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NAS PENSACOLA
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FINAL SAMPLING AND ANALYSIS PLAN AND HEALTH AND SAFETY PLAN FOR REMEDIAL
INVESTIGATION SITE 43 WITH TRANSMITTAL NAS PENSACOLA FL

1/25/2005
TETRA TECH

TtNUS/TAL-04-05/4821-3.2

January 25, 2005

Project Number 4821

Commander
Department of the Navy
Southern Division
Naval Facilities Engineering Command
ATTN: Mr. Bill Hill (ES31)
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Reference: Clean Contract No. N62467-94-D0888
Contract Task Order No. 0355

Subject: Submittal of the Final Sampling and Analysis Plan and Final Health and Safety Plan for the Remedial Investigation at Site 43, Naval Air Station Pensacola, Pensacola, Florida

Dear Mr. Hill:

Tetra Tech NUS is pleased to submit the Final Sampling and Analysis Plan and Final Health and Safety Plan for the Remedial Investigation at Site 43 Naval Air Station (NAS) Pensacola, Pensacola Florida. Comments on the draft documents were received from the U.S. Environmental Protection Agency and Florida Department of Environmental Protection Agency. The comments were addressed in a Response to Comments letter and incorporated into these final documents. A copy of the Response to Comments document is included as an appendix to this final edition.

Because there were no changes to the previously submitted appendices including the Health and Safety Plan and Historic Document CD, please remove these items from the draft edition and insert them in the final edition notebooks. An additional appendix - *Appendix C: Response to Comments from Regulatory Agencies* has been added to this final edition.

As indicated below copies for this Final Sampling and Analysis Plan and Final Health and Safety Plan for Site 43 NAS Pensacola have been forwarded to members of the NAS Pensacola as specified in the NAS Pensacola Partnering Team Document Delivery List. If you have any questions regarding this plan or require further information, please contact me at (904) 385-9899.

Sincerely,

Gerald Walker, P.G.
Task Order Manager

GW/gw

Enclosures (1 paper copy + 2 CDs)

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Greg Campbell, NASP (2 copy, 2 CDs)
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Brian Caldwell, TtNUS (1 CD)
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Mr. Mark Perry (1 unbound, 1 CD)

Sampling and Analysis Plan for Remedial Investigation at Site 43

**Naval Air Station Pensacola
Pensacola, Florida**



**Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0355**

January 2005

**SAMPLING and ANALYSIS PLAN
FOR
REMEDIAL INVESTIGATION AT SITE 43**

**NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

**Submitted to:
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Naval Facilities Engineering Command
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**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0335**

JANUARY 2005

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ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirements
bls	Below Land Surface
°C	Degrees Celsius
CCI	CH2MHILL Constructors, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLEAN	Comprehensive Long-term Environmental Action Navy
CLP	Contract Laboratory Program
COC	Contaminant of Concern
CTO	Contract Task Order
DPT	Direct-push Technology
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GCTL	Groundwater Cleanup Target Level
HASP	Health and Safety Plan
HCl	Hydrochloric Acid
HNO ₃	Nitric Acid
IDW	Investigation-derived Waste
IR	Installation Restoration
IRA	Interim Removal Action
mL	Milliliter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAS	Naval Air Station
NAVFAC EFD SOUTH	Southern Division, Naval Facilities Engineering Command
NELAP	National Environmental Laboratory Accreditation Program
oz	Ounce
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
RG	Remedial Goal
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SCTL	Soil Cleanup Target Level
SOP	Standard Operating Procedure
SVOC	Semivolatile Organic Compound

ACRONYMS (CONTINUED)

TAL	Target Analyte List
TCL	Target Compound List
TtNUS	Tetra Tech NUS, Inc.
UCL	Upper Confidence Limit
UST	Underground Storage Tank
µg/L	micrograms per Liter
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 INTRODUCTION

Tetra Tech NUS, Inc., (TtNUS) under contract to the Department of Navy, Southern Division, Naval Facilities Engineering Command (NAVFAC EFD SOUTH) is submitting this Sampling and Analysis Plan (SAP) for Remedial Investigation at Site 43 at Naval Air Station (NAS) Pensacola, Pensacola, Florida. This SAP was prepared under the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888, Contract Task Order (CTO) 0355 and was developed based on the results of the Site Characterization Report (TtNUS, 2004a).

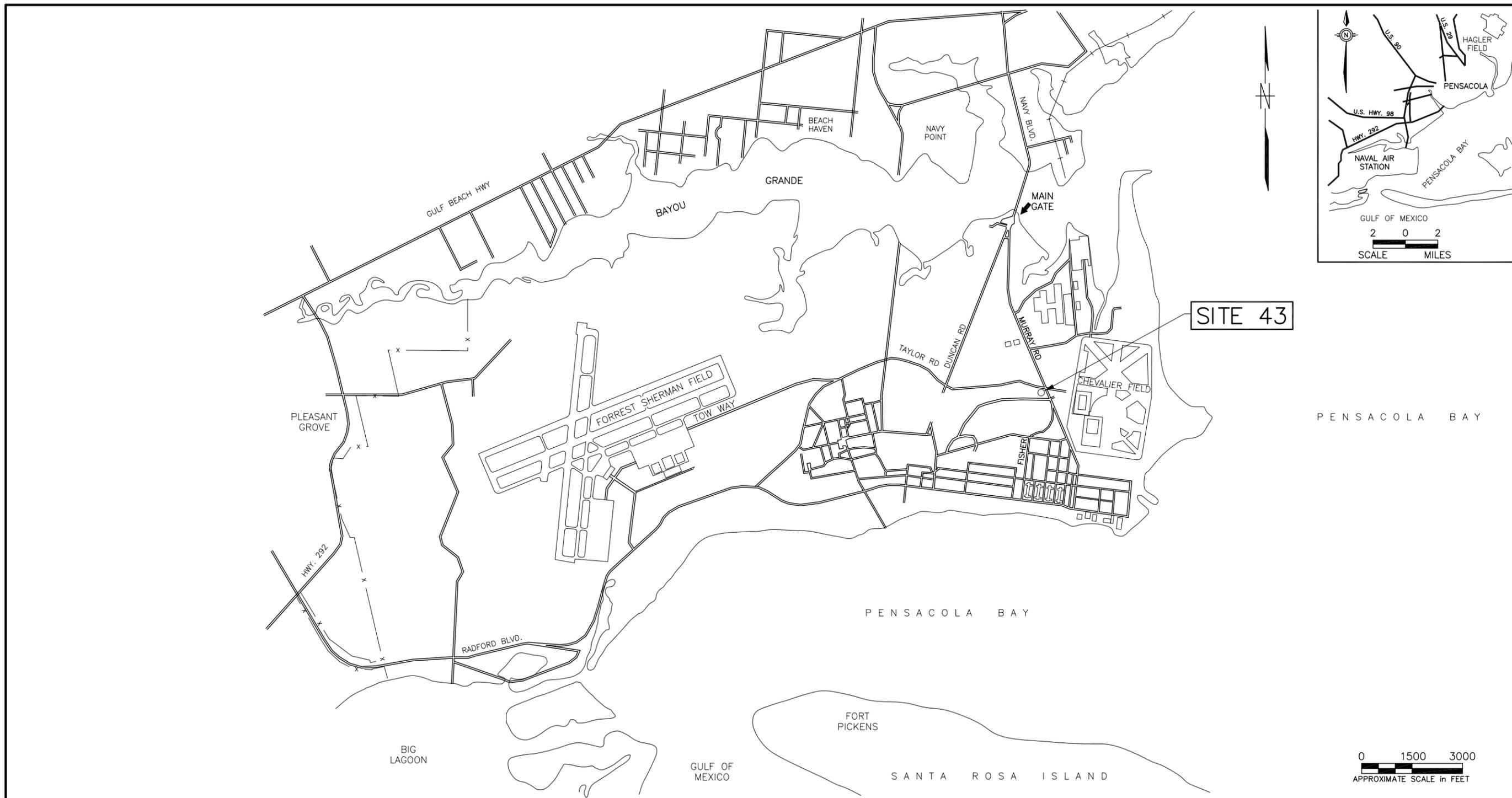
1.1 FACILITY BACKGROUND

NAS Pensacola (Figure 1-1) is located in Escambia County, in Florida's northwest coastal area, approximately five miles west of the Pensacola City limits. The approximately 5,000-acre installation was constructed in the 1800's. Prior to construction, the facility was undeveloped and sparsely vegetated. Land use at NAS Pensacola consists of various military housing, training, and support facilities as well as large industrial complexes for major repairs and refurbishment of aircraft engines and frames. Additional details on the NAS Pensacola facility may be found in the facility administrative record. Site 43 is located at the southwest corner of Murray and Taylor Roads and consists of an area approximately 200 feet by 200 feet in size.

1.2 PURPOSE OF THE SAP

This SAP serves as a guide for the remedial investigation activities to be conducted at Site 43. This plan documents the procedures for field activities and sample analyses. The SAP specifies the sampling protocol and procedures for data collection and sample analysis, sample locations, frequency of samples to be collected, sample designations, sample handling, sampling equipment, and handling of investigation-derived waste (IDW). This plan was prepared in accordance with the TtNUS Corporate Quality Assurance Program Manual, dated January 1, 2001, and the TtNUS Florida Regional Quality Assurance Program Manual, dated October 9, 2002.

The field activities for the remedial investigation will include the collection of samples from surface soil, subsurface soil, and groundwater for submission to a National Environmental Laboratory Accreditation Program (NELAP)-certified laboratory for analysis. The data collected during the remedial investigation will be used in preparing a Remedial Investigation Report.



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		SITE VICINITY MAP SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO.	
							LLK	7/2/04			4821	
							CHECKED BY	DATE			APPROVED BY	DATE
							COST/SCHED-AREA				APPROVED BY	DATE
							SCALE	AS NOTED	DRAWING NO.	FIGURE 1-1	REV.	
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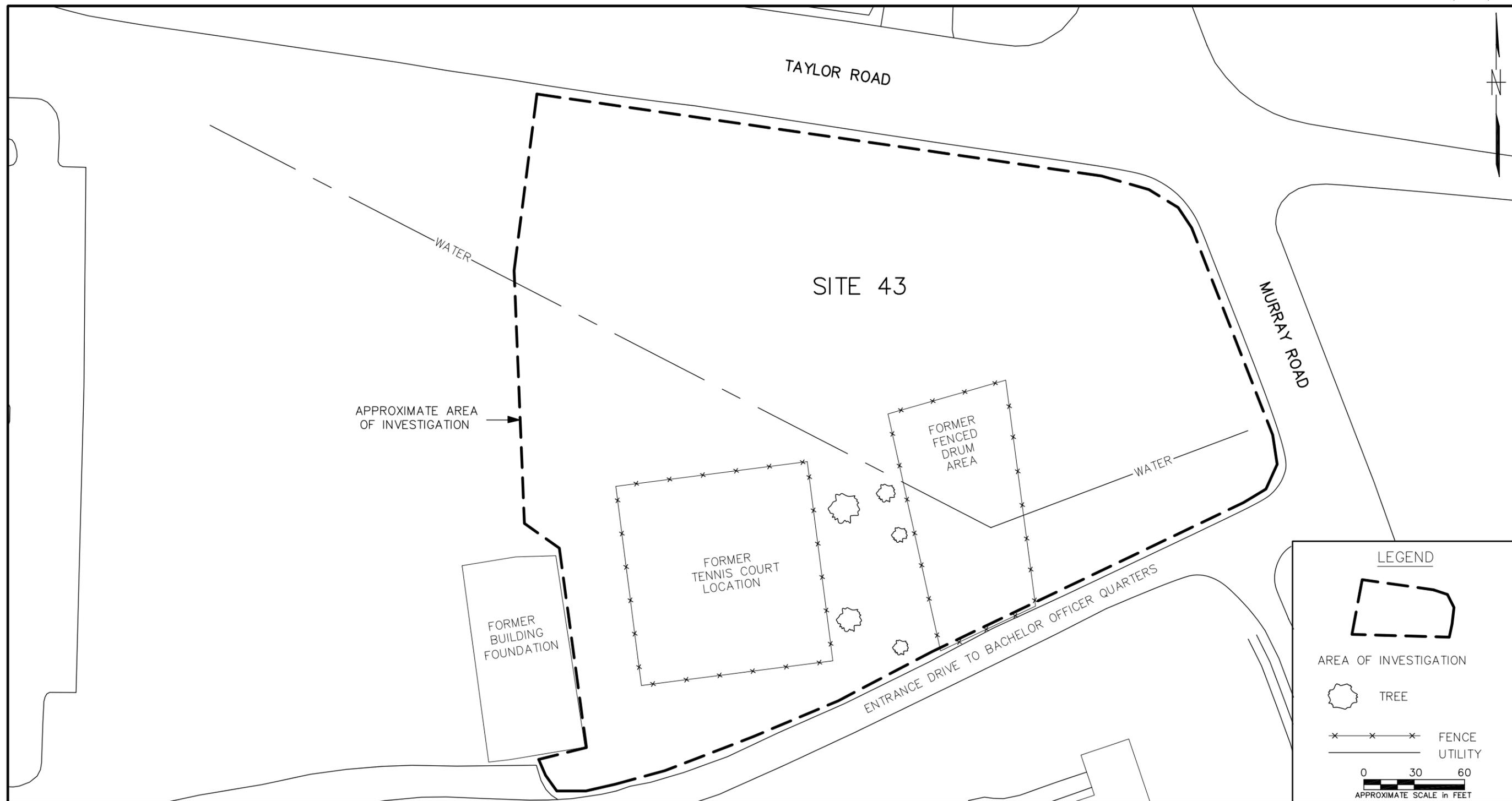
1.3 SITE DESCRIPTION AND HISTORY

Site 43 (Figure 1-2) is located at the southwest corner of Murray and Taylor Roads and north of the access road to the NAS Pensacola Officer's Quarters. The area is grass covered with oak trees scattered throughout the site. Previously the site contained a tennis court and a building foundation/basketball court; however, in 2003 the tennis and basketball courts were removed by the facility. Overhead utilities are not present within the site area; however, an underground water line traverses the site in a general west to east direction.

In December 1992, a child using a metal detector discovered a partially exposed drum located east of the tennis court. A site reconnaissance indicated an additional partially buried drum was also present. One drum was in a vertical position; its end punctured revealing standing water in the interior. The second drum also appeared to be in a vertical position, but was not obviously punctured. A third iron object resembling a drum rim was observed east of the tennis court. Smaller, rusted metal debris was observed at the surface. No odors, visible soil stains, or other indications of contaminant release were observed. The area surrounding the buried drums was fenced to prevent general access until further investigations could be conducted. Prior to the current usage as a residential recreational area the site's use is unknown.

1.4 REGULATORY SETTING

The Navy Installation Restoration (IR) Program was designed to identify and abate or control contaminant migration resulting from past operations at naval installations, with the goal of expediting and improving environmental response actions while protecting human health and the environment. The IR program is conducted in accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. CERCLA requires that federal facilities comply with the act, both procedurally and substantively. Site 43 is being investigated as part of CERCLA requirements.



LEGEND

AREA OF INVESTIGATION

TREE

FENCE
 UTILITY

0 30 60
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 1/20/00
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED



SITE LOCATION MAP
 SITE 43
 NAS PENSACOLA
 PENSACOLA, FLORIDA

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1.5 REPORT ORGANIZATION

The SAP is organized into eight sections. Below is a list of the sections and a brief description of their purpose:

- Section 1.0 – Presents the purpose, site description, and regulatory setting for the Remedial Investigation at NAS Pensacola.
- Section 2.0 – Summarizes previous investigations.
- Section 3.0 – Presents the site-specific investigation discussion.
- Section 4.0 – Presents the investigative methodology for conducting the assessment.
- Section 5.0 – Addresses the waste resulting from investigation activities.
- Section 6.0 – Discusses the investigative results of the assessment.
- Section 7.0 – Presents the sampling and analysis schedule of operations for the site assessment activities.
- References – Lists all references used in preparing this planning document.
- Supporting data are provided in the Appendices.

2.0 PREVIOUS INVESTIGATIONS

This chapter summarizes previous investigations performed at Site 43 at NAS Pensacola. Previous investigations include a geophysical survey, site characterization, drum characterization, and interim remedial action.

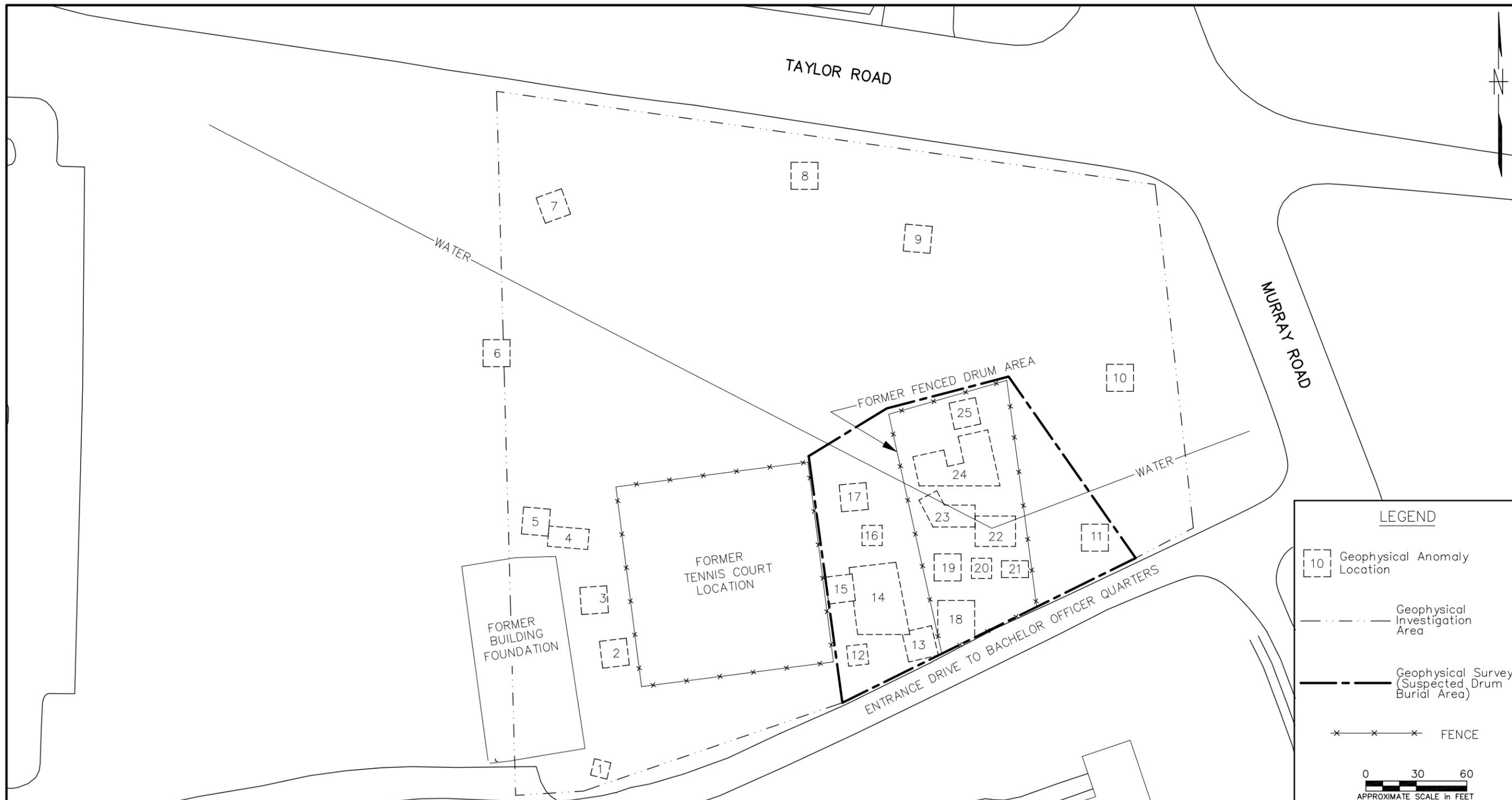
2.1 GEOPHYSICAL SURVEY

In March 1994, Ensafe/Allen & Hoshall conducted a geophysical investigation to assess the area surrounding the exposed drums using gradient and total magnetic surveys. Geophysical methods were used at the site because it is non-invasive and could provide a comprehensive overview of potential buried drums relatively quickly and easily. The objectives of the investigation were to determine the aerial extent of the disposal area and to determine if it was an extensive or limited drum disposal area. The geophysical survey was performed using a gradient magnetic geophysical survey, which responds exclusively to ferrous metals. The total magnetic field and vertical magnetic gradient were measured during the survey (Ensafe/Allen & Hoshall, 1994).

The suspected size of the disposal area was larger than the original fenced area installed based on the previous site reconnaissance. Although cultural clutter (buried utilities, metal fences, poles, buildings, etc.) precluded a definitive interpretation, magnetic anomalies typical of drums were limited to an area approximately 100 feet by 120 feet in size. The geophysical survey suggested that the disposal area was not systematic and widespread, but limited in aerial dimension and the number of disposed drums. A total of 25 individual geophysical anomalies were identified; however, the actual number of drums disposed in the area was not determined. The report concluded that the drum disposal area, as well as several anomalies discovered outside the disposal area should be further explored by test pitting or trenching to a depth of 5 feet. Figure 2-1 provides the survey results including the investigation area and areas of suspected drum locations. The summary report for the geophysical survey is included in Appendix A.

2.2 SITE CHARACTERIZATION

Following the geophysical survey, TtNUS conducted a site characterization sampling event in October 1999. The purpose of the site characterization was to investigate the anomalies detected during the geophysical survey, collect surface and subsurface soil samples from the anomaly locations, install temporary micro wells and collect samples from the micro wells. The results of the investigation are



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SCALE
AS NOTED



GEOPHYSICAL ANOMALY LOCATIONS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO.	4821
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summarized in the "Site Characterization Report (Site 43) NAS Pensacola, Pensacola Florida" submitted January 2004 (Appendix A).

As part of the site characterization, 17 surface soil samples collected at the site were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and cyanide. The sample locations are shown on Figure 2-2. The surface soil samples were reported to contain benzo(a)pyrene and eight metals (antimony, arsenic, barium, copper, iron, lead, nickel, and vanadium) at concentrations exceeding the Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs) for Direct Exposure - Residential [Chapter 62-777, Florida Administrative Code (FAC)] and NAS Pensacola background concentrations. In addition, concentrations of antimony and nickel were reported to exceed FDEP's SCTLs for leachability to groundwater criteria (Chapter 62-777, FAC).

Following the surface soil sampling fieldwork, test pitting activities, anomaly removal and subsurface soil sampling was completed at Site 43. Test pitting was completed at 17 of the geophysical anomaly areas including anomaly area 4 and areas 10 through 25. As recommended, the pits were advanced to a depth of 5 feet using a track hoe and shovels. Drums were encountered and removed at 2 of the 17 anomaly areas (anomaly 15 – 1 drum; anomaly 20 – 13 drums). Following the excavation, seven subsurface soil samples were collected. Due to the shallow burial of the drums, subsurface, soil samples were collected immediately beneath the buried drums at depths ranging from 2 to 3.5 feet below land surface (bls). All soil samples were collected above the water table. The sample locations are shown on Figure 2-2. The samples were analyzed for the same parameters as the surface soil samples. The analytical data indicated benzo(a)pyrene, dibenzo(a,h)anthracene, and nine metals (antimony, arsenic, barium, copper, iron, lead, nickel, zinc, and vanadium) were present at concentrations exceeding the FDEP SCTL for Direct Exposure - Residential (Chapter 62-777, FAC) and NAS Pensacola background concentrations. Antimony, arsenic, barium, nickel and zinc concentrations were reported to exceed FDEP's SCTLs for leachability to groundwater criteria (Chapter 62-777, FAC).

During the Site Characterization Investigation, 14 drums were excavated and stored in over pack containers. The contents of the drums were later sampled during the drum characterization sampling event. The results from the drum characterization were included in the Site Characterization Report as an addendum. The analytical data from the drum characterization indicated that 12 of the 14 drums contained insufficient volume/mass to sample. The two remaining drums were sampled and contained metals and polynuclear aromatic hydrocarbons (PAHs) at concentrations exceeding FDEP SCTLs.

In addition to the test pitting subsurface soil sampling, a direct-push technology (DPT) rig was used to collect five additional soil samples from above the water table. The additional soil samples were collected

at locations corresponding to the soil boring and monitoring well locations shown on Figure 2-2. The samples were analyzed for the same parameters as the previous subsurface soil samples. However, the analytical results for the subsurface soil samples collected from additional locations did not indicate the presence of contaminants above regulatory standards or NAS Pensacola background concentrations.

Five temporary monitoring wells were installed at Site 43 during the Characterization Study and sampled for VOCs, SVOCs, pesticides and PCBs, Target Analyte List (TAL) metals and cyanide. The sample locations are shown on Figure 2-2. The groundwater samples were reported to contain methylene chloride, a common laboratory contaminant, and two metals (aluminum and iron) at concentrations exceeding the FDEP Groundwater Cleanup Target Levels (GCTLs) specified in Chapter 62-777, FAC. Although concentrations of both metals exceeded the FDEP GCTLs, only iron was reported to exceed the NAS Pensacola background levels.

2.3 INTERIM REMEDIAL ACTION

Following the completion of the site characterization investigation and addendum, an Interim Removal Action (IRA) was completed by CH2MHILL Constructors, Inc. (CCI) to remove the metal debris and contaminated surface and subsurface soils at the site. The interim removal action is summarized in the "Interim Removal Action Report Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola, Florida" dated September 2003 (Appendix A).

Prior to initiating the IRA fieldwork, CCI developed remedial goals (RGs) for some contaminants of concern (COCs) at the site using 95% Upper Confidence Limit (UCL) procedure for surface soils. Once the 95% UCL-based RGs were calculated and approved by the regulators, samples were collected to delineate the extent of contamination prior to excavation activities. Forty-one (41) native surface soil samples and 21 subsurface soil samples were collected in the vicinity of the identified remedial areas for source delineation of the associate metals. Based on the laboratory results, the areas of excavation were defined (CCI, 2003).

Of the initial 15 anomalous areas characterized for contamination, 6 areas exceeded the initial cleanup criteria outlined in the Site 43 Work Plan. These areas included anomaly areas 4, 14, 15, 16, 20 and 22. From April through May 3, 2001, a total of 657 cubic yards of soil and debris were removed from these areas at Site 43. The excavated soil was either stockpiled or loaded directly onto transport vehicles. Soil that was analyzed and determined to be hazardous for lead was manifested accordingly. Approximately 20 to 25 rusted metal drums and drum parts and inert ornamental ordnance and munitions were uncovered in addition to the original 14 drums identified and previously removed (CCI, 2003). Following excavation activities, the excavated areas were backfilled with a clayey soil for the liner and topsoil for the

upper 1 foot surface completion. Following testing for appropriate density, the excavated areas were hydro-seeded with grass seed and fertilizer (CCI, 2003).

Baseline groundwater sampling was conducted prior to excavation activities and a subsequent round of semi-annual groundwater sampling was conducted after excavation activities were completed. Groundwater samples were analyzed for iron only. All detected iron concentrations were below the established NAS Pensacola background concentrations of 1,707 micrograms per liter ($\mu\text{g/L}$) for both consecutive sampling events (CCI, 2003).

Following excavation activities, the cleanup criteria were re-evaluated and revised. Many of the RGs established using the 95% UCL were not appropriate for the site. The University of Florida guidance (2004) indicates that 95% UCL cannot be used for barium, copper, nickel, or vanadium for current or potential residential land use due to acute toxic effects in children as a result of direct exposure. Additionally, the United States Environmental Protection Agency (USEPA) has indicated that 95% UCL should not be used for lead. Consequently, it was determined that nine other areas, anomaly areas 11, 12, 13, 17, 18, 19, 21, 23, and 24 contained contaminants that exceeded the revised cleanup criteria. Areas with exceedances that were not excavated included 11, 12, 13, 17, 23, and 24 (CCI, 2003). In addition, excavation activities were completed to a depth of 2 feet bls; however, subsurface soil samples collected within the excavation area at depths ranging from 2 feet bls to 3.5 feet bls during the Characterization Study contained exceedances of the revised RGs.

Because of the revised lower RGs established for the site after the soil removal activities were completed, CCI recommended a Remedial Investigation and Feasibility Study be completed at Site 43 to delineate contaminant of concern (COC) contamination and identify a final remedy for the site (CCI, 2003).

3.0 TECHNICAL APPROACH

3.1 OVERVIEW

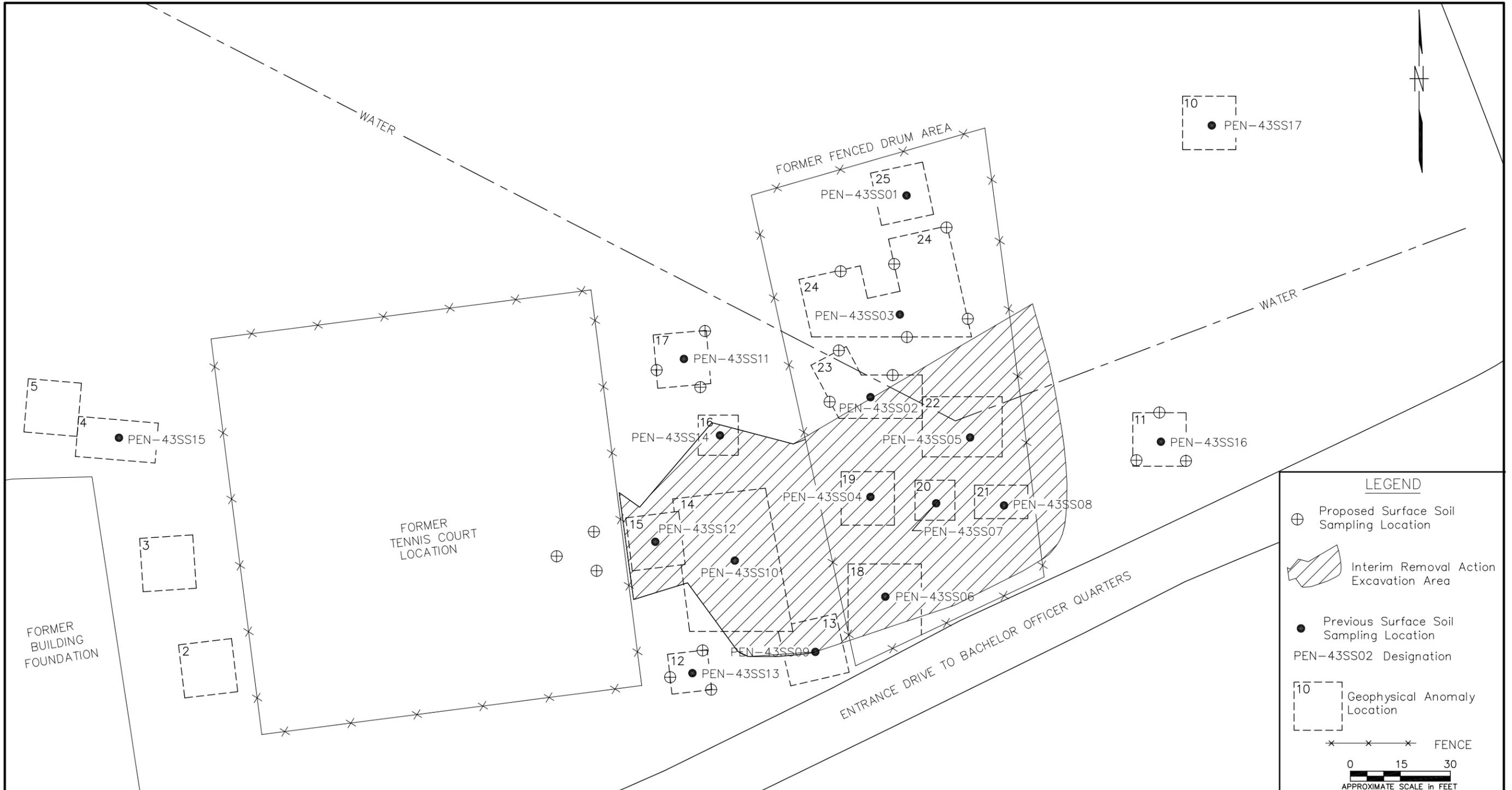
The primary objective of this sampling plan is to determine if the previous soil remediation actions at Site 43 were effective at reducing the risks identified in the Site Characterization Report and to determine if soil and groundwater remains protective to human health at the site. Soil and groundwater samples will be collected for off-site laboratory analysis and the analytical results will be screened against appropriate federal and state screening values. Field activities, such as, sampling and monitoring well installation will be conducted in accordance with the Health and Safety Plan (HASP) and the FDEPs Standard Operating Procedures (SOPs) for Field Activities (FDEP, 2004). In the event the FDEP SOPs do not address a specific task, TtNUS will defer to the TtNUS Corporate SOPs (TtNUS, 2004b).

3.2 SAMPLING AND ANALYSIS PLAN

Surface Soil Sampling Plan

Although extensive soil sampling was completed prior to the excavation activities at the site, all the areas of revised RG exceedances were not delineated or excavated previously. Surface soils samples collected in conjunction with anomaly areas 11, 12, 13, 17, 23 and 24 were not fully delineated. To delineate the exceedance area, TtNUS will collect surface soil samples from the test pit perimeter and analyze the samples for the same parameters as the indicated exceedance. In addition, three surface soil samples will be collected from the area west of the IRA excavation at the former location of the tennis court. These samples will be used to determine if excavation activities, which were limited previously by the presence of the tennis courts, were extensive enough. Approximately 20 surface soil samples (plus quality assurance and quality control samples) will be collected from on-site locations. The proposed soil sampling locations are shown on Figure 3-1. The surface soil samples will be collected from the ground surface to a depth of 1 foot bls using a hand-auger.

All surface soil samples collected at the site will be analyzed for Contract Laboratory Program (CLP) Target Compound List (TCL) SVOCs (USEPA Method SW-846 8270C), and inorganic analytes (USEPA Method SW-846 6010B) specific to the reported exceedances that are being investigated.



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>PROPOSED SURFACE SOIL SAMPLING LOCATIONS SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	APPROVED BY	DATE
							LLK	1/20/00		4821		
							COST/SCHED-AREA			DRAWING NO.	FIGURE 3-1	
							SCALE	AS NOTED			REV.	0

The specific parameters to be analyzed for each anomaly area are as follows:

- Anomaly Area 11 – SVOCs, arsenic, barium, copper, and lead
- Anomaly Area 12 – SVOCs, arsenic, barium, copper, lead, and vanadium
- Anomaly Area 17 – SVOCs and copper
- Anomaly Area 23 – SVOCs, arsenic, barium, lead, and vanadium
- Anomaly Area 24 – SVOCs, copper and lead

In addition, the soil samples for laboratory analysis will be collected in accordance with FS 3100, Surface Soil Sampling (FDEP, 2004). The laboratory analytical methods are specified in Table 3-1.

Subsurface Soil Sampling Plan

Because all areas of the revised RG exceedances were not delineated or excavated previously, additional subsurface soil sampling is required to fully characterize the contaminant levels at the site. Nine soil borings and associated subsurface soil sampling will be completed at geophysical anomaly/test pit locations 11, 12, 13, 17, 23 and 24 to further delineate the subsurface soils at locations not previously excavated. Six additional soil borings and associated subsurface soil sampling will be completed within the IRA excavation area to further delineate subsurface soil exceedances not removed during the IRA. And finally, five soil borings and associated subsurface soils samples will be completed at the former tennis court location to address potential subsurface soil contamination not previously evaluated due to the presence of the structure.

The soil borings will be completed using a DPT soil-sampling device (e.g., Geoprobe[®] system) to obtain subsurface soil samples at Site 43. The DPT sampler will be used to collect samples from discrete intervals below 2 feet bls to above the zone of groundwater saturation. It is anticipated that two soil samples will be collected from each soil boring, the first immediately below the soil excavation limit and the second at approximately 5 to 6 feet bls. The sampling methodology will be compliant with FDEP's Global RBCA Rule 62-780, including section 62-780.600(5) (c) 1, which describes how to conduct soil sampling when the remedial approach for the surface soil is proposed to be 95% UCL. In addition, quality assurance and quality control samples will be collected. The proposed subsurface soil investigation area is shown on Figure 3-2.

All subsurface soil samples collected at the site will be analyzed for CLP TCL SVOCs (USEPA Method SW-846 8270C), and specified inorganic analytes including arsenic, barium, copper, lead, and vanadium (USEPA Method SW-846 6010B). The soil samples for laboratory analysis will be collected in accordance with FS 3200, Subsurface Soil Sampling (FDEP, 2004). The laboratory analytical methods are specified in Table 3-1.

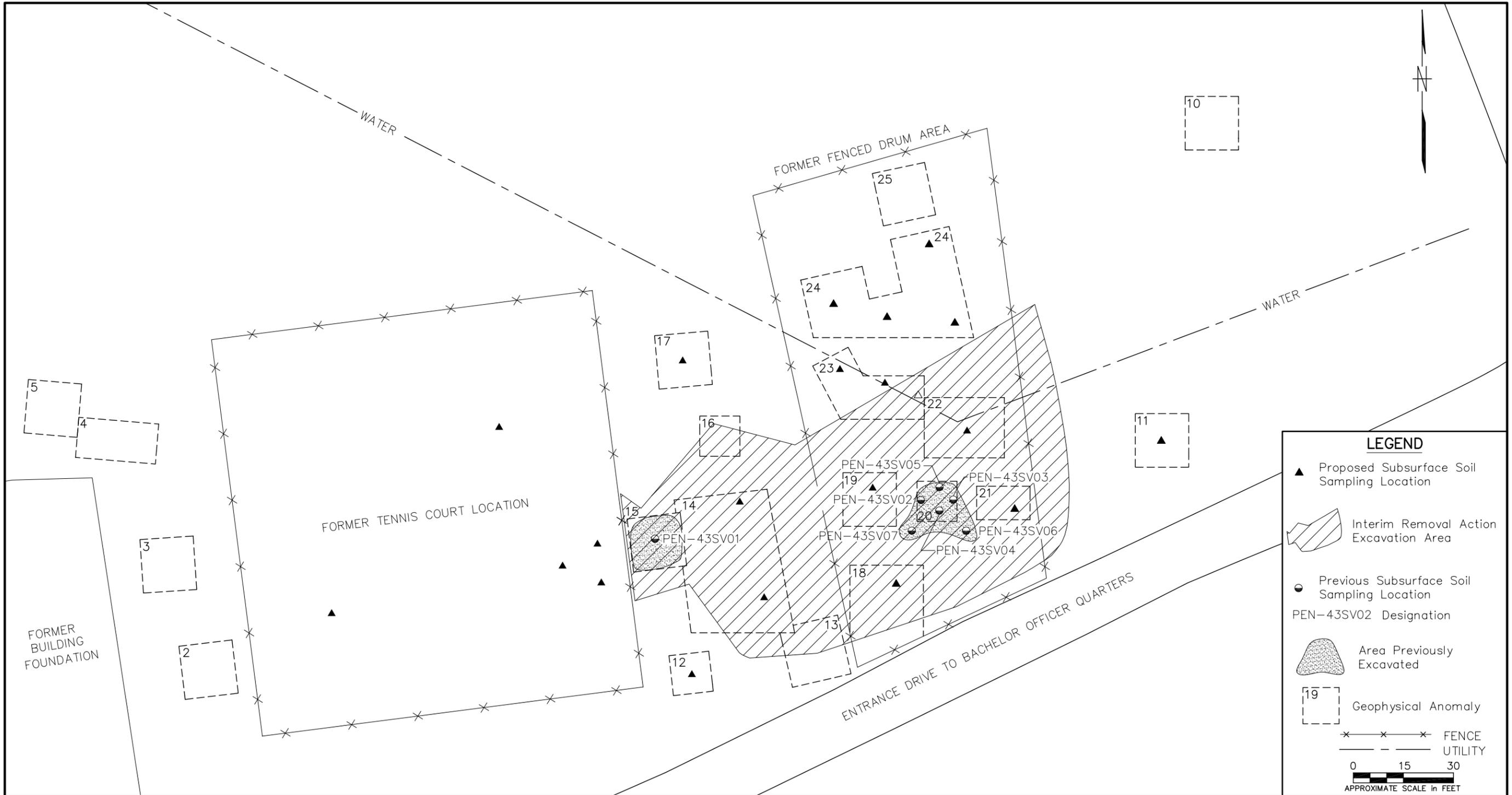
**TABLE 3-1
SUMMARY OF SOIL ANALYTICAL REQUIREMENTS
SAMPLING AND ANALYSIS PLAN FOR
REMEDIAL INVESTIGATION AT SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

Analysis	Analytical Method	Sample Volume ⁽¹⁾	Bottleware	Preservation	Holding Time ⁽²⁾
<u>SOIL SAMPLING; FIXED-BASE LABORATORY</u>					
CLP TCL SVOCs	USEPA SW-846 8270C	1 x 8 oz	widemouth jar with Teflon [®] -lined lid	Cool to 4°C	14 days to extraction; 40 days from extraction to analysis
Specified Inorganic Compounds including: arsenic, barium, copper, lead & vanadium	USEPA SW-846 6010B	1 x 8 oz	widemouth jar (approx. 200 grams)	Cool to 4°C	Within 180 days

NOTES:

- 1 Sample volume may vary based on laboratory requirements.
- 2 Holding times are measured from the date/time of sample collection.

CLP = Contract Laboratory Program
oz = ounce
°C = Degrees Celsius
SVOC = Semivolatile Organic Compound
TCL = Target Compound List



LEGEND

- ▲ Proposed Subsurface Soil Sampling Location
- ◉ Previous Subsurface Soil Sampling Location
- ◉ PEN-43SV02 Designation
- ◉ Area Previously Excavated
- 19 Geophysical Anomaly
- x — x — x — FENCE
- — — — — UTILITY

0 15 30
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY
LLK 7/2/04

CHECKED BY
DATE

COST/SCHED-AREA

SCALE
AS NOTED



PROPOSED SUBSURFACE SOIL SAMPLE LOCATIONS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 4821	APPROVED BY DATE
APPROVED BY DATE	APPROVED BY DATE
DRAWING NO. FIGURE 3-2	REV. 0

Micro Well Abandonment and Monitoring Well Installation Plan

Because the temporary micro well network at the site has been compromised, TtNUS will abandon the temporary micro wells that are suspect or compromised and install new permanent monitoring wells for current and future groundwater monitoring activities. Existing micro wells that will be abandoned include Pen-43-1S (micro well is reportedly dry) and Pen-43-3S (micro well is reportedly dry). Micro well Pen-43-4S has not been located since the removal of the tennis court and is believed to have been destroyed; however, TtNUS will attempt to locate the micro well and properly abandon it. Micro wells Pen-43-2S and Pen-43-5S are believed to be secure and will be evaluated during the investigation; however, if the wells are determined to be compromised they will be abandoned. Otherwise the micro wells will be sampled and used in the evaluation of groundwater at the site.

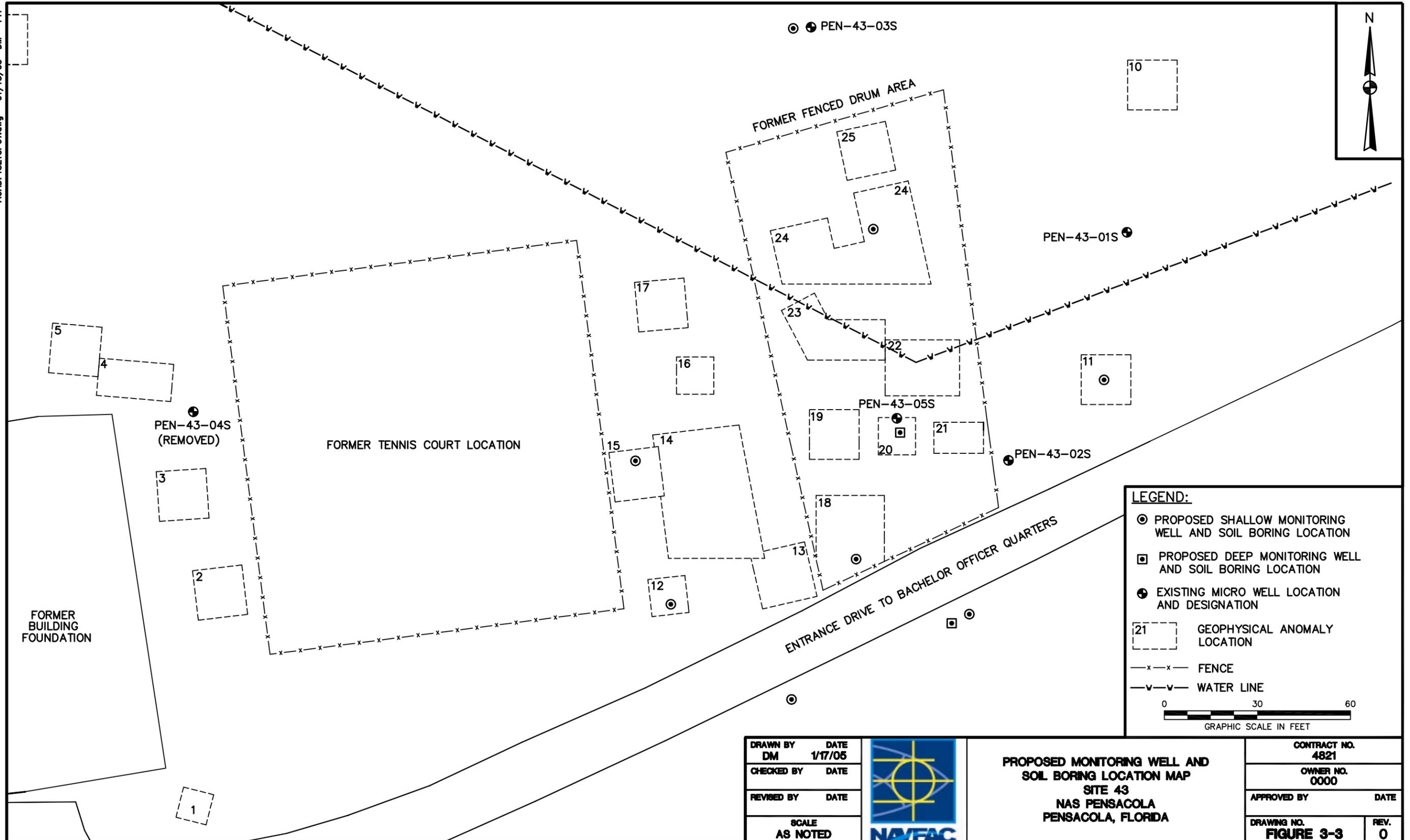
In conjunction with the abandonment of the on-site micro wells, TtNUS will install a new permanent monitoring well network including both shallow and deep monitoring wells. Eight shallow monitoring wells will be installed to an approximate depth of 25 feet bls at the locations shown on Figure 3-3. In addition, two deep permanent monitoring wells will be installed to an approximate depth of 50 feet bls. All monitoring wells will be installed using Hollow Stem Auger drilling methods. The monitoring wells will be installed and constructed in accordance with NAVFAC EFD SOUTH and FDEP guidance documents.

Groundwater Sampling Plan

Groundwater samples will be collected from all accessible and secure on-site micro wells and monitoring wells to assess the current groundwater conditions. It is anticipated that eight shallow monitoring wells, two shallow micro wells, and two deep monitoring wells will be sampled. The well locations are shown on Figure 3-3.

Prior to obtaining groundwater sampling, water levels and total well depths will be measured at all wells. The wells will then be purged, using a peristaltic pump (shallow wells) or submersible pump (deep wells) and a low-flow quiescent purging technique. Purging completion will be determined in accordance with FS 2212, Well Purging Techniques (FDEP, 2004).

The groundwater samples collected from on-site wells will be analyzed for CLP TCL VOCs (USEPA Method SW-846 8260B) and TAL metals (USEPA Method SW 846 6010B, 9010, and 7471). The list of the analyses for each groundwater sample is provided in Table 3-2. Groundwater samples will be collected in accordance with FS 2220, Groundwater Sampling Techniques (FDEP, 2004) and the groundwater piezometric head will be measured in each monitoring well.



LEGEND:

- ⊙ PROPOSED SHALLOW MONITORING WELL AND SOIL BORING LOCATION
- ⊠ PROPOSED DEEP MONITORING WELL AND SOIL BORING LOCATION
- ⊕ EXISTING MICRO WELL LOCATION AND DESIGNATION
- ⊡ GEOPHYSICAL ANOMALY LOCATION
- x-x- FENCE
- v-v- WATER LINE

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PROPOSED MONITORING WELL AND SOIL BORING LOCATION MAP
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 4821	
OWNER NO. 0000	
APPROVED BY	DATE
DRAWING NO. FIGURE 3-3	REV. 0

**TABLE 3-2
SUMMARY OF GROUNDWATER ANALYTICAL REQUIREMENTS
SAMPLING AND ANALYSIS PLAN FOR
REMEDIAL INVESTIGATION AT SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

Analysis	Analytical Method	Sample Volume⁽¹⁾	Bottleware	Preservation	Holding Time⁽²⁾
CLP TCL VOCs	SW-846 8260B	3 x 40 mL	Glass, plastic screw cap, Teflon™-lined	Cool to 4°C, HCl to pH<2	14 days from sampling to analysis
CLP TAL Inorganics	SW-846 6010B, 9010, and 7471	1 Liter	Polyethene, plastic cap, plastic liner	Cool to 4°C; dark HNO ₃ to pH<2	Within 180 days

NOTES:

- 1 Sample volume may vary based on laboratory requirements.
- 2 Holding times are measured from the date/time of sample collection.

mL = milliliter
 °C = Degrees Celsius
 CLP = Contract Laboratory Program
 TCL = Target Compound List
 VOC = Volatile Organic Compound
 TAL = Target Analyte List
 HCl = Hydrochloric Acid
 HNO₃ = Nitric acid

Aquifer Testing

Based on the extensive aquifer testing previously completed that the NAS Pensacola facility, TtNUS will not perform additional aquifer tests as part of the Site 43 RI investigation. In place of site-specific aquifer slug tests, existing aquifer test data and results from pumping tests and slug tests completed at many of the IR and Underground Storage Tank (UST) sites throughout the facility will be included in the IR report.

The facility geology has consistently been described as light brown to tan fine grained quartz sand with associated stringers and lens of clay and gravel. The Site 43 site-specific geology is defined as light to dark brown fine to medium sand with interspersed white fine sand (TtNUS, 2004a). Because of the similarity of the site-specific and facility-specific geologic conditions and the abundance of existing aquifer data for the facility, the time and expense to collect additional site-specific aquifer slug test data is not warranted.

4.0 FIELD OPERATIONS

This section describes the procedures for conducting the project-specific field investigation activities to be performed during the Site 43 Sampling Event. Field operation activities to be performed include mobilization of equipment, waste handling, soil sampling, groundwater sampling, and water level measurements. The individual activities are described below.

4.1 DECONTAMINATION

Decontamination of major equipment and sampling equipment will be in general accordance with FC 1000, Cleaning / Decontamination Procedures (FDEP, 2004).

4.2 WASTE HANDLING

Limited solid wastes in the form of soil or sediment are expected to be generated during this field program. All solid and liquid wastes generated will be collected in 55-gallon drums and will be handled in accordance with applicable state and federal regulations.

4.3 SOIL SAMPLING

Surface soil samples will be collected using a stainless steel hand auger, and subsurface soil samples will be collected using a DPT core barrel. The sample aliquots will be collected at the prescribed intervals as detailed in section 3.2 of this SAP. Each sample aliquot will be screened immediately with a flame ionization detector, then homogenized in a stainless steel bowl and transferred to sample bottles. The samples will be labeled, preserved on ice, and transported to the laboratory. All portions of the sampling equipment used in sample collection will be decontaminated before each use using standard decontamination procedures. Equipment rinsate blanks will be collected from the decontaminated sampler at the prescribed frequency. All soil will be collected using the procedures as specified in FS 3100, Surface Soil Sampling and FS 3200, Subsurface Soil Sampling (FDEP, 2004).

4.4 GROUNDWATER SAMPLING

Groundwater samples will be collected using low-flow purging (typically a rate of less than 1 liter per minute) and sampling with a peristaltic pump (shallow wells) or submersible pump (deep wells) and Teflon™ tubing dedicated to each well. All groundwater samples will be collected using the procedures specified in FS 2200, Groundwater Sampling (FDEP, 2004). If light non-aqueous phase liquid is detected in any monitoring well prior to sampling, a groundwater sample will not be collected at that location.

Prior to groundwater sample collection, the monitoring wells will be purged to remove stagnant water in the well casing. Both purging and sampling operations will be conducted at a flow rate that results in a groundwater turbidity measurement of 20 nephelometric turbidity units or less if possible.

Groundwater samples collected using a peristaltic pump for analysis other than VOCs will be collected using a vacuum trap apparatus to prevent sample contact with the peristaltic pump and placed in precleaned containers supplied by the contract laboratory. The sample aliquot for VOC analysis will be collected last by slowly pulling the Teflon™ tubing out of the well to minimize agitation of the water in the monitoring well and then transferring the contents of the tubing to a VOC vial. Groundwater samples collected using a submersible pump will be collected directly from the delivery tubing. After collection, all samples will be placed in a cooler, chilled with ice, and shipped under chain-of-custody protocol to the off-site laboratory for analysis.

4.5 WATER LEVEL MEASUREMENTS

One round of water-level measurements will be conducted at the site during each sampling event to provide information regarding groundwater flow patterns and gradients. Water levels will be measured from all existing and available monitoring wells at the site. Water-level measurements will be completed within the shortest time possible on the same day, and no sooner than 24 hours after a significant precipitation event to minimize the precipitation effects on the data sets.

In each monitoring well, water-level measurements will be made by obtaining a direct reading from a measuring tape with an attached water interface probe. Measurement will be recorded to the nearest 0.01 foot and referenced to the top of casing notch or north side of the well casing. The measurement tape will be properly decontaminated prior to conducting the measurement event and between each monitoring well.

4.6 SAMPLE HANDLING

4.6.1 Sample Containers, Preservation, Holding Times, and Analyses

The sample containers, preservatives, holding times, and specific analysis are provided in Tables 3-1 and 3-2. Pre-preserved, certified-clean bottleware will be supplied by the subcontracted laboratory.

4.6.2 Sample Documentation, Packaging, and Shipping

Matrix-specific sample logsheets will be maintained for each sample collected. In addition, sample collection information will be recorded in bound field notebooks or specific field forms. Samples will be packaged and shipped according to FS 1000, General Sampling Procedures (FDEP, 2004).

4.7 DATA QUALITY REQUIREMENTS

4.7.1 Laboratory Analyses and Quality Assurance/Quality Control Samples

The analytical methods to be used are presented in Tables 3-1 and 3-2. The analytical data packages should be Naval Energy and Environmental Support Activity Level E (USEPA Level III). The analytical data will receive a full validation.

Rinsate blanks are collected to determine whether the source water or the decontamination process have introduced contaminants to the environmental samples collected. Trip blanks are used to determine if contaminants are introduced in the samples during the sample shipping process. Field duplicates are a single sample split into two portions for a determination of the precision of the sampling and analysis method employed.

The field sampling team will provide the appropriate additional sample volume as prescribed by the laboratory requirements for laboratory duplicate and matrix spike samples. The additional sample aliquots required for analysis of matrix spike/matrix spike duplicates (MS/MSD) will be collected with a frequency of 1 per 20 samples per matrix. See Table 4-1 for frequency of field quality control samples.

4.7.2 Data Reduction, Validation, and Reporting

Formal off-site data validation has been included in this work. The data will be evaluated for, but not limited to precision, accuracy, representativeness, completeness, and comparability parameters using the USEPA Contract Laboratory Program National Validation Functional Guidelines for Organic Data Review (USEPA, 1999), the USEPA Contract Laboratory Program National Validation Functional Guidelines of Inorganic Data Review (USEPA, 1994), and the TtNUS SOPs.

TABLE 4-1

**FREQUENCY OF FIELD QUALITY CONTROL SAMPLES
SAMPLING AND ANALYSIS PLAN FOR
REMEDIAL INVESTIGATION AT SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

Type Of Samples	Frequency
Rinsate Blank	1 per media per sample event
Trip Blank (VOCs only)	1 per sample shipment
Field Duplicate	1 per 20 samples/matrix
Matrix spike/Matrix spike duplicate (MS/MSD)	1 per 20 samples/matrix

5.0 INVESTIGATION-DERIVED WASTE MANAGEMENT

IDW generated during the RI activities will be managed in accordance with the procedures described in the NAS Pensacola IDW Plan. This document emphasizes management of all IDW in an environmentally responsible manner consistent with the CERCLA program, Resource Conservation and Recovery Act (RCRA) requirements, and the base's standard procedures. The objectives of the IDW management plan are

- Management of IDW in a manner that prevents contamination of uncontaminated areas (by IDW) and that is protective of human health and the environment.
- Minimization of IDW, thereby reducing costs and the potential for human or ecological exposure to contaminated materials.
- Compliance with federal and state requirements that are Applicable or Relevant and Appropriate Requirements (ARARs).

6.0 REMEDIAL INVESTIGATION REPORT

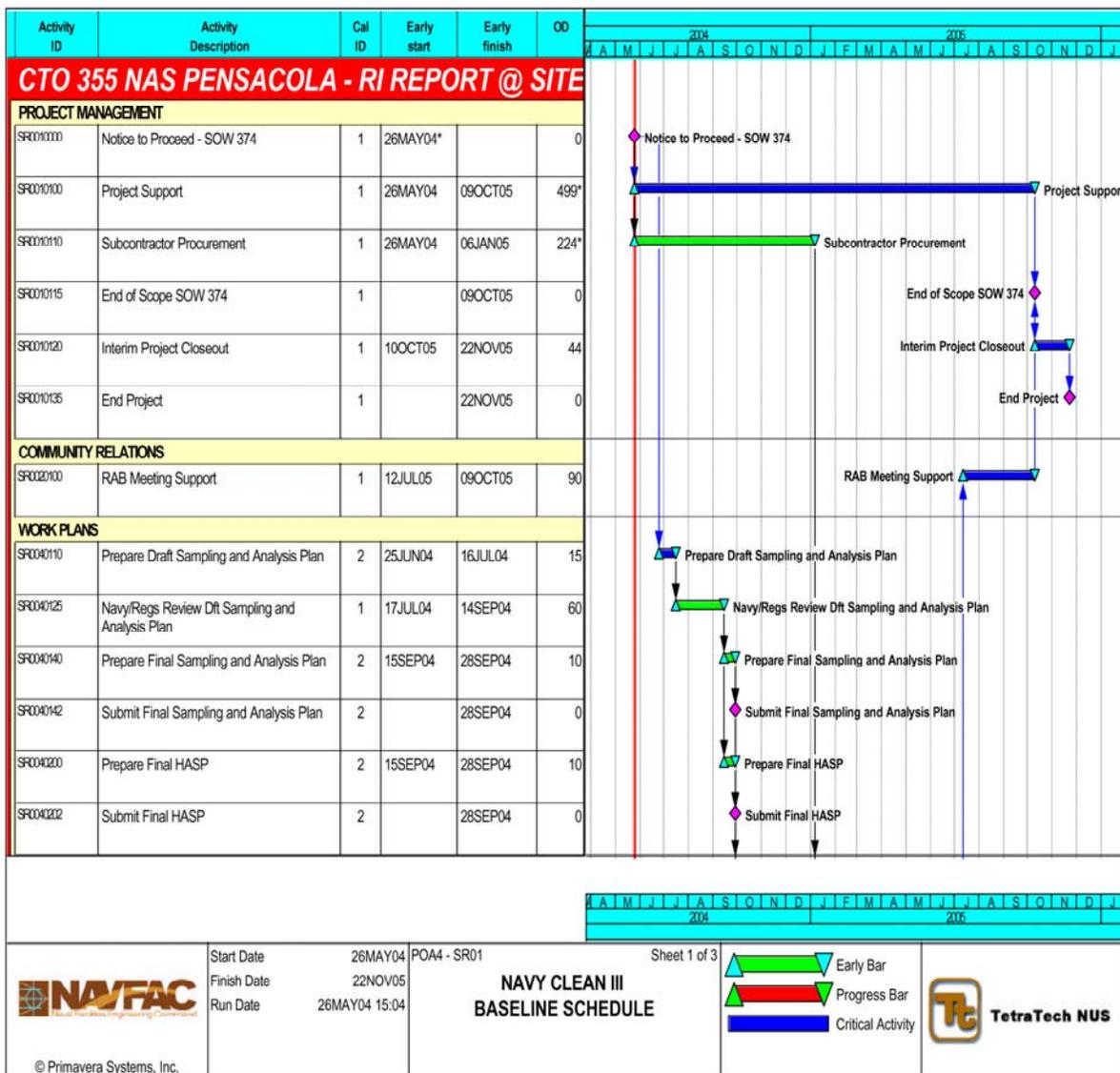
The Draft Remedial Investigation Report will include appropriate sections concerning site background, investigation activities, physical characteristics, nature and extent of contamination, aquifer characteristics, and human health risk assessment and screening level ecological risk assessment.

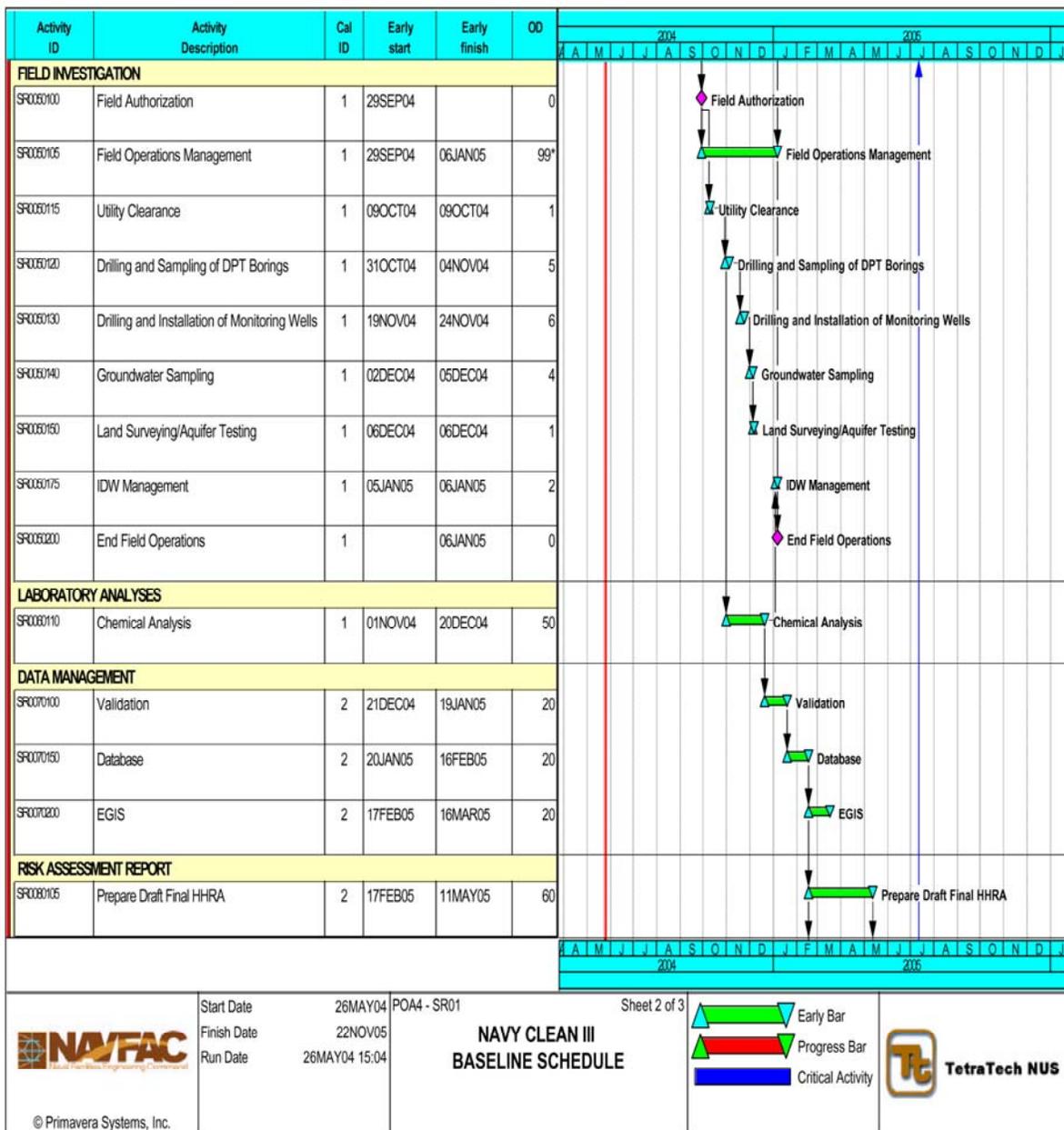
After internal review, the Draft Remedial Investigation Report will be issued to NAVFAC EFD SOUTH for review. The Final Remedial Investigation Report will be issued upon incorporation of review comments.

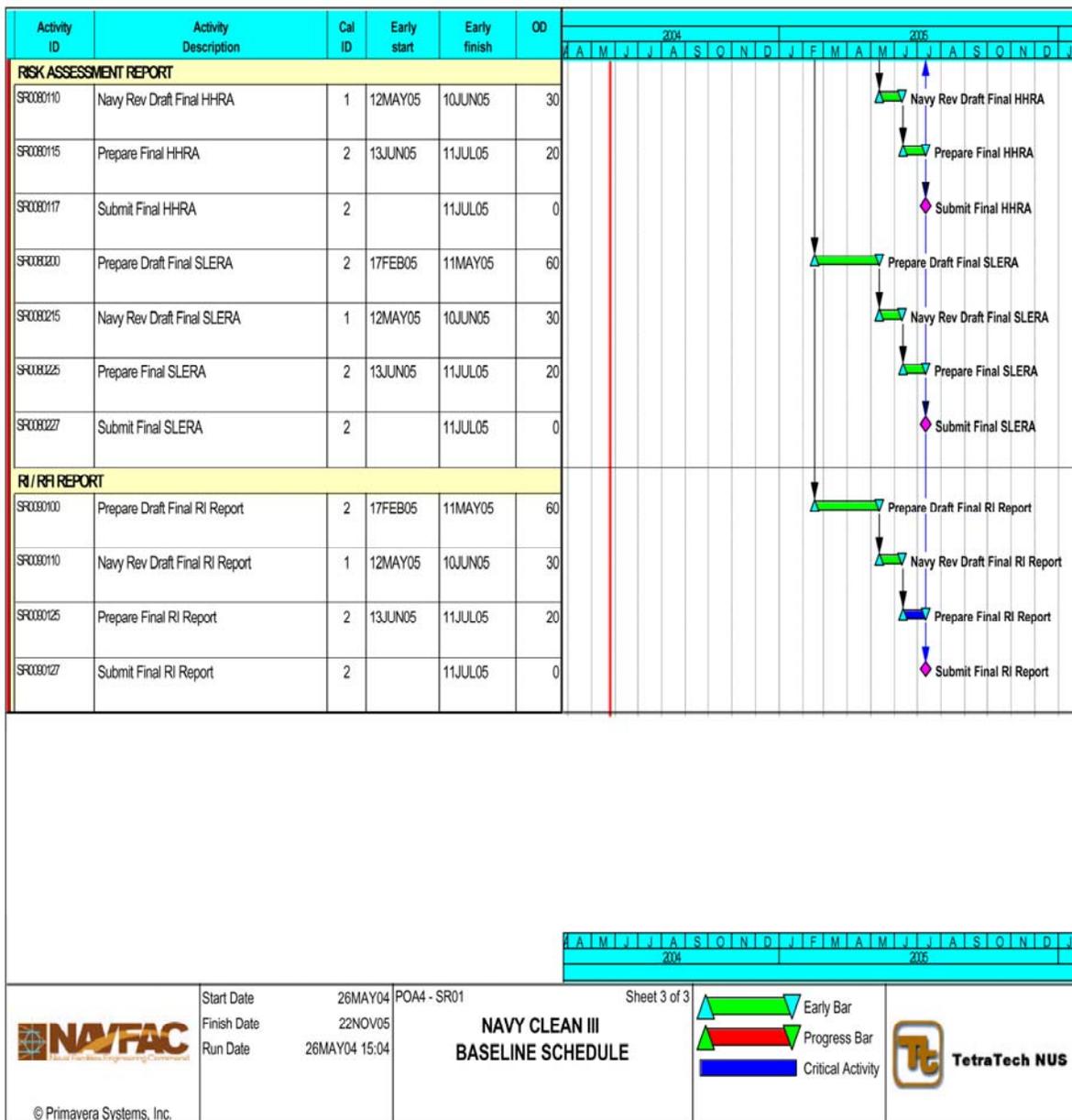
7.0 PROJECT SCHEDULE

The field investigation activities were originally proposed to begin in October 2004. A delay in the review of the Draft Sampling and Analysis Plan has postponed the project. Attempts will be made to make up or return to the original schedule, however due to the long delay, the scheduled submittal dates for the Final Remedial Investigation Report to the Navy and regulatory personnel in July 2005 is unlikely. The original estimated start and finish dates as well as the duration of each task, in working days, are shown on the project schedule shown on Figure 7-1. This schedule is based on assumed site conditions and will be updated to the Navy monthly to reflect actual progress during the project.

Figure 7-1
Project Schedule







REFERENCES

CCI (CH2MHILL Constructors, Inc.), 2003. Interim Removal Action Report, Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, Naval Air Station Pensacola, Pensacola, Florida September.

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TtNUS, 2004a. Site Characterization Report (Site 43) Naval Air Station Pensacola, Pensacola, Florida January 2004

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University of Florida, 2004. Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C. Center for Environmental & Human Toxicology, Gainesville, Florida, February 26, 2004

APPENDIX A

HISTORIC DOCUMENT CD

- Geophysical Investigation of Buried Drum Area Site 10 (West), Naval Air Station Pensacola (Ensafe/Allen & Hoshall, 1994).
- Site Characterization Report (Site 43) Naval Air Station Pensacola, Pensacola, Florida (TtNUS, 2004).
- Interim Removal Action Report Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, Naval Air Station Pensacola, Pensacola (CCI, 2003).

TECHNICAL MEMORANDUM

**Geophysical Investigation of Buried Drum Area
Site 10 (West), Naval Air Station Pensacola**

September 14, 1994

Prepared by:

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on behalf of the U.S. Navy
CLEAN Contract #N62467-89-D-0318
CTO - 070

SUMMARY

Responding to the discovery of several buried drums at the southwest corner of Murray and Taylor roads, west of Site 10 at Naval Air Station Pensacola, EnSafe/Allen & Hoshall conducted a gradient magnetics geophysical survey to define the extent of drum burial. The survey identified a 100-foot-by-120-foot zone where drums might be present. Excavating this zone is recommended. A large part of the study area appears to be clear of drums, suggesting that this may not be an extensive site of systematic disposal, but more likely is limited in size and the number of drums disposed of.

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1.0 INTRODUCTION

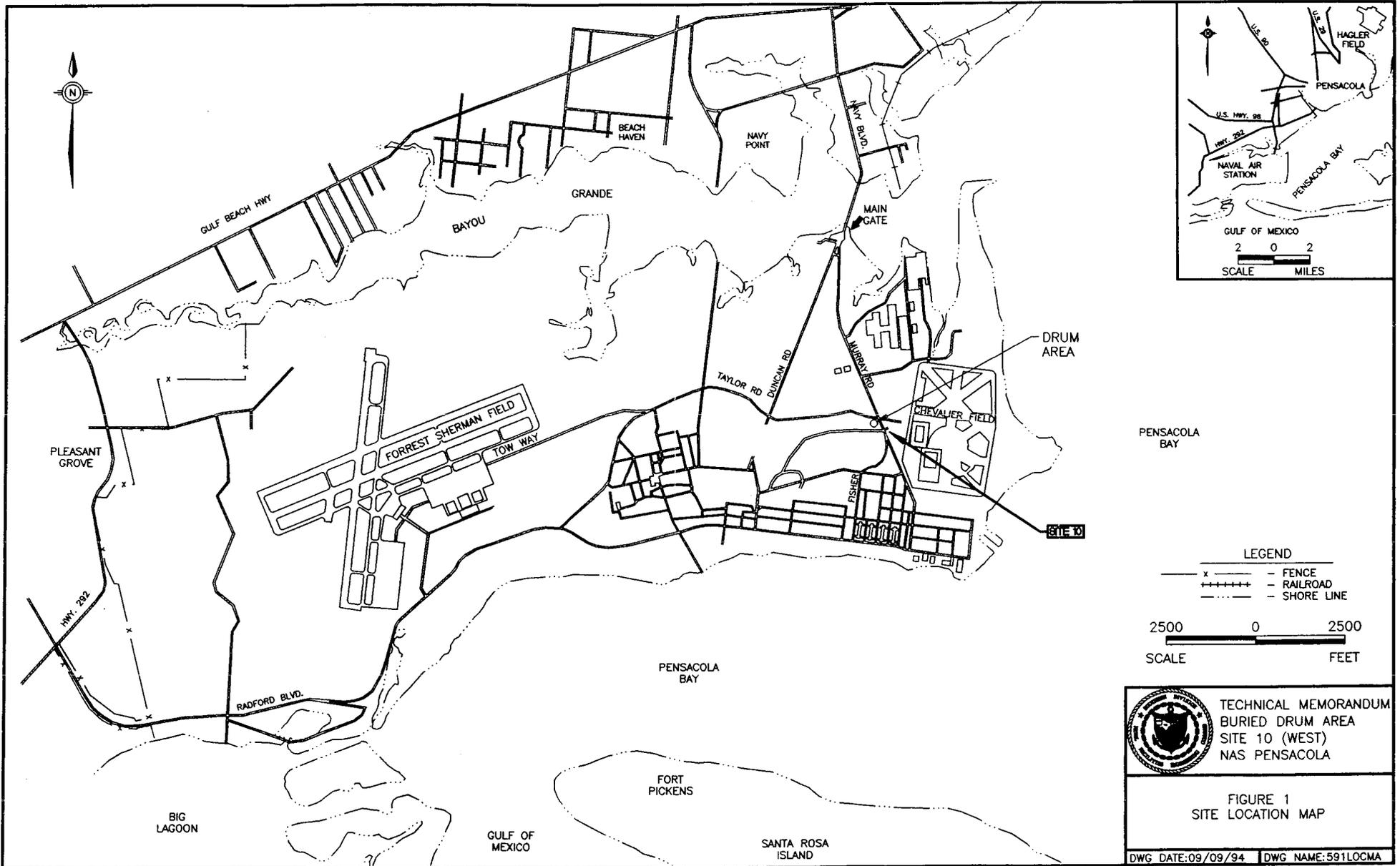
As a part of the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract with the United States Navy, EnSafe/Allen & Hoshall conducted a geophysical survey in March 1994 to investigate an area where several buried drums were discovered at Naval Air Station (NAS) Pensacola in Pensacola, Florida. The survey area lies west of Site 10, on the southwest corner of Murray and Taylor roads (see Figure 1). This Technical Memorandum describes the investigation of this area and recommends followup action.

2.0 SITE HISTORY

In December 1992, a child playing with a metal detector discovered a drum exposed at the surface just east of the tennis court. As a result of the discovery, the area was fenced to prevent access until the present investigation could be made.

Geophysics was applied to this site because it is non-invasive and can provide a comprehensive overview of potential buried drum locations relatively quickly and inexpensively. The objectives of the investigation were to:

- ▶ Determine the areal extent of the disposal area.
- ▶ Determine if this is a larger drum disposal area or if only a few drums are present.



3.0 METHODS

Magnetic Field Measurements

The study was done with a gradient magnetics geophysical survey, which responds exclusively to ferrous metals. This type of survey measures two magnetic parameters: the total magnetic field and the vertical magnetic gradient.

The *total magnetic field* has units of nanoTeslas (nT). By far the largest contribution to this measurement is the earth's magnetic field, which is roughly 50,000 to 52,000 nT in the southeast United States. Superposed on this large signal is a much smaller signal from local buried and above-ground metals. A buried object such as a drum can be thought of as a large, weak magnet with a positive pole at one end and a negative pole at the other. Depending upon the orientation of the drum and the position of the magnetometer at the surface, the drum magnetic field may add to or subtract from the earth's magnetic field value. By making sufficient measurements from the surface, the overall pattern of positive and negative anomalies can be mapped and the drum position and depth can be estimated.

The response of a buried drum varies greatly with the degree of remanent magnetism imparted by manufacture, the integrity of the drum, and its orientation and depth. Field experience shows that drums near the surface exhibit anomalies in the 20 to 200 nT range. Modern magnetometers can detect a single drum at up to 5 meters deep in the absence of noise.

An interfering factor in magnetic field measurements is "drift" caused by variations in solar activity. During solar storms, and particularly during peaks in the 11-year solar activity cycle, particles are ejected in a plasma from the sun's atmosphere and are blown outward by the solar wind. Some of these particles are trapped in the earth's magnetic field and flow down the earth's field lines into the atmosphere. This causes a current to flow, and hence a secondary magnetic field that varies with time. Solar pulsations can range from a few seconds to years in duration, and magnitudes during a single day can exceed 500 nT, although 10 to 100 nT is more

normal during "quiet" solar periods (as is the case for this year). In studies where the total magnetic field is the chief parameter to be interpreted, considerable effort is needed to correct for magnetic drift.

Another interfering factor is instrument noise. Most instruments can detect field changes as small as 0.1 nT, but slight variations in positioning of the sensor and other factors make the practical field noise threshold significantly larger. A good rule-of-thumb is that the smallest detectable field is about ± 1 nT.

The *vertical magnetic gradient* has units of nanoTeslas per meter (nT/m). Two magnetometer sensors are mounted at a fixed separation on a vertical pole. Each sensor measures the total magnetic field. The gradient is the difference in the two sensor readings, normalized to a 1-meter (m) separation. Gradient measurements have several strong advantages. First, since each of the two sensors responds equally to solar pulsations, these effects are removed from the gradient parameter. Similarly, strong magnetic effects from distant buildings and other magnetic features also are minimized in gradient data. However, for localized sources such as a drum, the lower sensor sees a stronger signal than the upper sensor, resulting in a gradient anomaly. In effect, gradient data separate local anomalies from regional anomalies. Most environmental applications are thus well served by making gradient measurements.

In a completely magnetic-free environment, the gradient is zero. Buried drums have responses of 10 to 200 nT/m, and the sign can be positive or negative, depending upon the drum's orientation and magnetic polarity. Practical field repeatability is about ± 1 nT/m.

Noise Sources

It is a rare project where the only metallic objects are buried drums. Nearly every site has other metallic debris, which is considered "noise" in terms of drum recognition. Chief among these is "culture," or man-made features such as buried pipes, cables, electric lines, fences, culverts,

light poles, reinforced concrete, etc. Culture is widespread at most environmental sites and can render magnetic measurements useless in certain cases.

In addition, there is the problem of surface clutter. Usually if drums are buried at a site, one also finds other metallic debris. Smaller items often can be distinguished from drum-sized objects, but in cases of extreme clutter this is difficult.

Technical Approach

The total magnetic field and the vertical gradient were measured with a GEM Systems GSM-19 proton-precession gradiometer with an Overhauser device. Data were obtained on a 10-foot-by-10-foot grid, which was tied to official NAS Pensacola easting/northing coordinates using the Navy CLEAN global positioning satellite (GPS) system. Two sensors were mounted on a vertical pole at a fixed separation of 56 centimeters (cm); the lower sensor was 2.2 m above ground surface. Measurements took only a few seconds, including the time required to walk to the next station. The data were stored automatically in a data recorder and were displayed on the instrument for evaluation of data quality and identification of anomalies. Data were transferred to a personal computer for processing and screen display.

In all, 1,575 measurements were made. An additional quantity of quality assurance (QA) and quality control (QC) measurements also was obtained.

QA/QC Results

Data accuracy is not directly checked in geophysical work because data precision is of far greater importance to detecting and interpreting field anomalies. Data accuracy is assured by proper factory construction and calibration of the instrument.

Data precision was checked 11 times throughout the two-day survey by repeating data at 11 stations along a baseline (Line 3300E, stations 3500 to 3600). The average standard

deviation for all the repeated gradient data was ± 0.59 nT/m. The baseline crossed an "anomalous" and a "background" area; precision over the anomaly was slightly poorer than in the background area (± 0.75 nT/m vs. ± 0.50 nT/m, respectively), because slight positioning variations result in large data changes near an anomaly. The worst standard deviation at any single station was ± 1.13 nT/m. Hence, one can consider the worst-case repeatability to be about ± 1 nT/m. This is far smaller than the expected response from a single drum.

Magnetic drift due to solar activity also was monitored in the baseline data. Drift is a minor issue since it does not affect the gradient parameter, which is used for the present interpretation. For the record, drift in the total magnetic field parameter at station 3300E/3500N was small and fairly slow. The total field there averaged $50,097.0 \pm 12.6$ nT over the course of the survey. Although there is no reason to do so now, the repeated data provide sufficient information to correct the total field measurements for drift.

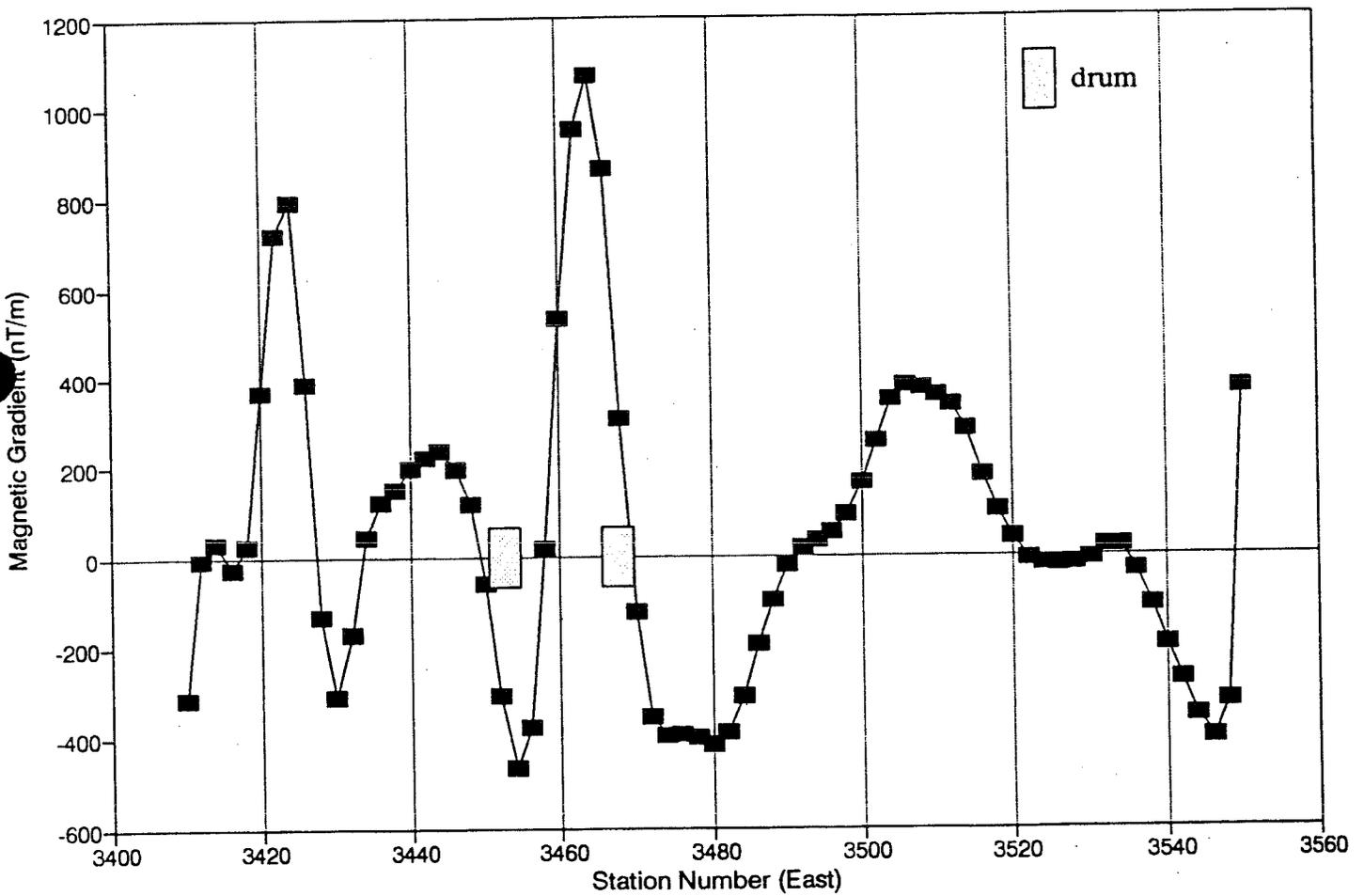
Spatial aliasing is a more important consideration. Aliasing occurs whenever sampling is done at a cruder interval than the variations being measured. The result is a hit-and-miss pattern of anomalies, with some resolved and others unresolved, depending upon the coincidental locations of sampling points. A familiar example of this in environmental work is soil sampling, during which one rarely has the luxury of having enough sample points to resolve all contaminant variations in an area (instead, a quasi-statistical sampling approach is often used to show the extent of contamination and, in some cases, to statistically sample the contaminant population).

An aliasing check was made by obtaining data at 2-foot increments along line 3588E inside the fenced drum area. This test line crossed two partially buried drums. Figure 2 shows the magnetic gradient data along the aliasing test line. The 2-foot station density defines a number of smoothly varying anomalies. The width of the smallest anomaly is about 6 feet, although most are wider than 10 feet. Thus, with a sampling density of 10 feet, one would encounter a moderate aliasing effect. However, the objective of this work is to define the areal extent of

drum burial; it is not necessarily helpful or cost-effective to achieve full definition of every small anomaly (indeed, "noise" from surficial metal debris and underground pipes prevent such detailed definition in many areas). In light of the overall objective, then, aliasing has little practical impact on the final results.

Figure 2 also shows a *typical drum response*, with positive-to-negative "crossovers" in the gradient data over the two known drums. This response is quite typical of data obtained over buried metals on north-facing lines. Anomaly amplitudes are as small as 200 nT/m and as large as 1,000 nT/m. These rather large anomalies may be enhanced by underground pipes or metal debris at the surface. But the test line serves as a template for recognizing other potential drum anomalies.

Figure 2
Aliasing Test, Line 3588E



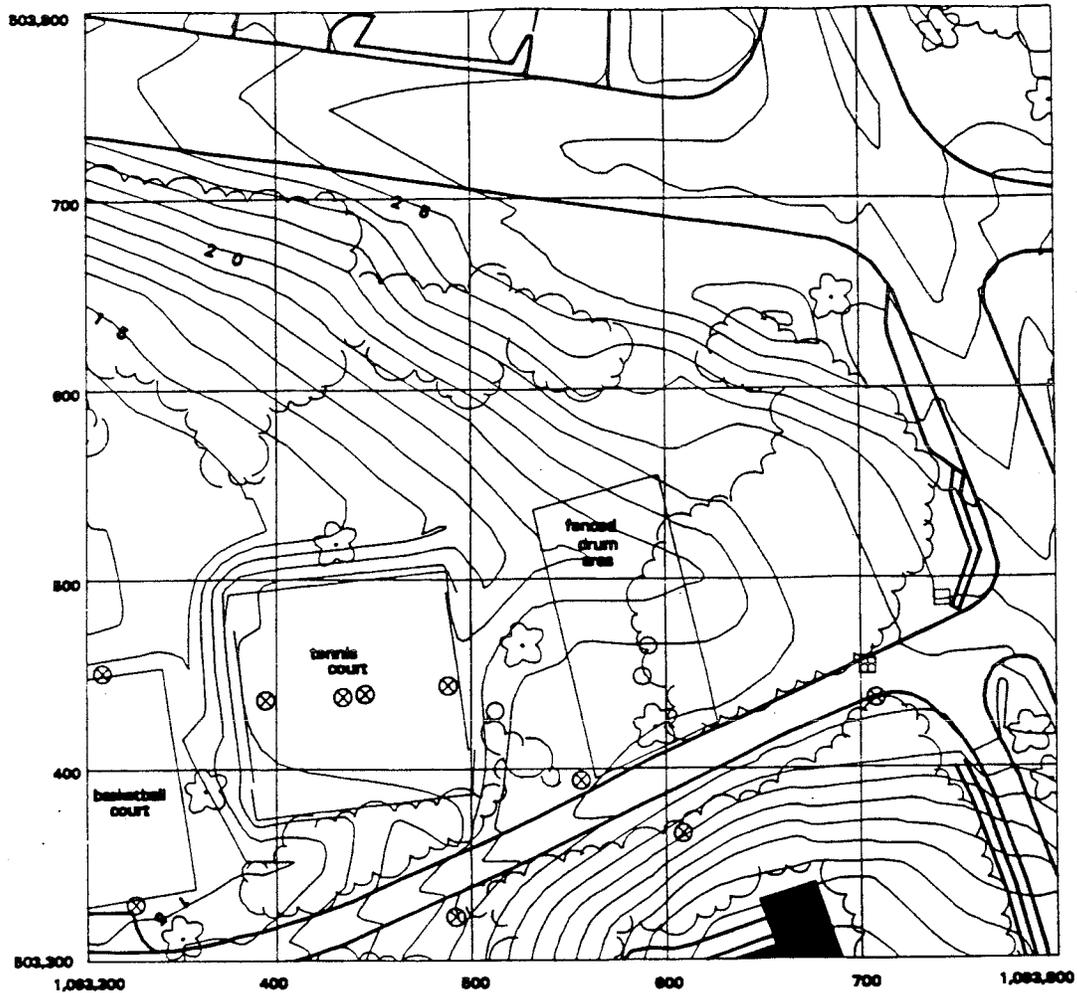
4.0 SUMMARY OF FINDINGS

The survey included a visual site inspection. The survey area is mostly planted with grass and contains a tennis court, an unfenced basketball court, and access roads to the officers' quarters. Two partially buried drums were observed inside the fenced area (see Figure 3 for locations). One of these drums is in a vertical position; its end is punctured, revealing standing water inside it. The second drum also may be vertical. A third iron object resembling a drum rim was observed between the fenced area and the tennis court. The terrain near these three objects is slightly hummocky. Smaller, rusted metal debris was observed at the surface, suggesting this was a minor disposal area. No odors, visible staining, or other indications of a contaminant release were observed here.

Figure 4 shows the total magnetic field, with no drift correction applied. Since the magnetic gradient parameter is the most definitive data set, comments are confined to those data. Trends in the two data sets are similar.

Figure 5 shows the vertical gradient of the magnetic field. A clear overlay is provided to reference key topographic features and metal objects that may affect the data. Small gradient values are in yellow-green, yellow, and yellow-orange; these can be regarded as "background" responses. Warmer colors (orange to purple) indicate significant positive gradients (i.e., above background); cooler colors (green to dark blue) indicate significant negative gradients (below background). Both positive and negative gradients are regarded as potential indicators of buried metals.

The strongest magnetic responses are from culture. Dominant among these are the very strong anomalies around the fences. Several linear features are underground utility lines. The linear feature extending off to the northwest portion of the area is most likely a buried phone cable. Its clumpy "string-of-pearls" appearance is an artifact of spatial aliasing, in which some data points happened to lie right over an anomaly crest, while others were on an upward or



Legend

- Metallic Grate
- Metallic Box
- ⊗ Metallic Pole
- Suspected or Known Drum



Technical Memorandum
 NAS Pensacola
 Pensacola, Florida

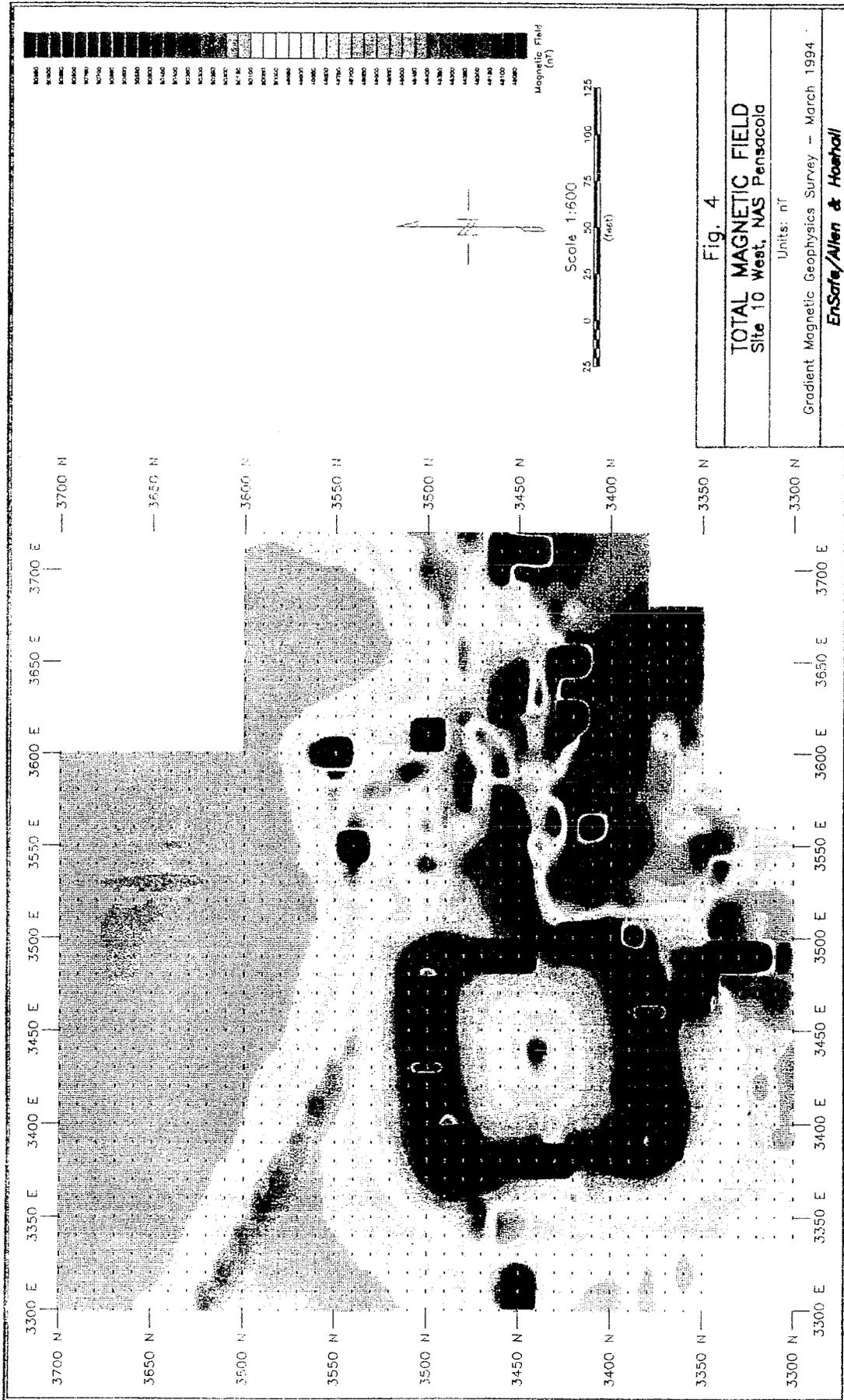


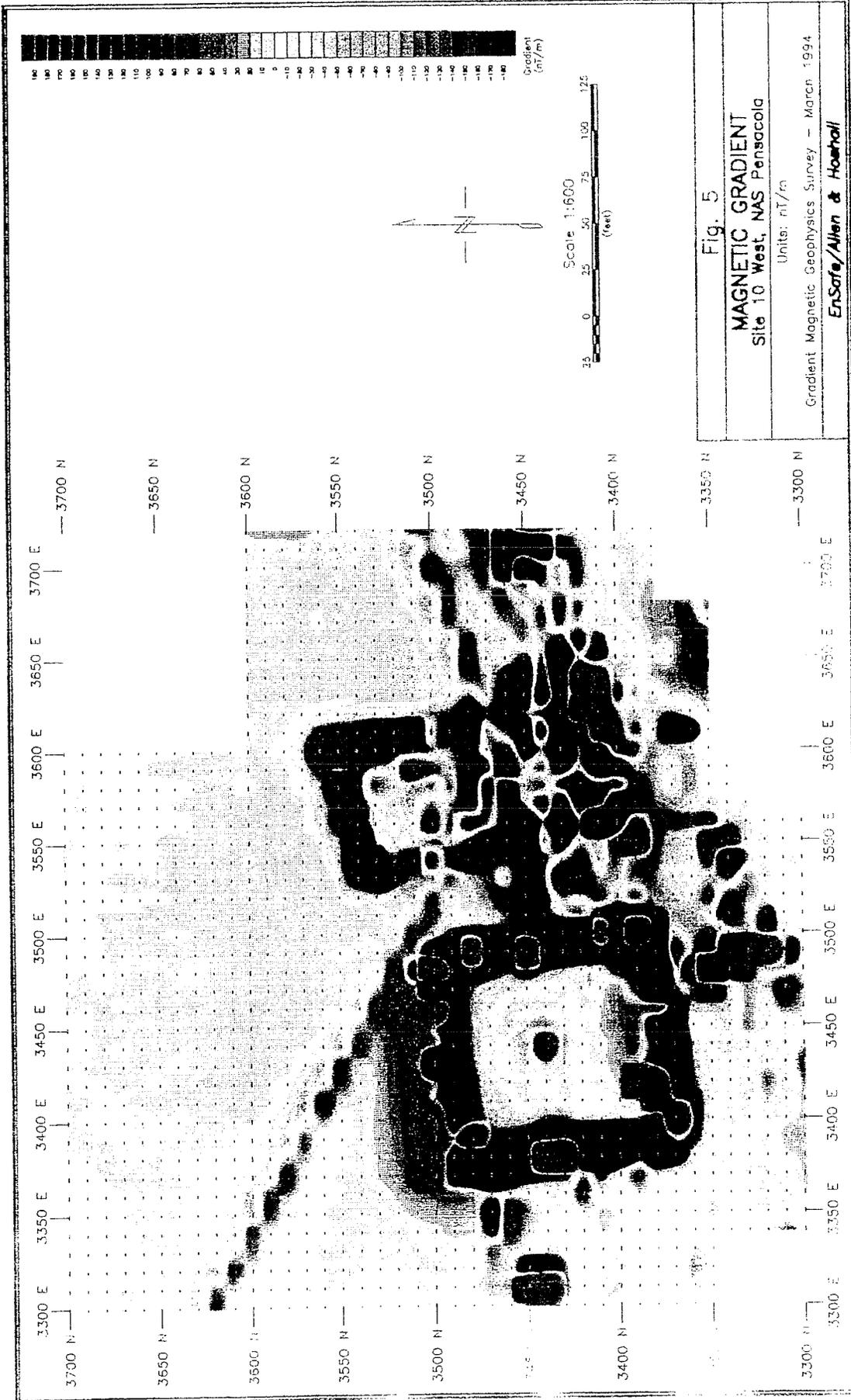
Figure 03
 Geophysics Survey
 Buried Drum Area, Site 10 (west)

Date: 28 APR 94

AM: larry10

Technical Memorandum
 Drum Area, Site 10 (West)
 NAS Pensacola
 September 14, 1994





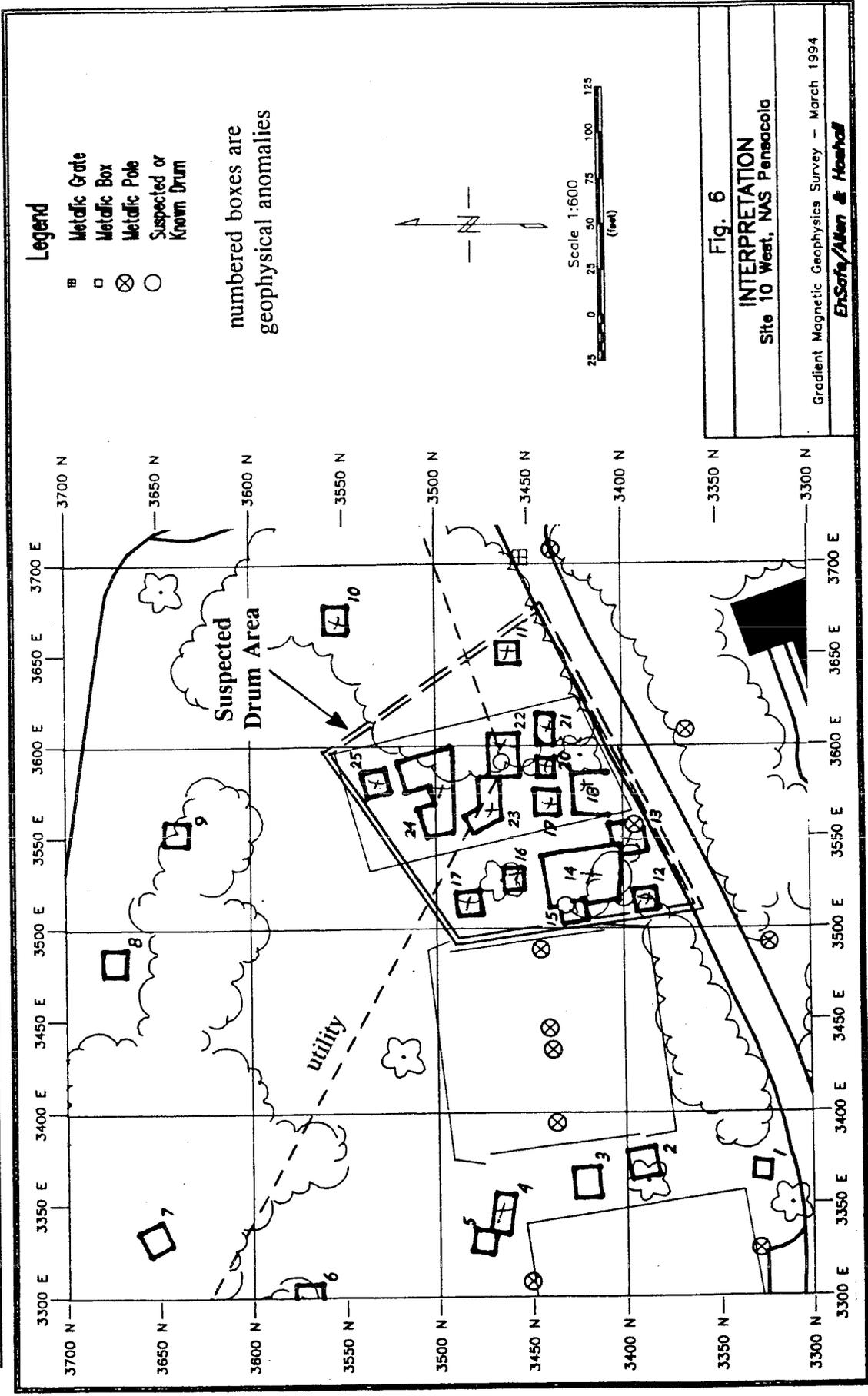
downward slope of the anomaly. A number of strong local anomalies lie along the access road to the south, which has subsurface cables, electric lines, and storm and sewer utilities. Finally, many metal poles, light fixtures, and storm grates produce strong anomalies.

Superposed on these anomalies attributed to culture are subtler anomalies, some of which are believed to be the result of buried metals. Figure 6 shows the interpretation of anomalies not likely to be caused by culture. It is possible that other anomalies have gone unrecognized near heavy culture, especially in the area's southern portion.

Anomalies 1 to 5 lie east of the basketball court; all but Anomaly 1 are strong and well-defined, and a near-surface source is indicated for all of them. Anomaly 4 should be investigated with a shovel or hand tool (see safety note in conclusions section).

Anomalies 6 to 10 are small-amplitude features in a broad area otherwise interpreted to be free of metal drums. These anomalies are smaller than a typical drum anomaly and are likely to be caused by a small piece of shallowly buried metal. However, one of these features should be excavated to confirm this interpretation (Anomaly 10 is the best candidate due to its proximity to the drum enclosure area).

Anomalies 11 to 25 have the amplitude and appearance consistent with buried drums, although it is quite possible that some are caused by other metal debris. Based on the data alone, there is no reason to consider any of these anomalies more likely to be caused by a drum than others. Instead, all of these features are worthy of investigation.



Legend

- ▣ Metallic Grate
- Metallic Box
- ⊗ Metallic Pole
- Suspected or Known Drum

numbered boxes are
 geophysical anomalies

Fig. 6

INTERPRETATION
 Site 10 West, NAS Pensacola

Gradient Magnetic Geophysics Survey - March 1994

EnSofy/Allen & Hornel

Due to the presence of metal debris at the surface and the fusion of some anomalies, it is not possible to estimate the number of drums present. In most cases the causative metal object, whether drum or some other metal object, appears to be fairly shallow. Typical estimated depths are 5 feet or shallower.

Figure 6 shows the interpreted boundary enclosing possible drum anomalies. The east and south sides of this boundary are particularly uncertain due to interference from underground pipes. This area, which measures roughly 100 by 120 feet, is recommended for excavation to 5 feet to search for buried drums. Full excavation or a few well-placed trenches both should suffice to sample this area. Note that the area extends outside the fence.

5.0 CONCLUSIONS

A large section of land on the north half of the surveyed area is interpreted to be free of drums, with the unlikely possibility of drums at anomalies 6 to 10. Although cultural clutter precludes a definitive interpretation, anomalies of the type one might expect of drums are mostly confined to an area about 100 by 120 feet in size. Taken as a whole, the survey suggests this area is not one of systematic and widespread drum disposal, but is limited in areal dimensions and in the number of disposed drums.

The area of possible drums, defined in Figure 6, should be explored by trenching. If drums are found on the south or east parts of the fenced area, the excavation should be extended past the area shown. Caution should be exercised, as the geophysics indicates underground utilities are present in the areas to be dug up.

Although less likely to be drums, anomalies 4 and 10 also should be investigated with shovel or hand tools to confirm a non-drum source. In the unlikely event that a drum is found at one of these anomalies, the data will need to be re-evaluated to identify subtler anomalies that might require investigation.

The fenced drum area gate has no lock on it. Installing one for safety and site security is recommended.

Site Characterization Report (Site 43)

**Naval Air Station Pensacola
Pensacola, Florida**



**Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0096**

January 2004

**SITE CHARACTERIZATION REPORT
(SITE 43)**

**NAVAL AIR STATION
PENSACOLA
PENSACOLA, FLORIDA**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

**Submitted by:

Tetra Tech NUS, Inc.
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**CONTRACT NO. N62467-94-D-0888
CONTRACT TASK ORDER 0096**

January 2004

PREPARED UNDER THE SUPERVISION OF:

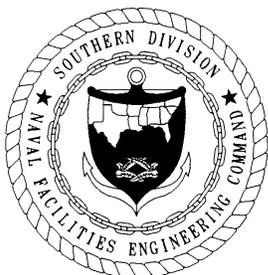


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FOREWORD

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment. With growing knowledge of the long-term effects of hazardous materials on the environment, the U. S. Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at its facilities.

One of these programs is the Installation Restoration (IR) program. This program complies with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA), the Resource Conservation and Recovery Act, and the Hazardous and Solid Waste Amendments of 1984. These acts establish the means to assess and clean up hazardous waste sites for both private-sector and federal facilities. The CERCLA and SARA acts form the basis for what is commonly known as the Superfund program.

Originally, the Navy's part of this program was called the Naval Assessment and Control of Installation Pollutants (NACIP) program. Early reports reflect the NACIP process and terminology. The Navy eventually adopted the program structure and terminology of the standard IR program.

The IR program consists of Preliminary Assessment (PA) and Site Inspections (SIs), Remedial Investigation (RI) and Feasibility Study (FS), and Remedial Design (RD) and Remedial Action (RA) at sites where chemicals were allegedly spilled or disposed of. The PA and SI identify the presence of pollutants. The nature and extent of contamination as well as the selected remedial solutions are determined during the RI/FS. The RD and RA are performed to complete implementation of the solution.

The Southern Division, Naval Facilities Engineering Command manages and the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection (formerly the Florida Department of Environmental Regulation) oversee the Navy environmental program at Naval Air Station (NAS) Pensacola. All aspects of the program are conducted in compliance with state and federal regulations, as ensured by the participation of these regulatory agencies.

Questions regarding the CERCLA program at NAS Pensacola should be addressed to Mr. William Hill, Code 1851, at (843) 820-7324.

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ACRONYMS

BLS	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COMPQAP	Comprehensive Quality Assurance Plan
DEL	Direct Exposure Limit
DOT	Department of Transportation
DPT	Direct Push Technology
E/A&H	EnSafe/Allen and Hoshall
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
GPS	Global Positioning System
ID	Inner Diameter
IR	Installation Restoration
MSL	Mean Sea Level
NAD	North American Datum
NAS	Naval Air Station
NAVD	North American Vertical Datum
NTU	Nephelometric Turbidity Unit
PCB	Polychlorinated Biphenyls
OVA	Organic Vapor Analysis
SARA	Superfund Amendments and Reauthorization Act
SCM	Site Conceptual Model
SCR	Site Characterization Report
SOP	Standard Operating Procedure
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SOW	Scope of Work
SVOC	Semivolatile Organics
TAL	Target Analyte List
TCL	Target Compound List
TtNUS	Tetra Tech NUS
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

Tetra Tech NUS, Inc., (TtNUS) under contract to the Department of Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) is submitting this Site Characterization Report (SCR) for Site 43 at Naval Air Station (NAS) Pensacola located in Pensacola, Florida. The SCR was prepared on behalf of the Navy at Naval Air Station (NAS) Pensacola under contract No. N62467-94-D-0888. The SCR was developed based on the results of a field investigation conducted according to the Sampling and Analysis Plan for Preliminary Site Characterization Study for Site 43 (TtNUS, 1999).

1.1 PURPOSE OF REPORT

The purpose of this SCR is to document field investigation activities associated with the Site Characterization Investigation for Site 43, and to report the results from the soil, groundwater, and drum characterization. The report also presents recommendations for further action at the site based on these findings.

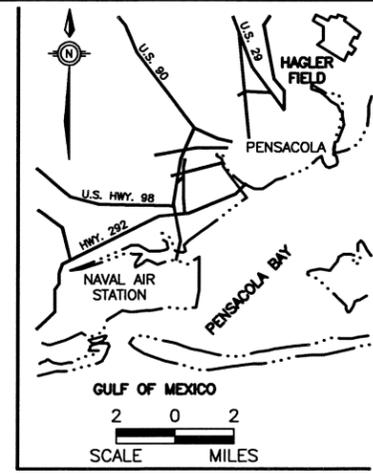
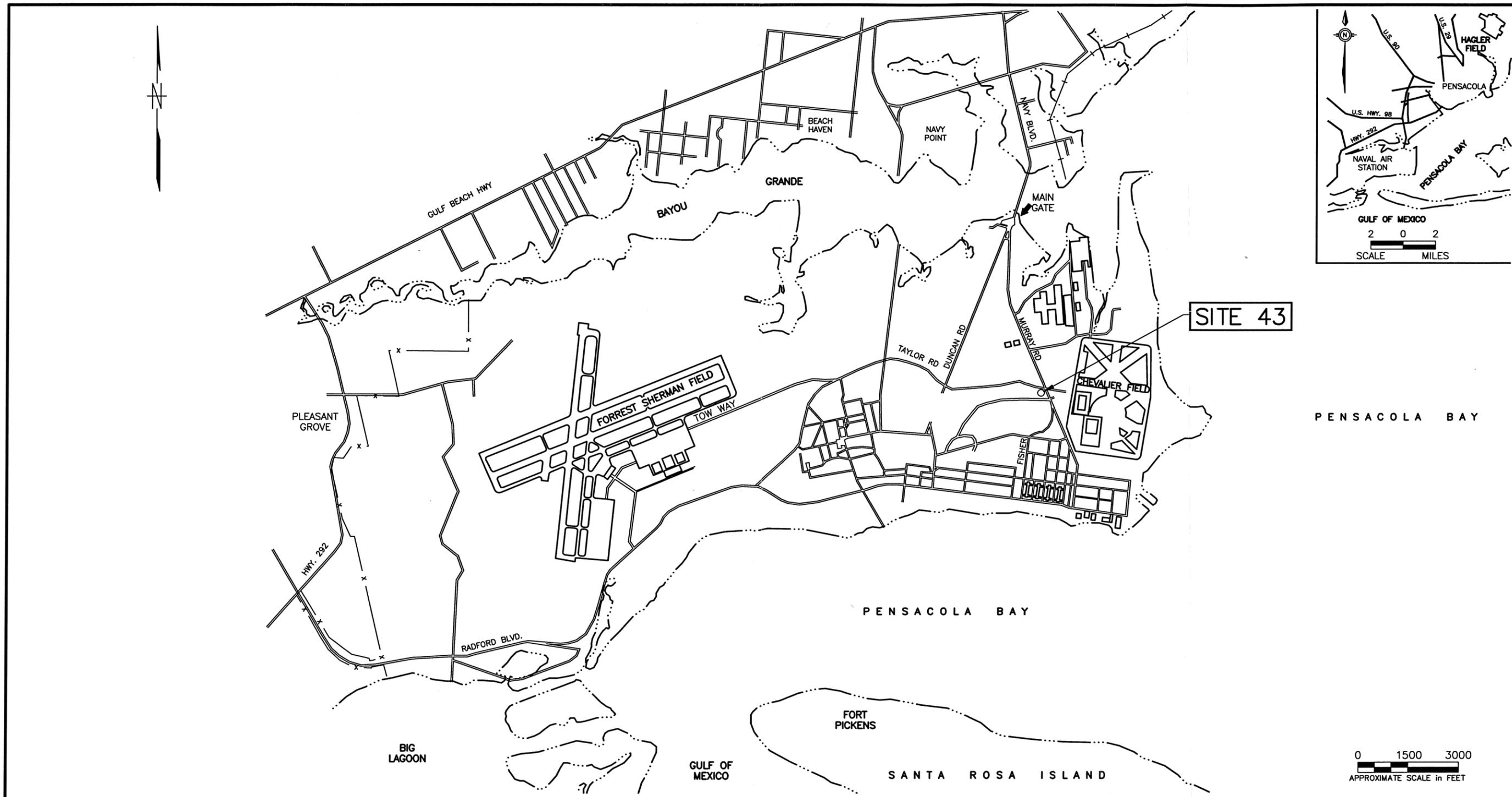
1.2 PHYSICAL DESCRIPTION OF THE SITE

1.2.1 Facility Background

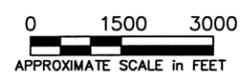
NAS Pensacola (Figure 1-1) is located in Escambia County, in Florida's northwest coastal area, approximately 5 miles west of the Pensacola City limits. The approximately 5,000-acre installation was constructed in the 1800's. Prior to construction, the facility was undeveloped and sparsely vegetated. Land use at NAS Pensacola consists of various military housing, training, and support facilities as well as large industrial complexes for major repairs and refurbishment of aircraft engines and frames. The subject site is located at the southwest corner of Murray and Taylor Roads. The historical usage of the site was to dispose of metallic wastes resembling drums of unknown contents. Details on the NAS Pensacola facility may be found in the facility administrative record.

1.2.2 Site Description

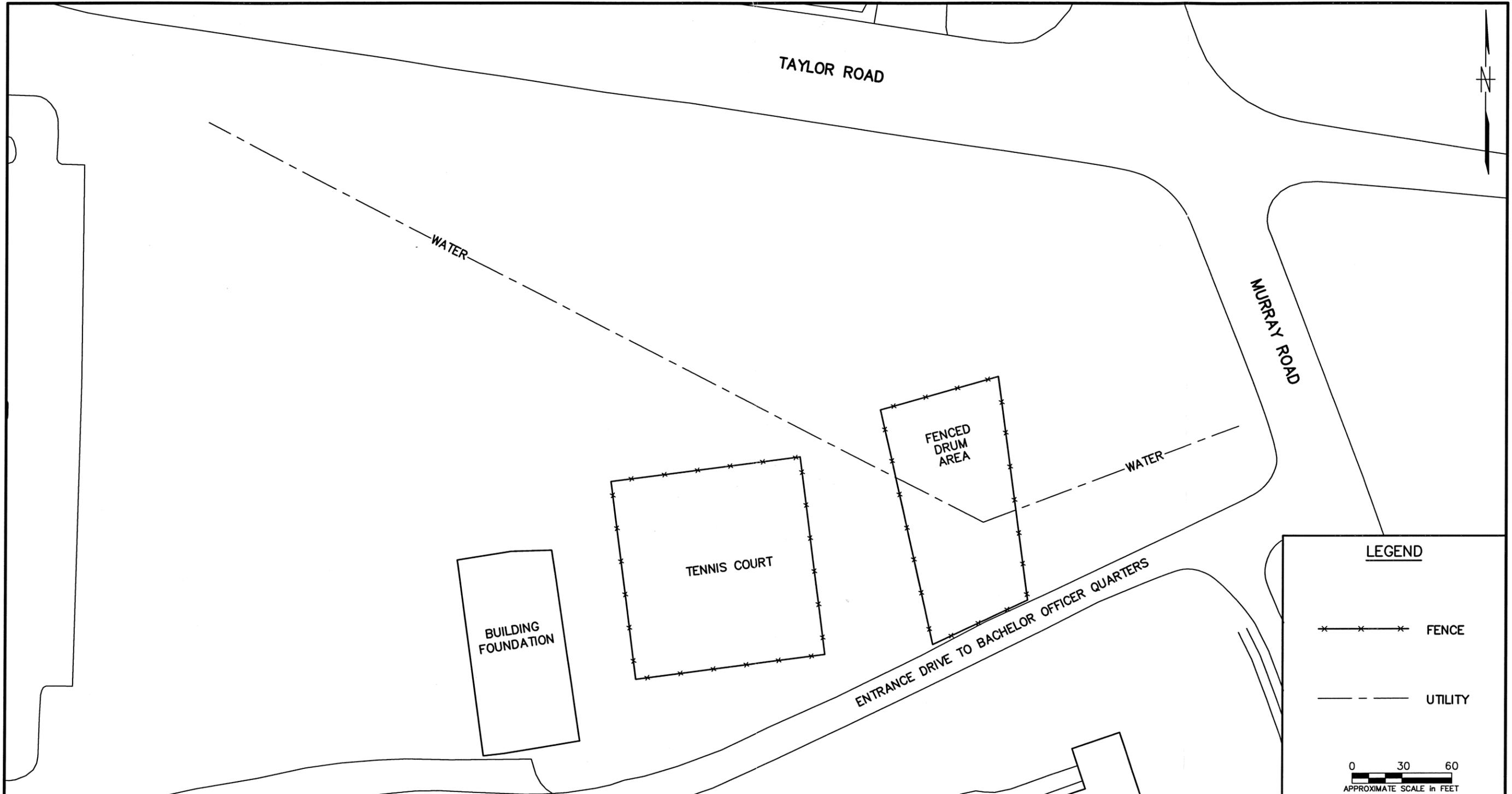
Site 43 (Figure 1-2) is located at the southwest corner of Murray and Taylor Roads, and currently consists of an area approximately 200 feet by 200 feet in size. The site is planted with grass and contains a tennis court, an old building foundation, and access roads to the officers' quarters. In December 1992, a child playing with a metal detector discovered two partially buried drums exposed at the surface just east of the tennis court. One drum was reported to be in a vertical position; its end punctured revealing standing water in the interior. The second drum was observed to be intact in a vertical position. A third iron object resembling a drum rim was observed between the fenced area and the tennis court. Smaller, rusted metal



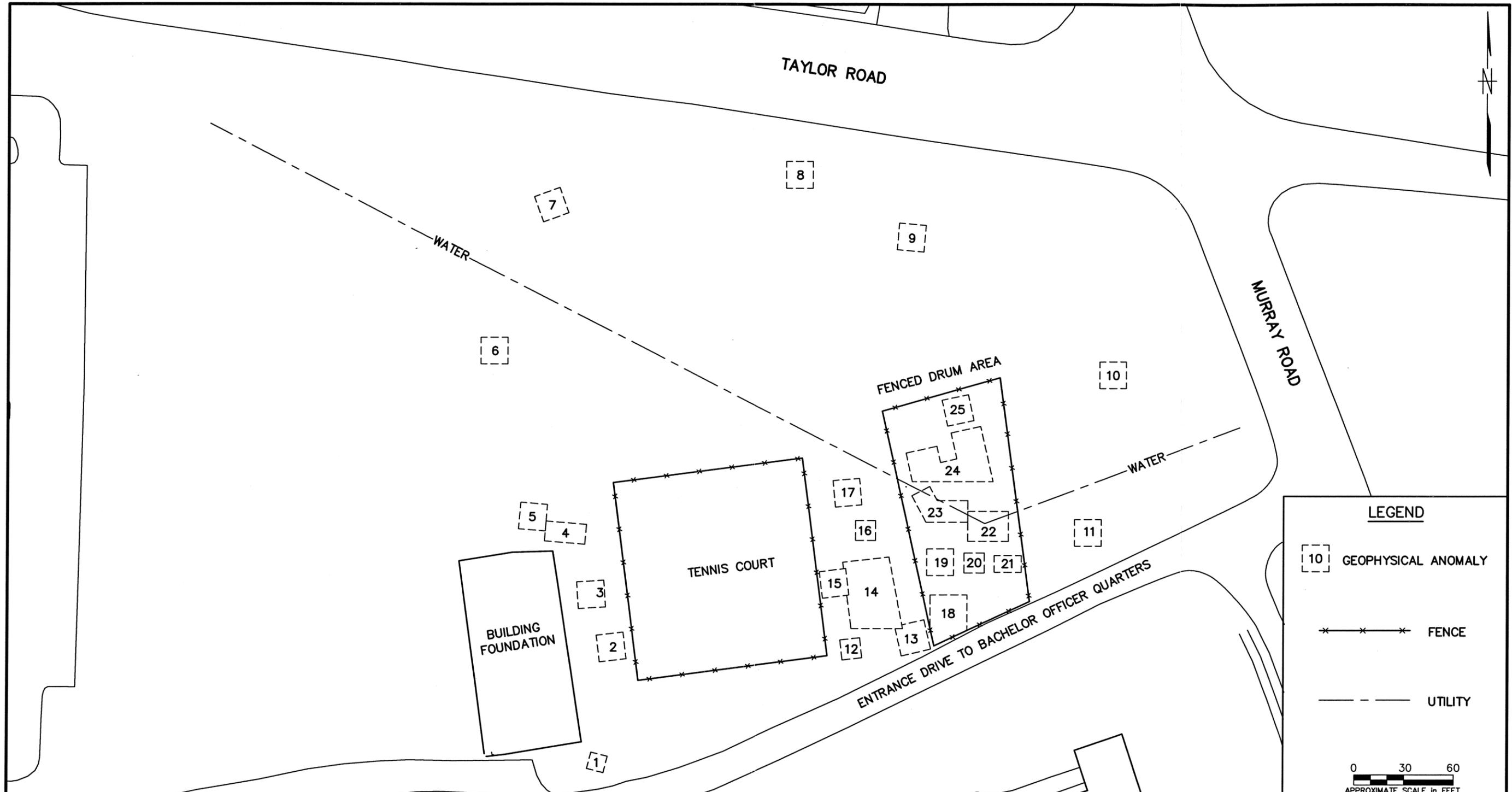
PENSACOLA BAY



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		SITE VICINITY MAP SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO.	
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									FIGURE 1-1	0		



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LEGEND

10 GEOPHYSICAL ANOMALY

—x—x—x— FENCE

--- UTILITY

0 30 60
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>GEOPHYSICAL ANOMALY LOCATIONS SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	
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									FIGURE 1-3	0	

debris was observed at the surface indicating the presence of a possible landfill. No odors, visible soil stains, or other indications of contaminant release were observed at the time the drums were discovered. The area was fenced to prevent general access until further investigations could be conducted.

1.2.3 Previous Investigations

EnSafe/Allen & Hoshall conducted a geophysical investigation in March 1994 using gradient and total magnetic surveys (E/A & H, 1994) to provide the locations of potential buried metal objects, including drums, relatively quickly. The objectives of the investigation were to determine the areal extent of the drum disposal area and to evaluate if it was extensive or limited in area. The geophysical survey was performed using a gradient magnetic geophysical survey, which responds exclusively to ferrous metals. The total magnetic field and vertical magnetic gradient were measured during the survey.

Results of the geophysical investigation identified metal anomalies consistent with metal drums in an area approximately 100-feet by 120-feet as a possible drum disposal area. A large section of land in the north half of the surveyed area was interpreted as free of drums. Although cultural clutter (buried utilities, metal fences, poles, buildings, etc.) precluded a definitive interpretation. Figure 13 shows the locations of anomalies identified during this geophysical investigation.

The magnetic anomaly data indicated the disposal area did not contain systematic disposal areas, rather the anomalies were limited in number and randomly dispersed. The actual number of drums disposed in the area could not be determined. The report recommended that the drum disposal area, as well as several anomalies discovered outside the disposal area, should be further explored by trenching to a depth of 5 feet. Other anomalies less likely to be drums should be investigated with hand-tools.

1.3 REGULATORY SETTING

The Naval Installation Restoration (IR) program was designed to identify and abate or control contaminant migration resulting from past operations at naval installations, with the goal of expediting and improving environmental response actions while protecting human health and the environment. The IR program is conducted in accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. CERCLA requires that federal facilities comply with the act, both procedurally and substantively. Site 43 was investigated as part of CERCLA requirements.

1.4 REPORT ORGANIZATION

The SCR is organized into seven chapters (Chapters 1.0 to 7.0). Chapter 1.0 presents the purpose, site description, and regulatory setting for the Site Characterization at NAS Pensacola. Chapter 2.0 summarizes site conditions. Chapter 3.0 presents the investigative methodologies that were used to conduct the assessment. Chapter 4.0 discusses the nature of contamination. Chapter 5.0 presents the conclusions and recommendations. Chapter 6.0 includes the Professional Review Certification. Chapter 7.0 includes the references used in preparing this report. Supporting data are provided in the Appendices.

2.0 SITE CONDITIONS

2.1 PHYSIOGRAPHY

Site 43 lies at the southwest corner of the intersections of Murray and Taylor Roads. The area covers approximately 40,000 square feet and the site elevation is approximately 20 feet above mean sea level (msl). The site lies in a low area between these two roads and across the street from the entrance to the Officers' Quarters. The land situated within the fenced portion of the site is grassy and overgrown with vegetation. The land outside the fenced area is grassy with mature trees and is maintained by the Navy Public Works Center. The site also contains a fenced in tennis court area and an unfenced old building foundation.

2.2 HYDROGEOLOGY

2.2.1 Regional

Naval Air Station (NAS) Pensacola is located in the extreme southeastern portion of Escambia County, Florida, which lies within the Coastal Plain Province of the United States. As described in the *Initial Assessment of NAS Pensacola* (Naval Energy and Environmental Support Activity [NEESA], 1983), NAS Pensacola lies within the coastal lowland that is characterized by a series of broad, nearly level marine terraced that extend several miles from the coast and merge with the narrow terraces along the Escambia and Perdido Rivers. NAS Pensacola is bordered on the south by Big Lagoon, on the east by Pensacola Bay, and on the north by Bayou Grande. Swampy areas exist on or near the western portion of NAS, and man-made drainage ways and storm drains feed into the short intermittent streams emptying in to the bay and bayou. No perennial streams enter or exit the NAS, but the marshy areas and three small lakes retain water throughout the year. The general elevation of NAS Pensacola is approximately 40 above msl.

The surficial geology of the area consists of Pleistocene marine deposits made up of light brown to tan fine quartz sand with associated stringers of and lenses of gravel and clay. Underlying these deposits, increasing with age, are the Citronelle Formation, the Miocene Coarse Clastics, the Pensacola Clay, the Tampa Formation, the Chickasawhay Limestone, the Bucatunna Clay member of the Byram Formation, the Ocala Group, the Lisbon equivalent, the Tallahatta Formation, and the Hatchetigbee Formation. The Pleistocene deposits and Citronelle formation are often impossible to differentiate, and together range in thickness from approximately 30 feet to 800 feet across the county (NEESA, 1983).

The groundwater is under artesian conditions where layers of clay, sandy clay, or hardpan are present, and under non-artesian conditions where such clays and hardpans are absent. Water levels in the shallow aquifer range from zero to approximately 30 feet bls across in the NAS Pensacola area. The groundwater flow has

historically been found toward the Gulf of Mexico and the Escambia and Perdido rivers although groundwater flow can vary locally due to the effect of topography or surface water bodies. The aquifer recharge is most dominantly from local precipitation. The Floridan aquifer is separated from the sand and gravel aquifer by a thick section of clay and is subdivided into two parts, upper and lower, by an extensive clay bed.

2.2.2 Site Specific

Lithologic descriptions of soil samples collected from borings advanced during the Site Characterization Investigation were used to evaluate the site specific geology. Since the deepest borings were advanced to approximately 20 feet below land surface (bls) to facilitate monitoring well installation, discussion of soil characteristics is limited to the top 20 feet of soils.

Based on lithologic descriptions from the soil samples, the subsurface soil generally consists of light to dark brown fine to medium sand with interspersed white fine sand. The water table was encountered at approximately 15 to 16 feet below land surface (bls). No cross section was constructed for this site due to the continuous lithology. Soil sample log sheets are provided in Appendix A. Boring logs are provided in Appendix B.

3.0 METHODOLOGIES AND EQUIPMENT

3.1 FIELD INVESTIGATION METHODS

The 1994 geophysical survey conducted by E/A&H indicated that an additional investigation was needed to confirm the presence or absence of additional buried drums and other metallic debris within the study area. The Site Characterization Investigation at Site 43 therefore focused primarily on the investigation of geophysical anomalies identified during this 1994 survey and to determine the associated impacts (if any) to soil and groundwater.

A variety of field investigation activities were conducted at NAS Pensacola to meet the objectives of the preliminary site characterization scope of work (SOW). The data collection activities followed the Standard Operating Procedures (SOPs) issued by the USEPA in *Environmental Investigations Standard Operating Procedures Quality Assurance Manual* (1996b). All such activities also complied with TtNUS's FDEP Comprehensive Quality Assurance Plan (COMPQAP) #980038 (1998), which was approved by FDEP on August 24, 1998. In some instances, the planned investigation activities (e.g., well construction) were not specifically addressed in the (COMPQAP); in other cases a methodology presented in the COMPQAP, or a specific step thereof, may have been deemed inconsistent with site-specific conditions or previous investigation methods used at NAS Pensacola. In these cases the United States Environmental Protection Agency (USEPA) Region 4 Environmental Investigations SOPs (USEPA 1996b), Navy technical guidance, or project-specific SOPs adopted by or prepared by TtNUS were invoked.

3.2 FIELD INVESTIGATION ACTIVITIES

The following activities were performed during this preliminary site characterization:

- Completion of test pits to investigate anomalies identified during the E/A&H survey;
- Collection of surface soil samples from each anomaly location;
- Collection of subsurface soil samples from each excavation containing a drum;
- Organic Vapor Analysis (OVA) headspace Analysis;
- Installation of soil borings and collection of subsurface soil samples using direct-push (DPT) techniques;
- Installation of direct push technology (DPT) groundwater monitoring wells in the shallow zone of the alluvial aquifer;
- Monitoring well development and collection of groundwater samples;
- Measurement of groundwater potentiometric surface;
- Location survey.

The following sections address each of these field investigation activities specifically.

3.2.1 Surface Soil Sampling

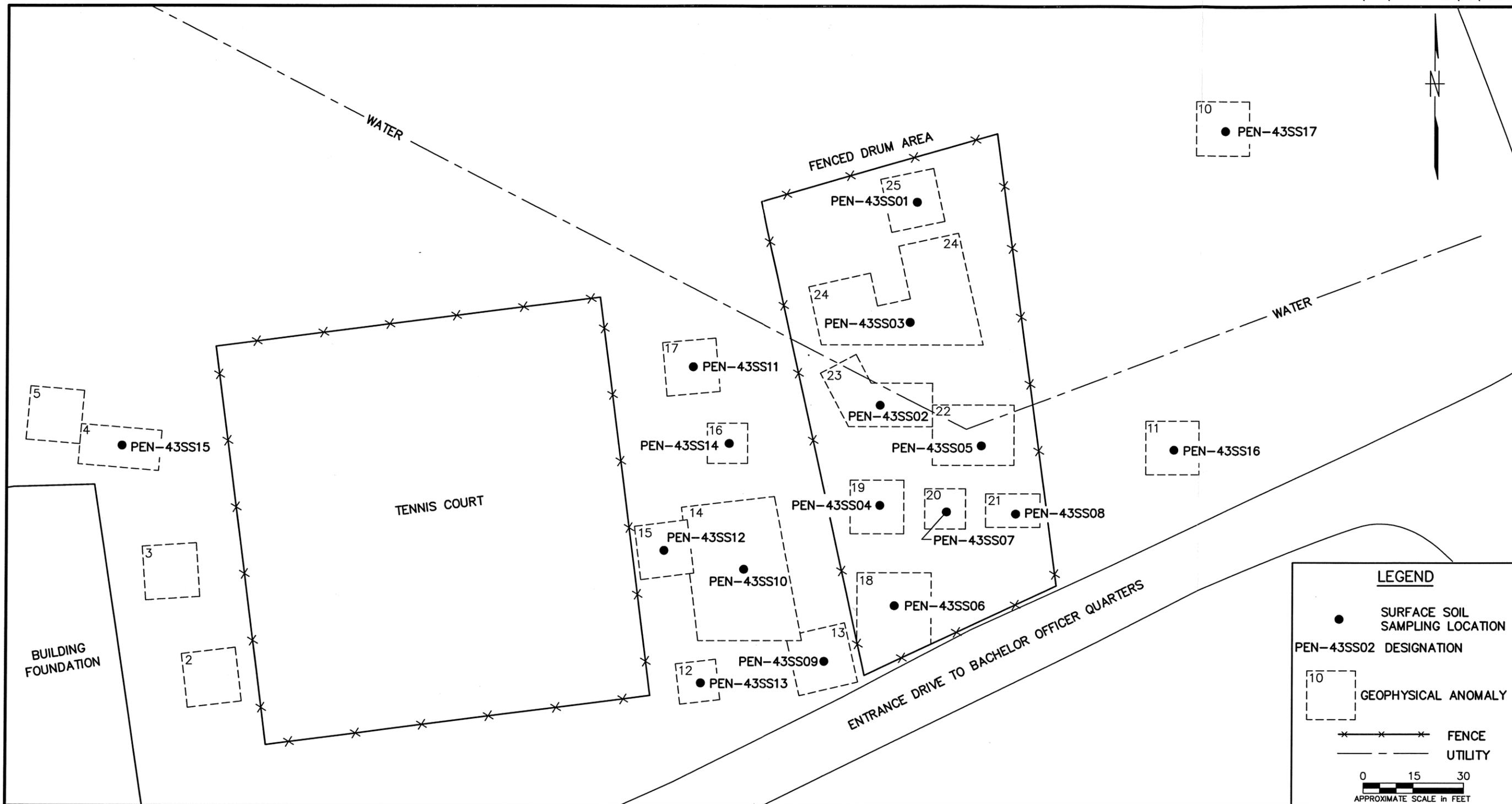
TtNUS personnel collected seventeen surface soil samples (PEN-43SS001 through PEN-43SS017) at Site 43 during the week of October 4, 1999. The samples were collected with a stainless steel spoon at each suspected anomaly location from 0-6 inches below land surface (bls). Encore[®] samplers were used to collect soil for volatile organic compound (VOC) analysis. Each sample was screened for organic vapor analysis as described in Section 3.2.2, and sent to the laboratory for analysis of contract laboratory program (CLP)- target compound list (TCL) VOCs (USEPA method 8260), semivolatile organics (SVOCs) (USEPA method 8270), pesticides and polychlorinated biphenyls (PCBs) (USEPA method 8081), target analyte list (TAL) metals and cyanide (USEPA methods SW 6010, SW7470, SW7471, SW9010, and SW9065). Quality control samples (duplicates, trip blanks, matrix spike/matrix spike duplicates, and equipment blanks) were collected where applicable. Surface soil sample locations are shown on Figure 3-1. Soil sample log sheets are found in Appendix A.

3.2.2 OVA Headspace Sampling

Soil vapor headspace analyses were performed on soil samples according to the method prescribed in FDEP Rule 62-770.200(8) of the Florida Administrative Code (FAC). All surface and subsurface soil samples were analyzed with a calibrated organic vapor analyzer (OVA) of the flame ionization detector (FID) type. The samples were collected and split into two clean, 16-ounce glass jars. The jars were then covered with aluminum foil and left to equilibrate for approximately five minutes. At that point the FID-OVA was pierced through the aluminum foil covering and the highest sustained reading was recorded. If the FID-OVA readings detected in the first jar were above background, the second sample jar was measured using an in-line charcoal filter to determine the portion of the total reading attributable to methane gas. All of the samples analyzed for headspace were sent to the laboratory for analysis.

3.2.3 Test Pitting

Test pitting was performed in order to investigate the geophysical anomalies identified during the 1994 E/A&H geophysical survey. Test pitting was performed at each of the seventeen magnetic anomaly locations. The pits were advanced to a depth of 5 feet bls using a tracked excavator or shovels. The open pits were visually inspected for the presence of drums or other metal debris. Drums were encountered in only two of the seventeen excavations, anomalies 15 and 20. The majority of excavations contained metal debris and trash that most likely resulted in the geophysical anomalies that did not contain drums.



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		SURFACE SOIL SAMPLING LOCATIONS SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO.	
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							CHECKED BY	DATE			APPROVED BY	DATE
							COST/SCHED-AREA				APPROVED BY	DATE
							SCALE	AS NOTED			DRAWING NO.	REV.
											FIGURE 3-1	0

If no drums were encountered, the test pit was subsequently backfilled with native soil. If drums were encountered, the drums were removed and placed into DOT-approved overpack; subsurface soil samples were collected from below each drum location (see section 3.2.4), and the pits were backfilled with the native soil.

3.2.4 Drum Characterization

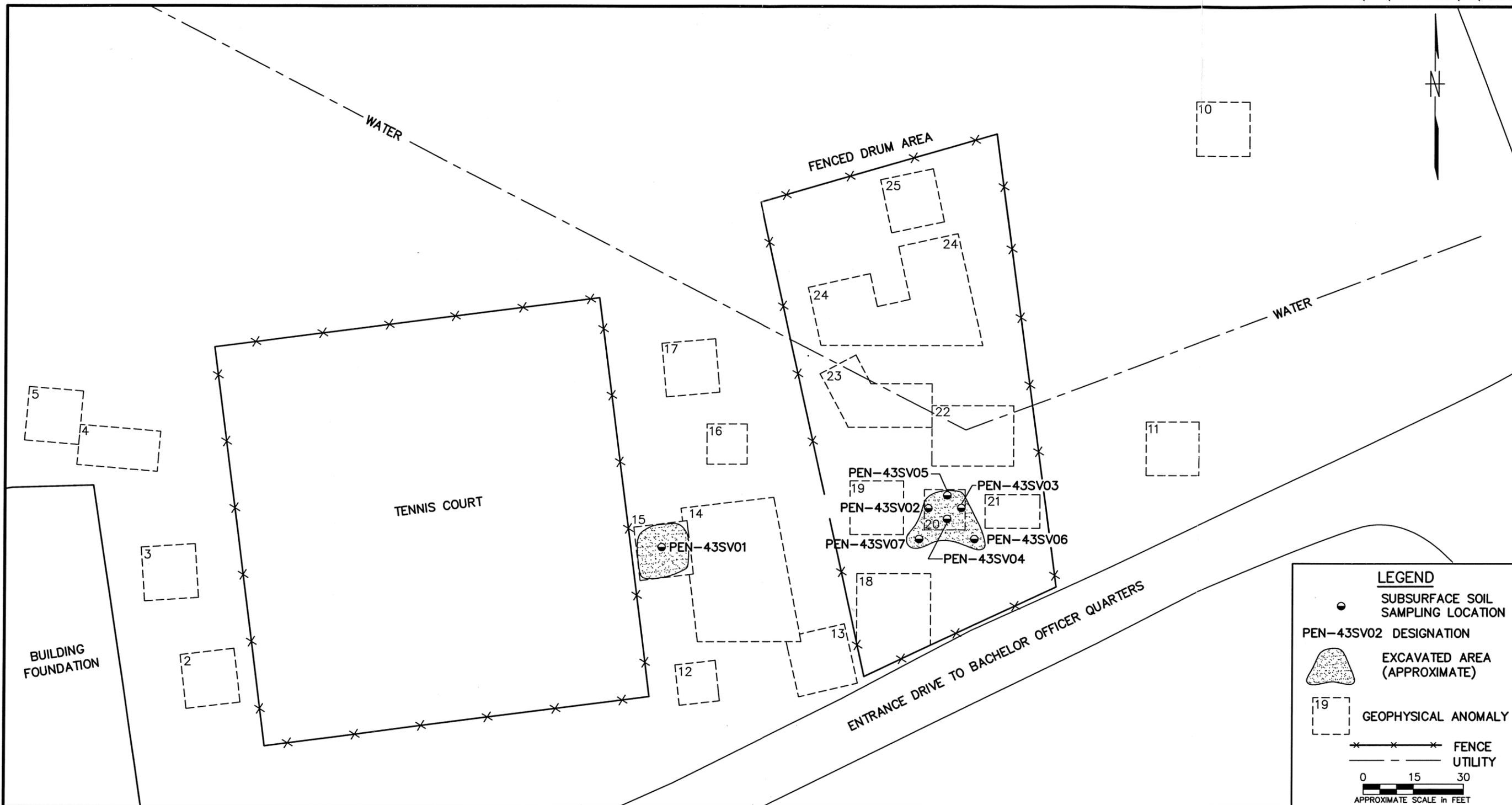
Fourteen drums were excavated from two different locations, one from anomaly 15 and thirteen from anomaly 20. Each drum was examined onsite to characterize its contents. The drums were examined for type, size, head configuration, identifiable markings, estimated volume of contents, general condition, and drum contents. The drums were then screened for radioactivity and organic vapors. Each excavated drum was subsequently placed in a DOT-approved overpack container and secured onsite.

3.2.5 Test Pit Subsurface Soil Sampling

TtNUS personnel collected seven subsurface soil samples (PEN-43SV01 through PEN-43SV07) during the week of October 4, 1999 from the two anomaly excavations containing drums. Each sample was collected with a stainless steel spoon from directly under where the drums were located. Encore[®] samplers were used to collect soils for VOC analysis. One sample was collected from underneath the drum at anomaly 15. Six subsurface samples were collected below the drums in anomaly 20. The samples were collected in each of the four quadrants of the test pit, and in places where there was evidence of drum contents possibly leaking onto the soil. Each soil sample was screened with an OVA (Section 3.2.2) and sent to the laboratory for analysis of CLP-TCL VOCs (USEPA method 8260), SVOCS (USEPA method 8270), pesticides and PCBs (USEPA method 8081), and TAL metals and cyanide (USEPA methods SW 6010, SW7470, SW7471, SW9010, and SW9065). Quality control samples were collected where applicable. Subsurface soil sample locations are shown in Figure 3-2. Soil sample sheets are found in Appendix A

3.2.6 Direct Push Borings and Monitoring Well Installation

Five soil borings (PEN-43SB01 through PEN-43SB05) were advanced at Site 43 using a DPT rig on October 15, 1999. Each boring was advanced to a depth of 20 feet bls, with the exception of PEN-43SB04 which was advanced to 15 ft. bls due to the shallower water table. Five subsurface soils samples (PEN-43SB01415 through PEN-43SB051415) were collected from soils just above the water table in each boring and sent for fixed base laboratory analysis for CLP-TCL VOCs (USEPA method 8260), SVOCS (USEPA method 8270), pesticides and PCBs (USEPA method 8081), and TAL metals and cyanide



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>SUBSURFACE SOIL SAMPLE AND EXCAVATION LOCATIONS SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	0189
							LLK	1/21/00		APPROVED BY	DATE
										APPROVED BY	DATE
										DRAWING NO.	REV.
										FIGURE 3-2	0

(USEPA methods SW6010, SW7471, SW7470, SW9010, and SW9065). Quality control samples were collected where applicable. Subsurface soil sampling logs are found in Appendix A.

Each soil boring was then converted into a permanent monitoring well (PEN-43-01S through PEN-43-05S). The monitoring wells were installed to approximately 20 feet bls, except for monitoring well PEN-43-04S, which was installed to a depth of 15 feet bls. One-inch inner diameter (ID) pre-packed Schedule 40 PVC monitoring wells with 10 foot of 0.010-slot screen were introduced into each boring. A 20/30 sand pack was installed to at least 0.5 ft. above the top of the screen. A bentonite seal was then completed to the surface, with a quickrete pad and stainless steel manhole cover. Soil boring and monitoring well locations are provided in Figure 3-3. Boring logs are provided in Appendix B. Monitoring well construction sheets are found in Appendix C.

3.2.7 Monitoring Well Development

Each monitoring well was developed no sooner than 24 hours after installation. The wells were developed using the surge and pump method with a peristaltic pump. The wells were developed until all the following criteria were achieved:

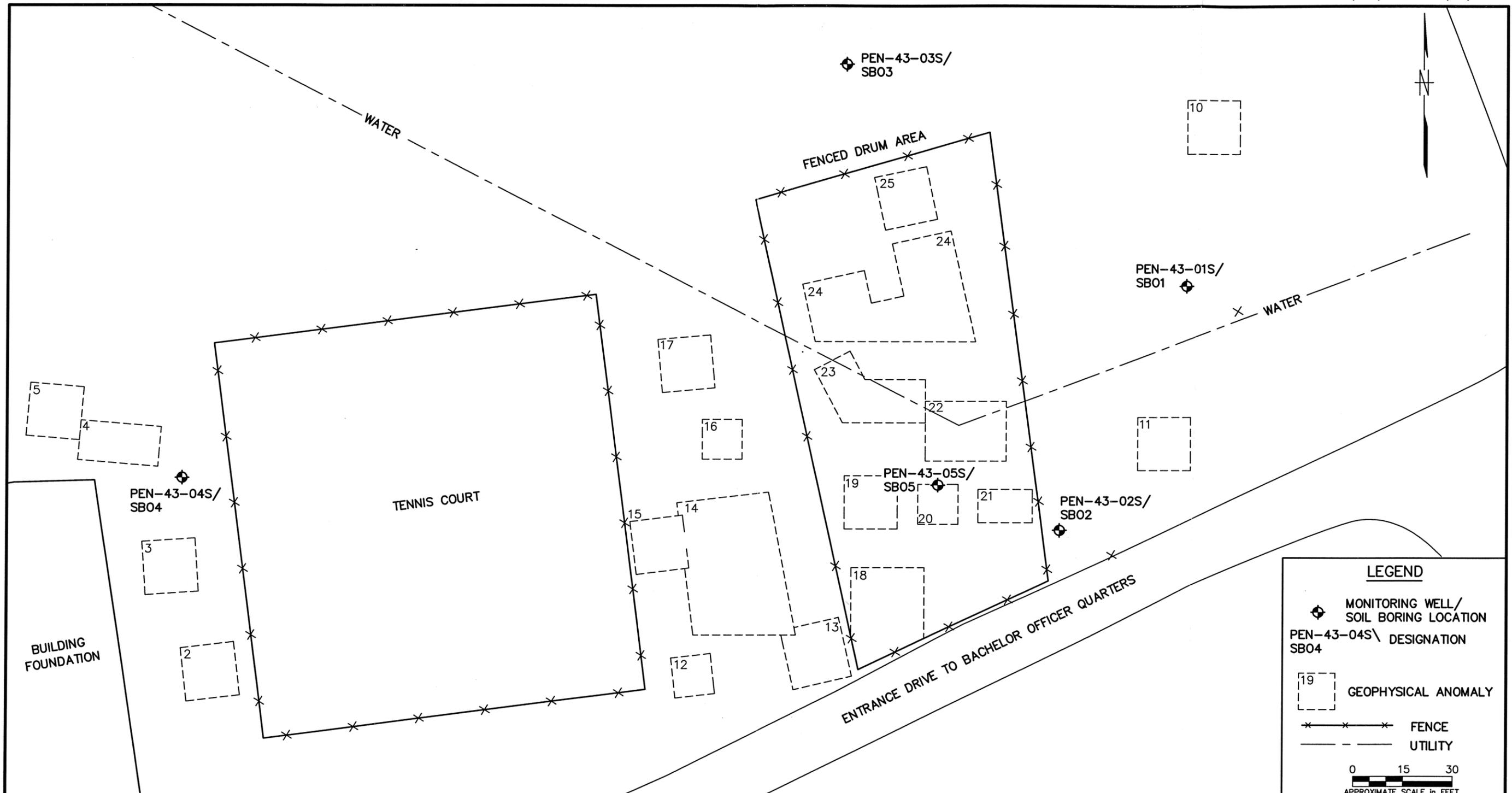
- Turbidity remained within a 10 nephelometric turbidity unit (NTU) range for 2 consecutive readings;
- Stabilization of the following parameters occurred:
 - temperature - plus or minus 1° C
 - pH - plus or minus 1 unit, and
 - specific conductivity - plus or minus 5 percent of scale; and
- Accumulated sediment was removed from the well.

Monitoring well development sheets are located in Appendix D.

3.2.8 Groundwater Sampling

Subsequent to monitoring well installation and no sooner than 24 hours after development, groundwater samples were collected from each well using low-flow quiescent purge techniques. The samples were collected and sent to a fixed base laboratory analysis of CLP-TCL VOCs (USEPA method 8260), SVOCs (USEPA method 8270), pesticides and PCBs (USEPA methods 8081), and TAL metals and cyanide (USEPA methods SW6010, SW7471, SW7470, SW9010, and SW9065). Groundwater sample sheets are presented in Appendix E.

Three of the groundwater samples were analyzed in the field for the following natural attenuation parameters: dissolved oxygen, alkalinity, carbon dioxide, sulfide, ferrous iron, nitrite, manganese, and



LEGEND

- ◆ MONITORING WELL/
SOIL BORING LOCATION
- PEN-43-04S\ DESIGNATION
SB04
- [19] GEOPHYSICAL ANOMALY
- x—x—x— FENCE
- - - - - UTILITY

0 15 30
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>MONITORING WELL\SOIL BORING LOCATION MAP SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	
							LLK	1/21/00		0189	
										APPROVED BY	DATE
										APPROVED BY	DATE
										DRAWING NO.	REV.
							SCALE	AS NOTED	FIGURE 3-3	0	

hydrogen sulfide. These analyses were performed to provide data in the event that natural attenuation parameters would be evaluated. Natural attenuation field sheets are included in Appendix E.

3.2.9 Water Table Elevation Measurements

One complete round of water level measurements was obtained from the five shallow monitoring wells on October 27, 1999. The measurements were collected within a 48-hour period of consistent weather conditions to minimize atmospheric/precipitation effects on groundwater conditions. Each measurement was taken to a permanent reference point on the top of each well casing. Water level measurements were recorded in the field logbook to the nearest 0.01 foot.

3.2.10 Location Survey

The location survey was completed on December 2, 1999. During this survey, the newly installed monitoring wells and site landmarks were surveyed in for ground elevation and top of casing elevation where applicable. The horizontal and vertical surveys were performed by a Florida registered surveyor and mapper to determine the locations and elevations of groundwater monitoring wells. The horizontal locations were referenced to the Florida State Plane Coordinate System, North Zone, North American Datum (NAD) of 1983, 1990 Adjustment (NAD 83,90), by ties to the existing published monuments in the vicinity. Elevations were referenced to Mean Sea Level, North American Vertical Datum, 1988 Adjustment (NAVD 88) by ties to existing survey benchmarks in the vicinity. Control points were established at each existing monument and benchmark by Global Positioning Systems (GPS) Surveys. Conventional surveys were performed to locate other site features.

4.0 NATURE OF CONTAMINATION

This chapter presents analytical data from surface soil, subsurface soil, and groundwater samples collected during the Site Characterization Investigations at Site 43. The laboratory analytical reports are provided in Appendix F. At the end of this chapter, a conceptual site model (CSM) is developed that incorporates the data collected during this effort to summarize the types of contaminants known or potential routes of migration, and to identify potential environmental or human receptors.

4.1 SOIL AND VADOSE ZONE

4.1.1 Soil Vapor Assessment

No soil vapor concentrations were detected from the surface soil samples. Two out of seven of the subsurface soil samples collected from the excavations contained organic vapor concentrations ranging from non-detect to 7.9 parts per million (ppm) total organic vapors. No soil vapor concentrations were detected from the subsurface soil samples collected from DPT borings. Table 4-1 summarizes the screening results.

4.1.2 Surface Soil

Seventeen surface soil samples (PEN-43SS01 through PEN-43SS17) were collected at Site 43 from selected magnetic anomaly locations. VOCs, pesticides, and PCBs were reported below laboratory method detection limits in the surface soil samples. Benzo (a) pyrene was the only SVOC detected in surface soils. Seven of the seventeen samples contained concentrations of benzo(a)pyrene above the FDEP residential Direct Exposure Limit (DEL) of 0.1 mg/kg, but below the industrial DEL of 0.5 mg/kg (Chapter 62-777, FAC).

Eight metals were detected in concentrations above their residential DELs: antimony, arsenic, barium, copper, lead, iron, nickel, and vanadium. Barium concentrations exceeded the residential DEL (110 mg/kg) in eleven samples, ranging from 136 mg/kg to 1,130 mg/kg. Copper concentrations exceeded the residential DEL (110 mg/kg) in thirteen of the seventeen samples, ranging from 160 mg/kg to 20,000 mg/kg. Iron concentrations exceeded the residential DEL (23,000 mg/kg) in four samples, ranging from 25,700 mg/kg to 73,700 mg/kg. Nickel concentrations exceeded the residential DEL (110 mg/kg) in one sample, PEN-43SS07 (144 mg/kg). Vanadium concentrations exceeded the residential DEL (15 mg/kg) in seven samples, ranging from 19.2 mg/kg to 185 mg/kg.

The industrial DEL for antimony (240 mg/kg) was exceeded in two samples, PEN-43SS14 (48,600 mg/kg) and PEN-43SS15 (25,000 mg/kg). The FDEP leachability concentration based on groundwater criteria for

TABLE 4-1
SUMMARY OF ORGANIC VAPOR ANALYZER (OVA) SCREENING RESULTS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample Location	Sample ID	Sample Depth (feet bls)	Headspace Readings (ppm)		
			Total Organic Reading	Carbon Filtered Reading	Net Reading
Anomaly # 25	PEN-43SS01	0.5	ND	ND	ND
Anomaly # 23	PEN-43SS02	0.5	ND	ND	ND
Anomaly # 24	PEN-43SS03	0.5	ND	ND	ND
Anomaly # 19	PEN-43SS04	0.5	ND	ND	ND
Anomaly # 22	PEN-43SS05	0.5	ND	ND	ND
Anomaly # 18	PEN-43SS06	0.5	ND	ND	ND
Anomaly # 20	PEN-43SS07	0.5	ND	ND	ND
Anomaly # 21	PEN-43SS08	0.5	ND	ND	ND
Anomaly # 13	PEN-43SS09	0.5	ND	ND	ND
Anomaly # 14	PEN-43SS10	0.5	ND	ND	ND
Anomaly # 17	PEN-43SS11	0.5	ND	ND	ND
Anomaly # 15	PEN-43SS12	0.5	ND	ND	ND
Anomaly # 12	PEN-43SS13	0.5	ND	ND	ND
Anomaly # 16	PEN-43SS14	0.5	ND	ND	ND
Anomaly # 04	PEN-43SS15	0.5	ND	ND	ND
Anomaly # 11	PEN-43SS16	0.5	ND	ND	ND
Anomaly # 10	PEN-43SS17	0.5	ND	ND	ND
Anomaly # 15	PEN-43SV01	2	ND	ND	ND
Anomaly # 20	PEN-43SV02	3	ND	ND	ND
Anomaly # 20	PEN-43SV03	3	ND	ND	ND
Anomaly # 20	PEN-43SV04	3	ND	ND	ND
Anomaly # 20	PEN-43SV05	3	ND	ND	ND
Anomaly # 20	PEN-43SV06	3.5	5.2	NM	NA
Anomaly # 20	PEN-43SV07	3.5	7.9	NM	NA
PEN-43SB01	PEN-43SB011415	15	ND	ND	ND
PEN-43SB02	PEN-43SB021415	15	ND	ND	ND
PEN-43SB03	PEN-43SB031415	15	ND	ND	ND
PEN-43SB04	PEN-43SB040708	8	ND	ND	ND
PEN-43SB05	PEN-43SB051415	15	ND	ND	ND

Notes:

NM = sample collected with photoionization detector

NA = not applicable

antimony (5.0 mg/kg) was also exceeded in five of the seventeen samples. Arsenic was detected in concentrations above the residential DEL but below the industrial DEL in three samples, ranging from 1.0 mg/kg to 3.3 mg/kg. Arsenic was detected in concentrations exceeding the industrial DEL (3.7 mg/kg) in nine of the seventeen samples, ranging from 4.1 mg/kg to 9.8 mg/kg. Lead concentrations exceeded the industrial DEL (920 mg/kg) in ten of the seventeen samples, ranging from 1420 mg/kg to 10,800 mg/kg. Nickel concentrations exceeded the leachability concentration (130 mg/kg) in one sample, PEN-43SS07 (144 mg/kg).

Background reference concentrations for soil were previously determined for NAS Pensacola by EnSafe Inc. All of the background values for metals detected at Site 43 fall below residential DELs, except for arsenic which has a background value of 1.0 mg/kg and a residential DEL of 0.87 mg/kg. All of the metal exceedences in surface soil at Site 43 were therefore found to be above background concentrations. The analytical results are summarized in Table 4-2. Contaminant concentrations are depicted on Figure 4-1.

4.1.3 Subsurface Soil from Excavations

Seven subsurface soil samples (PEN-43SV01 through PEN-43SV07) were collected from the two excavations containing drums (anomalies 15 and 20). VOCs, pesticides, and PCBs were reported below the laboratory method detection limits in the subsurface soil samples. Benzo(a)pyrene was detected in six of the seven samples at concentrations ranging from 0.10 mg/kg to 0.57 mg/kg. Two of the six samples exceeded the benzo(a)pyrene industrial DEL of 0.5 mg/kg.

Dibenzo(a,h)anthracene was detected in five of the seven samples at concentrations ranging from 0.150 mg/kg to 0.44 mg/kg. These concentrations all exceed the residential DEL of 0.10 mg/kg but fall below the industrial DEL of 0.50 mg/kg.

Nine metals were detected in concentrations exceeding their residential DELs: antimony, arsenic, barium, copper, iron, zinc, lead, nickel, and vanadium. The industrial DEL for arsenic (3.7 mg/kg) was exceeded in all seven samples, ranging from 6.6 mg/kg to 57.3 mg/kg. The leachability value for arsenic was exceeded in one sample, PEN-43SV03 (57.3 mg/kg). The residential DEL for antimony (26 mg/kg) was exceeded in three of the seven samples, ranging from 26 mg/kg to 226 mg/kg. The industrial DEL for antimony was not exceeded in any sample, but the leachability value for antimony (5.0 mg/kg) was exceeded in all seven samples. The residential DEL for barium (110 mg/kg) was exceeded in all seven samples, ranging from 438

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
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Sample No.		PEN-43SS01	PEN-43SS02	PEN-43SS03	PEN-43SS04	PEN-43SS05	PEN-43SS06	PEN-43SS07
Anomaly		25	23	24	19	22	18	20
Collect Date	DE1 ¹ /DE2 ² /LE ³ BG ⁹ (mg/kg)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999
Sample Depth (ft bls)		0.5	0.5	0.5	0.5	0.5	0.5	0.5
<u>Volatile⁴ (mg/kg)</u>								
None Detected								
<u>Semi-Volatile⁵ (mg/kg)</u>								
Benzo (A) Pyrene	0.1/0.5/8.0		0.110 ^J	--	--	0.140 ^J	0.130 ^J	--
<u>Pesticides⁶ (mg/kg)</u>								
None Detected								
<u>PCBs⁷ (mg/kg)</u>								
None Detected								
<u>Metals⁸ (mg/kg)</u>								
Antimony	26 / 240 / 5.0 / 9.48			--	--	34.7 ^J	--	59.9 ^J
Arsenic	0.8 / 3.7 / 29 / 1.0	--	4.1	1.4	5.2	9.7	8.2	16.9
Barium	110** / 87000 / 1600 / 4.63	--	344	--	479	644	557	1,050
Copper	110** / 76000 / *** / 5.72	--	707	160	681	2860	1040	20,000
Iron	23000 / 480000 / *** / 2745			--	--	37,300	35,100	73,700
Lead	400 / 920 / *** / 7.35	--	3,860	550	2700	3130	3060	10,800
Nickel	110** / 28000 / 130 / 6.38			--	--	--	--	144
Vanadium	15** / 7400 / 980 / 5.83	--	26.6	--	--	52.5	--	185.0
See notes at end of table								

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 2 OF 3

Sample No.		PEN-43SS08	PEN-43SS09	PEN-43SS10	PEN-43SS11	PEN-43SS12	PEN-43SS13	PEN-43SS14
Anomaly		21	13	14	17	15	12	16
Collect Date	DE1 ¹ /DE2 ² /LE ³ BG ⁹ (mg/kg)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999
Sample Depth (ft bls)		0.5	0.5	0.5	0.5	0.5	0.5	0.5
<u>Volatile⁴ (mg/kg)</u>								
None Detected								
<u>Semi-Volatile⁵ (mg/kg)</u>								
Benzo (A) Pyrene	0.1/0.5/8.0	0.110 ^J	0.36	0.300 ^J	--	--	0.120 ^J	--
<u>Pesticides⁶ (mg/kg)</u>								
None Detected								
<u>PCBs⁷ (mg/kg)</u>								
None Detected								
<u>Metals⁸ (mg/kg)</u>								
Antimony	26 / 240 / 5.0 / 9.48	--	--	53.5 ^J	--	--	--	48600 ^J
Arsenic	0.8 / 3.7 / 29 / 1.0	3.3	1.0	8.8	--	7.7	11.2	9.8
Barium	110** / 87000 / 1600 / 4.63	209.0	--	907.0	--	369.0	275.0	1130.0
Copper	110** / 76000 / *** / 5.72	305	--	1270	286	840	876	753
Iron	23000 / 480000 / *** / 2745	--	--	--	--	25700 ^J	--	--
Lead	400 / 920 / *** / 7.35	1420	--	3,370	--	1,910	1820	4050
Nickel	110** / 28000 / 130 / 6.38	--	--	--	--	--	--	--
Vanadium	15** / 7400 / 980 / 5.83	--	--	80.1	--	99.1	19.2	30

See notes at end of table

TABLE 4-2
SUMMARY OF ANALYTES DETECTED IN SURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 3 OF 3

Sample No.	PEN-43SS15	PEN-43SS16	PEN-43SS17	PEN-43SSDD01	PEN-43SSDD02	PEN-43TB100599
Anomaly	4	11	10	17	10	
Collect Date	DE1 ¹ /DE2 ² /LE ³ /BG ⁹ (mg/kg)					
Sample Depth (ft bls)	10/5/1999	10/5/1999	10/5/1999	10/5/1999	10/5/1999	
	0.5	0.5	0.5	0.5	0.5	
<u>Volatile⁴ (mg/kg)</u>						
None Detected						
<u>Semi-Volatile⁵ (mg/kg)</u>						
Benzo (A) Pyrene	0.1/0.5/8.0	--	--	--		NA
<u>Pesticides⁶ (mg/kg)</u>						
None Detected						NA
<u>PCBs⁷ (mg/kg)</u>						
None Detected						NA
<u>Metals⁸ (mg/kg)</u>						
Antimony	26 / 240 / 5.0 / 9.48	25000 ^j	--	--		
Arsenic	0.8 / 3.7 / 29 / 1.0	1.1	2.6	--		
Barium	110** / 87000 / 1600 / 4.63	--	136	--		
Copper	110** / 76000 / *** / 5.72	--	195	--		
Iron	23000 / 480000 / *** / 2745	--	--	--		NA
Lead	400 / 920 / *** / 7.35	--	817	--		
Nickel	110** / 28000 / 130 / 6.38	--	--	--		
Vanadium	15** / 7400 / 980 / 5.83	--	--	--		

¹ DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.

² DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.

³ LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.

⁴ SW-846 8260B, ⁵ SW-846 8270C, ⁶ SW-846 8081A, ⁷ SW-846 8082, ⁸ SW-846 6010B

⁹ BG = Background values for soils at NAS Pensacola, EnSafe, 1999

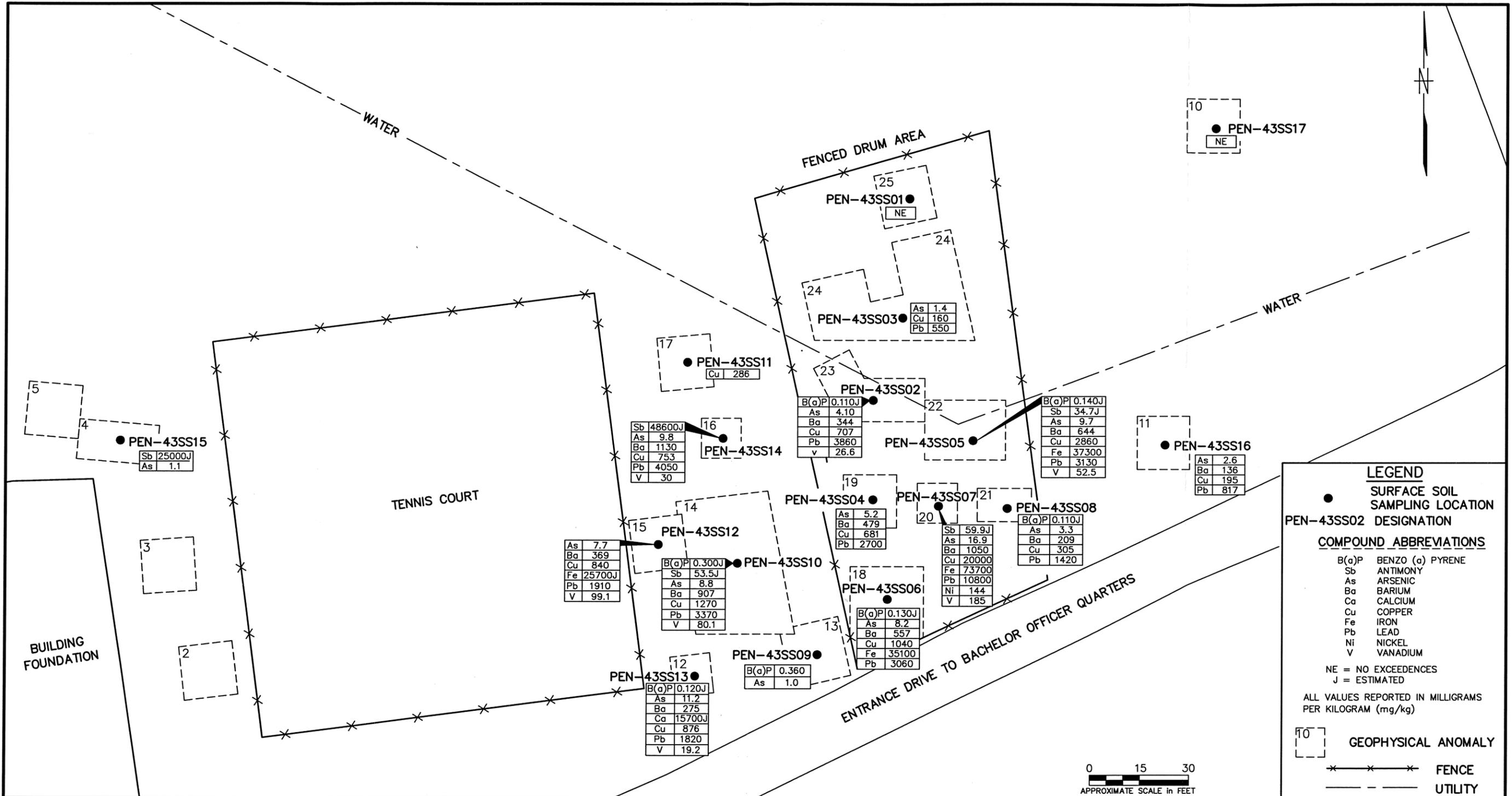
^j Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.

* Contaminant is not a health concern for this default exposure scenario.

** Direct exposure value based on acute toxicity considerations.

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

NA Not Analyzed



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>SUMMARY OF SURFACE SOIL SAMPLES EXCEEDING FDEP CRITERIA SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	
							LLK	1/24/00		0189	
							CHECKED BY	DATE		APPROVED BY	DATE
							COST/SCHED-AREA			APPROVED BY	DATE
							SCALE	AS NOTED		DRAWING NO.	REV.
									FIGURE 4-1	0	

mg/kg to 6820 mg/kg. The industrial DEL for barium was not exceeded in any sample, but the leachability value for barium (1600 mg/kg) was exceeded in one sample, PEN-43SV03 (6820 mg/kg).

Copper concentrations exceeded the residential DEL (110 mg/kg) in all seven samples, ranging from 529 mg/kg to 15,900 mg/kg. Iron concentrations also exceeded the residential DEL (23,000 mg/kg) in all seven samples, ranging from 23,800 mg/kg to 236,000 mg/kg. Lead concentrations exceeded the residential DEL (400 mg/kg) in all seven samples, ranging from 2080 mg/kg to 20,700 mg/kg. Vanadium concentrations exceeded the residential DEL (15 mg/kg) in all seven samples, ranging from 21.6 mg/kg to 596 mg/kg.

The residential DEL for zinc (23,000 mg/kg) was only exceeded in one sample, PEN-43SV03 (71,700 mg/kg). The industrial DEL for zinc was not exceeded in any sample, but the leachability value for zinc (6000 mg/kg) was exceeded in four samples, ranging from 6260 mg/kg to 71,700 mg/kg. The residential DEL concentration and leachability concentrations for nickel (110 mg/kg and 130 mg/kg respectively) were exceeded in two samples, PEN-43SV01 (149 mg/kg) and PEN-43SV05 (163 mg/kg). The industrial DEL for nickel was not exceeded in any sample.

All the metal exceedences in subsurface soil at Site 43 were also above background values. The analytical results are summarized in Table 4-3. Contaminant concentrations are depicted on Figure 4-2.

4.1.4 Soil Borings

Five soil samples were collected from five soil borings (PEN-43SB011415 through PEN-43SB021415). No VOCs, SVOCs, pesticides, PCBs, or metals were detected in these samples above residential DELs. The soil boring sampling results are summarized in Table 4-4.

4.2 CONTAMINANTS IN GROUNDWATER

Five groundwater samples were collected from five monitoring wells at Site 43 (PEN-43-1S-01 through PEN-43-5S-01). SVOCs, pesticides, and PCBs were reported below the laboratory method detection limits in these samples. Methylene chloride, a common laboratory contaminant, was detected in three of the five groundwater samples at concentrations exceeding the FDEP criterion of 5 µg/L (Chapter 62-777, F.A.C.).

Two metals were detected in groundwater at concentrations exceeding FDEP guidance criteria: aluminum, and iron. Aluminum concentrations exceeded the FDEP criterion of 200 µg /L in three of the five samples,

TABLE 4-3
SUMMARY OF ANALYTES DETECTED IN SUBSURFACE SOIL AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample No.		PEN-43SV01	PEN-43SV02	PEN-43SV03	PEN-43SV04	PEN-43SV05	PEN-43SV06	PEN-43SV07	PEN-43TB10699
Anomaly		15	20	20	20	20	20	20	
Collect Date	DE1 ¹ /DE2 ² /LE ³ BG ⁹ (mg/kg)	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	10/6/1999	
Sample Depth (ft bls)		2.0	3.0	3.0	3.0	3.0	3-3.5	3-3.5	
Volatiles⁴ (mg/kg)									
None Detected									
Semi-Volatile⁵ (mg/kg)									
Benzo (A) Pyrene	0.1/0.5/8.0	0.190 ^J	0.50	0.270 ^J	0.57	0.49	0.100 ^J	--	NA
Dibenzo (A,H) Anthracene	0.1/0.5/30	0.150 ^J	0.34	0.170 ^J	0.44	0.190 ^J			NA
Pesticides⁶ (mg/kg)									
None Detected									
PCBs⁷ (mg/kg)									
None Detected									
Metals⁸ (mg/kg)									
Antimony	26 / 240 / 5.0 / 9.48	40.4 ^J	25.1 ^J	226 ^J	62.6 ^J	26	13.8 ^J	20.4 ^J	
Arsenic	0.8 / 3.7 / 29 / 1.0	15	13.3	57.3	17.5	16	6.6	22.9	
Barium	110** / 87000 / 1600 / 4.63	1210	1570	6820	1530	1510	620	438	
Copper	110** / 76000 / *** / 5.72	4010	1400	3470	15900	1720 ^J	1310 ^J	529 ^J	
Iron	23000 / 480000 / *** / 2745	60900	37900	36700	51400	75600	23800 ^J	236000 ^J	NA
Zinc	23000 / 560000 / 6000 / 16.86	--	6860	71700	10300	6260	--	--	
Lead	400 / 920 / *** / 7.35	4820	8160	16400	4880	20700	2560 ^J	2080 ^J	
Nickel	110** / 28000 / 130 / 6.38	149 ^J	--	--	--	163	--	--	
Vanadium	15** / 7400 / 980 / 5.83	321	70.5	53.9	106	57.8	21.6	596	

Notes:

¹ DE1 = Direct Exposure limit for residential area from Chapter 62-777, F.A.C.

² DE2 = Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.

³ LE = Leachability for groundwater limit from Chapter 62-777, F.A.C.

⁴ SW-846 8260B, ⁵ SW-846 8270C, ⁶ SW-846 8081A, ⁷ SW-846 8082, ⁸ SW-846 6010B

⁹ BG = Background values for soils at NAS Pensacola, EnSafe, 1999

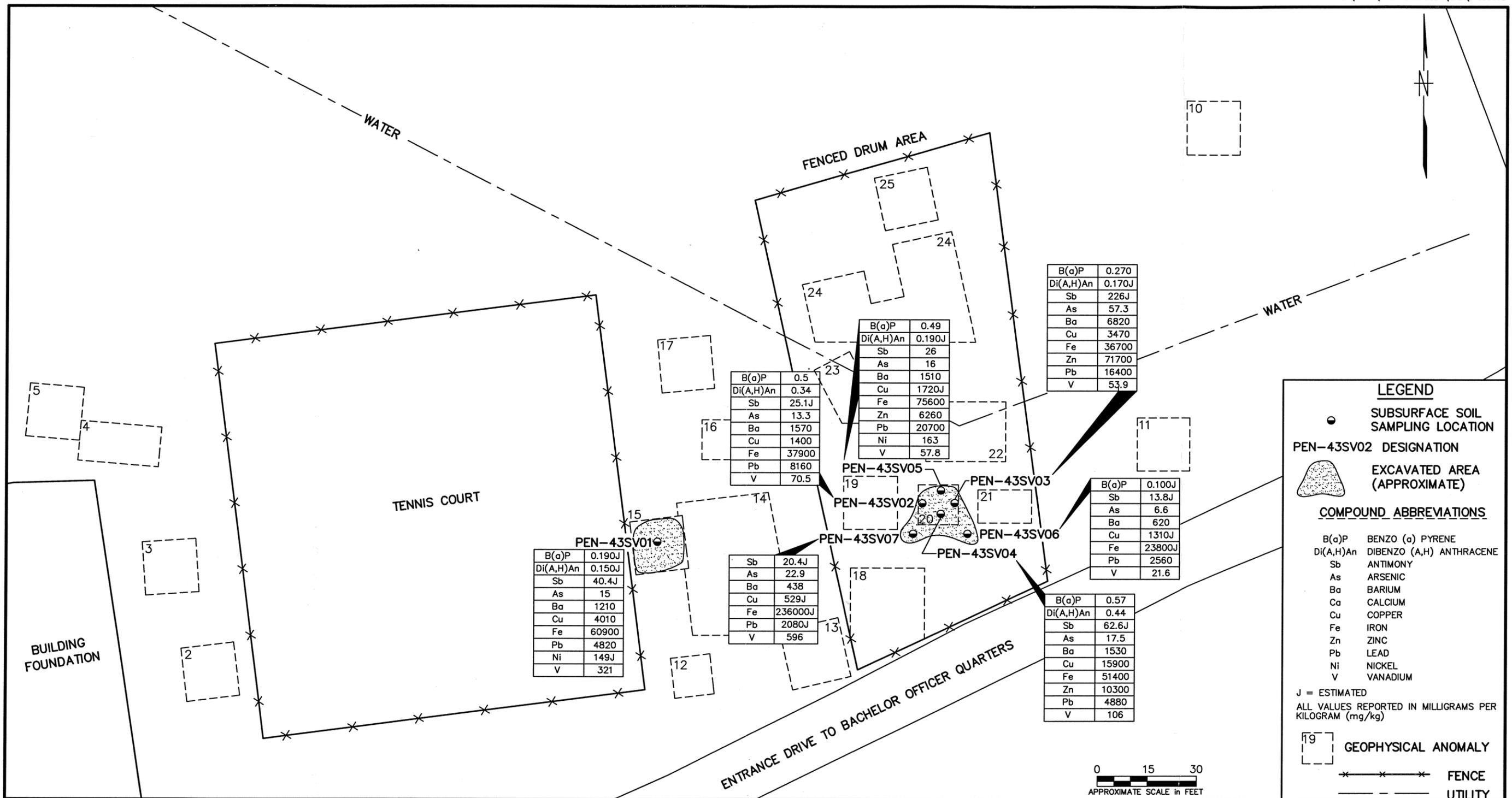
^J Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.

* Contaminant is not a health concern for this default exposure scenario.

** Direct exposure value based on acute toxicity considerations.

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

NA = not analyzed



PEN-43SV01

B(a)P	0.190J
Di(A,H)An	0.150J
Sb	40.4J
As	15
Ba	1210
Cu	4010
Fe	60900
Pb	4820
Ni	149J
V	321

PEN-43SV02

Sb	20.4J
As	22.9
Ba	438
Cu	529J
Fe	236000J
Pb	2080J
V	596

PEN-43SV05

B(a)P	0.5
Di(A,H)An	0.34
Sb	25.1J
As	13.3
Ba	1570
Cu	1400
Fe	37900
Pb	8160
V	70.5

PEN-43SV03

B(a)P	0.49
Di(A,H)An	0.190J
Sb	26
As	16
Ba	1510
Cu	1720J
Fe	75600
Zn	6260
Pb	20700
Ni	163
V	57.8

PEN-43SV04

B(a)P	0.270
Di(A,H)An	0.170J
Sb	226J
As	57.3
Ba	6820
Cu	3470
Fe	36700
Zn	71700
Pb	16400
V	53.9

PEN-43SV06

B(a)P	0.100J
Sb	13.8J
As	6.6
Ba	620
Cu	1310J
Fe	23800J
Pb	2560
V	21.6

PEN-43SV07

B(a)P	0.57
Di(A,H)An	0.44
Sb	62.6J
As	17.5
Ba	1530
Cu	15900
Fe	51400
Zn	10300
Pb	4880
V	106

LEGEND

- SUBSURFACE SOIL SAMPLING LOCATION
- PEN-43SV02 DESIGNATION
- ⬢ EXCAVATED AREA (APPROXIMATE)
- ⬢ GEOPHYSICAL ANOMALY
- FENCE
- - - UTILITY

COMPOUND ABBREVIATIONS

- B(a)P BENZO (a) PYRENE
- Di(A,H)An DIBENZO (A,H) ANTHRACENE
- Sb ANTIMONY
- As ARSENIC
- Ba BARIUM
- Ca CALCIUM
- Cu COPPER
- Fe IRON
- Zn ZINC
- Pb LEAD
- Ni NICKEL
- V VANADIUM

J = ESTIMATED
ALL VALUES REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK 1/21/00
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED

SUMMARY OF SUBSURFACE SOIL SAMPLES EXCEEDING FDEP CRITERIA
 SITE 43
 NAS PENSACOLA
 PENSACOLA, FLORIDA

CONTRACT NO.	0189
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 4-2
REV.	0

TABLE 4-4
SUMMARY OF ANALYTES DETECTED IN SOIL BORINGS AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample No.		PEN-43SB011415	PEN-43SB021415	PEN-43-SB031415	PEN-43SB040708	PEN-43SB051415	PEN-43SBDD03	TB101999-01
Sample Location		PEN-43SB01	PEN-43SB02	PEN-43SB03	PEN-43SB04	PEN-43SB05	PEN-43SB05	
Collect Date	DE1 ¹ /DE2 ² /LE ³ BG ⁹ (mg/kg)	10/19/1999	10/19/1999	10/19/1999	10/19/1999	10/19/1999	10/19/1999	
Sample Depth (ft bls)		14-15	14-15	7/8/2000	7/8/2000	14-15	14-15	
<u>Volatile⁴ (mg/kg)</u>								
None Detected								
<u>Semi-Volatile⁵ (mg/kg)</u>								
Benzo (A) Pyrene	0.1/0.5/8.0	--	--	--	--	--	--	NA
<u>Pesticides⁶ (mg/kg)</u>								
None Detected								
<u>PCBs⁷ (mg/kg)</u>								
None Detected								
<u>Metals⁸ (mg/kg)</u>								
Arsenic	0.8 / 3.7 / 29 / 1.0	--	--	--	--	--	--	
Barium	110** / 87000 / 1600 / 4.63	--	--	--	--	--	--	
Copper	110** / 76000 / *** / 5.72	--	--	--	--	--	--	
Iron	23000 / 480000 / *** / 2745	--	--	--	--	--	--	NA
Zinc	23000 / 560000 / 6000 / 16.86	--	--	--	--	--	--	
Lead	400 / 920 / *** / 7.35	--	--	--	--	--	--	
Nickel	110** / 28000 / 130 / 6.38	--	--	--	--	--	--	
Vanadium	15** / 7400 / 980 / 5.83	--	--	--	--	--	--	

Notes:

¹ DE1 = Direct Exposure limit for residential area from Chapter 62-777, F.A.C.

² DE2 = Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.

³ LE = Leachability for groundwater limit from Chapter 62-777, F.A.C.

⁴ SW-846 8260B, ⁵ SW-846 8270C, ⁶ SW-846 8081A, ⁷ SW-846 8082, ⁸ SW-846 6010B

⁹ BG = Background values for soils at NAS Pensacola, EnSafe, 1999

^J Indicates the presence of a chemical at a concentration less than the reporting limit and greater than the method detection limit.

* Contaminant is not a health concern for this default exposure scenario.

** Direct exposure value based on acute toxicity considerations.

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

PEN-43-2S-01 (970 µg/L), PEN-43-4S-01 (310 µg/L), and PEN-43-5S-01 (316 µg/L). The NAS Pensacola background concentration for aluminum, 3882 µg/L, is above the FDEP groundwater standard of 200 µg/L. Aluminum concentrations in groundwater at Site 43 did not exceed the background concentration.

Iron was detected in all five samples at concentrations ranging from 364 µg/L to 2980 µg/L, exceeding the FDEP criterion of 300 µg/L. The reference background concentrations of 1707 µg/L was exceeded in three of the five samples. Groundwater analytical results are summarized in Table 4-5. Contaminant concentrations are shown on Figure 4-3.

Field data collected from three monitoring wells were analyzed for the following natural attenuation parameters: dissolved oxygen, alkalinity, carbon dioxide, sulfide, ferrous iron, nitrite, manganese, and hydrogen sulfide. These results are summarized in Table 4-6.

4.2.1 Groundwater Flow Direction

On October 27, 1999, groundwater elevations were measured in the five newly installed monitoring wells (PEN-43-0S through PEN-43-05S). Groundwater elevation ranged from 3.78 to 5.46 feet above msl. Groundwater flow at the site is generally toward the south-southwest. A summary of the water table elevations is provided in Table 4-7. A potentiometric surface map is shown in Figure 4-4.

4.3 DRUMS

Fourteen drums were removed from two excavations at Site 43. One drum was recovered from anomaly 15 and thirteen drums were removed from anomaly 20. None of the drums were opened, but they were characterized based on chemical and physical observations. Each drum was characterized based on type, volume, condition, contents, etc. Once characterized, the drums were placed in DOT approved overpack containers. A summary of the drum characteristics is given in Table 4-8. The drum characterization sheets are found in Appendix G.

The drum removed from anomaly 15 was a 30-gallon capacity steel drum with a central bung and reinforced rings for structural support. The drum was crushed and filled with rocks, dirt, and several cockroaches. The OVA reading collected from the drum was 11.3 parts per million (ppm). Photographs of this excavation are found in Appendix H.

TABLE 4-5
SUMMARY OF ANALYTES DETECTED IN GROUNDWATER AT CONCENTRATIONS EXCEEDING FDEP CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Sample No. Sample Location Collect Date	FDEP GW Criteria (ug/L)* / BG ⁶	PEN-43-1S-01 PEN-43-1S 10/27/99	PEN-43-2S-01 PEN-43-2S 10/27/99	PEN-43-3S-01 PEN-43-3S 10/27/99	PEN-43-4S-01 PEN-43-4S 10/27/99	PEN-43-5S-01 PEN-43-5S 10/27/99	PEN-43-DD-01 PEN-43-3S 10/27/99	TB102799-01
<u>Volatile¹ (ug/L)</u>								
Methylene Chloride	5	19	6	--	6	--	--	
<u>Semi-Volatile² (ug/L)</u>								
None Detected		--	--	--	--	--	--	NA
<u>Pesticides³ (ug/L)</u>								
None Detected		--	--	--	--	--	--	NA
<u>PCBs⁴ (ug/L)</u>								
None Detected		--	--	--	--	--	--	NA
<u>Metals⁵ (ug/L)</u>								
Aluminum	200 / 3882	--	970	--	310	316	--	
Iron	300 / 1707	2980	1390	422	--	2430	364	NA

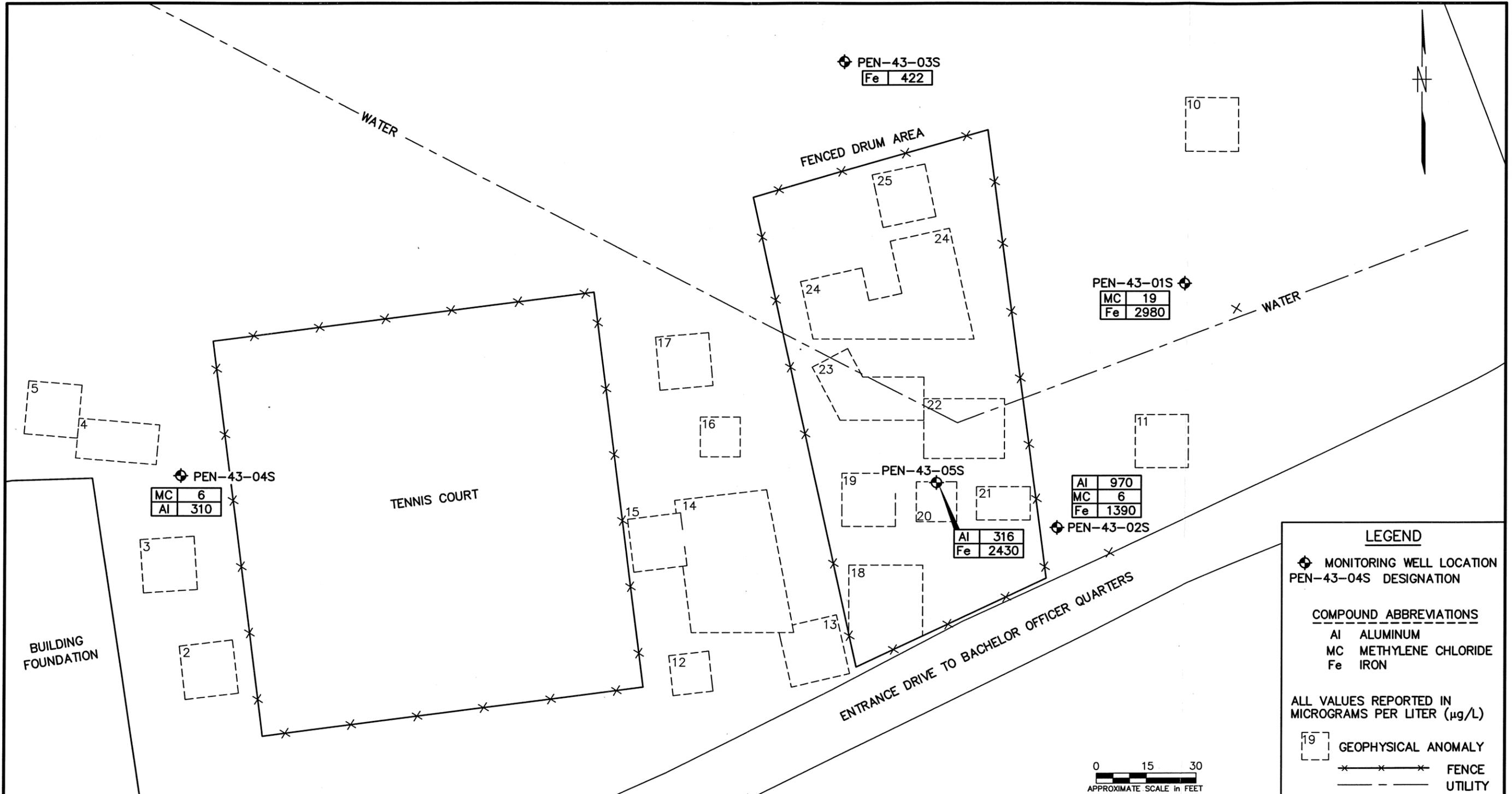
Notes:

¹ SW-846 8260B, ² SW-846 8270C, ³ SW-846 8081A, ⁴ SW-846 8082, ⁵ SW-846 6010B

* As provided by Chapter 62-777, F.A.C.

⁶ BG = Background values for groundwater at NAS Pensacola, EnSafe, 2000

NA = not analyzed



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE	 <p>SUMMARY OF GROUNDWATER SAMPLES EXCEEDING FDEP CRITERIA SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA</p>	CONTRACT NO.	
							LLK	1/25/00		0189	
										APPROVED BY	DATE
										APPROVED BY	DATE
										DRAWING NO.	REV.
							SCALE	AS NOTED	FIGURE 4-3	0	

TABLE 4-6
GROUNDWATER NATURAL ATTENUATION FIELD MEASUREMENTS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Well I.D.	Date Sampled	Dissolved Oxygen (mg/L)	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Sulfide (mg/L)	Ferrous Iron (mg/L)	Nitrite (mg/L)	Manganese (mg/L)	Hydrogen Sulfide (mg/L)
PEN-43-01S	10/27/1999	4.00	9.2	26	0.00	1.11	0.016	0.0	0.00
PEN-43-04S	10/27/1999	3.00	11.0	29	0.02	0.07	0.017	0.2	0.00
PEN-43-05S	10/27/1999	3.00	9.5	26	0.05	1.21	0.003	1.1	0.00

Notes:

mg/L = milligrams per liter

NA = not Analyzed

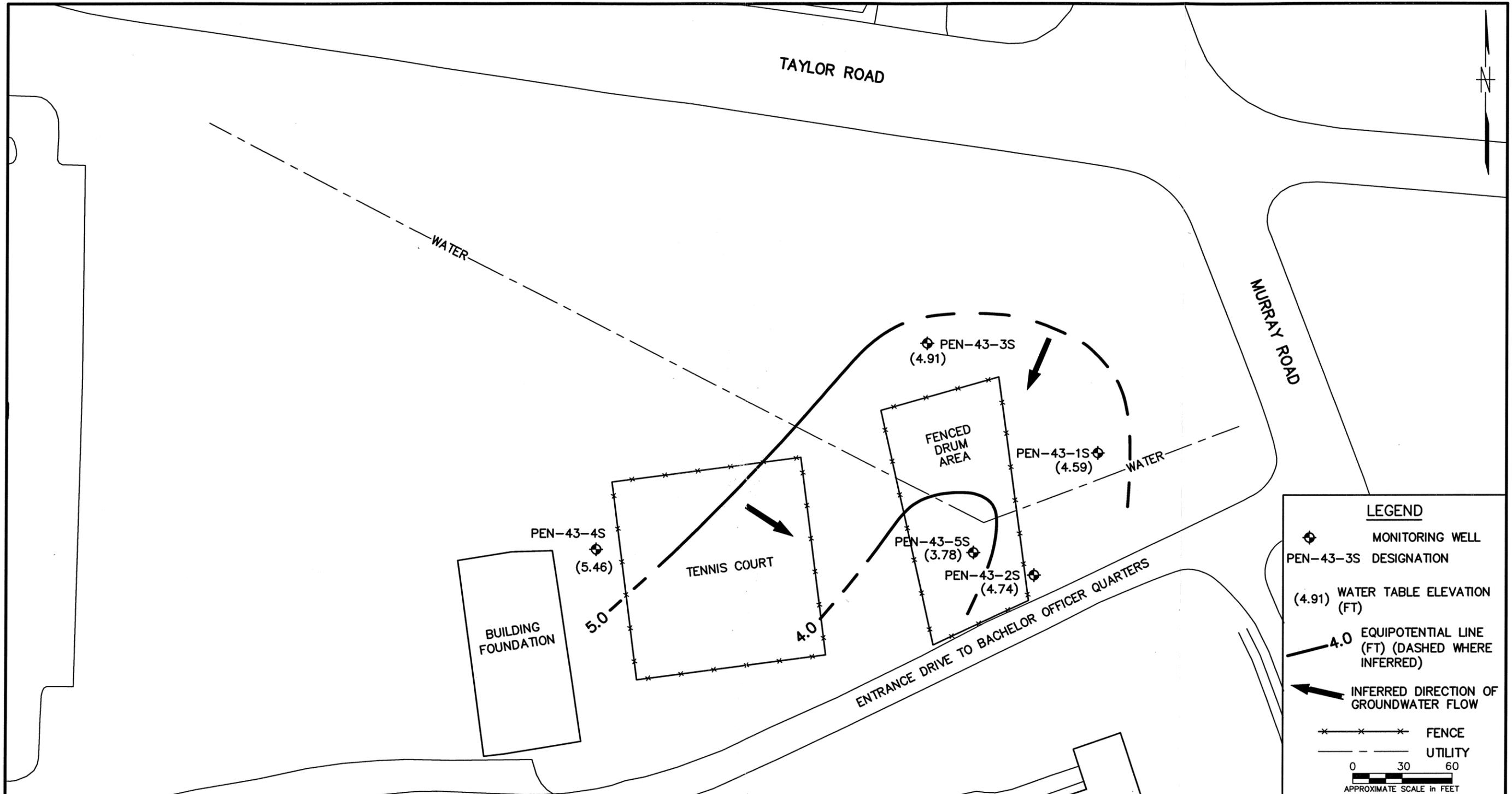
TABLE 4-7
WATER TABLE ELVATION AND MONITORING WELL CONSTRUCTION DATA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1

Well Number	Top of Casing Elevation (msl)	Screened Interval Depth (feet, bls)	October 27, 1999	
			Depth to Water Below Top of Casing (feet)	Water Elevation (msl)
PEN-43-01S	19.95	9.5-19.5	15.36	4.59
PEN-43-02S	21.07	9.4-19.4	16.33	4.74
PEN-43-03S	21.50	9.5-19.5	16.59	4.91
PEN-43-04S	14.46	5-15	9.00	5.46
PEN-43-05S	20.57	9-19	16.79	3.78

Notes:

NM = not measured

msl = mean sea level



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK 1/20/00
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED



POTENTIOMETRIC SURFACE
 OCTOBER 27, 1999
 SITE 43
 NAS PENSACOLA
 PENSACOLA, FLORIDA

CONTRACT NO.	0189
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 4-4
REV.	0

**TABLE 4-8
SUMMARY OF DRUM CHARACTERISTICS
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 1**

Drum Number	Drum Type	Condition	Contents	Estimated Volume	Date	PID (ppm)	Comments
1	55 Gallon Steel	Fair	tar like liquid	<1 gallon	10/6/1999	0	reinforced rings
2	55 Gallon Steel	Fair	-	empty	10/6/1999	30	
3	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	2	reinforced rings, labeled "use only for lubricating oil"
4	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	0	reinforced rings, labeled "use only for lubricating oil"
5	55 Gallon Steel	Fair, rusted	liquid based on drum type	~18 gallons	10/6/1999	0	reinforced rings, labeled "use only for lubricating oil"
6	55 Gallon Steel	Fair, rusted	-	empty	10/6/1999	0	
7	55 Gallon Steel	Poor, 12-in. gash in top	rainwater	~27 gallons	10/7/1999	NM	reinforced rings, frogs living inside
8	55 Gallon Steel	Fair	-	empty	10/7/1999	NM	
9	55 Gallon Steel	Fair	black/brown liquid leaking at small opening.	~3 - 5 gallons	10/7/1999	NM	reinforced rings, residual oil leak,
10	55 Gallon Steel	Fair to Poor	liquid based on drum type, however no sloshing so possibly sediment	~13 - 18 gallons	10/7/1999	NM	label marked "use only for lubricating oil"
11	55 Gallon Steel	Fair, rusted	-	empty	10/7/1999	NM	
12	55 Gallon Steel	Fair, rusted	-	empty	10/7/1999	NM	reinforced rings
13	30 Gallon Steel	Poor, crushed	solids/soils	~30 gallons	10/7/1999	14.6	reinforced rings, cockroaches living inside
14	55 Gallon Steel	Fair, rusted	rusty water	<1 gallon	10/7/1999	NM	reinforced rings

All thirteen drums removed from the excavation at anomaly 20 were 55-gallon capacity steel drums. Of these, nine drums had reinforced rings around them. Four of the drums were labeled “use only for lubricating oil.” Twelve of the drums were found to be in fair but rusted condition, while two of the drums were found to be in poor structural condition (dents, holes, etc.).

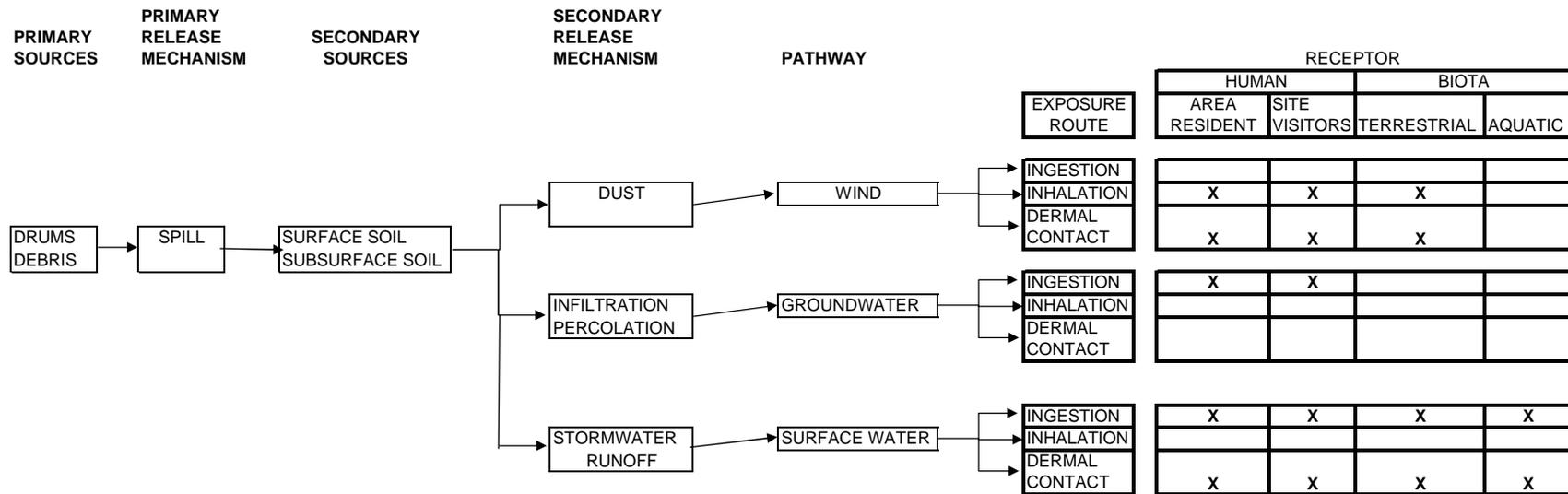
Five of the drums recovered from anomaly 20 were empty. The others ranged from approximately one third full to completely full. Two of the drums were observed to have a dark colored, tar like liquid leaking at the openings. The others were classified as liquid containers simply based on the drum type. OVA readings from the drums ranged from 0 ppm to 30 ppm. Photos of this excavation are found in Appendix H.

4.4 CONCEPTUAL SITE MODEL

The Conceptual Site Model plots sources, pathways and possible receptors on a flow diagram (Figure 4-5). The flow diagram provides a framework to assess the potential risks a remedial action associated with the site will need to take into consideration.

The primary sources at Site 43 are the buried drums discovered during the Site Characterization Investigation. The primary release mechanism from this source is leaking or spilling of the drums' contents into the soil at the site. This primary release could result in the secondary release mechanisms of dust, infiltration/percolation, and stormwater runoff. A secondary release of dust would be transported from the site by wind resulting in humans and terrestrial biota becoming potential receptors via inhalation and dermal contact. A secondary release by infiltration/percolation of the material would affect the groundwater at the site resulting in humans becoming potential receptors via ingestion. A secondary release by stormwater runoff would affect the surface water in the surrounding area resulting in humans and both terrestrial and aquatic biota becoming potential receptors via ingestion and dermal contact.

**FIGURE 4-5
CONCEPTUAL SITE MODEL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA**



5.0 CONCLUSIONS, FOLLOW-UP WORK, AND RECOMMENDATIONS

The results of the Site Characterization Investigation reveal the following:

- Surface soil samples at the site contains benzo(a)pyrene and eight metals (antimony, arsenic, barium, copper, iron, zinc, lead, nickel, and vanadium) at concentrations exceeding the FDEP residential direct exposure limits (DELS) and NAS Pensacola background concentrations. Antimony and nickel concentrations exceeded their respective leachability concentrations.
- Subsurface soil samples collected from underneath drums in excavations contain concentrations of benzo(a)pyrene, dibenzo(a,h)anthracene, and nine metals (antimony, arsenic, barium, copper, iron, lead, nickel, zinc, and vanadium) at concentrations exceeding the FDEP residential DELs and NAS Pensacola background concentrations. Antimony, arsenic, barium, nickel and zinc concentrations exceeded their respective leachability concentrations.
- Subsurface soil samples collected from soil borings at the site were not impacted by VOCs, SVOCs, pesticides, PCBs, metals or cyanide.
- Groundwater at the site contains concentrations of methylene chloride, a common laboratory contaminant, and two metals (aluminum and iron) at concentrations exceeding FDEP groundwater criteria. Aluminum concentrations at the site did not exceed background values, while iron concentrations exceeded background values in three out of the five samples.
- Fourteen drums were removed from excavations at Site 43.

Results from the Site Characterization Investigation indicate that surface soil, subsurface soil to a depth of 3.5 feet, and groundwater at Site 43 have been impacted by the historical use of the site as a drum storage area. Four of the six metals detected in groundwater at concentrations above the FDEP criteria were also found in soils at concentrations exceeding residential DELs. While the inorganic concentrations may reflect turbidity of the water samples, it is likely that inorganic soil contamination has impacted groundwater at the site.

The Chapter 62-777, FAC groundwater criteria are based on a 10^{-6} human health risk, therefore the above exceedences pose a human health risk-based concern for residential land use at the site. The conceptual site model presented in Section 4.3 indicates that there are both human and ecological receptors at risk at Site 43. The primary exposure pathways at this site include inhalation and dermal contact of dust and ingestion of groundwater. The loose metal debris found in the surface soil at the site also presents a physical hazard to humans in the area.

Site Characterization Report Addendum – Site 43

During the completion of the Site Characterization Investigation, 14 buried drums were excavated onsite and placed in over pack containers for offsite disposal. The contents of the drums were not sampled for laboratory analysis during the investigation, therefore an additional drum characterization sampling event was completed and documented as a Site Characterization Report Addendum (TtNUS 2001). A copy of the Site Characterization Report Addendum is included as Appendix I.

The results of the Site Characterization Report Addendum indicated that 12 of the 14 drums contained insufficient volume/mass to be sample. The two remaining drums were sampled and contained metals and PAHs at concentrations exceeding Florida Soil Cleanup Target Levels. Following the assessment activities the drums were properly disposed as non-hazardous waste.

Interim Removal Action – Site 43

Following the completion of the Site Characterization Investigation and addendum, an Interim Removal Action was completed CH2MHILL Constructors, Inc. to removal the metal debris and contaminated surface and subsurface soils at the site. The interim removal action is summarized in the “Interim Removal Action Report Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola, Florida”. An electronic copy of the report is included in Appendix J.

The results of the Interim Remedial Action reveal the following:

Conclusions:

- *An IRA was completed to remove visible debris and the upper 2 feet of contaminated soil.*
- *Thirty-one truck loads with an accumulated total of 747.62 tons of soil and debris were transported to Michigan Disposal Waste Treatment Facility in Belleview, Michigan.*
- *Fourteen drums from the initial site investigation, 20 to 25 drums, and drum parts were loaded and disposed of in the Michigan landfill.*
- *Ornamental ordnance and munitions were found in the excavation area and were determined to be inert and disposed of in the Michigan landfill.*
- *Following the IRA, RGs were revisited and it was determined that the initial RGs were not appropriate for the site. Based upon this information, laboratory data were reevaluated to characterize the extent of contamination at the site.*
- *Due to the change in RGs following the IRA activities, several inorganics and two SVOCs remain in surface and subsurface soil at concentrations above their respective RG.*
- *Iron concentrations detected in groundwater during the IRA sampling activities were all below the background concentration for iron at NAS Pensacola.*

Recommendations:

- *An IR/FS should be completed to determine the horizontal and vertical extent of the contamination at this site and whether adverse risk to human health or the environment exist.*
- *Applicable or Relevant and Appropriate Requirements should be established for each COC at the site.*
- *As requested by FDEP and EPA, permanent monitoring wells should be installed at agreed upon locations and the temporary wells should be properly abandoned.*

Therefore, based on the site characterization investigation and Interim Removal Action, TtNUS recommends that a RI/FS investigation be completed for the site including the recommendations from the Interim Removal Action Report.

6.0 PROFESSIONAL CERTIFICATION

Site Characterization Report
Site 43
Pensacola NAS

This Site Characterization Report was prepared under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time the report was prepared. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of additional information on the assessment described in this report. This report was developed specifically for the referenced site and should not be construed to apply to any other site.


Gerald A, Walker, P.G.
Florida License No. 1180


Date: February 4, 2004

REFERENCES

CH2MHILL Constructors, Inc. (CCI), 2003, Interim Removal Action Report, Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola Florida, September 8, 2003

Ensafe/Allen & Hoshall, 1994, Geophysical Investigation of Buried Drum Area Site 10 (West), Naval Air Station Pensacola, September.

Florida Department of Environmental Protection (FDEP), 1998, Florida Administrative Code (FAC) Chapter 62-770, Petroleum Contamination Site Cleanup Criteria, September 23, 1998

FDEP, 1999, FAC Chapter 62-777, Contaminant Cleanup Target Levels, August 5, 1999

Naval Energy and Environmental Support Activity, 1983, Initial Assessment Study of Naval Air Station Pensacola, June.

Tetra Tech NUS, Inc.(TtNUS), 2001, Site Characterization Report Addendum Letter, March 9, 2001.

TtNUS, 1999, Florida Department of Environmental Protection Comprehensive Quality Assurance Plan #980038, Revision 1, August.

TtNUS, 1989, Sampling and Analysis Plan for Preliminary Site Characterization Study, Site 43, Naval Air Station Pensacola, August.

USEPA (United States Environmental Protection Agency) 1996b. Environmental Investigations Standard Operating Procedures Quality Assurance Manual (EISOPQAM), Environmental Compliance Branch, Region IV, Science and Ecosystems Support Division, Athens, Georgia.

APPENDIX A
SOIL SAMPLE SHEETS

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 43</u>	Sample ID No.:	<u>PEN-43SU01</u>
Project No.:	<u>CTO 96</u>	Sample Location:	<u>Anomaly #13</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>E. Parker</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/6/99</u>	<u>2'</u>	<u>Brown</u>	<u>Sand (medium grained)</u>
Time: <u>0830</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>SS 11M</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>(4) 5g Encore 2oz G</u>	<u>yes</u>	
<u>Pest, PCB, Semivol</u>	<u>8 oz G</u>	↓	
<u>CN, TAL Metal</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES:	MAP:
<u>FID = 2.0 ppm</u>	<u>SEE FIELDBOOK pg</u>

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 43</u>	Sample ID No.:	<u>PEN-435002</u>
Project No.:	<u>CTO 96</u>	Sample Location:	<u>Anomaly #20 (NW)</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Elliott Wilson</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	<u>10/6/99</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:	<u>1100</u>	<u>3'</u>	<u>Grey / Brown</u>	<u>Medium Grained Sand</u>
Method:	<u>SS Spoon</u>			
Monitor Reading (ppm):	<u>< 10 ppm</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>(1) 5g Encore 200 G</u>	<u>yes</u>	
<u>Pest, PCB, Semi-vol</u>	<u>8 oz G</u>	↓	
<u>CN, TAL metal</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES:	MAP:
<u>FID = 0.0 ppm</u>	<u>see logbook pgs</u>

Circle if Applicable:	Signature(s):		
<table style="width: 100%;"> <tr> <td style="width: 50%;"><input type="checkbox"/> MS/MSD</td> <td style="width: 50%;">Duplicate ID No.:</td> </tr> </table>	<input type="checkbox"/> MS/MSD	Duplicate ID No.:	
<input type="checkbox"/> MS/MSD	Duplicate ID No.:		

SOIL & SEDIMENT SAMPLE LOG SHEET

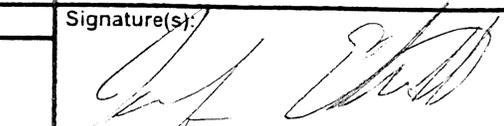
Project Site Name:	<u>NAS Pensacola site 4</u>	Sample ID No.:	<u>PEN-435003</u>
Project No.:	<u>CTO 96</u>	Sample Location:	<u>Anomaly #20 (SE)</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Elliott / A. Wilson</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/6/99</u>			
Time: <u>1115</u>			
Method: <u>55 Spoon</u>	<u>5'</u>	<u>Grey / Brown</u>	<u>medium Grained Sand</u>
Monitor Reading (ppm): <u>2.0 ppm</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL Voc</u>	<u>(4) 5g Encore 2006</u>	<u>yes</u>	
<u>Pest, PCB, Semivol</u>	<u>200 G</u>	↓	
<u>CIN, TAL Metal</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES:	MAP:
<u>FID = 2.0 ppm</u>	<u>see logbook p 13</u>

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola, Ste 4B Sample ID No.: PEV-435004
 Project No.: CTD 90 Sample Location: Anomaly #20 (SW)
 Sampled By: J. Elliott / A. Wilcox
 C.O.C. No.: _____
 Type of Sample:
 Surface Soil
 Subsurface Soil
 Sediment
 Other: _____
 QA Sample Type: _____
 Low Concentration
 High Concentration

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/6/99</u>	<u>3'</u>	<u>Grey / Brown</u>	<u>Medium Grained Sand</u>
Time: <u>1130</u>			
Method: <u>SS spoon</u>			
Monitor Reading (ppm): <u>210 ppm</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCH VOC</u>	<u>(4) 5g Enviro bags</u>	<u>yes</u>	
<u>Pest, PCB, Semivol</u>	<u>8 oz G</u>	↓	
<u>Cd, Tl, Metals</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES: FID = 0.0 ppm

MAP: see logbook pg 13

Circle if Applicable:

<input type="checkbox"/> MS/MSD	Duplicate ID No.:	Signature(s):
		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola Pensacola</u>	Sample ID No.:	<u>PEN-4350D5</u>
Project No.:	<u>CTO 96 Site 43</u>	Sample Location:	<u>Anomaly #50 (NE)</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Elliott / A. Wilcox</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/16/99</u>	<u>3'</u>	<u>Grey / Brown</u>	<u>Medium Grained Sand</u>
Time: <u>1140</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>< 10 ppm</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>(4) 5g Ennore 200 G</u>	<u>YES</u>	
<u>Pest, PCB, Semivol</u>	<u>800 G</u>	↓	
<u>CN, TNL Metals</u>	<u>800 G</u>	↓	

OBSERVATIONS / NOTES:

FID = 0.0 ppm

MAP:

See logbook p13

Circle if Applicable:

<input type="checkbox"/> MS/MSD	Duplicate ID No.:
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Signature(s): [Handwritten Signatures]

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 48</u>	Sample ID No.:	<u>PEN435106</u>
Project No.:	<u>CTO 96</u>	Sample Location:	<u>Anomaly #200</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Elliott A. Wilcox</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>12-6-99</u>	<u>3'</u>	<u>Grey/Brown</u>	<u>medium Grained Sand w/ debris (metal & concrete)</u>
<u>1730</u>	<u>3.5'</u>	<u>White</u>	
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>< 10 ppm</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TEL VOC</u>	<u>(4) 5g Encore 202G</u>	<u>YES</u>	
<u>Pest, PCB, Semivol</u>	<u>8 oz G</u>	↓	
<u>CN, TAL Metal</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES:	MAP:
<u>FID = 0.0 ppm</u> <u>PID = 5.2 ppm</u>	<u>see Fieldbook pg</u>

Circle if Applicable:	Signature(s):
MS/MSD	
Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 4B</u>	Sample ID No.:	<u>PEN435U07</u>
Project No.:	<u>CTS 96</u>	Sample Location:	<u>Anomaly #20</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Elliott / A. Wilcox</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10-6-91</u>	<u>3'</u>	<u>Grey/Brown</u>	<u>Medium Grained Sand w/ rusted debris</u>
<u>1715</u>	<u>3.5'</u>	<u>w/ white below</u>	
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>(4) 5g Encore 2oz G</u>	<u>yes</u>	
<u>Pest, PCB, Semivol</u>	<u>8 oz G</u>	↓	
<u>CN, TAL Metal</u>	<u>4 oz G</u>	↓	

OBSERVATIONS / NOTES:	MAP:
<u>RID = 7.9 ppm</u>	<u>See fieldbook pg</u>

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD		

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name:	<u>NASP site 43</u>	Sample ID No.:	<u>Pen-43SB040708</u>
Project No.:	<u>CTO 096</u>	Sample Location:	<u>43 SB04</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>JA, RF</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	<u>0462</u>
<input type="checkbox"/> Sediment		Type of Sample:	<u>0463</u>
<input type="checkbox"/> Other:		<input type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10-15-99</u>	<u>7-8'</u>	<u>lt. tan-white</u>	<u>Sand, moist</u>
Time: <u>1540 1600 GA</u>			
Method: <u>DPT</u>			
Monitor Reading (ppm): <u>0</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 encore</u>		
	<u>202 G</u>		
<u>SVOC, Pest, CB</u>	<u>802 G</u>		
	<u>402 G</u>		
<u>TAL, metals</u>	<u>+</u>		

OBSERVATIONS / NOTES:	MAP:

Circle if Applicable:	Signature(s):		
<table style="width: 100%;"> <tr> <td style="width: 50%;"><input type="checkbox"/> MS/MSD</td> <td style="width: 50%;">Duplicate ID No.:</td> </tr> </table>	<input type="checkbox"/> MS/MSD	Duplicate ID No.:	
<input type="checkbox"/> MS/MSD	Duplicate ID No.:		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NASP - site 43</u>	Sample ID No.:	<u>Pen-435B051415</u>
Project No.:	<u>CTO 096</u>	Sample Location:	<u>43 SB05</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>JA, RF</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	<u>0463</u>
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10 13 99</u>			
Time: <u>1500 1635</u>			
Method: <u>DPT</u>	<u>14-15'</u>	<u>White</u>	<u>Moist, Firm Sand</u>
Monitor Reading (ppm): <u>∅</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 encores</u> <u>202 9</u>		
<u>SVOC, Pest, PCB</u>	<u>4 02</u>		
<u>TA L Metals, cyanide</u>	<u>8 02</u>		

OBSERVATIONS / NOTES:	MAP:
<p style="font-size: 2em; text-align: center;">duplicate taken</p> <p style="text-align: center; font-size: 3em;">↓</p>	

Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	Duplicate ID No.: <u>Pen-435B DD03</u>	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NASP/ Site 43</u>	Sample ID No.:	<u>Pen-43SBΦ(1415)</u>
Project No.:	<u>CTO 046</u>	Sample Location:	<u>Spill Boring 01</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>L. Franklin</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	<u>0462</u>
<input type="checkbox"/> Sediment		Type of Sample:	<u>0463</u>
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/15/19</u>	<u>14-15'</u>	<u>White</u>	<u>Moist Fine Sand</u>
<u>12:50</u>			
<u>1440</u>			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL UOA</u>	<u>4x546new</u>		
	<u>200G</u>		
<u>SUOC, Rest, PCB</u>	<u>800G</u>		
<u>HAZ Metals, Cu</u>	<u>400G</u>		

OBSERVATIONS / NOTES:	MAP:
<u>Down gradient</u>	

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NHSP/ Site 43</u>	Sample ID No.:	<u>Peny-43SB021415</u>
Project No.:	<u>CTB 096</u>	Sample Location:	<u>Berthole #2</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>J. Frankl.</u>
<input checked="" type="checkbox"/> Subsurface Soil		C.O.C. No.:	<u>0462</u>
<input type="checkbox"/> Sediment		Type of Sample:	<u>0463</u>
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/18/99</u>	<u>14-15'</u>	<u>White</u>	<u>Moist, Fine Sand</u>
Time: <u>1420</u>			
Method: <u>DPT</u>			
Monitor Reading (ppm): <u>-</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 x 54 Encor 202 G</u>	<input checked="" type="checkbox"/>	
<u>SUOC, Pest. PCB</u>	<u>4 02G</u>	<input checked="" type="checkbox"/>	
<u>TAL Metal, CW</u>	<u>4 02G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:	MAP:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NASP/ Site 42</u>	Sample ID No.: <u>Pennd-435B0314 15</u>
Project No.: <u>CT6 96</u>	Sample Location: <u>Boothole #3</u>
<input type="checkbox"/> Surface Soil	Sampled By: <u>R. Franklin</u>
<input checked="" type="checkbox"/> Subsurface Soil	C.O.C. No.: <u>0462</u>
<input type="checkbox"/> Sediment	Type of Sample: <u>0463</u>
<input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Low Concentration
<input type="checkbox"/> QA Sample Type: _____	<input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:

Date: <u>12/15/98</u>	Depth: _____	Color: _____	Description (Sand, Silt, Clay, Moisture, etc.): _____
Time: <u>1450 1520</u>	<u>14-15'</u>	<u>white</u>	<u>Moist, Fine Sand</u>
Method: <u>DPT</u>			
Monitor Reading (ppm): _____			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TAL VOC</u>	<u>4454 Enew 202G</u>	<input checked="" type="checkbox"/>	
<u>SUOC, Pest, PCB</u>	<u>802 G</u>	<input checked="" type="checkbox"/>	
<u>TAL Metals, CW</u>	<u>402 G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

MAP:

Side gradient

Circle if Applicable:

Signature(s):

MS/MSD	Duplicate ID No.: _____
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R. Franklin

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NIFS Pensacola, Site 43</u>	Sample ID No.:	<u>PEN-435541</u>
Project No.:	<u>C-096</u>	Sample Location:	<u>Anomaly # 25</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>R. Franklin</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>Brown</u>	<u>Sand</u>
Time: <u>0905</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4x596um, 2026</u>	<u>✓</u>	
<u>Post PCB SemiVol</u>	<u>8 026</u>	<u>✓</u>	
<u>CU, TALL Metal</u>	<u>4 026</u>	<u>✓</u>	

OBSERVATIONS / NOTES:	MAP:
<u>FID = 0.02 ppm</u>	

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NHS Pensacola, Site 42</u>	Sample ID No.: <u>PAW-435502</u>
Project No.: <u>CTO 96</u>	Sample Location: <u>Anomaly # 23</u>
	Sampled By: <u>A. Franklin</u>
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: <input type="checkbox"/> QA Sample Type:	C.O.C. No.: Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DK BRN</u>	<u>FSAND</u>
Time: <u>0920</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4x5g, Encore, 1x20g</u>	<input checked="" type="checkbox"/>	
<u>SVOC, Pest, PCB</u>	<u>803 G</u>	<input checked="" type="checkbox"/>	
<u>TAL Metals, CN</u>	<u>403 G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
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Signature(s):

A. Franklin

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 43</u>	Sample ID No.:	<u>PER-4355φ3</u>
Project No.:	<u>CT096</u>	Sample Location:	<u>Anomaly # 24</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>R. Frank</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/15/99</u>	<u>0-6"</u>	<u>DK BRN.</u>	<u>F. SAND</u>
Time: <u>0907</u>			
Method: <u>SS Spec</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 x 454 Gram, 2000</u>	<u>—</u>	
<u>Post, PCB, Sem, VOC</u>	<u>4 02 G</u>	<u>—</u>	
<u>TAL Metals, CN</u>	<u>4 02 G</u>	<u>—</u>	

OBSERVATIONS / NOTES: <u>flp = 0.00 ppm</u>	MAP:
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Circle if Applicable:		Signature(s): <u>[Signature]</u>
MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NAS Pensacola</u>	Sample ID No.: <u>PN 435504</u>
Project No.: <u>CTO 96</u>	Sample Location: <u>Area # 19</u>
	Sampled By: <u>Franklin</u>
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: <input type="checkbox"/> QA Sample Type:	C.O.C. No.:
	Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/15/99</u>	<u>0-6"</u>	<u>DR BRN</u>	<u>F-SAND</u>
Time: <u>0930</u>			
Method: <u>SSS 200</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4854 Encas, 200L</u>	<u>✓</u>	
<u>Pest, PCB, Semi VOC</u>	<u>8 02 G</u>	<u>—</u>	
<u>TML Metal, RA</u>	<u>402 G</u>	<u>—</u>	

OBSERVATIONS / NOTES: <u>FID = 0.00 ppm</u>	MAP:
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Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 43</u>	Sample ID No.:	<u>PCN-435505</u>
Project No.:	<u>CT096</u>	Sample Location:	<u>Hydromat #22</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>J. Franklin</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/17/98</u>	<u>0-6"</u>	<u>DK BRN</u>	<u>F SAND</u>
Time: <u>0940</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 x 545 Eucor, 202 G</u>	<u>✓</u>	
<u>Pest, PCB, Semi VOC</u>	<u>8 oz G</u>	<u>✓</u>	
<u>TAL Metals, CAI</u>	<u>4 oz G</u>	<u>✓</u>	

OBSERVATIONS / NOTES:	MAP:
<u>FD = 0.00 ppm</u>	

Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	<input type="checkbox"/> Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NAS Pensacola, Site 43</u>	Sample ID No.: <u>PN 4355096</u>
Project No.: <u>CT096</u>	Sample Location: <u>Anomaly # 18</u>
	Sampled By: <u>M. Franklin</u>
	C.O.C. No.: _____
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: _____ <input type="checkbox"/> QA Sample Type: _____	Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DK. BRN</u>	<u>F.SAND</u>
Time: <u>0950</u>			
Method: <u>55 Spoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOC</u>	<u>4 x 54 Encaps, 200G</u>	<u>—</u>	
<u>Post-PCB, Semi-VOC</u>	<u>4 02G</u>	<u>—</u>	
<u>CD, TML Metals</u>	<u>4 02G</u>	<u>—</u>	

OBSERVATIONS / NOTES: <u>FIP = 0.00 ppm</u>	MAP: _____
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Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.: _____	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola Site 43</u>	Sample ID No.:	<u>PEN-435507</u>
Project No.:	<u>CTD 96</u>	Sample Location:	<u>Anomaly # 20</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>C. Franklin</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>Dk Brn</u>	<u>F. SAND</u>
Time: <u>0945</u>			
Method: <u>SS SPOON</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4x5g. Encep, 1x203 G.</u>	<input checked="" type="checkbox"/>	
<u>SVOCs, Pest, PCB</u>	<u>8 oz G.</u>	<input checked="" type="checkbox"/>	
<u>PAH Metals, CP</u>	<u>4 oz G.</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES: <u>FI0 = 0.00 ppm</u>	MAP:
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Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola # 43</u>	Sample ID No.:	<u>PEN-430508</u>
Project No.:	<u>CD 96</u>	Sample Location:	<u>Anomaly #21</u>
<input type="checkbox"/> Surface Soil		Sampled By:	<u>R. Franklin</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date: <u>10/5/99</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1000</u>	<u>0-6"</u>	<u>DK BRN.</u>	<u>F.S AND</u>
Method: <u>SS SPOON</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4x5g Envoy, 1x20g</u>	<input checked="" type="checkbox"/>	
<u>SVOC, Pest, PCB</u>	<u>1x80g</u>	<input checked="" type="checkbox"/>	
<u>TAL Metals, CN</u>	<u>1x40g</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

FIN = 0.00 ppm

MAP:

Circle if Applicable:

<input type="checkbox"/> MS/MSD	Duplicate ID No.:
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Signature(s):

[Signature]

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NAS Pensacola, Site 43</u>	Sample ID No.: <u>PEN-435509</u>
Project No.: <u>CR094</u>	Sample Location: <u>Anomaly # 13</u>
	Sampled By: <u>AW/ape</u>
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: <input type="checkbox"/> QA Sample Type:	C.O.C. No.:
	Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:

Date: <u>10/5/99</u>	Depth: <u>0-6"</u>	Color: <u>LT. BRN</u>	Description (Sand, Silt, Clay, Moisture, etc.): <u>FSAND</u>
Time: <u>140500</u>			
Method: <u>SS Spoon</u>			
Monitor Reading (ppm): <u>0.00 ppm</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4 x 5g. Encap, 1 x 2oz G</u>	<input checked="" type="checkbox"/>	
<u>SiOC, Pest, PCB</u>	<u>1 x 2oz G</u>	<input checked="" type="checkbox"/>	
<u>TAL metals</u>	<u>1 x 4oz. G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

FID: 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
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Signature(s): AW/ape

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola Site 43</u>	Sample ID No.:	<u>PEN-435510</u>
Project No.:	<u>OTO 96</u>	Sample Location:	<u>Anomaly #14</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>R. Franklin</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DLBEN</u>	<u>F. SAND</u>
Time:			
<u>1420 PM</u>			
Method:			
<u>SSSpoon</u>			
Monitor Reading (ppm):			
<u>0.00</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4 x 5g. Encore, 1 x 2oz. G</u>	<input checked="" type="checkbox"/>	
<u>SVOCs, Pest, PCB</u>	<u>1 x 8oz G</u>	<input checked="" type="checkbox"/>	
<u>DM Metals, CN</u>	<u>1 x 4oz G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

FID = 0.00 ppm ASD
0.00

MAP:

Circle if Applicable:		Signature(s): <u>Alby Blum</u>
<input type="checkbox"/> MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola Site 43</u>	Sample ID No.:	<u>PEN-435511</u>
Project No.:	<u>CTD 96</u>	Sample Location:	<u>Anomaly #1 F</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>Mulder</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>			
Time: <u>1445</u>			
Method: <u>SSSpoon</u>	<u>0-6"</u>	<u>LTBRN / DLEPEY</u>	<u>F. SAND</u>
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>SVOC, Pest, PCB</u>	<u>1 x 8oz. G</u>	<input checked="" type="checkbox"/>	
<u>TAL Metals, CN</u>	<u>1 x 4oz. G</u>	<input checked="" type="checkbox"/>	
<u>TCL VOCs</u>	<u>4 x 5g. Encore, 1 x 2oz. G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:	MAP:
<p><u>FID = 0.00 ppm</u> <u>0.00 ppm</u></p> <p><u>DUPLICATE COLLECTED</u></p>	

Circle if Applicable:		Signature(s): <u>Abby B. Mulder</u>
<input type="checkbox"/> MS/MSD	Duplicate ID No.: <u>PEN-43550001</u>	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola #43</u>	Sample ID No.:	<u>PEN-435512</u>
Project No.:	<u>CTD 96</u>	Sample Location:	<u>Anomaly # 15</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>AWilcox</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DK. GREY</u>	<u>F. SAND</u>
Time: <u>1505</u>			
Method: <u>SSPOON</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:				
Analysis	Container Requirements	Collected	Other	
<u>SWOC, Pest, PCB</u>	<u>4 x 5g. ETCORE / 1 x 20g. G</u>	<input checked="" type="checkbox"/>		
<u>TAL Metals, CN</u>	<u>1 x 803. G</u>	<input checked="" type="checkbox"/>		
<u>TCL VOCs</u>	<u>1 x 20g. G, 4 x 5g. G</u>	<input checked="" type="checkbox"/>		

OBSERVATIONS / NOTES:	MAP:
<u>FID = 0.00 ppm</u>	

Circle if Applicable:	Signature(s):		
<table style="width: 100%;"> <tr> <td style="width: 50%;"><input type="checkbox"/> MS/MSD</td> <td style="width: 50%;"><input type="checkbox"/> Duplicate ID No.:</td> </tr> </table>	<input type="checkbox"/> MS/MSD	<input type="checkbox"/> Duplicate ID No.:	<u>Abby B. Wilcox</u>
<input type="checkbox"/> MS/MSD	<input type="checkbox"/> Duplicate ID No.:		

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NAS Pensacola, Site 43</u> Project No.: <u>CTD 96</u>	Sample ID No.: <u>PEN-43573</u> Sample Location: <u>Anomaly #12</u> Sampled By: _____ C.O.C. No.: _____
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: _____ <input type="checkbox"/> QA Sample Type: _____	Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DK BRN.</u>	<u>F. SAND</u>
Time: <u>1455</u>			
Method: <u>SSSpoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>SWC, Pest, PCB</u>	<u>1 x 8 oz. G</u>	<input checked="" type="checkbox"/>	
<u>Ta Metals, Cu</u>	<u>1 x 4 oz. G</u>	<input checked="" type="checkbox"/>	
<u>TCL VOCs</u>	<u>4 x 5 g. Bcore, 1 x 2 oz. G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES: <u>FID = 0.00 ppm</u>	MAP:
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Circle if Applicable:	Duplicate ID No.:	Signature(s):
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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola site 43</u>	Sample ID No.:	<u>PEN-435514</u>
Project No.:	<u>CD 96</u>	Sample Location:	<u>Anomaly #14</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>AWL/COB</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>DLBRN</u>	<u>F.SAND</u>
Time: <u>1530</u>			
Method: <u>SSA000</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4 x 5g. Enviro. 1 x 2oz. G</u>	<input checked="" type="checkbox"/>	
<u>SVOC, Pest, PCB</u>	<u>1 x 8oz. G</u>	<input checked="" type="checkbox"/>	
<u>TPZ Metals, CN</u>	<u>1 x 4oz. G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:	MAP:
<u>FIP = 0.00ppm</u>	

Circle if Applicable:		Signature(s): <u>Abby B. Moore</u>
<input type="checkbox"/> MS/MSD	Duplicate ID No.:	

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name:	<u>NAS Pensacola, Site 43</u>	Sample ID No.:	<u>PEN-435515</u>
Project No.:	<u>CD 96</u>	Sample Location:	<u>Anomaly #4</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>A. Wilcox</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>	<u>MED. BRN.</u>	<u>F.SAND</u>
Time: <u>1545</u>			
Method: <u>SSSP00A</u>			
Monitor Reading (ppm): <u>0.0</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCH VOCs</u>	<u>4 x 50g Empty, 1 x 20g G</u>	<input checked="" type="checkbox"/>	
<u>SVOC, Pest, PCB</u>	<u>1 x 80g G</u>	<input checked="" type="checkbox"/>	
<u>TAL Metals</u>	<u>1 x 40g G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:

FID = 0.00 ppm

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
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Signature(s):

Abby B Wilcox

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: <u>NAS Pensacola Site 43</u> Project No.: <u>CTD96</u>	Sample ID No.: <u>PEX-435516</u> Sample Location: <u>Anomaly #11</u> Sampled By: <u>A. Wilcox</u> C.O.C. No.: _____ Type of Sample: <input checked="" type="checkbox"/> Low Concentration <input type="checkbox"/> High Concentration
<input checked="" type="checkbox"/> Surface Soil <input type="checkbox"/> Subsurface Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other: _____ <input type="checkbox"/> QA Sample Type: _____	

GRAB SAMPLE DATA:

Date: <u>10/5/95</u>	Depth: <u>0-6"</u>	Color: <u>DK BRN</u>	Description (Sand, Silt, Clay, Moisture, etc.): <u>F5 AND</u>
Time: <u>1640</u>			
Method: <u>SSpoon</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4 x 5g. Encorp, 1 x 203 G</u>	<input checked="" type="checkbox"/>	
<u>SWC, Pest, PCB</u>	<u>1 x 8 oz G</u>	<input checked="" type="checkbox"/>	
<u>TAL metals Sn</u>	<u>1 x 4 oz G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES: MS/MSD ANALYSIS - DUPLICATE VOLUME SUBMITTED FID = 0.00 DOUBLED	MAP:
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Circle if Applicable: <input checked="" type="checkbox"/> MS/MSD Duplicate ID No.: <u>PEX-435516</u>	Signature(s):
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SOIL & SEDIMENT SAMPLE LOG SHEET

Page 1 of 1

Project Site Name:	<u>NAS Pensacola Site 43</u>	Sample ID No.:	<u>PEN-435517</u>
Project No.:	<u>CTD 96</u>	Sample Location:	<u>Anomaly # 10</u>
<input checked="" type="checkbox"/> Surface Soil		Sampled By:	<u>A. Wilcox</u>
<input type="checkbox"/> Subsurface Soil		C.O.C. No.:	_____
<input type="checkbox"/> Sediment		Type of Sample:	
<input type="checkbox"/> Other:	_____	<input checked="" type="checkbox"/> Low Concentration	
<input type="checkbox"/> QA Sample Type:	_____	<input type="checkbox"/> High Concentration	

GRAB SAMPLE DATA:			
Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
<u>10/5/99</u>	<u>0-6"</u>		
Time: <u>1018</u>			
Method: <u>SSP, OCN</u>			
Monitor Reading (ppm): <u>0.00</u>			

COMPOSITE SAMPLE DATA:				
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:			
Analysis	Container Requirements	Collected	Other
<u>TCL VOCs</u>	<u>4 x 5 g. Encore, 1 x 20g G</u>	<input checked="" type="checkbox"/>	
<u>SMC, Pect, PCB</u>	<u>1 x 8.03 G</u>	<input checked="" type="checkbox"/>	
<u>TAL metals</u>	<u>1 x 4.03 G</u>	<input checked="" type="checkbox"/>	

OBSERVATIONS / NOTES:	MAP:
<p><u>DUPLICATE COLLECTED</u> <u>FWD = 0.00 ppm</u></p>	

Circle if Applicable:	Duplicate ID No.:	Signature(s):
<input type="checkbox"/> MS/MSD	<u>PEN-43550002</u>	<u>Abby B. Wilcox</u>

APPENDIX B
BORING LOGS

BORING LOG

PROJECT NAME: WASP/ Site 43
 PROJECT NUMBER: CTO 96
 DRILLING COMPANY: TEG
 DRILLING RIG: DPT

BORING NUMBER: 43 SB 01
 DATE: 10/15/99
 GEOLOGIST: _____
 DRILLER: J. Stevens

Sample No. and Type or RQD	Depth (FL) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/FL) or Screened Interval	MATERIAL DESCRIPTION		U S C S *	Remarks	PID/FID Reading (ppm)												
					Soil Density/ Consistency or Rock Hardness	Color			Material Classification	Sample	Sampler BZ	Borehole**	Driller BZ**								
	1	/				Brn	Fine Sand														
	2	/																			
	3	/																			
	4	/	4/4																		
	5	/																			
	6	/																			
	7	/																			
	8	/	4/4																		
	9	/																			
	10	/																			
	11	/																			
	12	/	4/4																		
	13	/																			
	14	/																			
	15	/																			
	16	/	3/4																		
	17	/																			
	18	/																			
	19	/																			
	20	/	4/4																		

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: V-FID Screening Depth

Drilling Area
Background (ppm): 0

Converted to Well: Yes No Well I.D. #: _____

BORING LOG

PROJECT NAME: NASP / Site 43 BORING NUMBER: 43SB02
 PROJECT NUMBER: CTO 4996 DATE: 10/15/99
 DRILLING COMPANY: TEG GEOLOGIST: _____
 DRILLING RIG: DPT DRILLER: J. Stevenson

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	1	/				Brown	Fine Sand		Dry				
	2	/				↓	↓		↓				
	3	/				↓	↓		↓				
	4	/	4/4			↓	↓		↓				
	5	/					-		↓				
	6	/				Tan			Damp				
	7	/				↓	↓		↓				
	8	/	3/4			↓	↓		↓				
	9	/				↓	↓		↓				
	10	/				↓	↓		↓				
	11	/					-						
	12	/	2/4				-						
	13	/					↓		↓				
	14	/				White			↓				
	15	/				↓	↓		↓				
	16	/	3/4			↓	↓		Saturated				
	17	/				↓	↓		↓				
	18	/				↓	↓		↓				
	19	/				↓	↓		↓				
	20	/	4/4			↓	↓		↓				

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area
Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

BORING LOG

PROJECT NAME: NASPI Site 43 BORING NUMBER: 43 SBφ3
 PROJECT NUMBER: CTO 96 DATE: 10/15/99
 DRILLING COMPANY: TEB GEOLOGIST: _____
 DRILLING RIG: DPT DRILLER: J. Stinson

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PID/FID Reading (ppm)									
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**						
	1	/																	
	2	/																	
	3	/																	
	4	/	4/4																
	5	/																	
	6	/																	
	7	/																	
	8	/	3/4																
	9	/																	
	10	/																	
	11	/																	
	12	/	3/4																
	13	/																	
	14	/																	
	15	/																	
	16	/	2/4																
	17	/																	
	18	/																	
	19	/																	
	20	/	2/4																

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area
Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

BORING LOG

PROJECT NAME: NAAP/ Site 43 BORING NUMBER: 43SB05
 PROJECT NUMBER: C7096 DATE: 10/15/99
 DRILLING COMPANY: TEC GEOLOGIST: _____
 DRILLING RIG: DPT DRILLER: J. Stuenkel

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
	1	/				Brown	Fine Sand		Dry				
	2	/											
	3	/											
	4	/	4/4										
	5	/				Tan							
	6	/											
	7	/											
	8	/	4/4										
	9	/											
	10	/											
	11	/											
	12	/	3/4			White			Moist				
	13	/											
	14	/											
	15	/											
	16	/	2/4						Saturated				
	17	/											
	18	/											
	19	/											
	20	/	3/4										

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: _____

Drilling Area
Background (ppm): 0

Converted to Well: Yes _____ No _____ Well I.D. #: _____

APPENDIX C
MONITORING WELL CONSTRUCTION SHEETS

BORING NO.: 43-15

OVERBURDEN MONITORING WELL SHEET

PROJECT <u>IR Site 43</u>	LOCATION: <u>NASP</u>	DRILLER <u>D. Anthony</u>
PROJECT NO. <u>CTO 96</u>	BORING <u>NAS-43-15</u>	METHOD: <u>DPT</u>
ELEVATION _____	DATE <u>10/17/94</u>	DRILLING _____
FIELD GEOLOGIST _____		DEVELOPMENT: <u>NA</u>

ELEVATION OF TOP OF SURFACE CASING:	_____
ELEVATION OF TOP OF RISER PIPE:	_____
STICK-UP TOP OF SURFACE CASING:	_____
STICK-UP RISER PIPE:	_____
I.D. OF SURFACE CASING:	_____
TYPE OF SURFACE CASING:	_____
TYPE OF SURFACE SEAL: <u>Concrete</u>	_____
RISER PIPE I.D.: <u>1"</u>	_____
TYPE OF RISER PIPE: <u>40 pvc</u>	_____
BOREHOLE DIAMETER: <u>3"</u>	_____
TYPE OF SEAL: <u>Bentonite</u>	<u>0-0.5'</u>
ELEVATION / DEPTH OF SEAL:	<u>1</u>
TYPE OS SEAL:	_____
DEPTH TOP OF SAND PACK:	<u>0.5'</u>
ELEVATION / DEPTH TOP OF SCREEN:	<u>19.5'</u>
TYPE OF SCREEN: <u>40 PVC</u>	_____
SLOT SIZE X LENGTH: <u>0.01" x 10'</u>	_____
I.D. OF SCREEN: <u>1"</u>	_____
TYPE OF SAND PACK: <u>Medium (PnePack)</u>	_____
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>19.5'</u>
ELEVATION / DEPTH BOTTOM OF SAND PACK:	<u>1</u>
TYPE OF BACKFILL BELOW OBSERVATION WELL:	_____
ELEVATION / DEPTH OF HOLE:	<u>1</u>

BORING NO.: 43-25

OVERBURDEN MONITORING WELL SHEET

PROJECT <u>IL Site 43</u>	LOCATION: <u>NASP</u>	DRILLER <u>D. Anthony</u>
PROJECT NO. <u>CTO 96</u>	BORING <u>NAS-43-25</u>	METHOD: DPT
ELEVATION _____	DATE <u>10/17/99</u>	DRILLING _____
FIELD GEOLOGIST _____		DEVELOPMENT: NA

ELEVATION OF TOP OF SURFACE CASING:	_____
ELEVATION OF TOP OF RISER PIPE:	_____
STICK-UP TOP OF SURFACE CASING:	_____
STICK-UP RISER PIPE:	_____
I.D. OF SURFACE CASING:	_____
TYPE OF SURFACE CASING:	_____
TYPE OF SURFACE SEAL: <u>Concrete</u>	_____
RISER PIPE I.D.: <u>1"</u>	_____
TYPE OF RISER PIPE: <u>40 PVC</u>	_____
BOREHOLE DIAMETER: <u>3"</u>	_____
TYPE OF SEAL: <u>Bentonite</u> <u>0-0.5'</u>	_____
ELEVATION / DEPTH OF SEAL:	<u>1</u>
TYPE OS SEAL:	_____
DEPTH TOP OF SAND PACK:	<u>0.5'</u>
ELEVATION / DEPTH TOP OF SCREEN:	<u>19.4'</u>
TYPE OF SCREEN: <u>40 PVC</u>	_____
SLOT SIZE X LENGTH: <u>0.01" X 10'</u>	_____
I.D. OF SCREEN: <u>1"</u>	_____
TYPE OF SAND PACK: <u>Medium (Pvc Pack)</u>	_____
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>119.4'</u>
ELEVATION / DEPTH BOTTOM OF SAND PACK:	<u>1</u>
TYPE OF BACKFILL BELOW OBSERVATION WELL:	_____
ELEVATION / DEPTH OF HOLE:	<u>1</u>

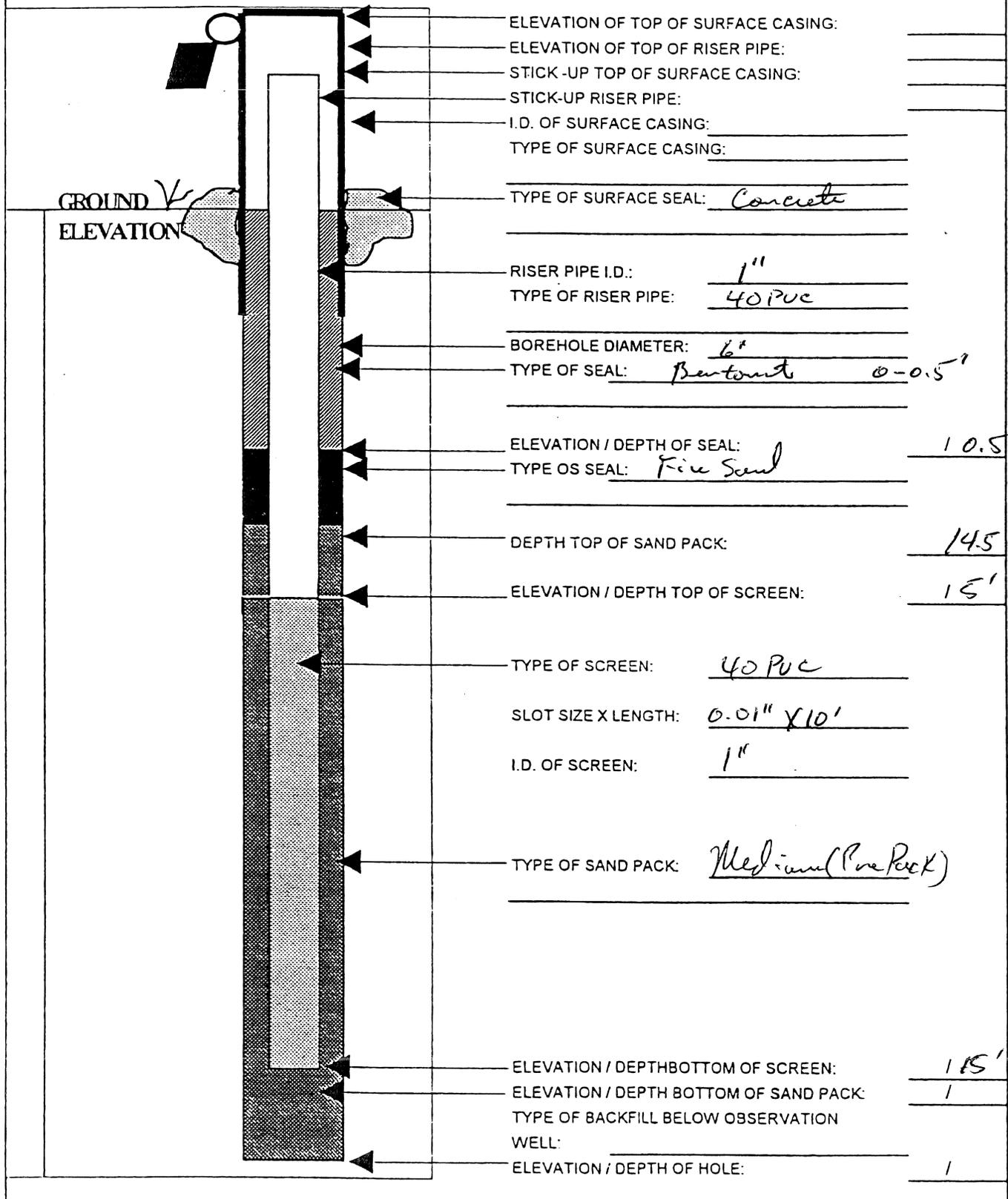
OVERBURDEN MONITORING WELL SHEET

PROJECT <u>IR Site 43</u>	LOCATION: <u>NASP</u>	DRILLER <u>D. Autho-1</u>
PROJECT NO. <u>CTO 96</u>	BORING <u>NAS-43-35</u>	METHOD: <u>DPT</u>
ELEVATION _____	DATE <u>10/17/99</u>	DRILLING _____
FIELD GEOLOGIST _____		DEVELOPMENT: <u>NA</u>

	ELEVATION OF TOP OF SURFACE CASING: _____
	ELEVATION OF TOP OF RISER PIPE: _____
	STICK-UP TOP OF SURFACE CASING: _____
	STICK-UP RISER PIPE: _____
	I.D. OF SURFACE CASING: _____
	TYPE OF SURFACE CASING: _____
	TYPE OF SURFACE SEAL: <u>Concrete</u>
	RISER PIPE I.D.: <u>1"</u>
	TYPE OF RISER PIPE: <u>40 PVC</u>
	BOREHOLE DIAMETER: <u>3"</u>
	TYPE OF SEAL: <u>Bentonite 0-05'</u>
	ELEVATION / DEPTH OF SEAL: <u>105'</u>
	TYPE OS SEAL: <u>Medium Seal</u>
	DEPTH TOP OF SAND PACK: _____
	ELEVATION / DEPTH TOP OF SCREEN: <u>19.5'</u>
TYPE OF SCREEN: <u>40 PVC</u>	
SLOT SIZE X LENGTH: <u>0.01" x 10'</u>	
I.D. OF SCREEN: <u>1"</u>	
TYPE OF SAND PACK: <u>Medium (Fine Pack)</u>	
ELEVATION / DEPTH BOTTOM OF SCREEN: <u>119.5'</u>	
ELEVATION / DEPTH BOTTOM OF SAND PACK: <u>1</u>	
TYPE OF BACKFILL BELOW OBSERVATION WELL: _____	
ELEVATION / DEPTH OF HOLE: <u>1</u>	

OVERBURDEN MONITORING WELL SHEET

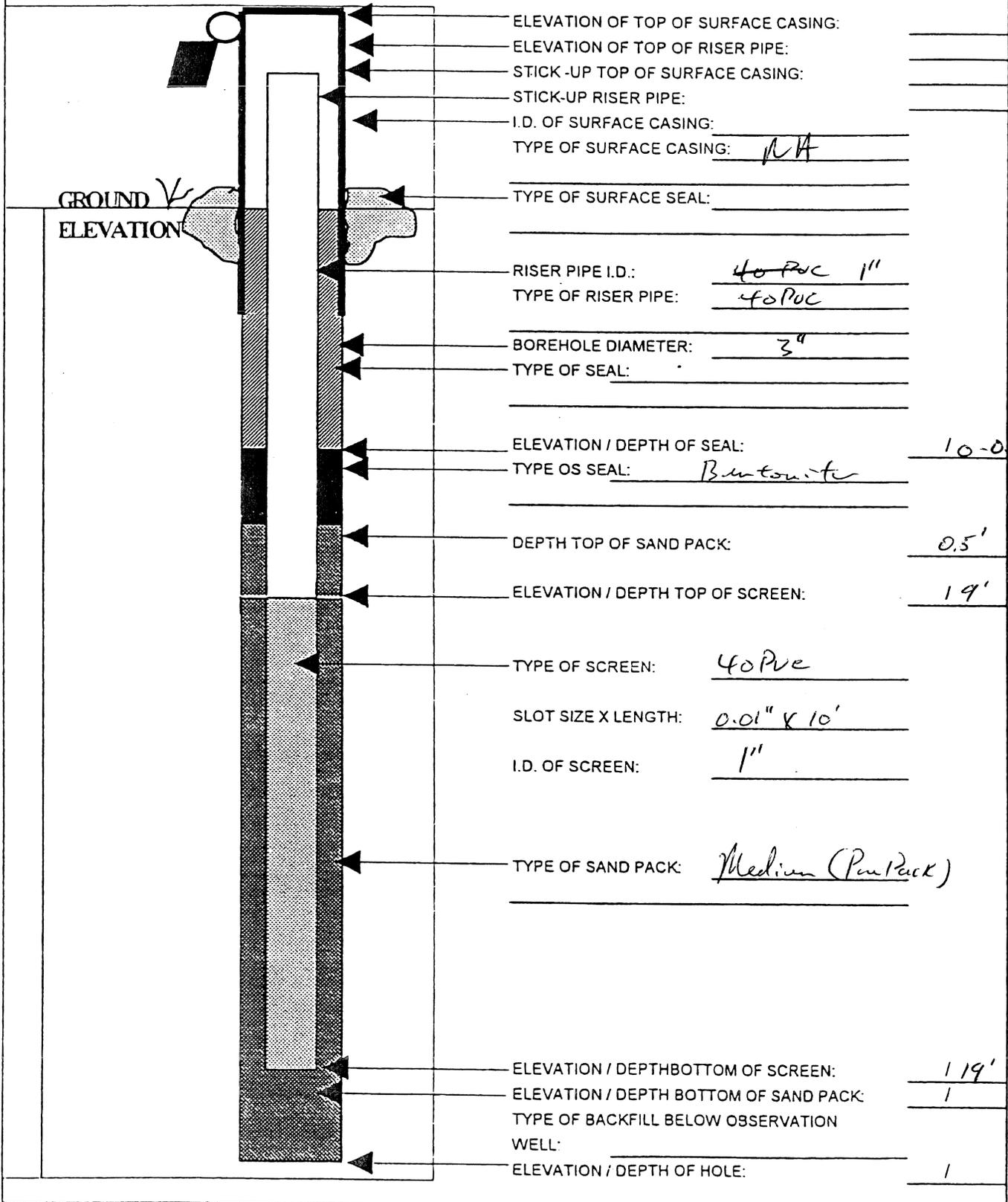
PROJECT <u>IR Site 43</u>	LOCATION: <u>NASP</u>	DRILLER <u>D. Anthony</u>
PROJECT NO. <u>CTD 96</u>	BORING <u>NAS-43 45</u>	METHOD: <u>DPT</u>
ELEVATION _____	DATE <u>10/17/99</u>	DRILLING _____
FIELD GEOLOGIST _____		DEVELOPMENT: <u>NA</u>



BORING NO: 43-53

OVERBURDEN MONITORING WELL SHEET

PROJECT <u>IR Site 43</u>	LOCATION: <u>NASP</u>	DRILLER <u>D. Anthony</u>
PROJECT NO. <u>27046</u>	BORING <u>NAS-43-53</u>	METHOD: <u>DPT</u>
ELEVATION _____	DATE <u>10/17/99</u>	DRILLING _____
FIELD GEOLOGIST _____		DEVELOPMENT: <u>NA</u>



APPENDIX D
MONITORING WELL DEVELOPMENT SHEETS

APPENDIX E
GROUNDWATER SAMPLE SHEETS



GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
 Project No.: CTO 96

Domestic Well Data
 Monitoring Well Data
 Other Well Type: _____
 QA Sample Type: _____

Sample ID No.: Pen-43-15-01
 Sample Location: 43-15
 Sampled By: R. F. ...
 C.O.C. No.: _____
 Type of Sample:
 Low Concentration
 High Concentration

SAMPLING DATA:

Date: <u>10/27/99</u>	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: <u>1025</u>	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Method: PERISTALTIC								

PURGE DATA:

Date: <u>10/27/99</u>	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
Method: PERISTALTIC	<u>0851</u>	<u>6.01</u>	<u>0.074</u>	<u>22.8</u>	<u>328</u>	<u>1.86</u>	<u>0.0</u>	<u>15.36</u>
Monitor Reading (ppm):	<u>0859</u>	<u>6.15</u>	<u>0.072</u>	<u>22.7</u>	<u>73</u>	<u>2.66</u>	<u>0.0</u>	<u>15.36</u>
Well Casing Diameter & Material	<u>0909</u>	<u>6.17</u>	<u>0.072</u>	<u>22.3</u>	<u>60</u>	<u>2.39</u>	<u>0.0</u>	<u>15.38</u>
Type: 2" PVC	SEE LOW FLOW PURGE DATA SHEET							
Total Well Depth (TD): <u>19.5'</u>	<u>0920</u>	<u>6.16</u>	<u>0.072</u>	<u>22.7</u>	<u>40</u>	<u>2.19</u>	<u>0.0</u>	<u>15.38</u>
Static Water Level (WL): <u>15.36'</u>	<u>0941</u>	<u>6.11</u>	<u>0.073</u>	<u>22.4</u>	<u>24</u>	<u>2.07</u>	<u>0.0</u>	<u>15.36</u>
One Casing Volume (gal/L): <u>0.169</u>	<u>1007</u>	<u>6.16</u>	<u>0.072</u>	<u>22.8</u>	<u>25</u>	<u>2.06</u>	<u>0.0</u>	<u>15.36</u>
Start Purge (hrs): <u>0844</u>	<u>1014</u>	<u>6.14</u>	<u>0.073</u>	<u>23.2</u>	<u>2725</u>	<u>1.89</u>	<u>0.0</u>	<u>15.36</u>
End Purge (hrs): <u>1023</u>								
Total Purge Time (min): <u>99</u>								
Total Vol. Purged (gal/L): <u>5.5</u>								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs		2 x 40 ml	
SVOC		2 x 1 liter amber	
pest		"	
PCB		"	
metals		1 liter poly	
Cyanide		1.5 liter poly	
anionics		1 500 ml poly	
Sulfide		1 500 ml poly	
TOC		1 250 ml poly	
methans		2 x 40 ml	

OBSERVATIONS / NOTES:

19.5
15.36
3.19
4.14

4
 $2.14 \times 0.04\% = 0.169$
 $0.169 \times 0.169 = 0.128 \text{ gal}$

Tubing set @ 18.0'

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

R. F. ...



GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
 Project No.: ~~63~~ FLORNO189

Domestic Well Data
 Monitoring Well Data
 Other Well Type: _____
 QA Sample Type: _____

Sample ID No.: Pen-43-25-01
 Sample Location: 25
 Sampled By: JA,
 C.O.C. No.: _____
 Type of Sample:
 Low Concentration
 High Concentration

SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
<u>10 27 99</u>	<u>—</u>	<u>6.28</u>	<u>.078</u>	<u>23.6</u>	<u>24</u>	<u>1.71</u>		
<u>0935</u>								
Method: PERISTALTIC								

PURGE DATA:

Date:	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other
<u>10 27 99</u>	<u>0747</u>	<u>6.60</u>	<u>.091</u>	<u>22.6</u>	<u>499</u>	<u>1.90</u>	<u>—</u>	<u>—</u>
Method: PERISTALTIC								
Monitor Reading (ppm): <u>Ø</u>	<u>0854</u>	<u>6.33</u>	<u>.078</u>	<u>23.1</u>	<u>121</u>	<u>3.44</u>	<u>—</u>	<u>16.35'</u>
Well Casing Diameter & Material	<u>0911</u>	<u>6.30</u>	<u>.078</u>	<u>23.4</u>	<u>48</u>	<u>2.09</u>	<u>—</u>	<u>—</u>
Type: <u>2" PVC</u>	SEE LOW FLOW PURGE DATA SHEET							
Total Well Depth (TD): <u>18.75</u>	<u>0914</u>	<u>6.30</u>	<u>.078</u>	<u>23.4</u>	<u>29</u>	<u>3.00</u>	<u>—</u>	<u>—</u>
Static Water Level (WL): <u>16.33</u>	<u>0929</u>	<u>6.28</u>	<u>.078</u>	<u>23.6</u>	<u>24</u>	<u>1.71</u>	<u>—</u>	<u>—</u>
One Casing Volume(gal/L): <u>0.1</u>								
Start Purge (hrs): <u>0840</u>								
End Purge (hrs): <u>0930</u>								
Total Purge Time (min): <u>50</u>								
Total Vol. Purged (gal/L): <u>3</u>								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
<u>SVOC</u>	<u>—</u>	<u>2 x 1 L g</u>	<u>yes</u>
<u>pesticides</u>	<u>—</u>	<u>2 x 1 L g</u>	<u>yes</u>
<u>PCB'S</u>	<u>—</u>	<u>2 x 1 L g</u>	<u>yes</u>
<u>VOC'S</u>	<u>HCl</u>	<u>2 x 40ml g</u>	<u>yes</u>
<u>methane</u>	<u>—</u>	<u>2 x 40ml g</u>	<u>—</u>
<u>TOC</u>	<u>H₂SO₄</u>	<u>1 x 250ml g</u>	<u>—</u>
<u>ANIONS</u>	<u>—</u>	<u>1 x 500ml poly.</u>	<u>—</u>
<u>Sulfide</u>	<u>Zn + NaOH</u>	<u>1 x 250ml poly.</u>	<u>—</u>
<u>Cyanide</u>	<u>NaOH</u>	<u>1 x 1 L poly</u>	<u>—</u>
<u>metals</u>	<u>HNO₃</u>	<u>1 x 500ml poly</u>	<u>—</u>

OBSERVATIONS / NOTES:

18.75
16.33
—

.041
.099

Circle if Applicable:

MS/MSD Duplicate ID No.: _____

Signature(s):



GROUNDWATER SAMPLE LOG SHEET

Page of

Project Site Name:	NAS Pensacola	Sample ID No.:	Pen-43-35-01
Project No.:	NO189	Sample Location:	NAS-43-35
<input type="checkbox"/> Domestic Well Data		Sampled By:	JA, HE
<input checked="" type="checkbox"/> Monitoring Well Data		C.O.C. No.:	
<input type="checkbox"/> Other Well Type:		Type of Sample:	
<input type="checkbox"/> QA Sample Type:		<input type="checkbox"/> Low Concentration	
		<input type="checkbox"/> High Concentration	

SAMPLING DATA:									
Date:	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other	
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA	
10 27 99	Clear	6.19	.205	25.0	3	1.61	0.0		
1530									
Method: PERISTALTIC									

PURGE DATA:									
Date:	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Other	
10 27 99	1453	6.30	.206	25.0	678	2.11	0.0	16.59	
Method: PERISTALTIC	1500	6.21	.206	25.0	58	1.56	0.0	16.59	
Monitor Reading (ppm):	1509	6.22	.204	25.0	74	1.99	0.0		
Well Casing Diameter & Material	SEE LOW FLOW PURGE DATA SHEET								
Type: 2" PVC									
Total Well Depth (TD):	1515	6.17	.205	24.9	17	1.58	0.0		
Static Water Level (WL):	1519	6.17	.205	25.0	8	1.40	0.0		
One Casing Volume(gal/L):	1625	6.19	.205	25.0	3	1.61	0.0		
Start Purge (hrs):	1450								
End Purge (hrs):	1525								
Total Purge Time (min):	35								
Total Vol. Purged (gal/L):	2								

SAMPLE COLLECTION INFORMATION:			
Analysis	Preservative	Container Requirements	Collected
VOA	HCl	2 x 40 ml g	
SVO C	---	2 x 1 L amber	
Pesticides	---	2 x 1 L amber	
PCB	---	2 x 1 L amber	
metals	HNO ₃	1 x 1 L poly	
cyanide	NaOH	1 x 500ml poly	
Anions	---	1 x 500ml poly	
TOC	H ₂ SO ₄	1 x 250ml amber	
methane	---	2 x 40ml g	
Sulfide	Zn+NaOH	1 x 250ml	

OBSERVATIONS / NOTES:

ms/msd - Pen - ~~43~~ - ~~35~~ - 01ms

Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	Duplicate ID No.: Pen-43-DD-01	



GROUNDWATER SAMPLE LOG SHEET

Project Site Name:	NAS Pensacola	Sample ID No.:	PEN-43-45-01
Project No.:	0098 0096 (15)	Sample Location:	Site 43
<input type="checkbox"/> Domestic Well Data		Sampled By:	JE
<input checked="" type="checkbox"/> Monitoring Well Data		C.O.C. No.:	
<input type="checkbox"/> Other Well Type:		Type of Sample:	<input checked="" type="checkbox"/> Low Concentration
<input type="checkbox"/> QA Sample Type:			<input type="checkbox"/> High Concentration

SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
10-27-99	clear	5.53	0.119	25.3	8	1.54	9.02	
0930								
Method: PERISTALTIC								

PURGE DATA:

Date:	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Water Level Salinity	Flow Rate Other
10-27-99	0900	5.19	0.180	24.1	113	2.17	9.00	~400 mL/min
Method:	PERISTALTIC							
Monitor Reading (ppm):	—	0907	5.45	0.119	25.0	0.33	9.02	~400 mL/min
Well Casing Diameter & Material	0914	5.63	0.120	24.9	20	2.26	9.01	~350 mL/min
Type:	2" PVC 1" PVC							
SEE LOW FLOW PURGE DATA SHEET								
Total Well Depth (TD):	15.05	0917	5.50	0.120	25.1	18	2.48	9.01
Static Water Level (WL):	9.00	0922	5.47	0.119	25.1	10	1.50	9.00
One Casing Volume (gal/L):	0.25 gal							
Start Purge (hrs):	0900	0920	5.53	0.119	25.3	8	1.54	9.00
End Purge (hrs):	0926							
Total Purge Time (min):	26 min							
Total Vol. Purged (gal/L):	2.3 gal							

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SVC	—	(2) 1 L glass	
Pesticides	—	(2) 1 L glass	
PCB's	—	(2) 1 L glass	
VOC's	HCl	(2) 40 mL vials	
Methane	—	(2) 40 mL vials	
TOC	H ₂ SO ₄	(1) 250 mL glass	
Anions	—	(1) 500 mL poly	
Sulfide	Zn + NaOH	(1) 250 mL poly	
Cyanide	NaOH	(1) 1 L poly	
Metals	HNO ₃	(1) 500 mL poly	

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
<input type="checkbox"/> MS/MSD	Duplicate ID No.:	



GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS Pensacola
 Project No.: ~~0098~~ 0096 (R)

Domestic Well Data
 Monitoring Well Data
 Other Well Type: _____
 QA Sample Type: _____

Sample ID No.: _____
 Sample Location: PEN-43-55-01
 Sampled By: H.E.
 C.O.C. No.: _____
 Type of Sample: _____
 Low Concentration
 High Concentration

SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Flow Rate
Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	Other
<u>10-27-99</u>		<u>6.09</u>	<u>0.096</u>	<u>24.7</u>	<u>36</u>	<u>1.56</u>	<u>15.82</u>	<u>300^m/min</u>
<u>1030</u>								<u>NA</u>
Method: PERISTALTIC								

PURGE DATA:

Date:	Time	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Flow Rate
Method:	Monitor Reading (ppm):	Well Casing Diameter & Material	Type:	Total Well Depth (TD):	Static Water Level (WL):	One Casing Volume (gal/L):	Start Purge (hrs):	End Purge (hrs):
<u>10-27-99</u>					<u>9.99</u>	<u>2.13</u>	<u>16.79</u>	<u>150^m/min</u>
PERISTALTIC	<u>0852</u>	<u>6.24</u>	<u>0.092</u>	<u>23.4</u>	<u>116</u>	<u>1.59</u>	<u>15.82</u>	<u>300^m/min</u>
	<u>0910</u>	<u>6.10</u>	<u>0.094</u>	<u>23.9</u>	<u>63</u>	<u>1.61</u>	<u>15.82</u>	<u>11</u>
	<u>0933</u>	<u>6.10</u>	<u>0.095</u>	<u>24.1</u>	SEE LOW FLOW PURGE DATA SHEET			
	<u>0947</u>	<u>6.06</u>	<u>0.095</u>	<u>24.0</u>	<u>59</u>	<u>1.57</u>	<u>15.82</u>	<u>11</u>
	<u>0954</u>	<u>6.06</u>	<u>0.095</u>	<u>24.3</u>	<u>40</u>	<u>1.90</u>	<u>11</u>	<u>11</u>
	<u>1022</u>	<u>6.04</u>	<u>0.096</u>	<u>24.5</u>	<u>32</u>	<u>1.49</u>	<u>11</u>	<u>11</u>
	<u>0850</u>	<u>1030</u>	<u>6.09</u>	<u>0.096</u>	<u>24.7</u>	<u>36</u>	<u>1.56</u>	<u>11</u>
	<u>1030</u>							
	<u>100</u>							
	<u>89</u>							

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	HCL / 4°C	(2) 40mL Vials	Yes
PCBs	4°C	(2) 1L Amber	
Pesticides	4°C	(2) 1L Amber	
TOC	H ₂ SO ₄ / 4°C	(1) 250mL	
METALS	HNO ₃ / 4°C	(1) 500mL Poly	
Cyanide	NaOH / 4°C	(1) 1L Poly	
Methane	4°C	(2) 40mL Vials	
Sulfide	Zinc Acetate / 4°C	(1) 500mL Poly	
Anions	4°C	(1) 500mL Poly	
SVOC	4°C	(2) 1L Amber	

OBSERVATIONS / NOTES:

-041

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

[Handwritten Signature]

APPENDIX F
LABORATORY ANALYTICAL DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.01

Sample wt/vol: 3.8 (g/mL) G.

Lab File ID: R35045.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 10

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	13	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.01

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: 09102608.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 10 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	370	U
111-44-4-----	bis(2-Chloroethyl) ether	370	U
95-57-8-----	2-Chlorophenol	370	U
541-73-1-----	1,3-Dichlorobenzene	370	U
106-46-7-----	1,4-Dichlorobenzene	370	U
95-50-1-----	1,2-Dichlorobenzene	370	U
95-48-7-----	2-Methylphenol	370	U
108-60-1-----	bis(2-Chloroisopropyl) ether	370	U
106-44-5-----	4-Methylphenol	370	U
621-64-7-----	N-Nitroso-di-n-propylamine	370	U
67-72-1-----	Hexachloroethane	370	U
98-95-3-----	Nitrobenzene	370	U
78-59-1-----	Isophorone	370	U
88-75-5-----	2-Nitrophenol	370	U
105-67-9-----	2,4-Dimethylphenol	370	U
111-91-1-----	bis(2-Chloroethoxy)methane	370	U
120-83-2-----	2,4-Dichlorophenol	370	U
120-82-1-----	1,2,4-Trichlorobenzene	370	U
91-20-3-----	Naphthalene	31	JB
106-47-8-----	4-Chloroaniline	370	U
87-68-3-----	Hexachlorobutadiene	370	U
59-50-7-----	4-Chloro-3-methylphenol	370	U
91-57-6-----	2-Methylnaphthalene	370	U
77-47-4-----	Hexachlorocyclopentadiene	370	U
88-06-2-----	2,4,6-Trichlorophenol	370	U
95-95-4-----	2,4,5-Trichlorophenol	920	U
91-58-7-----	2-Chloronaphthalene	370	U
88-74-4-----	2-Nitroaniline	920	U
131-11-3-----	Dimethylphthalate	370	U
208-96-8-----	Acenaphthylene	370	U
606-20-2-----	2,6-Dinitrotoluene	370	U
99-09-2-----	3-Nitroaniline	920	U
83-32-9-----	Acenaphthene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.01

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: 09102608.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 10 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2-----	2,4-Dinitrotoluene	370	U
51-28-5-----	2,4-Dinitrophenol	920	U
100-02-7-----	4-Nitrophenol	920	U
132-64-9-----	Dibenzofuran	370	U
84-66-2-----	Diethylphthalate	370	U
7005-72-3-----	4-Chlorophenyl-phenylether	370	U
86-73-7-----	Fluorene	370	U
100-01-6-----	4-Nitroaniline	920	U
534-52-1-----	4,6-Dinitro-2-methylphenol	920	U
86-30-6-----	N-Nitrosodiphenylamine (1)	370	U
101-55-3-----	4-Bromophenylphenylether	370	U
118-74-1-----	Hexachlorobenzene	370	U
87-86-5-----	Pentachlorophenol	920	U
86-74-8-----	Carbazole	370	U
85-01-8-----	Phenanthrene	55	J
120-12-7-----	Anthracene	370	U
84-74-2-----	Di-n-butylphthalate	31	JB
206-44-0-----	Fluoranthene	150	J
129-00-0-----	Pyrene	180	J
85-68-7-----	Butylbenzylphthalate	370	U
91-94-1-----	3,3'-Dichlorobenzidine	370	U
56-55-3-----	Benzo(a)anthracene	100	J
218-01-9-----	Chrysene	160	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	100	JB
117-84-0-----	Di-n-octylphthalate	370	U
205-99-2-----	Benzo(b)fluoranthene	250	J
207-08-9-----	Benzo(k)fluoranthene	140	J
50-32-8-----	Benzo(a)pyrene	190	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	220	J
53-70-3-----	Dibenz(a,h)anthracene	150	J
191-24-2-----	Benzo(g,h,i)perylene	320	J

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.7	P
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	2.7	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	91	U
Surrogate amount spiked		7.31	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

12674-11-2-----	Aroclor-1016	37	U
11104-28-2-----	Aroclor-1221	37	U
11141-16-5-----	Aroclor-1232	37	U
53469-21-9-----	Aroclor-1242	37	U
12672-29-6-----	Aroclor-1248	37	U
11097-69-1-----	Aroclor-1254	37	U
11096-82-5-----	Aroclor-1260	37	U
Surrogate amount spiked		7.41	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.02

Sample wt/vol: 3.6 (g/mL) G

Lab File ID: R35046.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	14	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV02

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.02

Sample wt/vol: 33.4 (g/mL) G

Lab File ID: 09102227.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.7

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

108-95-2-----	Phenol	320	U
111-44-4-----	bis(2-Chloroethyl) ether	320	U
95-57-8-----	2-Chlorophenol	320	U
541-73-1-----	1,3-Dichlorobenzene	320	U
106-46-7-----	1,4-Dichlorobenzene	320	U
95-50-1-----	1,2-Dichlorobenzene	320	U
95-48-7-----	2-Methylphenol	320	U
108-60-1-----	bis(2-Chloroisopropyl) ether	320	U
106-44-5-----	4-Methylphenol	320	U
621-64-7-----	N-Nitroso-di-n-propylamine	320	U
67-72-1-----	Hexachloroethane	320	U
98-95-3-----	Nitrobenzene	320	U
78-59-1-----	Isophorone	320	U
88-75-5-----	2-Nitrophenol	320	U
105-67-9-----	2,4-Dimethylphenol	320	U
111-91-1-----	bis(2-Chloroethoxy)methane	320	U
120-83-2-----	2,4-Dichlorophenol	320	U
120-82-1-----	1,2,4-Trichlorobenzene	320	U
91-20-3-----	Naphthalene	31	JB
106-47-8-----	4-Chloroaniline	320	U
87-68-3-----	Hexachlorobutadiene	320	U
59-50-7-----	4-Chloro-3-methylphenol	320	U
91-57-6-----	2-Methylnaphthalene	320	U
77-47-4-----	Hexachlorocyclopentadiene	320	U
88-06-2-----	2,4,6-Trichlorophenol	320	U
95-95-4-----	2,4,5-Trichlorophenol	800	U
91-58-7-----	2-Chloronaphthalene	320	U
88-74-4-----	2-Nitroaniline	800	U
131-11-3-----	Dimethylphthalate	320	U
208-96-8-----	Acenaphthylene	320	U
606-20-2-----	2,6-Dinitrotoluene	320	U
99-09-2-----	3-Nitroaniline	800	U
83-32-9-----	Acenaphthene	320	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV02

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.02

Sample wt/vol: 33.4 (g/mL) G

Lab File ID: 09102227.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.7

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

121-14-2-----	2,4-Dinitrotoluene	320	U
51-28-5-----	2,4-Dinitrophenol	800	U
100-02-7-----	4-Nitrophenol	800	U
132-64-9-----	Dibenzofuran	320	U
84-66-2-----	Diethylphthalate	320	U
7005-72-3-----	4-Chlorophenyl-phenylether	320	U
86-73-7-----	Fluorene	320	U
100-01-6-----	4-Nitroaniline	800	U
534-52-1-----	4,6-Dinitro-2-methylphenol	800	U
86-30-6-----	N-Nitrosodiphenylamine (1)	320	U
101-55-3-----	4-Bromophenylphenylether	320	U
118-74-1-----	Hexachlorobenzene	320	U
87-86-5-----	Pentachlorophenol	800	U
86-74-8-----	Carbazole	320	U
85-01-8-----	Phenanthrene	55	J
120-12-7-----	Anthracene	320	U
84-74-2-----	Di-n-butylphthalate	20	JB
206-44-0-----	Fluoranthene	140	J
129-00-0-----	Pyrene	190	J
85-68-7-----	Butylbenzylphthalate	320	U
91-94-1-----	3,3'-Dichlorobenzidine	320	U
56-55-3-----	Benzo(a)anthracene	170	J
218-01-9-----	Chrysene	230	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	96	JB
117-84-0-----	Di-n-octylphthalate	320	U
205-99-2-----	Benzo(b)fluoranthene	420	
207-08-9-----	Benzo(k)fluoranthene	250	J
50-32-8-----	Benzo(a)pyrene	500	
193-39-5-----	Indeno(1,2,3-cd)pyrene	510	
53-70-3-----	Dibenz(a,h)anthracene	340	
191-24-2-----	Benzo(g,h,i)perylene	980	

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) _____ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	3.5	U
309-00-2	Aldrin	1.4	P
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	2.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	14	P
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
Surrogate amount spiked		7.17	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.02

Sample wt/vol: 32.0 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U
Surrogate amount spiked		6.72	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.03

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: N36894.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 24

Date Analyzed: 10/19/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.

COMPOUND

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	7	U
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	5	J
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV03RE

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.03RA

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: R35047.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 24

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	22	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV03

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.03

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: 09102228.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 24 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

108-95-2-----	Phenol	440	U
111-44-4-----	bis(2-Chloroethyl) ether	440	U
95-57-8-----	2-Chlorophenol	440	U
541-73-1-----	1,3-Dichlorobenzene	440	U
106-46-7-----	1,4-Dichlorobenzene	440	U
95-50-1-----	1,2-Dichlorobenzene	440	U
95-48-7-----	2-Methylphenol	440	U
108-60-1-----	bis(2-Chloroisopropyl) ether	440	U
106-44-5-----	4-Methylphenol	440	U
621-64-7-----	N-Nitroso-di-n-propylamine	440	U
67-72-1-----	Hexachloroethane	440	U
98-95-3-----	Nitrobenzene	440	U
78-59-1-----	Isophorone	440	U
88-75-5-----	2-Nitrophenol	440	U
105-67-9-----	2,4-Dimethylphenol	440	U
111-91-1-----	bis(2-Chloroethoxy) methane	440	U
120-83-2-----	2,4-Dichlorophenol	440	U
120-82-1-----	1,2,4-Trichlorobenzene	440	U
91-20-3-----	Naphthalene	42	JB
106-47-8-----	4-Chloroaniline	440	U
87-68-3-----	Hexachlorobutadiene	440	U
59-50-7-----	4-Chloro-3-methylphenol	440	U
91-57-6-----	2-Methylnaphthalene	440	U
77-47-4-----	Hexachlorocyclopentadiene	440	U
88-06-2-----	2,4,6-Trichlorophenol	440	U
95-95-4-----	2,4,5-Trichlorophenol	1100	U
91-58-7-----	2-Chloronaphthalene	440	U
88-74-4-----	2-Nitroaniline	1100	U
131-11-3-----	Dimethylphthalate	440	U
208-96-8-----	Acenaphthylene	440	U
606-20-2-----	2,6-Dinitrotoluene	440	U
99-09-2-----	3-Nitroaniline	1100	U
83-32-9-----	Acenaphthene	440	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV03

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.03

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: 09102228.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 24 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

121-14-2-----	2,4-Dinitrotoluene	440	U
51-28-5-----	2,4-Dinitrophenol	1100	U
100-02-7-----	4-Nitrophenol	1100	U
132-64-9-----	Dibenzofuran	440	U
84-66-2-----	Diethylphthalate	440	U
7005-72-3-----	4-Chlorophenyl-phenylether	440	U
86-73-7-----	Fluorene	440	U
100-01-6-----	4-Nitroaniline	1100	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1100	U
86-30-6-----	N-Nitrosodiphenylamine (1)	440	U
101-55-3-----	4-Bromophenylphenylether	440	U
118-74-1-----	Hexachlorobenzene	440	U
87-86-5-----	Pentachlorophenol	1100	U
86-74-8-----	Carbazole	440	U
85-01-8-----	Phenanthrene	140	J
120-12-7-----	Anthracene	29	J
84-74-2-----	Di-n-butylphthalate	32	JB
206-44-0-----	Fluoranthene	280	J
129-00-0-----	Pyrene	260	J
85-68-7-----	Butylbenzylphthalate	440	U
91-94-1-----	3,3'-Dichlorobenzidine	440	U
56-55-3-----	Benzo(a)anthracene	160	J
218-01-9-----	Chrysene	200	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	160	JB
117-84-0-----	Di-n-octylphthalate	440	U
205-99-2-----	Benzo(b)fluoranthene	240	J
207-08-9-----	Benzo(k)fluoranthene	210	J
50-32-8-----	Benzo(a)pyrene	270	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	220	J
53-70-3-----	Dibenz(a,h)anthracene	170	J
191-24-2-----	Benzo(g,h,i)perylene	420	J

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 31.5 (g/mL) G Lab File ID: _____

% Moisture: 24 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.6	U
319-85-7	beta-BHC	1.6	U
319-86-8	delta-BHC	1.6	U
58-89-9	gamma-BHC (Lindane)	1.6	U
76-44-8	Heptachlor	1.6	U
309-00-2	Aldrin	1.6	U
1024-57-3	Heptachlor epoxide	1.6	U
959-98-8	Endosulfan I	1.6	U
60-57-1	Dieldrin	3.1	U
72-55-9	4,4'-DDE	3.1	U
72-20-8	Endrin	3.1	U
33213-65-9	Endosulfan II	3.1	U
72-54-8	4,4'-DDD	3.1	U
1031-07-8	Endosulfan sulfate	3.1	U
50-29-3	4,4'-DDT	5.3	P
72-43-5	Methoxychlor	16	U
53494-70-5	Endrin ketone	3.1	U
7421-93-4	Endrin aldehyde	3.1	U
5103-71-9	alpha-Chlordane	1.6	U
5103-74-2	gamma-Chlordane	1.6	U
8001-35-2	Toxaphene	100	U
Surrogate amount spiked		8.35	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV03

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.03

Sample wt/vol: 32.8 (g/mL) G Lab File ID: _____

% Moisture: 24 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	40	U
11104-28-2-----	Aroclor-1221	40	U
11141-16-5-----	Aroclor-1232	40	U
53469-21-9-----	Aroclor-1242	40	U
12672-29-6-----	Aroclor-1248	40	U
11097-69-1-----	Aroclor-1254	40	U
11096-82-5-----	Aroclor-1260	40	U
Surrogate amount spiked		8.02	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.04

Sample wt/vol: 3.9 (g/mL) G

Lab File ID: R35048.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 8

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	27	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV04

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.04

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: 09102229.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 8 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	bis(2-Chloroisopropyl) ether	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy) methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	37	JB
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV04

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.04

Sample wt/vol: 30.1 (g/mL) G

Lab File ID: 09102229.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 8 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
121-14-2-----	2,4-Dinitrotoluene	360	U
51-28-5-----	2,4-Dinitrophenol	900	U
100-02-7-----	4-Nitrophenol	900	U
132-64-9-----	Dibenzofuran	360	U
84-66-2-----	Diethylphthalate	360	U
7005-72-3-----	4-Chlorophenyl-phenylether	360	U
86-73-7-----	Fluorene	360	U
100-01-6-----	4-Nitroaniline	900	U
534-52-1-----	4,6-Dinitro-2-methylphenol	900	U
86-30-6-----	N-Nitrosodiphenylamine (1)	360	U
101-55-3-----	4-Bromophenylphenylether	360	U
118-74-1-----	Hexachlorobenzene	360	U
87-86-5-----	Pentachlorophenol	900	U
86-74-8-----	Carbazole	360	U
85-01-8-----	Phenanthrene	110	J
120-12-7-----	Anthracene	26	J
84-74-2-----	Di-n-butylphthalate	25	JB
206-44-0-----	Fluoranthene	350	J
129-00-0-----	Pyrene	460	
85-68-7-----	Butylbenzylphthalate	360	U
91-94-1-----	3,3'-Dichlorobenzidine	360	U
56-55-3-----	Benzo(a)anthracene	330	J
218-01-9-----	Chrysene	450	
117-81-7-----	bis(2-Ethylhexyl)phthalate	120	JB
117-84-0-----	Di-n-octylphthalate	360	U
205-99-2-----	Benzo(b)fluoranthene	570	
207-08-9-----	Benzo(k)fluoranthene	310	J
50-32-8-----	Benzo(a)pyrene	570	
193-39-5-----	Indeno(1,2,3-cd)pyrene	500	
53-70-3-----	Dibenz(a,h)anthracene	440	
191-24-2-----	Benzo(g,h,i)perylene	850	

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 34.1 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
319-84-6	alpha-BHC	1.2	U
319-85-7	beta-BHC	1.2	U
319-86-8	delta-BHC	1.2	U
58-89-9	gamma-BHC (Lindane)	1.2	U
76-44-8	Heptachlor	2.9	P
309-00-2	Aldrin	1.2	U
1024-57-3	Heptachlor epoxide	1.2	U
959-98-8	Endosulfan I	1.2	U
60-57-1	Dieldrin	2.4	U
72-55-9	4,4'-DDE	2.4	U
72-20-8	Endrin	2.4	U
33213-65-9	Endosulfan II	2.4	U
72-54-8	4,4'-DDD	2.4	U
1031-07-8	Endosulfan sulfate	2.4	U
50-29-3	4,4'-DDT	5.5	P
72-43-5	Methoxychlor	12	U
53494-70-5	Endrin ketone	2.4	U
7421-93-4	Endrin aldehyde	2.4	U
5103-71-9	alpha-Chlordane	1.2	U
5103-74-2	gamma-Chlordane	1.2	U
8001-35-2	Toxaphene	79	U
Surrogate amount spiked		6.38	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.04

Sample wt/vol: 31.4 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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12674-11-2-----Aroclor-1016		34	U
11104-28-2-----Aroclor-1221		34	U
11141-16-5-----Aroclor-1232		34	U
53469-21-9-----Aroclor-1242		34	U
12672-29-6-----Aroclor-1248		34	U
11097-69-1-----Aroclor-1254		34	U
11096-82-5-----Aroclor-1260		34	U
Surrogate amount spiked		6.92	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV05

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.05

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: R35049.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	10	B
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV05

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.05

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: 09102230.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	350	U
51-28-5	2,4-Dinitrophenol	870	U
100-02-7	4-Nitrophenol	870	U
132-64-9	Dibenzofuran	24	J
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	23	J
100-01-6	4-Nitroaniline	870	U
534-52-1	4,6-Dinitro-2-methylphenol	870	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenylphenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	870	U
85-01-8	Phenanthrene	590	
86-74-8	Carbazole	58	J
120-12-7	Anthracene	130	J
84-74-2	Di-n-butylphthalate	22	JB
206-44-0	Fluoranthene	750	
129-00-0	Pyrene	860	
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	430	
218-01-9	Chrysene	480	
117-81-7	bis(2-Ethylhexyl)phthalate	130	JB
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	390	
50-32-8	Benzo(a)pyrene	490	
193-39-5	Indeno(1,2,3-cd)pyrene	350	
53-70-3	Dibenz(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	560	

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV05

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 33.1 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.4	U
72-55-9	4,4'-DDE	2.4	U
72-20-8	Endrin	2.4	U
33213-65-9	Endosulfan II	2.4	U
72-54-8	4,4'-DDD	2.4	U
1031-07-8	Endosulfan sulfate	2.4	U
50-29-3	4,4'-DDT	7.3	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.4	U
7421-93-4	Endrin aldehyde	2.4	U
5103-71-9	alpha-Chlordane	1.6	P
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	81	U
Surrogate amount spiked		6.50	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV05

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.05

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) _____ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----	Aroclor-1016	35	U
11104-28-2-----	Aroclor-1221	35	U
11141-16-5-----	Aroclor-1232	35	U
53469-21-9-----	Aroclor-1242	35	U
12672-29-6-----	Aroclor-1248	35	U
11097-69-1-----	Aroclor-1254	35	U
11096-82-5-----	Aroclor-1260	35	U
Surrogate amount spiked		7.12	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SV06

ab Name: SWL-TULSA

Contract: PENSACOLA

ab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.06

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: R35050.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7

Date Analyzed: 10/20/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	10	B
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV06

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.06

Sample wt/vol: 31.2 (g/mL) G

Lab File ID: 09102609.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 7 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/26/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 6.6

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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108-95-2-----	Phenol	340	U
111-44-4-----	bis(2-Chloroethyl) ether	340	U
95-57-8-----	2-Chlorophenol	340	U
541-73-1-----	1,3-Dichlorobenzene	340	U
106-46-7-----	1,4-Dichlorobenzene	340	U
95-50-1-----	1,2-Dichlorobenzene	340	U
95-48-7-----	2-Methylphenol	340	U
108-60-1-----	bis(2-Chloroisopropyl) ether	340	U
106-44-5-----	4-Methylphenol	340	U
621-64-7-----	N-Nitroso-di-n-propylamine	340	U
67-72-1-----	Hexachloroethane	340	U
98-95-3-----	Nitrobenzene	340	U
78-59-1-----	Isophorone	340	U
88-75-5-----	2-Nitrophenol	340	U
105-67-9-----	2,4-Dimethylphenol	340	U
111-91-1-----	bis(2-Chloroethoxy) methane	340	U
120-83-2-----	2,4-Dichlorophenol	340	U
120-82-1-----	1,2,4-Trichlorobenzene	340	U
91-20-3-----	Naphthalene	31	JB
106-47-8-----	4-Chloroaniline	340	U
87-68-3-----	Hexachlorobutadiene	340	U
59-50-7-----	4-Chloro-3-methylphenol	340	U
91-57-6-----	2-Methylnaphthalene	340	U
77-47-4-----	Hexachlorocyclopentadiene	340	U
88-06-2-----	2,4,6-Trichlorophenol	340	U
95-95-4-----	2,4,5-Trichlorophenol	860	U
91-58-7-----	2-Chloronaphthalene	340	U
88-74-4-----	2-Nitroaniline	860	U
131-11-3-----	Dimethylphthalate	340	U
208-96-8-----	Acenaphthylene	340	U
606-20-2-----	2,6-Dinitrotoluene	340	U
99-09-2-----	3-Nitroaniline	860	U
83-32-9-----	Acenaphthene	340	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV06

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 31.6 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/20/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	4.2	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.5	P
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	85	U
Surrogate amount spiked		6.81	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV06

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.06

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___ - Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	35	U
11104-28-2-----	Aroclor-1221	35	U
11141-16-5-----	Aroclor-1232	35	U
53469-21-9-----	Aroclor-1242	35	U
12672-29-6-----	Aroclor-1248	35	U
11097-69-1-----	Aroclor-1254	35	U
11096-82-5-----	Aroclor-1260	35	U
Surrogate amount spiked		7.01	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN43SV07

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40600

Matrix: (soil/water) SOIL

Lab Sample ID: 40600.07

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: 09102232.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. 10 dec.

Date Extracted: 10/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 10/22/99

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y

pH: 7.1

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
121-14-2	2,4-Dinitrotoluene	360	U
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenylphenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
86-74-8	Carbazole	360	U
85-01-8	Phenanthrene	30	J
120-12-7	Anthracene	360	U
84-74-2	Di-n-butylphthalate	23	JB
206-44-0	Fluoranthene	44	J
129-00-0	Pyrene	59	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	48	J
218-01-9	Chrysene	97	J
117-81-7	bis(2-Ethylhexyl)phthalate	79	JB
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	65	J
207-08-9	Benzo(k)fluoranthene	47	J
50-32-8	Benzo(a)pyrene	67	J
193-39-5	Indeno(1,2,3-cd)pyrene	61	J
53-70-3	Dibenz(a,h)anthracene	43	J
191-24-2	Benzo(g,h,i)perylene	110	J

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV07

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600

Matrix: (soil/water) SOIL Lab Sample ID: 40600.07

Sample wt/vol: 32.1 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) _____ Date Received: 10/07/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/20/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	1.3	U
319-85-7-----beta-BHC	1.3	U
319-86-8-----delta-BHC	1.3	U
58-89-9-----gamma-BHC (Lindane)	1.3	U
76-44-8-----Heptachlor	1.3	U
309-00-2-----Aldrin	1.3	U
1024-57-3-----Heptachlor epoxide	1.3	U
959-98-8-----Endosulfan I	1.3	U
60-57-1-----Dieldrin	2.6	U
72-55-9-----4,4'-DDE	2.6	U
72-20-8-----Endrin	2.6	U
33213-65-9-----Endosulfan II	2.6	U
72-54-8-----4,4'-DDD	2.6	U
1031-07-8-----Endosulfan sulfate	2.6	U
50-29-3-----4,4'-DDT	2.6	U
72-43-5-----Methoxychlor	13	U
53494-70-5-----Endrin ketone	2.6	U
7421-93-4-----Endrin aldehyde	2.6	U
5103-71-9-----alpha-Chlordane	1.3	U
5103-74-2-----gamma-Chlordane	1.3	U
8001-35-2-----Toxaphene	86	U
Surrogate amount spiked	6.92	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SV07

o Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40600
 Matrix: (soil/water) SOIL Lab Sample ID: 40600.07
 Sample wt/vol: 31.2 (g/mL) G Lab File ID: _____
 % Moisture: 10 decanted: (Y/N) ___ Date Received: 10/07/99
 Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/08/99
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99
 Injection Volume: 0.5 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	35	U
11104-28-2-----	Aroclor-1221	35	U
11141-16-5-----	Aroclor-1232	35	U
53469-21-9-----	Aroclor-1242	35	U
12672-29-6-----	Aroclor-1248	35	U
11097-69-1-----	Aroclor-1254	35	U
11096-82-5-----	Aroclor-1260	35	U
Surrogate amount spiked		7.12	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43TB10699

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPI

SAS No.:

SDG No.: 40600

Matrix: (soil/water) WATER

Lab Sample ID: 40600.08

Sample wt/vol: 5 (g/mL) ML

Lab File ID: K29710.D

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: not dec. _____

Date Analyzed: 10/15/99

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3-----Chloromethane	5	U
75-01-4-----Vinyl Chloride	5	U
74-83-9-----Bromomethane	5	U
75-00-3-----Chloroethane	5	U
75-35-4-----1,1-Dichloroethene	5	U
67-64-1-----Acetone	5	U
75-15-0-----Carbon Disulfide	5	U
75-09-2-----Methylene Chloride	8	U
75-34-3-----1,1-Dichloroethane	5	U
540-59-0-----1,2-Dichloroethene (total)	5	U
78-93-3-----2-Butanone	5	U
67-66-3-----Chloroform	5	U
71-55-6-----1,1,1-Trichloroethane	5	U
56-23-5-----Carbon Tetrachloride	5	U
71-43-2-----Benzene	5	U
107-06-2-----1,2-Dichloroethane	5	U
79-01-6-----Trichloroethene	5	U
78-87-5-----1,2-Dichloropropane	5	U
75-27-4-----Bromodichloromethane	5	U
10061-01-5---cis-1,3-Dichloropropene	5	U
108-10-1-----4-Methyl-2-Pentanone	5	U
108-88-3-----Toluene	5	U
10061-02-6---trans-1,3-Dichloropropene	5	U
79-00-5-----1,1,2-Trichloroethane	5	U
127-18-4-----Tetrachloroethene	5	U
591-78-6-----2-Hexanone	5	U
124-48-1-----Dibromochloromethane	5	U
108-90-7-----Chlorobenzene	5	U
100-41-4-----Ethylbenzene	5	U
1330-20-7---Xylene (total)	5	U
100-42-5-----Styrene	5	U
75-25-2-----Bromoform	5	U
79-34-5-----1,1,2,2-Tetrachloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.01

Sample wt/vol: 4.9 (g/mL) G

Lab File ID: R34909.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 5

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO. COMPOUND

74-87-3	-----CHLOROMETHANE	5	U
74-83-9	-----BROMOMETHANE	5	U
75-01-4	-----VINYL CHLORIDE	5	U
75-00-3	-----CHLOROETHANE	5	U
75-09-2	-----METHYLENE CHLORIDE	2	JB
67-64-1	-----ACETONE	5	U
75-15-0	-----CARBON DISULFIDE	5	U
75-35-4	-----1 1-DICHLOROETHENE	5	U
75-34-3	-----1 1-DICHLOROETHANE	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----CHLOROFORM	5	U
107-06-2	-----1 2-DICHLOROETHANE	5	U
78-93-3	-----2-BUTANONE	5	U
71-55-6	-----1 1 1-TRICHLOROETHANE	5	U
56-23-5	-----CARBON TETRACHLORIDE	5	U
75-27-4	-----BROMODICHLOROMETHANE	5	U
78-87-5	-----1 2-DICHLOROPROPANE	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----TRICHLOROETHENE	5	U
124-48-1	-----DIBROMOCHLOROMETHANE	5	U
79-00-5	-----1 1 2-TRICHLOROETHANE	5	U
71-43-2	-----BENZENE	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----BROMOFORM	5	U
108-10-1	-----4-METHYL-2-PENTANONE	5	U
591-78-6	-----2-HEXANONE	5	U
127-18-4	-----TETRACHLOROETHENE	5	U
108-88-3	-----TOLUENE	5	U
79-34-5	-----1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	-----CHLOROETHENE	5	U
100-41-4	-----ETHYL BENZENE	5	U
100-42-5	-----STYRENE	5	U
1330-20-7	-----Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101819.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl) ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy) methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	350	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101819.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol_____	860	U
100-02-7-----	4-Nitrophenol_____	860	U
132-64-9-----	Dibenzofuran_____	350	U
121-14-2-----	2,4-Dinitrotoluene_____	350	U
84-66-2-----	Diethylphthalate_____	350	U
7005-72-3-----	4-Chlorophenyl-phenylether__	350	U
86-73-7-----	Fluorene_____	350	U
100-01-6-----	4-Nitroaniline_____	860	U
534-52-1-----	4,6-Dinitro-2-methylphenol__	860	U
86-30-6-----	N-Nitrosodiphenylamine (1)___	350	U
101-55-3-----	4-Bromophenyl-phenylether__	350	U
118-74-1-----	Hexachlorobenzene_____	350	U
87-86-5-----	Pentachlorophenol_____	860	U
85-01-8-----	Phenanthrene_____	350	U
120-12-7-----	Anthracene_____	350	U
86-74-8-----	Carbazole_____	350	U
84-74-2-----	Di-n-butylphthalate_____	350	U
206-44-0-----	Fluoranthene_____	350	U
129-00-0-----	Pyrene_____	350	U
85-68-7-----	Butylbenzylphthalate_____	350	U
91-94-1-----	3,3'-Dichlorobenzidine_____	350	U
56-55-3-----	Benzo (a) anthracene_____	350	U
218-01-9-----	Chrysene_____	350	U
117-81-7-----	bis(2-Ethylhexyl)phthalate__	68	J
117-84-0-----	Di-n-octylphthalate_____	350	U
205-99-2-----	Benzo (b) fluoranthene_____	350	U
207-08-9-----	Benzo (k) fluoranthene_____	350	U
50-32-8-----	Benzo (a) pyrene_____	350	U
193-39-5-----	Indeno (1,2,3-cd) pyrene_____	350	U
53-70-3-----	Dibenz (a,h) anthracene_____	350	U
191-24-2-----	Benzo (g,h,i) perylene_____	350	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	1.3	U
319-85-7-----	beta-BHC	1.3	U
319-86-8-----	delta-BHC	1.3	U
58-89-9-----	gamma-BHC (Lindane)	1.3	U
76-44-8-----	Heptachlor	1.3	U
309-00-2-----	Aldrin	1.3	U
1024-57-3-----	Heptachlor epoxide	1.3	U
959-98-8-----	Endosulfan I	1.3	U
60-57-1-----	Dieldrin	2.6	U
72-55-9-----	4,4'-DDE	3.6	P
72-20-8-----	Endrin	2.6	U
33213-65-9-----	Endosulfan II	2.6	U
72-54-8-----	4,4'-DDD	2.6	U
1031-07-8-----	Endosulfan sulfate	2.6	U
50-29-3-----	4,4'-DDT	2.6	U
72-43-5-----	Methoxychlor	13	U
53494-70-5-----	Endrin ketone	2.6	U
7421-93-4-----	Endrin aldehyde	2.6	U
5103-71-9-----	alpha-Chlordane	1.3	U
5103-74-2-----	gamma-Chlordane	1.3	U
8001-35-2-----	Toxaphene	86	U
Surrogate amount spiked		6.88	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.01

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/11/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	34	U U U U U U U
11104-28-2-----	Aroclor-1221	34	
11141-16-5-----	Aroclor-1232	34	
53469-21-9-----	Aroclor-1242	34	
12672-29-6-----	Aroclor-1248	34	
11097-69-1-----	Aroclor-1254	34	
11096-82-5-----	Aroclor-1260	34	
Surrogate amount spiked		6.90	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101821.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2-----	Phenol	350	U
111-44-4-----	bis(2-Chloroethyl) ether	350	U
95-57-8-----	2-Chlorophenol	350	U
541-73-1-----	1,3-Dichlorobenzene	350	U
106-46-7-----	1,4-Dichlorobenzene	350	U
95-50-1-----	1,2-Dichlorobenzene	350	U
95-48-7-----	2-Methylphenol	350	U
108-60-1-----	bis(2-Chloroisopropyl) ether	350	U
106-44-5-----	4-Methylphenol	350	U
621-64-7-----	N-Nitroso-di-n-propylamine	350	U
67-72-1-----	Hexachloroethane	350	U
98-95-3-----	Nitrobenzene	350	U
78-59-1-----	Isophorone	350	U
88-75-5-----	2-Nitrophenol	350	U
105-67-9-----	2,4-Dimethylphenol	350	U
111-91-1-----	bis(2-Chloroethoxy) methane	350	U
120-83-2-----	2,4-Dichlorophenol	350	U
120-82-1-----	1,2,4-Trichlorobenzene	350	U
91-20-3-----	Naphthalene	350	U
106-47-8-----	4-Chloroaniline	350	U
87-68-3-----	Hexachlorobutadiene	350	U
59-50-7-----	4-Chloro-3-methylphenol	350	U
91-57-6-----	2-Methylnaphthalene	350	U
77-47-4-----	Hexachlorocyclopentadiene	350	U
88-06-2-----	2,4,6-Trichlorophenol	350	U
95-95-4-----	2,4,5-Trichlorophenol	860	U
91-58-7-----	2-Chloronaphthalene	350	U
88-74-4-----	2-Nitroaniline	860	U
131-11-3-----	Dimethylphthalate	350	U
208-96-8-----	Acenaphthylene	350	U
606-20-2-----	2,6-Dinitrotoluene	350	U
99-09-2-----	3-Nitroaniline	860	U
83-32-9-----	Acenaphthene	350	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS02

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.03
 Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101821.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	80	J
218-01-9	Chrysene	96	J
117-81-7	bis(2-Ethylhexyl)phthalate	48	J
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	88	J
53-70-3	Dibenz(a,h)anthracene	45	J
191-24-2	Benzo(g,h,i)perylene	140	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS02

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.03

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.4	U
319-85-7-----	beta-BHC	1.4	U
319-86-8-----	delta-BHC	1.4	U
58-89-9-----	gamma-BHC (Lindane)	1.4	U
76-44-8-----	Heptachlor	1.4	U
309-00-2-----	Aldrin	1.4	U
1024-57-3-----	Heptachlor epoxide	1.4	U
959-98-8-----	Endosulfan I	1.4	U
60-57-1-----	Dieldrin	2.7	U
72-55-9-----	4,4'-DDE	2.7	U
72-20-8-----	Endrin	2.7	U
33213-65-9-----	Endosulfan II	2.7	U
72-54-8-----	4,4'-DDD	2.7	U
1031-07-8-----	Endosulfan sulfate	2.7	U
50-29-3-----	4,4'-DDT	2.7	U
72-43-5-----	Methoxychlor	14	U
53494-70-5-----	Endrin ketone	2.7	U
7421-93-4-----	Endrin aldehyde	2.7	U
5103-71-9-----	alpha-Chlordane	1.4	U
5103-74-2-----	gamma-Chlordane	1.4	U
8001-35-2-----	Toxaphene	90	U
Surrogate amount spiked		7.22	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.03

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: _____

% Moisture: 8 decanted: (Y/N) ___

Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 10/11/99

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

12674-11-2-----Aroclor-1016		36	U
11104-28-2-----Aroclor-1221		36	U
11141-16-5-----Aroclor-1232		36	U
53469-21-9-----Aroclor-1242		36	U
12672-29-6-----Aroclor-1248		36	U
11097-69-1-----Aroclor-1254		36	U
11096-82-5-----Aroclor-1260		36	U
Surrogate amount spiked		7.17	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS03

b Name: SWL-TULSA

Contract: PENSACOLA

o Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: R34910.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 15

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q	
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	59	
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101820.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	bis(2-Chloroisopropyl) ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy) methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	960	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	960	U
83-32-9	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS03

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101820.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 15 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	960	U
100-02-7	4-Nitrophenol	960	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-methylphenol	960	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	76	J
129-00-0	Pyrene	75	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)anthracene	45	J
218-01-9	Chrysene	59	J
117-81-7	bis(2-Ethylhexyl)phthalate	81	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	100	J
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	60	J
193-39-5	Indeno(1,2,3-cd)pyrene	52	J
53-70-3	Dibenz(a,h)anthracene	380	U
191-24-2	Benzo(g,h,i)perylene	60	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS03

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 31.5 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 5.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.4	U
319-85-7-----	beta-BHC	1.4	U
319-86-8-----	delta-BHC	1.4	U
58-89-9-----	gamma-BHC (Lindane)	1.4	U
76-44-8-----	Heptachlor	1.4	U
309-00-2-----	Aldrin	1.4	U
1024-57-3-----	Heptachlor epoxide	1.4	U
959-98-8-----	Endosulfan I	1.4	U
60-57-1-----	Dieldrin	2.8	U
72-55-9-----	4,4'-DDE	4.6	
72-20-8-----	Endrin	2.8	U
33213-65-9-----	Endosulfan II	2.8	U
72-54-8-----	4,4'-DDD	2.8	U
1031-07-8-----	Endosulfan sulfate	2.8	U
50-29-3-----	4,4'-DDT	7.2	
72-43-5-----	Methoxychlor	14	U
53494-70-5-----	Endrin ketone	2.8	U
7421-93-4-----	Endrin aldehyde	2.8	U
5103-71-9-----	alpha-Chlordane	1.4	U
5103-74-2-----	gamma-Chlordane	1.4	U
8001-35-2-----	Toxaphene	93	U
Surrogate amount spiked		7.47	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS03

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.02

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 15 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/11/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	38	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U
Surrogate amount spiked		7.74	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS04

b Name: SWL-TULSA

Contract: PENSACOLA

ab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: R34912.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 8

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3-----	CHLOROMETHANE	5	U
74-83-9-----	BROMOMETHANE	5	U
75-01-4-----	VINYL CHLORIDE	5	U
75-00-3-----	CHLOROETHANE	5	U
75-09-2-----	METHYLENE CHLORIDE	3	JB
67-64-1-----	ACETONE	5	U
75-15-0-----	CARBON DISULFIDE	5	U
75-35-4-----	1 1-DICHLOROETHENE	5	U
75-34-3-----	1 1-DICHLOROETHANE	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
67-66-3-----	CHLOROFORM	5	U
107-06-2-----	1 2-DICHLOROETHANE	5	U
78-93-3-----	2-BUTANONE	5	U
71-55-6-----	1 1 1-TRICHLOROETHANE	5	U
56-23-5-----	CARBON TETRACHLORIDE	5	U
75-27-4-----	BROMODICHLOROMETHANE	5	U
78-87-5-----	1 2-DICHLOROPROPANE	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
79-01-6-----	TRICHLOROETHENE	5	U
124-48-1-----	DIBROMOCHLOROMETHANE	5	U
79-00-5-----	1 1 2-TRICHLOROETHANE	5	U
71-43-2-----	BENZENE	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
75-25-2-----	BROMOFORM	5	U
108-10-1-----	4-METHYL-2-PENTANONE	5	U
591-78-6-----	2-HEXANONE	5	U
127-18-4-----	TETRACHLOROETHENE	5	U
108-88-3-----	TOLUENE	5	U
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7-----	CHLOROBENZENE	5	U
100-41-4-----	ETHYL BENZENE	5	U
100-42-5-----	STYRENE	5	U
1330-20-7-----	Xylene (Total)	5	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS04

Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.04
 Sample wt/vol: 30.6 (g/mL) G Lab File ID: V9101822.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 8 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	890	U
100-02-7	4-Nitrophenol	890	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	890	U
534-52-1	4,6-Dinitro-2-methylphenol	890	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	890	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	75	J
129-00-0	Pyrene	80	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	53	J
218-01-9	Chrysene	69	J
117-81-7	bis(2-Ethylhexyl)phthalate	54	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	76	J
193-39-5	Indeno(1,2,3-cd)pyrene	70	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	70	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.4	U
319-85-7-----	beta-BHC	1.4	U
319-86-8-----	delta-BHC	1.4	U
58-89-9-----	gamma-BHC (Lindane)	1.4	U
76-44-8-----	Heptachlor	1.4	U
309-00-2-----	Aldrin	1.4	U
1024-57-3-----	Heptachlor epoxide	1.4	U
959-98-8-----	Endosulfan I	1.4	U
60-57-1-----	Dieldrin	2.7	U
72-55-9-----	4,4'-DDE	2.7	U
72-20-8-----	Endrin	2.7	U
33213-65-9-----	Endosulfan II	2.7	U
72-54-8-----	4,4'-DDD	2.7	U
1031-07-8-----	Endosulfan sulfate	2.7	U
50-29-3-----	4,4'-DDT	2.7	U
72-43-5-----	Methoxychlor	14	U
53494-70-5-----	Endrin ketone	2.7	U
7421-93-4-----	Endrin aldehyde	2.7	U
5103-71-9-----	alpha-Chlordane	1.4	U
5103-74-2-----	gamma-Chlordane	1.4	U
8001-35-2-----	Toxaphene	88	U
Surrogate amount spiked		7.10	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS04

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.04

Sample wt/vol: 31.7 (g/mL) G

Lab File ID: _____

% Moisture: 8 decanted: (Y/N) _____

Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	34	U
11104-28-2-----	Aroclor-1221	34	U
11141-16-5-----	Aroclor-1232	34	U
53469-21-9-----	Aroclor-1242	34	U
12672-29-6-----	Aroclor-1248	34	U
11097-69-1-----	Aroclor-1254	34	U
11096-82-5-----	Aroclor-1260	34	U
Surrogate amount spiked		6.86	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS05

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.05

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: R34913.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 9

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	3	JB
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	5	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	2	J
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	19	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101823.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl) ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy) methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	900	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	900	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	35	J
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	900	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS05

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101823.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	89	J
120-12-7	Anthracene	39	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	220	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	46	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	110	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS05

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	4.7	U
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	4.9	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
Surrogate amount spiked		7.23	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS05

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.05

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/12/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/13/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
12674-11-2-----	Aroclor-1016	36 U
11104-28-2-----	Aroclor-1221	36 U
11141-16-5-----	Aroclor-1232	36 U
53469-21-9-----	Aroclor-1242	36 U
12672-29-6-----	Aroclor-1248	36 U
11097-69-1-----	Aroclor-1254	36 U
11096-82-5-----	Aroclor-1260	36 U
Surrogate amount spiked		7.30

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS06

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.07

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: R34934.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 10

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3-----CHLOROMETHANE	5	U
74-83-9-----BROMOMETHANE	5	U
75-01-4-----VINYL CHLORIDE	5	U
75-00-3-----CHLOROETHANE	5	U
75-09-2-----METHYLENE CHLORIDE	7	B
67-64-1-----ACETONE	5	U
75-15-0-----CARBON DISULFIDE	5	U
75-35-4-----1 1-DICHLOROETHENE	5	U
75-34-3-----1 1-DICHLOROETHANE	5	U
540-59-0-----1,2-Dichloroethene (total)	5	U
67-66-3-----CHLOROFORM	5	U
107-06-2-----1 2-DICHLOROETHANE	5	U
78-93-3-----2-BUTANONE	5	U
71-55-6-----1 1 1-TRICHLOROETHANE	5	U
56-23-5-----CARBON TETRACHLORIDE	5	U
75-27-4-----BROMODICHLOROMETHANE	5	U
78-87-5-----1 2-DICHLOROPROPANE	5	U
10061-01-5-----cis-1,3-Dichloropropene	5	U
79-01-6-----TRICHLOROETHENE	3	J
124-48-1-----DIBROMOCHLOROMETHANE	5	U
79-00-5-----1 1 2-TRICHLOROETHANE	5	U
71-43-2-----BENZENE	5	U
10061-02-6-----trans-1,3-Dichloropropene	5	U
75-25-2-----BROMOFORM	5	U
108-10-1-----4-METHYL-2-PENTANONE	5	U
591-78-6-----2-HEXANONE	5	U
127-18-4-----TETRACHLOROETHENE	5	U
108-88-3-----TOLUENE	5	U
79-34-5-----1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7-----CHLOROBENZENE	5	U
100-41-4-----ETHYL BENZENE	5	U
100-42-5-----STYRENE	5	U
1330-20-7-----Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS06

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.07

Sample wt/vol: 30.8 (g/mL) G

Lab File ID: V9101825.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N

Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/18/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 6.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	bis(2-Chloroisopropyl) ether	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy)methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS06

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 30.8 (g/mL) G Lab File ID: V9101825.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	38	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	92	J
218-01-9	Chrysene	130	J
117-81-7	bis(2-Ethylhexyl)phthalate	65	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	240	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	130	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	130	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS06

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 31.3 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	1.4	U
319-85-7-----beta-BHC	1.4	U
319-86-8-----delta-BHC	1.4	U
58-89-9-----gamma-BHC (Lindane)	1.4	U
76-44-8-----Heptachlor	1.4	U
309-00-2-----Aldrin	1.4	U
1024-57-3-----Heptachlor epoxide	1.4	U
959-98-8-----Endosulfan I	1.4	U
60-57-1-----Dieldrin	2.7	U
72-55-9-----4,4'-DDE	13	P
72-20-8-----Endrin	2.7	U
33213-65-9-----Endosulfan II	2.7	U
72-54-8-----4,4'-DDD	2.7	U
1031-07-8-----Endosulfan sulfate	2.7	U
50-29-3-----4,4'-DDT	7.2	U
72-43-5-----Methoxychlor	14	U
53494-70-5-----Endrin ketone	2.7	U
7421-93-4-----Endrin aldehyde	2.7	U
5103-71-9-----alpha-Chlordane	1.4	U
5103-74-2-----gamma-Chlordane	1.4	U
8001-35-2-----Toxaphene	88	U
Surrogate amount spiked	7.10	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS06

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.07

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	36	U
11104-28-2-----Aroclor-1221	36	U
11141-16-5-----Aroclor-1232	36	U
53469-21-9-----Aroclor-1242	36	U
12672-29-6-----Aroclor-1248	36	U
11097-69-1-----Aroclor-1254	36	U
11096-82-5-----Aroclor-1260	36	U
Surrogate amount spiked	7.33	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS07

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.06

Sample wt/vol: 3.9 (g/mL) G

Lab File ID: R34914.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 17

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3-----	CHLOROMETHANE	8	U
74-83-9-----	BROMOMETHANE	8	U
75-01-4-----	VINYL CHLORIDE	8	U
75-00-3-----	CHLOROETHANE	8	U
75-09-2-----	METHYLENE CHLORIDE	4	JB
67-64-1-----	ACETONE	8	U
75-15-0-----	CARBON DISULFIDE	8	U
75-35-4-----	1 1-DICHLOROETHENE	8	U
75-34-3-----	1 1-DICHLOROETHANE	8	U
540-59-0-----	1,2-Dichloroethene (total)	8	U
67-66-3-----	CHLOROFORM	8	U
107-06-2-----	1 2-DICHLOROETHANE	8	U
78-93-3-----	2-BUTANONE	8	U
71-55-6-----	1 1 1-TRICHLOROETHANE	8	U
56-23-5-----	CARBON TETRACHLORIDE	8	U
75-27-4-----	BROMODICHLOROMETHANE	8	U
78-87-5-----	1 2-DICHLOROPROPANE	8	U
10061-01-5-----	cis-1,3-Dichloropropene	8	U
79-01-6-----	TRICHLOROETHENE	8	U
124-48-1-----	DIBROMOCHLOROMETHANE	8	U
79-00-5-----	1 1 2-TRICHLOROETHANE	8	U
71-43-2-----	BENZENE	8	U
10061-02-6-----	trans-1,3-Dichloropropene	8	U
75-25-2-----	BROMOFORM	8	U
108-10-1-----	4-METHYL-2-PENTANONE	8	U
591-78-6-----	2-HEXANONE	8	U
127-18-4-----	TETRACHLOROETHENE	8	U
108-88-3-----	TOLUENE	8	U
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	8	U
108-90-7-----	CHLOROBENZENE	8	U
100-41-4-----	ETHYL BENZENE	8	U
100-42-5-----	STYRENE	8	U
1330-20-7-----	Xylene (Total)	8	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.06
 Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101824.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 17 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND UG/KG Q

108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	bis(2-Chloroisopropyl) ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy) methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS07

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101824.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	130	J
129-00-0	Pyrene	120	J
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a) anthracene	74	J
218-01-9	Chrysene	97	J
117-81-7	bis(2-Ethylhexyl)phthalate	44	J
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b) fluoranthene	160	J
207-08-9	Benzo(k) fluoranthene	400	U
50-32-8	Benzo(a) pyrene	88	J
193-39-5	Indeno(1,2,3-cd)pyrene	90	J
53-70-3	Dibenz(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	110	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS07

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	1.6	U
319-85-7-----	beta-BHC	1.6	U
319-86-8-----	delta-BHC	1.6	U
58-89-9-----	gamma-BHC (Lindane)	1.6	U
76-44-8-----	Heptachlor	1.6	U
309-00-2-----	Aldrin	1.6	U
1024-57-3-----	Heptachlor epoxide	1.6	U
959-98-8-----	Endosulfan I	1.6	U
60-57-1-----	Dieldrin	3.0	U
72-55-9-----	4,4'-DDE	4.4	
72-20-8-----	Endrin	3.0	U
33213-65-9-----	Endosulfan II	3.0	U
72-54-8-----	4,4'-DDD	3.0	U
1031-07-8-----	Endosulfan sulfate	3.0	U
50-29-3-----	4,4'-DDT	3.0	U
72-43-5-----	Methoxychlor	16	U
53494-70-5-----	Endrin ketone	3.0	U
7421-93-4-----	Endrin aldehyde	3.0	U
5103-71-9-----	alpha-Chlordane	1.6	U
5103-74-2-----	gamma-Chlordane	1.6	U
8001-35-2-----	Toxaphene	99	U
Surrogate amount spiked		7.95	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS07

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.06

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

12674-11-2-----	Aroclor-1016	39	U
11104-28-2-----	Aroclor-1221	39	U
11141-16-5-----	Aroclor-1232	39	U
53469-21-9-----	Aroclor-1242	39	U
12672-29-6-----	Aroclor-1248	39	U
11097-69-1-----	Aroclor-1254	39	U
11096-82-5-----	Aroclor-1260	39	U
Surrogate amount spiked		7.90	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS08

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.08

Sample wt/vol: 3.9 (g/mL) G

Lab File ID: R34916.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 14

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3-----	CHLOROMETHANE	7	U
74-83-9-----	BROMOMETHANE	7	U
75-01-4-----	VINYL CHLORIDE	7	U
75-00-3-----	CHLOROETHANE	7	U
75-09-2-----	METHYLENE CHLORIDE	3	JB
67-64-1-----	ACETONE	220	
75-15-0-----	CARBON DISULFIDE	7	U
75-35-4-----	1 1-DICHLOROETHENE	7	U
75-34-3-----	1 1-DICHLOROETHANE	7	U
540-59-0-----	1,2-Dichloroethene (total)	7	U
67-66-3-----	CHLOROFORM	7	U
107-06-2-----	1 2-DICHLOROETHANE	7	U
78-93-3-----	2-BUTANONE	7	U
71-55-6-----	1 1 1-TRICHLOROETHANE	7	U
56-23-5-----	CARBON TETRACHLORIDE	7	U
75-27-4-----	BROMODICHLOROMETHANE	7	U
78-87-5-----	1 2-DICHLOROPROPANE	7	U
10061-01-5-----	cis-1,3-Dichloropropene	7	U
79-01-6-----	TRICHLOROETHENE	7	U
124-48-1-----	DIBROMOCHLOROMETHANE	7	U
79-00-5-----	1 1 2-TRICHLOROETHANE	7	U
71-43-2-----	BENZENE	7	U
10061-02-6-----	trans-1,3-Dichloropropene	7	U
75-25-2-----	BROMOFORM	7	U
108-10-1-----	4-METHYL-2-PENTANONE	7	U
591-78-6-----	2-HEXANONE	7	U
127-18-4-----	TETRACHLOROETHENE	7	U
108-88-3-----	TOLUENE	7	U
79-34-5-----	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7-----	CHLOROBENZENE	7	U
100-41-4-----	ETHYL BENZENE	7	U
100-42-5-----	STYRENE	7	U
1330-20-7-----	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS08

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.08
 Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101837.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 14 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	380	U
111-44-4-----	bis(2-Chloroethyl) ether	380	U
95-57-8-----	2-Chlorophenol	380	U
541-73-1-----	1,3-Dichlorobenzene	380	U
106-46-7-----	1,4-Dichlorobenzene	380	U
95-50-1-----	1,2-Dichlorobenzene	380	U
95-48-7-----	2-Methylphenol	380	U
108-60-1-----	bis(2-Chloroisopropyl) ether	380	U
106-44-5-----	4-Methylphenol	380	U
621-64-7-----	N-Nitroso-di-n-propylamine	380	U
67-72-1-----	Hexachloroethane	380	U
98-95-3-----	Nitrobenzene	380	U
78-59-1-----	Isophorone	380	U
88-75-5-----	2-Nitrophenol	380	U
105-67-9-----	2,4-Dimethylphenol	380	U
111-91-1-----	bis(2-Chloroethoxy)methane	380	U
120-83-2-----	2,4-Dichlorophenol	380	U
120-82-1-----	1,2,4-Trichlorobenzene	380	U
91-20-3-----	Naphthalene	380	U
106-47-8-----	4-Chloroaniline	380	U
87-68-3-----	Hexachlorobutadiene	380	U
59-50-7-----	4-Chloro-3-methylphenol	380	U
91-57-6-----	2-Methylnaphthalene	380	U
77-47-4-----	Hexachlorocyclopentadiene	380	U
88-06-2-----	2,4,6-Trichlorophenol	380	U
95-95-4-----	2,4,5-Trichlorophenol	950	U
91-58-7-----	2-Chloronaphthalene	380	U
88-74-4-----	2-Nitroaniline	950	U
131-11-3-----	Dimethylphthalate	380	U
208-96-8-----	Acenaphthylene	380	U
606-20-2-----	2,6-Dinitrotoluene	380	U
99-09-2-----	3-Nitroaniline	950	U
83-32-9-----	Acenaphthene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS08

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.08
 Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101837.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 14 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	950	U
100-02-7	4-Nitrophenol	950	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	950	U
534-52-1	4,6-Dinitro-2-methylphenol	950	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	950	U
85-01-8	Phenanthrene	46	J
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-butylphthalate	380	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo (a) anthracene	94	J
218-01-9	Chrysene	120	J
117-81-7	bis(2-Ethylhexyl)phthalate	130	J
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo (b) fluoranthene	210	J
207-08-9	Benzo (k) fluoranthene	380	U
50-32-8	Benzo (a) pyrene	110	J
193-39-5	Indeno (1,2,3-cd) pyrene	94	J
53-70-3	Dibenz (a,h) anthracene	380	U
191-24-2	Benzo (g,h,i) perylene	96	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS08

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.5	U
319-85-7	beta-BHC	1.5	U
319-86-8	delta-BHC	1.5	U
58-89-9	gamma-BHC (Lindane)	1.5	U
76-44-8	Heptachlor	1.5	U
309-00-2	Aldrin	1.5	U
1024-57-3	Heptachlor epoxide	1.5	U
959-98-8	Endosulfan I	1.5	U
60-57-1	Dieldrin	4.8	
72-55-9	4,4'-DDE	27	P
72-20-8	Endrin	2.9	U
33213-65-9	Endosulfan II	2.9	U
72-54-8	4,4'-DDD	2.9	U
1031-07-8	Endosulfan sulfate	2.9	U
50-29-3	4,4'-DDT	30	
72-43-5	Methoxychlor	15	U
53494-70-5	Endrin ketone	2.9	U
7421-93-4	Endrin aldehyde	2.9	U
5103-71-9	alpha-Chlordane	1.5	U
5103-74-2	gamma-Chlordane	1.5	U
8001-35-2	Toxaphene	95	U
Surrogate amount spiked		7.65	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS08

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.08

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 14 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----	Aroclor-1016	38	U
11104-28-2-----	Aroclor-1221	38	U
11141-16-5-----	Aroclor-1232	38	U
53469-21-9-----	Aroclor-1242	38	U
12672-29-6-----	Aroclor-1248	38	U
11097-69-1-----	Aroclor-1254	38	U
11096-82-5-----	Aroclor-1260	38	U
Surrogate amount spiked		7.60	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS09

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.09

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: R34917.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 3

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	6	U
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS09

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 31.7 (g/mL) G Lab File ID: V9101826.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl) ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl) ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	bis(2-Chloroethoxy) methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	810	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	320	U
208-96-8	Acenaphthylene	90	J
606-20-2	2,6-Dinitrotoluene	320	U
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	320	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS09

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 31.7 (g/mL) G Lab File ID: V9101826.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

51-28-5-----	2,4-Dinitrophenol_____	810	U
100-02-7-----	4-Nitrophenol_____	810	U
132-64-9-----	Dibenzofuran_____	320	U
121-14-2-----	2,4-Dinitrotoluene_____	320	U
84-66-2-----	Diethylphthalate_____	320	U
7005-72-3-----	4-Chlorophenyl-phenylether__	320	U
86-73-7-----	Fluorene_____	320	U
100-01-6-----	4-Nitroaniline_____	810	U
534-52-1-----	4,6-Dinitro-2-methylphenol__	810	U
86-30-6-----	N-Nitrosodiphenylamine (1)___	320	U
101-55-3-----	4-Bromophenyl-phenylether__	320	U
118-74-1-----	Hexachlorobenzene_____	320	U
87-86-5-----	Pentachlorophenol_____	810	U
85-01-8-----	Phenanthrene_____	62	J
120-12-7-----	Anthracene_____	90	J
86-74-8-----	Carbazole_____	320	U
84-74-2-----	Di-n-butylphthalate_____	320	U
206-44-0-----	Fluoranthene_____	380	
129-00-0-----	Pyrene_____	380	
85-68-7-----	Butylbenzylphthalate_____	320	U
91-94-1-----	3,3'-Dichlorobenzidine_____	320	U
56-55-3-----	Benzo (a) anthracene_____	320	
218-01-9-----	Chrysene_____	360	
117-81-7-----	bis (2-Ethylhexyl) phthalate__	78	J
117-84-0-----	Di-n-octylphthalate_____	320	U
205-99-2-----	Benzo (b) fluoranthene_____	650	
207-08-9-----	Benzo (k) fluoranthene_____	320	U
50-32-8-----	Benzo (a) pyrene_____	360	
193-39-5-----	Indeno (1,2,3-cd) pyrene_____	270	J
53-70-3-----	Dibenz (a,h) anthracene_____	49	J
191-24-2-----	Benzo (g,h,i) perylene_____	250	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC _____	1.3	U
319-85-7-----	beta-BHC _____	1.3	U
319-86-8-----	delta-BHC _____	1.3	U
58-89-9-----	gamma-BHC (Lindane) _____	1.3	U
76-44-8-----	Heptachlor _____	1.3	U
309-00-2-----	Aldrin _____	1.3	U
1024-57-3-----	Heptachlor epoxide _____	1.3	U
959-98-8-----	Endosulfan I _____	1.3	U
60-57-1-----	Dieldrin _____	2.5	U
72-55-9-----	4,4'-DDE _____	84	PE
72-20-8-----	Endrin _____	2.5	U
33213-65-9-----	Endosulfan II _____	2.5	U
72-54-8-----	4,4'-DDD _____	2.5	U
1031-07-8-----	Endosulfan sulfate _____	2.5	U
50-29-3-----	4,4'-DDT _____	62	PE
72-43-5-----	Methoxychlor _____	13	U
53494-70-5-----	Endrin ketone _____	2.5	U
7421-93-4-----	Endrin aldehyde _____	2.5	U
5103-71-9-----	alpha-Chlordane _____	1.3	U
5103-74-2-----	gamma-Chlordane _____	1.3	U
8001-35-2-----	Toxaphene _____	83	U
Surrogate amount spiked		6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09DL

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09DL

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	13	U
319-85-7-----	beta-BHC	13	U
319-86-8-----	delta-BHC	13	U
58-89-9-----	gamma-BHC (Lindane)	13	U
76-44-8-----	Heptachlor	13	U
309-00-2-----	Aldrin	13	U
1024-57-3-----	Heptachlor epoxide	13	U
959-98-8-----	Endosulfan I	13	U
60-57-1-----	Dieldrin	25	U
72-55-9-----	4,4'-DDE	93	D
72-20-8-----	Endrin	25	U
33213-65-9-----	Endosulfan II	25	U
72-54-8-----	4,4'-DDD	25	U
1031-07-8-----	Endosulfan sulfate	25	U
50-29-3-----	4,4'-DDT	71	DP
72-43-5-----	Methoxychlor	130	U
53494-70-5-----	Endrin ketone	25	U
7421-93-4-----	Endrin aldehyde	25	U
5103-71-9-----	alpha-Chlordane	13	U
5103-74-2-----	gamma-Chlordane	13	U
8001-35-2-----	Toxaphene	830	U
Surrogate amount spiked		6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS09

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.09

Sample wt/vol: 35.0 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) _____ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/12/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/13/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	29	UUUUUUU
11104-28-2-----	Aroclor-1221	29	
11141-16-5-----	Aroclor-1232	29	
53469-21-9-----	Aroclor-1242	29	
12672-29-6-----	Aroclor-1248	29	
11097-69-1-----	Aroclor-1254	29	
11096-82-5-----	Aroclor-1260	29	
Surrogate amount spiked		5.89	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS10

ab Name: SWL-TULSA

Contract: PENSACOLA

ab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.10

Sample wt/vol: 3.8 (g/mL) G

Lab File ID: R34935.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 9

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.

COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS	Q
74-87-3	CHLOROMETHANE	7	U
74-83-9	BROMOMETHANE	7	U
75-01-4	VINYL CHLORIDE	7	U
75-00-3	CHLOROETHANE	7	U
75-09-2	METHYLENE CHLORIDE	17	B
67-64-1	ACETONE	7	U
75-15-0	CARBON DISULFIDE	7	U
75-35-4	1 1-DICHLOROETHENE	7	U
75-34-3	1 1-DICHLOROETHANE	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	CHLOROFORM	7	U
107-06-2	1 2-DICHLOROETHANE	7	U
78-93-3	2-BUTANONE	7	U
71-55-6	1 1 1-TRICHLOROETHANE	7	U
56-23-5	CARBON TETRACHLORIDE	7	U
75-27-4	BROMODICHLOROMETHANE	7	U
78-87-5	1 2-DICHLOROPROPANE	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	TRICHLOROETHENE	7	U
124-48-1	DIBROMOCHLOROMETHANE	7	U
79-00-5	1 1 2-TRICHLOROETHANE	7	U
71-43-2	BENZENE	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
75-25-2	BROMOFORM	7	U
108-10-1	4-METHYL-2-PENTANONE	7	U
591-78-6	2-HEXANONE	7	U
127-18-4	TETRACHLOROETHENE	7	U
108-88-3	TOLUENE	7	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	7	U
108-90-7	CHLOROBENZENE	7	U
100-41-4	ETHYL BENZENE	7	U
100-42-5	STYRENE	7	U
1330-20-7	Xylene (Total)	7	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS10

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.3 (g/mL) G Lab File ID: V9101827.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Q
108-95-2	Phenol	360 U
111-44-4	bis(2-Chloroethyl) ether	360 U
95-57-8	2-Chlorophenol	360 U
541-73-1	1,3-Dichlorobenzene	360 U
106-46-7	1,4-Dichlorobenzene	360 U
95-50-1	1,2-Dichlorobenzene	360 U
95-48-7	2-Methylphenol	360 U
108-60-1	bis(2-Chloroisopropyl) ether	360 U
106-44-5	4-Methylphenol	360 U
621-64-7	N-Nitroso-di-n-propylamine	360 U
67-72-1	Hexachloroethane	360 U
98-95-3	Nitrobenzene	360 U
78-59-1	Isophorone	360 U
88-75-5	2-Nitrophenol	360 U
105-67-9	2,4-Dimethylphenol	360 U
111-91-1	bis(2-Chloroethoxy)methane	360 U
120-83-2	2,4-Dichlorophenol	360 U
120-82-1	1,2,4-Trichlorobenzene	360 U
91-20-3	Naphthalene	360 U
106-47-8	4-Chloroaniline	360 U
87-68-3	Hexachlorobutadiene	360 U
59-50-7	4-Chloro-3-methylphenol	360 U
91-57-6	2-Methylnaphthalene	360 U
77-47-4	Hexachlorocyclopentadiene	360 U
88-06-2	2,4,6-Trichlorophenol	360 U
95-95-4	2,4,5-Trichlorophenol	910 U
91-58-7	2-Chloronaphthalene	360 U
88-74-4	2-Nitroaniline	910 U
131-11-3	Dimethylphthalate	360 U
208-96-8	Acenaphthylene	360 U
606-20-2	2,6-Dinitrotoluene	360 U
99-09-2	3-Nitroaniline	910 U
83-32-9	Acenaphthene	360 U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA Contract: PENSACOLA

PEN43SS10

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.10
 Sample wt/vol: 30.3 (g/mL) G Lab File ID: V9101827.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	290	J
120-12-7	Anthracene	66	J
86-74-8	Carbazole	42	J
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	550	
129-00-0	Pyrene	620	
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	270	J
218-01-9	Chrysene	320	J
117-81-7	bis(2-Ethylhexyl)phthalate	60	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	530	
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	300	J
193-39-5	Indeno(1,2,3-cd)pyrene	260	J
53-70-3	Dibenz(a,h)anthracene	80	J
191-24-2	Benzo(g,h,i)perylene	260	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS10

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	1.4	U
319-85-7-----	beta-BHC	1.4	U
319-86-8-----	delta-BHC	1.4	U
58-89-9-----	gamma-BHC (Lindane)	1.4	U
76-44-8-----	Heptachlor	1.4	U
309-00-2-----	Aldrin	1.4	U
1024-57-3-----	Heptachlor epoxide	1.4	U
959-98-8-----	Endosulfan I	1.4	U
60-57-1-----	Dieldrin	2.7	U
72-55-9-----	4,4'-DDE	7.5	
72-20-8-----	Endrin	2.7	U
33213-65-9-----	Endosulfan II	2.7	U
72-54-8-----	4,4'-DDD	2.7	U
1031-07-8-----	Endosulfan sulfate	2.7	U
50-29-3-----	4,4'-DDT	5.4	P
72-43-5-----	Methoxychlor	14	U
53494-70-5-----	Endrin ketone	2.7	U
7421-93-4-----	Endrin aldehyde	2.7	U
5103-71-9-----	alpha-Chlordane	1.4	U
5103-74-2-----	gamma-Chlordane	1.4	U
8001-35-2-----	Toxaphene	89	U
Surrogate amount spiked		7.18	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS10

b Name: SWL-TULSA

b Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.10

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	36	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U
Surrogate amount spiked		7.21	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: PENSACOLA

PEN-43SS11

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.11

Sample wt/vol: 4.3 (g/mL) G

Lab File ID: R34936.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 2

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	7	B
67-64-1	ACETONE	170	
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	27	
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA Contract: PENSACOLA

PEN43SS11

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.11
 Sample wt/vol: 31.2 (g/mL) G Lab File ID: V9101836.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 2 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl) ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy) methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	820	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS11

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.11
 Sample wt/vol: 31.2 (g/mL) G Lab File ID: V9101836.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 2 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	820	U
100-02-7	4-Nitrophenol	820	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	53	J
129-00-0	Pyrene	60	J
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	89	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	70	J
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS11

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	1.3	U
319-85-7-----beta-BHC	1.3	U
319-86-8-----delta-BHC	1.3	U
58-89-9-----gamma-BHC (Lindane)	1.3	U
76-44-8-----Heptachlor	1.3	U
309-00-2-----Aldrin	1.3	U
1024-57-3-----Heptachlor epoxide	1.3	U
959-98-8-----Endosulfan I	1.3	U
60-57-1-----Dieldrin	2.5	U
72-55-9-----4,4'-DDE	6.5	
72-20-8-----Endrin	5.2	P
33213-65-9-----Endosulfan II	2.5	U
72-54-8-----4,4'-DDD	2.5	U
1031-07-8-----Endosulfan sulfate	2.5	U
50-29-3-----4,4'-DDT	12	P
72-43-5-----Methoxychlor	13	U
53494-70-5-----Endrin ketone	2.5	U
7421-93-4-----Endrin aldehyde	2.5	U
5103-71-9-----alpha-Chlordane	1.3	U
5103-74-2-----gamma-Chlordane	1.3	U
8001-35-2-----Toxaphene	83	U
Surrogate amount spiked	6.69	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS11

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.11

Sample wt/vol: 31.9 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) _____ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/12/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----	Aroclor-1016	32	U
11104-28-2-----	Aroclor-1221	32	U
11141-16-5-----	Aroclor-1232	32	U
53469-21-9-----	Aroclor-1242	32	U
12672-29-6-----	Aroclor-1248	32	U
11097-69-1-----	Aroclor-1254	32	U
11096-82-5-----	Aroclor-1260	32	U
Surrogate amount spiked		6.40	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS12

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101828.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl) ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS12

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V9101828.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	70	J
129-00-0	Pyrene	88	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo (a) anthracene	58	J
218-01-9	Chrysene	70	J
117-81-7	bis(2-Ethylhexyl)phthalate	78	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo (b) fluoranthene	62	J
207-08-9	Benzo (k) fluoranthene	74	J
50-32-8	Benzo (a) pyrene	75	J
193-39-5	Indeno (1,2,3-cd) pyrene	65	J
53-70-3	Dibenz (a,h) anthracene	360	U
191-24-2	Benzo (g,h,i) perylene	78	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS12

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	6.4	
72-20-8	Endrin	12	
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	11	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	89	U
Surrogate amount spiked		7.14	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS12

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.12

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	36	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U
Surrogate amount spiked		7.18	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SWL-TULSA

Contract: PENSACOLA

PEN-43SS13

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.13

Sample wt/vol: 4.7 (g/mL) G

Lab File ID: R34921.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 10

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	6	U
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS13

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.13

Sample wt/vol: 30.5 (g/mL) G

Lab File ID: V9101829.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: 10 decanted: (Y/N) N

Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/18/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 6.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	bis(2-Chloroisopropyl) ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	910	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	910	U
131-11-3	Dimethylphthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
99-09-2	3-Nitroaniline	910	U
83-32-9	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS13

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.13
 Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101829.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/18/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	910	U
100-02-7	4-Nitrophenol	910	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	910	U
534-52-1	4,6-Dinitro-2-methylphenol	910	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	910	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	41	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	140	J
117-81-7	bis(2-Ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	180	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	88	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	79	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS13

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	3.0	P
72-20-8	Endrin	2.7	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	6.1	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
Surrogate amount spiked		7.26	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS13

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.13

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	36	U
11104-28-2-----Aroclor-1221	36	U
11141-16-5-----Aroclor-1232	36	U
53469-21-9-----Aroclor-1242	36	U
12672-29-6-----Aroclor-1248	36	U
11097-69-1-----Aroclor-1254	36	U
11096-82-5-----Aroclor-1260	36	U
Surrogate amount spiked	7.22	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS14

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.14

Sample wt/vol: 2.9 (g/mL) G

Lab File ID: R34937.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 10

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	CHLOROMETHANE	10	U
74-83-9	BROMOMETHANE	10	U
75-01-4	VINYL CHLORIDE	10	U
75-00-3	CHLOROETHANE	10	U
75-09-2	METHYLENE CHLORIDE	7	JB
67-64-1	ACETONE	10	U
75-15-0	CARBON DISULFIDE	10	U
75-35-4	1 1-DICHLOROETHENE	10	U
75-34-3	1 1-DICHLOROETHANE	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	CHLOROFORM	10	U
107-06-2	1 2-DICHLOROETHANE	10	U
78-93-3	2-BUTANONE	10	U
71-55-6	1 1 1-TRICHLOROETHANE	10	U
56-23-5	CARBON TETRACHLORIDE	10	U
75-27-4	BROMODICHLOROMETHANE	10	U
78-87-5	1 2-DICHLOROPROPANE	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	TRICHLOROETHENE	2	J
124-48-1	DIBROMOCHLOROMETHANE	10	U
79-00-5	1 1 2-TRICHLOROETHANE	10	U
71-43-2	BENZENE	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	BROMOFORM	10	U
108-10-1	4-METHYL-2-PENTANONE	10	U
591-78-6	2-HEXANONE	10	U
127-18-4	TETRACHLOROETHENE	10	U
108-88-3	TOLUENE	10	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	10	U
108-90-7	CHLOROBENZENE	10	U
100-41-4	ETHYL BENZENE	10	U
100-42-5	STYRENE	10	U
1330-20-7	Xylene (Total)	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA Contract: PENSACOLA

PEN43SS14

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.14
 Sample wt/vol: 30.7 (g/mL) G Lab File ID: V9101830.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	bis(2-Chloroisopropyl) ether	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy)methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS14

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.14
 Sample wt/vol: 30.7 (g/mL) G Lab File ID: V9101830.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 10 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	37	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	82	J
218-01-9	Chrysene	90	J
117-81-7	bis(2-Ethylhexyl)phthalate	110	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	92	J
193-39-5	Indeno(1,2,3-cd)pyrene	78	J
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	89	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS14

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.7	U
72-55-9	4,4'-DDE	3.6	P
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	2.7	U
72-54-8	4,4'-DDD	2.7	U
1031-07-8	Endosulfan sulfate	2.7	U
50-29-3	4,4'-DDT	8.8	P
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.7	U
7421-93-4	Endrin aldehyde	2.7	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	90	U
Surrogate amount spiked		7.19	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS14

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.14

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 10 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/12/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/19/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	36	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U
Surrogate amount spiked		7.33	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS15

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101831.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

108-95-2-----	Phenol	360	U
111-44-4-----	bis(2-Chloroethyl) ether	360	U
95-57-8-----	2-Chlorophenol	360	U
541-73-1-----	1,3-Dichlorobenzene	360	U
106-46-7-----	1,4-Dichlorobenzene	360	U
95-50-1-----	1,2-Dichlorobenzene	360	U
95-48-7-----	2-Methylphenol	360	U
108-60-1-----	bis(2-Chloroisopropyl) ether	360	U
106-44-5-----	4-Methylphenol	360	U
621-64-7-----	N-Nitroso-di-n-propylamine	360	U
67-72-1-----	Hexachloroethane	360	U
98-95-3-----	Nitrobenzene	360	U
78-59-1-----	Isophorone	360	U
88-75-5-----	2-Nitrophenol	360	U
105-67-9-----	2,4-Dimethylphenol	360	U
111-91-1-----	bis(2-Chloroethoxy)methane	360	U
120-83-2-----	2,4-Dichlorophenol	360	U
120-82-1-----	1,2,4-Trichlorobenzene	360	U
91-20-3-----	Naphthalene	360	U
106-47-8-----	4-Chloroaniline	360	U
87-68-3-----	Hexachlorobutadiene	360	U
59-50-7-----	4-Chloro-3-methylphenol	360	U
91-57-6-----	2-Methylnaphthalene	360	U
77-47-4-----	Hexachlorocyclopentadiene	360	U
88-06-2-----	2,4,6-Trichlorophenol	360	U
95-95-4-----	2,4,5-Trichlorophenol	900	U
91-58-7-----	2-Chloronaphthalene	360	U
88-74-4-----	2-Nitroaniline	900	U
131-11-3-----	Dimethylphthalate	360	U
208-96-8-----	Acenaphthylene	360	U
606-20-2-----	2,6-Dinitrotoluene	360	U
99-09-2-----	3-Nitroaniline	900	U
83-32-9-----	Acenaphthene	360	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS15

b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.15
 Sample wt/vol: 30.4 (g/mL) G Lab File ID: V9101831.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 9 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	900	U
100-02-7	4-Nitrophenol	900	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	900	U
534-52-1	4,6-Dinitro-2-methylphenol	900	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	900	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)phthalate	140	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS15

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	1.4	U
319-85-7-----	beta-BHC	1.4	U
319-86-8-----	delta-BHC	1.4	U
58-89-9-----	gamma-BHC (Lindane)	1.4	U
76-44-8-----	Heptachlor	1.4	U
309-00-2-----	Aldrin	1.4	U
1024-57-3-----	Heptachlor epoxide	1.4	U
959-98-8-----	Endosulfan I	1.4	U
60-57-1-----	Dieldrin	2.7	U
72-55-9-----	4,4'-DDE	2.7	U
72-20-8-----	Endrin	2.7	U
33213-65-9-----	Endosulfan II	2.7	U
72-54-8-----	4,4'-DDD	2.7	U
1031-07-8-----	Endosulfan sulfate	2.7	U
50-29-3-----	4,4'-DDT	2.7	U
72-43-5-----	Methoxychlor	14	U
53494-70-5-----	Endrin ketone	2.7	U
7421-93-4-----	Endrin aldehyde	2.7	U
5103-71-9-----	alpha-Chlordane	1.4	U
5103-74-2-----	gamma-Chlordane	1.4	U
8001-35-2-----	Toxaphene	89	U
Surrogate amount spiked		7.18	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS15

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.15

Sample wt/vol: 30.1 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	36	U
11104-28-2-----	Aroclor-1221	36	U
11141-16-5-----	Aroclor-1232	36	U
53469-21-9-----	Aroclor-1242	36	U
12672-29-6-----	Aroclor-1248	36	U
11097-69-1-----	Aroclor-1254	36	U
11096-82-5-----	Aroclor-1260	36	U
Surrogate amount spiked		7.30	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS16

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101833.D

Level: (low/med) LOW Date Received: 10/06/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99

Injection Volume: 2 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	340	U
111-44-4-----	bis(2-Chloroethyl) ether	340	U
95-57-8-----	2-Chlorophenol	340	U
541-73-1-----	1,3-Dichlorobenzene	340	U
106-46-7-----	1,4-Dichlorobenzene	340	U
95-50-1-----	1,2-Dichlorobenzene	340	U
95-48-7-----	2-Methylphenol	340	U
108-60-1-----	bis(2-Chloroisopropyl) ether	340	U
106-44-5-----	4-Methylphenol	340	U
621-64-7-----	N-Nitroso-di-n-propylamine	340	U
67-72-1-----	Hexachloroethane	340	U
98-95-3-----	Nitrobenzene	340	U
78-59-1-----	Isophorone	340	U
88-75-5-----	2-Nitrophenol	340	U
105-67-9-----	2,4-Dimethylphenol	340	U
111-91-1-----	bis(2-Chloroethoxy) methane	340	U
120-83-2-----	2,4-Dichlorophenol	340	U
120-82-1-----	1,2,4-Trichlorobenzene	340	U
91-20-3-----	Naphthalene	340	U
106-47-8-----	4-Chloroaniline	340	U
87-68-3-----	Hexachlorobutadiene	340	U
59-50-7-----	4-Chloro-3-methylphenol	340	U
91-57-6-----	2-Methylnaphthalene	340	U
77-47-4-----	Hexachlorocyclopentadiene	340	U
88-06-2-----	2,4,6-Trichlorophenol	340	U
95-95-4-----	2,4,5-Trichlorophenol	860	U
91-58-7-----	2-Chloronaphthalene	340	U
88-74-4-----	2-Nitroaniline	860	U
131-11-3-----	Dimethylphthalate	340	U
208-96-8-----	Acenaphthylene	340	U
606-20-2-----	2,6-Dinitrotoluene	340	U
99-09-2-----	3-Nitroaniline	860	U
83-32-9-----	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SS16

ab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.17
 Sample wt/vol: 31.4 (g/mL) G Lab File ID: V9101833.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 7 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	860	U
100-02-7	4-Nitrophenol	860	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	860	U
534-52-1	4,6-Dinitro-2-methylphenol	860	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	860	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	78	J
218-01-9	Chrysene	90	J
117-81-7	bis(2-Ethylhexyl)phthalate	80	J
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	82	J
193-39-5	Indeno(1,2,3-cd)pyrene	69	J
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	68	J

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	110	E
72-20-8	Endrin	11	
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	23	
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	86	E
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	87	U
Surrogate amount spiked		6.98	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16DL

o Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.17DL

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	14	U
319-85-7	beta-BHC	14	U
319-86-8	delta-BHC	14	U
58-89-9	gamma-BHC (Lindane)	14	U
76-44-8	Heptachlor	14	U
309-00-2	Aldrin	14	U
1024-57-3	Heptachlor epoxide	14	U
959-98-8	Endosulfan I	14	U
60-57-1	Dieldrin	26	U
72-55-9	4,4'-DDE	73	D
72-20-8	Endrin	26	U
33213-65-9	Endosulfan II	26	U
72-54-8	4,4'-DDD	26	U
1031-07-8	Endosulfan sulfate	26	U
50-29-3	4,4'-DDT	65	D
72-43-5	Methoxychlor	140	U
53494-70-5	Endrin ketone	26	U
7421-93-4	Endrin aldehyde	26	U
5103-71-9	alpha-Chlordane	14	U
5103-74-2	gamma-Chlordane	14	U
8001-35-2	Toxaphene	870	U
Surrogate amount spiked		6.98	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS16

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.17

Sample wt/vol: 31.1 (g/mL) G

Lab File ID: _____

% Moisture: 7 decanted: (Y/N) ___

Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

12674-11-2-----Aroclor-1016	34	U
11104-28-2-----Aroclor-1221	34	U
11141-16-5-----Aroclor-1232	34	U
53469-21-9-----Aroclor-1242	34	U
12672-29-6-----Aroclor-1248	34	U
11097-69-1-----Aroclor-1254	34	U
11096-82-5-----Aroclor-1260	34	U
Surrogate amount spiked	6.91	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SS17

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.16

Sample wt/vol: 4.2 (g/mL) G

Lab File ID: R34938.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 4

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	4	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA Contract: PENSACOLA

PEN43SS17

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.16
 Sample wt/vol: 31.1 (g/mL) G Lab File ID: V9101832.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/19/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	840	U
100-02-7-----	4-Nitrophenol	840	U
132-64-9-----	Dibenzofuran	330	U
121-14-2-----	2,4-Dinitrotoluene	330	U
84-66-2-----	Diethylphthalate	330	U
7005-72-3-----	4-Chlorophenyl-phenylether	330	U
86-73-7-----	Fluorene	330	U
100-01-6-----	4-Nitroaniline	840	U
534-52-1-----	4,6-Dinitro-2-methylphenol	840	U
86-30-6-----	N-Nitrosodiphenylamine (1)	330	U
101-55-3-----	4-Bromophenyl-phenylether	330	U
118-74-1-----	Hexachlorobenzene	330	U
87-86-5-----	Pentachlorophenol	840	U
85-01-8-----	Phenanthrene	330	U
120-12-7-----	Anthracene	330	U
86-74-8-----	Carbazole	330	U
84-74-2-----	Di-n-butylphthalate	330	U
206-44-0-----	Fluoranthene	330	U
129-00-0-----	Pyrene	330	U
85-68-7-----	Butylbenzylphthalate	330	U
91-94-1-----	3,3'-Dichlorobenzidine	330	U
56-55-3-----	Benzo(a)anthracene	330	U
218-01-9-----	Chrysene	330	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	67	J
117-84-0-----	Di-n-octylphthalate	330	U
205-99-2-----	Benzo(b)fluoranthene	330	U
207-08-9-----	Benzo(k)fluoranthene	330	U
50-32-8-----	Benzo(a)pyrene	330	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U
53-70-3-----	Dibenz(a,h)anthracene	330	U
191-24-2-----	Benzo(g,h,i)perylene	330	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS17

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.16

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	5.2	
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	6.9	P
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	84	U
Surrogate amount spiked		6.74	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SS17

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.16

Sample wt/vol: 30.6 (g/mL) G

Lab File ID: _____

% Moisture: 4 decanted: (Y/N) ___

Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL)

Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	34	U
11104-28-2-----	Aroclor-1221	34	U
11141-16-5-----	Aroclor-1232	34	U
53469-21-9-----	Aroclor-1242	34	U
12672-29-6-----	Aroclor-1248	34	U
11097-69-1-----	Aroclor-1254	34	U
11096-82-5-----	Aroclor-1260	34	U
Surrogate amount spiked		6.81	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.20

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: R34926.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 3

Date Analyzed: 10/13/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	7	B
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD01

Lab Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.20
 Sample wt/vol: 30.5 (g/mL) G Lab File ID: V9101931.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 3 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 7.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl) ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.20

Sample wt/vol: 30.5 (g/mL) G

Lab File ID: V9101931.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 10/07/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/20/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 7.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	840	U
100-02-7-----	4-Nitrophenol	840	U
132-64-9-----	Dibenzofuran	340	U
121-14-2-----	2,4-Dinitrotoluene	340	U
84-66-2-----	Diethylphthalate	340	U
7005-72-3-----	4-Chlorophenyl-phenylether	340	U
86-73-7-----	Fluorene	340	U
100-01-6-----	4-Nitroaniline	840	U
534-52-1-----	4,6-Dinitro-2-methylphenol	840	U
86-30-6-----	N-Nitrosodiphenylamine (1)	340	U
101-55-3-----	4-Bromophenyl-phenylether	340	U
118-74-1-----	Hexachlorobenzene	340	U
87-86-5-----	Pentachlorophenol	840	U
85-01-8-----	Phenanthrene	340	U
120-12-7-----	Anthracene	340	U
86-74-8-----	Carbazole	340	U
84-74-2-----	Di-n-butylphthalate	340	U
206-44-0-----	Fluoranthene	340	U
129-00-0-----	Pyrene	340	U
85-68-7-----	Butylbenzylphthalate	340	U
91-94-1-----	3,3'-Dichlorobenzidine	340	U
56-55-3-----	Benzo(a)anthracene	340	U
218-01-9-----	Chrysene	340	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	340	U
117-84-0-----	Di-n-octylphthalate	340	U
205-99-2-----	Benzo(b)fluoranthene	340	U
207-08-9-----	Benzo(k)fluoranthene	340	U
50-32-8-----	Benzo(a)pyrene	340	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	340	U
53-70-3-----	Dibenz(a,h)anthracene	340	U
191-24-2-----	Benzo(g,h,i)perylene	340	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	1.3	U
319-85-7-----	beta-BHC	1.3	U
319-86-8-----	delta-BHC	1.3	U
58-89-9-----	gamma-BHC (Lindane)	1.3	U
76-44-8-----	Heptachlor	1.3	U
309-00-2-----	Aldrin	1.3	U
1024-57-3-----	Heptachlor epoxide	1.3	U
959-98-8-----	Endosulfan I	1.3	U
60-57-1-----	Dieldrin	2.5	U
72-55-9-----	4,4'-DDE	6.8	P
72-20-8-----	Endrin	4.6	
33213-65-9-----	Endosulfan II	2.5	U
72-54-8-----	4,4'-DDD	2.5	U
1031-07-8-----	Endosulfan sulfate	2.5	U
50-29-3-----	4,4'-DDT	11	P
72-43-5-----	Methoxychlor	13	U
53494-70-5-----	Endrin ketone	2.5	U
7421-93-4-----	Endrin aldehyde	2.5	U
5103-71-9-----	alpha-Chlordane	1.3	U
5103-74-2-----	gamma-Chlordane	1.3	U
8001-35-2-----	Toxaphene	83	U
Surrogate amount spiked		6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD01

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.20

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) _____ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U
Surrogate amount spiked		6.72	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN-43SSDD02

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40581

Matrix: (soil/water) SOIL

Lab Sample ID: 40581.21

Sample wt/vol: 4.4 (g/mL) G

Lab File ID: R34939.D

Level: (low/med) LOW

Date Received: 10/06/99

% Moisture: not dec. 4

Date Analyzed: 10/14/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	6	JB
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	9	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN43SSDD02

b Name: SWL-TULSA Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.21
 Sample wt/vol: 30.9 (g/mL) G Lab File ID: V9101932.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl) ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy) methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	840	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

Lab Name: SWL-TULSA Contract: PENSACOLA

PEN43SSDD02

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40581
 Matrix: (soil/water) SOIL Lab Sample ID: 40581.21
 Sample wt/vol: 30.9 (g/mL) G Lab File ID: V9101932.D
 Level: (low/med) LOW Date Received: 10/06/99
 % Moisture: 4 decanted: (Y/N) N Date Extracted: 10/07/99
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/20/99
 Injection Volume: 2 (uL) Dilution Factor: 1
 GPC Cleanup: (Y/N) N pH: 6.3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	150	J
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 31.2 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) ___ Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/28/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	1.3	U
319-85-7-----beta-BHC	1.3	U
319-86-8-----delta-BHC	1.3	U
58-89-9-----gamma-BHC (Lindane)	1.3	U
76-44-8-----Heptachlor	1.3	U
309-00-2-----Aldrin	1.3	U
1024-57-3-----Heptachlor epoxide	1.3	U
959-98-8-----Endosulfan I	1.3	U
60-57-1-----Dieldrin	2.5	U
72-55-9-----4,4'-DDE	11	
72-20-8-----Endrin	2.5	U
33213-65-9-----Endosulfan II	2.5	U
72-54-8-----4,4'-DDD	2.5	U
1031-07-8-----Endosulfan sulfate	2.5	U
50-29-3-----4,4'-DDT	10	P
72-43-5-----Methoxychlor	13	U
53494-70-5-----Endrin ketone	2.5	U
7421-93-4-----Endrin aldehyde	2.5	U
5103-71-9-----alpha-Chlordane	1.3	U
5103-74-2-----gamma-Chlordane	1.3	U
8001-35-2-----Toxaphene	83	U
Surrogate amount spiked	6.68	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SSDD02

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40581

Matrix: (soil/water) SOIL Lab Sample ID: 40581.21

Sample wt/vol: 31.3 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) Date Received: 10/06/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/07/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U
Surrogate amount spiked		6.66	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN431S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111312.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.6

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl) ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	0.80	J
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN431S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.01

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111312.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.6

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenylphenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
86-74-8	Carbazole	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	0.90	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-1S-01
SWOK ID: 40903.01
DATE RECEIVED:
DATE ANALYZED: 11/09/99
BLANK ID: VBLK

SAMPLE MATRIX: WATER
METHOD REF. : RSK-175
PROJECT:
DILUTION: 1

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	1	JB

Quantitation Report

Data File : J:\1\DATA\D991109A\D11860.D Vial: 15
 Acq On : 9 Nov 1999 16:20 Operator:
 Sample : PEN-43-1S-01 Inst : HPD
 Misc : 40903.01*10ML*GC195 Multiplr: 1.0000
 IntFile : EVENTS.E
 Quant Time: Nov 10 11:11 1999 Quant Results File: C1C2HS-1.RES

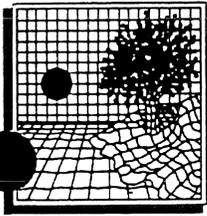
Method : J:\1\DATA\D991109A\C1C2HS-1.M
 Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
 Last Update : Tue Nov 09 13:47:30 1999
 Response via : Initial Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	ug/L	Curve

Target Compounds:				
1) Methane	0.82	12919	0.9721 m	L

Curve Types : A=Average L=Linear P=Power Q=Quadratic/
 (f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.
 D11860.D C1C2HS-1.M Wed Nov 10 11:21:16 1999



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.01

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.01
SAMPLE #: PEN-43-1S-01
LOCATION: SITE 43

SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U mg/l	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	9.2	mg/l		10/28/99	EPA 300.0
NITRATE	0.22	mg/l		10/28/99	EPA 300.0
SULFATE	6.9	mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-2S-01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPI

SAS No.:

SDG No.: 40903A

Matrix: (soil/water) WATER

Lab Sample ID: 40903.02

Sample wt/vol: 5 (g/mL) ML

Lab File ID: K30113.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. _____

Date Analyzed: 11/08/99

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3-----	Chloromethane	5	U
75-01-4-----	Vinyl Chloride	5	U
74-83-9-----	Bromomethane	5	U
75-00-3-----	Chloroethane	5	U
75-35-4-----	1,1-Dichloroethene	5	U
67-64-1-----	Acetone	5	U
75-15-0-----	Carbon Disulfide	5	U
75-09-2-----	Methylene Chloride	6	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
78-93-3-----	2-Butanone	5	U
67-66-3-----	Chloroform	5	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
71-43-2-----	Benzene	5	U
107-06-2-----	1,2-Dichloroethane	5	U
79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5---	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	5	U
108-88-3-----	Toluene	5	U
10061-02-6---	trans-1,3-Dichloropropene	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
591-78-6-----	2-Hexanone	5	U
124-48-1-----	Dibromochloromethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7----	Xylene (total)	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN432S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111313.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.3

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----Phenol	10	U
111-44-4-----bis(2-Chloroethyl) ether	10	U
95-57-8-----2-Chlorophenol	10	U
541-73-1-----1,3-Dichlorobenzene	10	U
106-46-7-----1,4-Dichlorobenzene	10	U
95-50-1-----1,2-Dichlorobenzene	10	U
95-48-7-----2-Methylphenol	10	U
108-60-1-----bis(2-Chloroisopropyl) ether	10	U
106-44-5-----4-Methylphenol	10	U
621-64-7-----N-Nitroso-di-n-propylamine	10	U
67-72-1-----Hexachloroethane	10	U
98-95-3-----Nitrobenzene	10	U
78-59-1-----Isophorone	10	U
88-75-5-----2-Nitrophenol	10	U
105-67-9-----2,4-Dimethylphenol	10	U
111-91-1-----bis(2-Chloroethoxy)methane	10	U
120-83-2-----2,4-Dichlorophenol	10	U
120-82-1-----1,2,4-Trichlorobenzene	10	U
91-20-3-----Naphthalene	10	U
106-47-8-----4-Chloroaniline	10	U
87-68-3-----Hexachlorobutadiene	10	U
59-50-7-----4-Chloro-3-methylphenol	10	U
91-57-6-----2-Methylnaphthalene	10	U
77-47-4-----Hexachlorocyclopentadiene	10	U
88-06-2-----2,4,6-Trichlorophenol	10	U
95-95-4-----2,4,5-Trichlorophenol	25	U
91-58-7-----2-Chloronaphthalene	10	U
88-74-4-----2-Nitroaniline	25	U
131-11-3-----Dimethylphthalate	10	U
208-96-8-----Acenaphthylene	10	U
606-20-2-----2,6-Dinitrotoluene	10	U
99-09-2-----3-Nitroaniline	25	U
83-32-9-----Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN432S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111313.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.3

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

121-14-2-----	2,4-Dinitrotoluene	10	U
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenylphenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
86-74-8-----	Carbazole	10	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	0.80	J
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	4	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenz(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-2S-01

SAMPLE MATRIX: WATER

SWOK ID: 40903.02

METHOD REF. : RSK-175

DATE RECEIVED:

PROJECT:

DATE ANALYZED: 11/09/99

DILUTION: 1

BLANK ID: VBLK

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	1	JB

Quantitation Report

Data File : J:\1\DATA\D991109A\D11861.D Vial: 16
 Acq On : 9 Nov 1999 16:52 Operator:
 Sample : PEN-43-2S-01 Inst : HPD
 Misc : 40903.02*10ML*GC195 Multiplr: 1.0000
 IntFile : EVENTS.E
 Quant Time: Nov 10 11:12 1999 Quant Results File: C1C2HS-1.RES

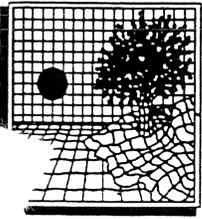
Method : J:\1\DATA\D991109A\C1C2HS-1.M
 Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
 Last Update : Tue Nov 09 13:47:30 1999
 Response via : Initial Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	ug/L	Curve

Target Compounds:				
1) Methane	0.80	12842	0.9662 m	L

Curve Types : A=Average L=Linear P=Power Q=Quadratic/
 (f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.
 D11861.D C1C2HS-1.M Wed Nov 10 11:21:20 1999



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.02

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.02
SAMPLE #: PEN-43-2S-01
LOCATION: SITE 43

SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U mg/l	11/02/99	11/02/99	EPA 376.1
NORGANIC CHLORIDE	6.1	mg/l		10/28/99	EPA 300.0
ITRATE	1.1	mg/l		10/28/99	EPA 300.0
ULFATE	6.3	mg/l		10/28/99	EPA 300.0

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN433S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.03

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111314.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

GPC Cleanup: (Y/N) N

pH: 6.2

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

121-14-2-----	2,4-Dinitrotoluene	10	U
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenylphenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
86-74-8-----	Carbazole	10	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	0.60	J
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	3	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenz(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

REPORT DATE: 11/30/99

SAMPLE ID: PEN-43-3S-01

SWOK ID: 40903.03

DATE RECEIVED:

DATE ANALYZED: 11/09/99

BLANK ID: VBLK

SAMPLE MATRIX: WATER

METHOD REF. : RSK-175

PROJECT:

DILUTION: 1

RESULTS REPORTED IN UG/L OR PARTS PER BILLION (PPB)

PARAMETER	QUANTITATION LIMIT	RESULTS	Q
Methane	1	0.9	JB

Quantitation Report

Data File : J:\1\DATA\D991109A\D11862.D Vial: 17
 Acq On : 9 Nov 1999 17:24 Operator:
 Sample : PEN-43-3S-01 Inst : HPD
 Misc : 40903.03*10ML*GC195 Multiplr: 1.0000
 IntFile : EVENTS.E
 Quant Time: Nov 10 11:12 1999 Quant Results File: C1C2HS-1.RES

Method : J:\1\DATA\D991109A\C1C2HS-1.M
 Title-Path : iCAL - C:\HPCHEM\1\DATA\D990415A\
 Last Update : Tue Nov 09 13:47:30 1999
 Response via : Initial Calibration

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	ug/L	Curve

Target Compounds:				
1) Methane	0.82	12306	0.9259 m	L

 Curve Types : A=Average L=Linear P=Power Q=Quadratic/
 (f)=RT Delta > 1/2 Window (E)= > High cal. std. (m)=manual int.
 D11862.D C1C2HS-1.M Wed Nov 10 11:21:25 1999

SOUTHWEST LABORATORY OF OKLAHOMA
GAS CHROMATOGRAPHY LABORATORY

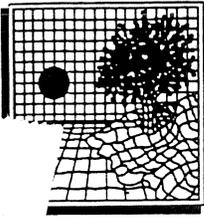
REPORT DATE: 11/30/99

CLIENT SAMPLE ID: PEN-43-3S-01	LAB SAMPLE ID: 40903.03
MS FILE ID: D11863.D	MSD FILE ID: D11864.D
SAMPLE MATRIX: WATER	METHOD REFERENCE: RSK-175
DATE ANALYZED: 11/09/99	PROJECT:

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
=====

PARAMETER	SPIKE	SAMPLE	MS	MSD	QC LIMITS		
	ADDED	CONC.	%	%	RPD	RPD	RECOVERY
	UG/L	UG/L	REC.	REC.			
Methane	3	1	64	66	2	25	50-150

* = VALUE OUTSIDE OF QC LIMITS



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.03

REPORTED : 11/30/99

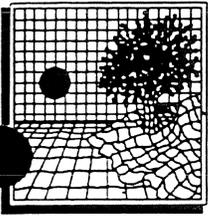
PROJECT : PENSACOLA
LAB# : 40903.03
SAMPLE #: PEN-43-3S-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	4.4	mg/l	11/02/99	11/02/99	EPA 376.1
TRITATE	1.8	mg/l		10/28/99	EPA 300.0
LFATE	17.7	mg/l		10/28/99	EPA 300.0
ORGANIC CHLORIDE	22.1	mg/l		11/15/99	EPA 300.0



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.04

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.04 MS1
SAMPLE #: PEN-43-3S-01 MS1
LOCATION: SITE 43

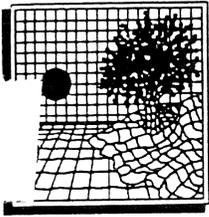
SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	25.5	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	119.4	mg/l	11/02/99	11/02/99	EPA 376.1
NITRATE	11.5	mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	31.8	mg/l		11/15/99	EPA 300.0
SULFATE	25.1	mg/l		11/15/99	EPA 300.0



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.05

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.05 SD1
SAMPLE #: PEN-43-3S-01 SD1
LOCATION: SITE 43

SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	25.5	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	121.1	mg/l	11/02/99	11/02/99	EPA 376.1
NITRATE	12.0	mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	31.7	mg/l		11/15/99	EPA 300.0
SULFATE	23.7	mg/l		11/15/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-4S-01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPI

SAS No.:

SDG No.: 40903A

Matrix: (soil/water) WATER

Lab Sample ID: 40903.06

Sample wt/vol: 5 (g/mL) ML

Lab File ID: K30139.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. _____

Date Analyzed: 11/09/99

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3-----	Chloromethane	5	U
75-01-4-----	Vinyl Chloride	5	U
74-83-9-----	Bromomethane	5	U
75-00-3-----	Chloroethane	5	U
75-35-4-----	1,1-Dichloroethene	5	U
67-64-1-----	Acetone	5	U
75-15-0-----	Carbon Disulfide	5	U
75-09-2-----	Methylene Chloride	6	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
78-93-3-----	2-Butanone	5	U
67-66-3-----	Chloroform	5	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
71-43-2-----	Benzene	5	U
107-06-2-----	1,2-Dichloroethane	5	U
79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5----	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	5	U
108-88-3-----	Toluene	5	U
10061-02-6----	trans-1,3-Dichloropropene	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
591-78-6-----	2-Hexanone	5	U
124-48-1-----	Dibromochloromethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7----	Xylene (total)	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN434S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.06

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111317.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

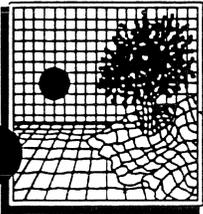
GPC Cleanup: (Y/N) N

pH: 6.1

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
121-14-2-----	2,4-Dinitrotoluene	10	U
51-28-5-----	2,4-Dinitrophenol	25	U
100-02-7-----	4-Nitrophenol	25	U
132-64-9-----	Dibenzofuran	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	25	U
534-52-1-----	4,6-Dinitro-2-methylphenol	25	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenylphenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	25	U
86-74-8-----	Carbazole	10	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-butylphthalate	0.70	J
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	2	J
117-84-0-----	Di-n-octylphthalate	10	U
205-99-2-----	Benzo(b)fluoranthene	10	U
207-08-9-----	Benzo(k)fluoranthene	10	U
50-32-8-----	Benzo(a)pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	10	U
53-70-3-----	Dibenz(a,h)anthracene	10	U
191-24-2-----	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany Broken Arrow, Oklahoma 74012 Office (918) 251-2858 Fax (918) 251-2599

TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.06

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.06
SAMPLE #: PEN-43-4S-01
LOCATION: SITE 43

SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	4.1	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	16.2	mg/l		10/28/99	EPA 300.0
NITRATE	1.3	mg/l		10/28/99	EPA 300.0
SULFATE	7.8	mg/l		10/28/99	EPA 300.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEN435S01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40903

Matrix: (soil/water) WATER

Lab Sample ID: 40903.07

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 09111318.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. 0 dec.

Date Extracted: 10/29/99

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/13/99

Concentrated Extract Volume: 1000(uL)

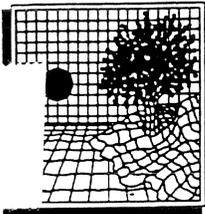
GPC Cleanup: (Y/N) N

pH: 6.0

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2-----	Phenol	10	U
111-44-4-----	bis(2-Chloroethyl) ether	10	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
108-60-1-----	bis(2-Chloroisopropyl) ether	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-di-n-propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
111-91-1-----	bis(2-Chloroethoxy) methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	10	U
95-95-4-----	2,4,5-Trichlorophenol	25	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	25	U
131-11-3-----	Dimethylphthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U
99-09-2-----	3-Nitroaniline	25	U
83-32-9-----	Acenaphthene	10	U



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TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.07

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.07
SAMPLE #: PEN-43-5S-01
LOCATION: SITE 43

SAMPLED : 10/27/99

SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	2.6	mg/l		11/14/99	EPA 415.1
TOTAL SULFIDE	1.0	U mg/l	11/02/99	11/02/99	EPA 376.1
INORGANIC CHLORIDE	16.1	mg/l		10/28/99	EPA 300.0
NITRATE	0.98	mg/l		10/28/99	EPA 300.0
SULFATE	3.9	mg/l		10/28/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43-DD-01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPI

SAS No.:

SDG No.: 40903A

Matrix: (soil/water) WATER

Lab Sample ID: 40903.08

Sample wt/vol: 5 (g/mL) ML

Lab File ID: K30093.D

Level: (low/med) LOW

Date Received: 10/28/99

% Moisture: not dec. _____

Date Analyzed: 11/05/99

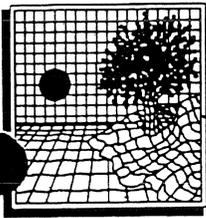
GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3-----	Chloromethane	5	U
75-01-4-----	Vinyl Chloride	5	U
74-83-9-----	Bromomethane	5	U
75-00-3-----	Chloroethane	5	U
75-35-4-----	1,1-Dichloroethene	5	U
67-64-1-----	Acetone	5	U
75-15-0-----	Carbon Disulfide	5	U
75-09-2-----	Methylene Chloride	19	B
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
78-93-3-----	2-Butanone	5	U
67-66-3-----	Chloroform	5	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
71-43-2-----	Benzene	5	U
107-06-2-----	1,2-Dichloroethane	5	U
79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5---	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	5	U
108-88-3-----	Toluene	5	U
10061-02-6---	trans-1,3-Dichloropropene	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
591-78-6-----	2-Hexanone	5	U
124-48-1-----	Dibromochloromethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7----	Xylene (total)	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U



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TETRA TECH NUS, INC.
FOSTER PLAZA 7
661 ANDERSEN DRIVE
PITTSBURGH, PA 15220-274
Attn: LEE LECK

REPORT : 40903.08

REPORTED : 11/30/99

PROJECT : PENSACOLA
LAB# : 40903.08
SAMPLE #: PEN-43-DD-01
LOCATION: SITE 43

SAMPLED : 10/27/99
SUBMITTED: 10/28/99

MATRIX : Water

MISCELLANEOUS

PARAMETER	RESULTS	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
ORGANIC CARBON	1.0	U mg/l		11/14/99	EPA 415.1
NITRATE	1.8	mg/l		10/28/99	EPA 300.0
SULFATE	17.7	mg/l		10/28/99	EPA 300.0
INORGANIC CHLORIDE	22.1	mg/l		11/15/99	EPA 300.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB011415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK Case No.: TETPITT SAS No.: SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 4.0 (g/mL) G Lab File ID: R35097.D

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: not dec. 3 Date Analyzed: 10/22/99

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	6	U
74-83-9	BROMOMETHANE	6	U
75-01-4	VINYL CHLORIDE	6	U
75-00-3	CHLOROETHANE	6	U
75-09-2	METHYLENE CHLORIDE	2	J
67-64-1	ACETONE	6	U
75-15-0	CARBON DISULFIDE	6	U
75-35-4	1 1-DICHLOROETHENE	6	U
75-34-3	1 1-DICHLOROETHANE	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	CHLOROFORM	6	U
107-06-2	1 2-DICHLOROETHANE	6	U
78-93-3	2-BUTANONE	6	U
71-55-6	1 1 1-TRICHLOROETHANE	6	U
56-23-5	CARBON TETRACHLORIDE	6	U
75-27-4	BROMODICHLOROMETHANE	6	U
78-87-5	1 2-DICHLOROPROPANE	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	TRICHLOROETHENE	6	U
124-48-1	DIBROMOCHLOROMETHANE	6	U
79-00-5	1 1 2-TRICHLOROETHANE	6	U
71-43-2	BENZENE	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	BROMOFORM	6	U
108-10-1	4-METHYL-2-PENTANONE	6	U
591-78-6	2-HEXANONE	6	U
127-18-4	TETRACHLOROETHENE	6	U
108-88-3	TOLUENE	6	U
79-34-5	1 1 2 2-TETRACHLOROETHANE	6	U
108-90-7	CHLOROBENZENE	6	U
100-41-4	ETHYL BENZENE	6	U
100-42-5	STYRENE	6	U
1330-20-7	Xylene (Total)	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: F9110510.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl) ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	24	JB
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	850	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	850	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	850	U
83-32-9	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.01

Sample wt/vol: 30.2 (g/mL) G

Lab File ID: F9110510.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	850	U
100-02-7	4-Nitrophenol	850	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	850	U
534-52-1	4,6-Dinitro-2-methylphenol	850	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	850	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo (a) anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis (2-Ethylhexyl) phthalate	56	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo (b) fluoranthene	340	U
207-08-9	Benzo (k) fluoranthene	340	U
50-32-8	Benzo (a) pyrene	340	U
193-39-5	Indeno (1,2,3-cd) pyrene	340	U
53-70-3	Dibenz (a, h) anthracene	340	U
191-24-2	Benzo (g, h, i) perylene	340	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6-----	alpha-BHC	1.3	U
319-85-7-----	beta-BHC	1.3	U
319-86-8-----	delta-BHC	1.3	U
58-89-9-----	gamma-BHC (Lindane)	1.3	U
76-44-8-----	Heptachlor	1.3	U
309-00-2-----	Aldrin	1.3	U
1024-57-3-----	Heptachlor epoxide	1.3	U
959-98-8-----	Endosulfan I	1.3	U
60-57-1-----	Dieldrin	2.5	U
72-55-9-----	4,4'-DDE	2.5	U
72-20-8-----	Endrin	2.5	U
33213-65-9-----	Endosulfan II	2.5	U
72-54-8-----	4,4'-DDD	2.5	U
1031-07-8-----	Endosulfan sulfate	2.5	U
50-29-3-----	4,4'-DDT	2.5	U
72-43-5-----	Methoxychlor	13	U
53494-70-5-----	Endrin ketone	2.5	U
7421-93-4-----	Endrin aldehyde	2.5	U
5103-71-9-----	alpha-Chlordane	1.3	U
5103-74-2-----	gamma-Chlordane	1.3	U
8001-35-2-----	Toxaphene	84	U
Surrogate amount spiked		6.78	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB011415

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.01

Sample wt/vol: 32.0 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/26/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

12674-11-2-----	Aroclor-1016	32	U
11104-28-2-----	Aroclor-1221	32	U
11141-16-5-----	Aroclor-1232	32	U
53469-21-9-----	Aroclor-1242	32	U
12672-29-6-----	Aroclor-1248	32	U
11097-69-1-----	Aroclor-1254	32	U
11096-82-5-----	Aroclor-1260	32	U
Surrogate amount spiked		6.44	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.02

Sample wt/vol: 30.7 (g/mL) G

Lab File ID: F9110511.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol_____	830	U
100-02-7-----	4-Nitrophenol_____	830	U
132-64-9-----	Dibenzofuran_____	330	U
121-14-2-----	2,4-Dinitrotoluene_____	330	U
84-66-2-----	Diethylphthalate_____	330	U
7005-72-3-----	4-Chlorophenyl-phenylether_____	330	U
86-73-7-----	Fluorene_____	330	U
100-01-6-----	4-Nitroaniline_____	830	U
534-52-1-----	4,6-Dinitro-2-methylphenol_____	830	U
86-30-6-----	N-Nitrosodiphenylamine (1)_____	330	U
101-55-3-----	4-Bromophenyl-phenylether_____	330	U
118-74-1-----	Hexachlorobenzene_____	330	U
87-86-5-----	Pentachlorophenol_____	830	U
85-01-8-----	Phenanthrene_____	330	U
120-12-7-----	Anthracene_____	330	U
86-74-8-----	Carbazole_____	330	U
84-74-2-----	Di-n-butylphthalate_____	330	U
206-44-0-----	Fluoranthene_____	330	U
129-00-0-----	Pyrene_____	330	U
85-68-7-----	Butylbenzylphthalate_____	330	U
91-94-1-----	3,3'-Dichlorobenzidine_____	330	U
56-55-3-----	Benzo (a) anthracene_____	330	U
218-01-9-----	Chrysene_____	330	U
117-81-7-----	bis (2-Ethylhexyl) phthalate_____	67	JB
117-84-0-----	Di-n-octylphthalate_____	330	U
205-99-2-----	Benzo (b) fluoranthene_____	330	U
207-08-9-----	Benzo (k) fluoranthene_____	330	U
50-32-8-----	Benzo (a) pyrene_____	330	U
193-39-5-----	Indeno (1,2,3-cd) pyrene_____	330	U
53-70-3-----	Dibenz (a,h) anthracene_____	330	U
191-24-2-----	Benzo (g,h,i) perylene_____	330	U

(1) Cannot be seperated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.3	U
319-85-7	beta-BHC	1.3	U
319-86-8	delta-BHC	1.3	U
58-89-9	gamma-BHC (Lindane)	1.3	U
76-44-8	Heptachlor	1.3	U
309-00-2	Aldrin	1.3	U
1024-57-3	Heptachlor epoxide	1.3	U
959-98-8	Endosulfan I	1.3	U
60-57-1	Dieldrin	2.5	U
72-55-9	4,4'-DDE	2.5	U
72-20-8	Endrin	2.5	U
33213-65-9	Endosulfan II	2.5	U
72-54-8	4,4'-DDD	2.5	U
1031-07-8	Endosulfan sulfate	2.5	U
50-29-3	4,4'-DDT	2.5	U
72-43-5	Methoxychlor	13	U
53494-70-5	Endrin ketone	2.5	U
7421-93-4	Endrin aldehyde	2.5	U
5103-71-9	alpha-Chlordane	1.3	U
5103-74-2	gamma-Chlordane	1.3	U
8001-35-2	Toxaphene	83	U
Surrogate amount spiked		6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.02

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U
Surrogate amount spiked		6.74	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.03

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: F9110512.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 6.8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl) ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	23	JB
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	820	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	330	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

319-84-6-----	alpha-BHC	1.3	U
319-85-7-----	beta-BHC	1.3	U
319-86-8-----	delta-BHC	1.3	U
58-89-9-----	gamma-BHC (Lindane)	1.3	U
76-44-8-----	Heptachlor	1.3	U
309-00-2-----	Aldrin	1.3	U
1024-57-3-----	Heptachlor epoxide	1.3	U
959-98-8-----	Endosulfan I	1.3	U
60-57-1-----	Dieldrin	2.6	U
72-55-9-----	4,4'-DDE	2.6	U
72-20-8-----	Endrin	2.6	U
33213-65-9-----	Endosulfan II	2.6	U
72-54-8-----	4,4'-DDD	2.6	U
1031-07-8-----	Endosulfan sulfate	2.6	U
50-29-3-----	4,4'-DDT	2.6	U
72-43-5-----	Methoxychlor	13	U
53494-70-5-----	Endrin ketone	2.6	U
7421-93-4-----	Endrin aldehyde	2.6	U
5103-71-9-----	alpha-Chlordane	1.3	U
5103-74-2-----	gamma-Chlordane	1.3	U
8001-35-2-----	Toxaphene	85	U
Surrogate amount spiked		6.80	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB031415

Sample Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.03

Sample wt/vol: 32.1 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) _____ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q

12674-11-2-----Aroclor-1016	31	U
11104-28-2-----Aroclor-1221	31	U
11141-16-5-----Aroclor-1232	31	U
53469-21-9-----Aroclor-1242	31	U
12672-29-6-----Aroclor-1248	31	U
11097-69-1-----Aroclor-1254	31	U
11096-82-5-----Aroclor-1260	31	U
Surrogate amount spiked	6.36	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.04

Sample wt/vol: 30.3 (g/mL) G

Lab File ID: F9110513.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 7.1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

51-28-5-----	2,4-Dinitrophenol	840	U
100-02-7-----	4-Nitrophenol	840	U
132-64-9-----	Dibenzofuran	340	U
121-14-2-----	2,4-Dinitrotoluene	340	U
84-66-2-----	Diethylphthalate	340	U
7005-72-3-----	4-Chlorophenyl-phenylether	340	U
86-73-7-----	Fluorene	340	U
100-01-6-----	4-Nitroaniline	840	U
534-52-1-----	4,6-Dinitro-2-methylphenol	840	U
86-30-6-----	N-Nitrosodiphenylamine (1)	340	U
101-55-3-----	4-Bromophenyl-phenylether	340	U
118-74-1-----	Hexachlorobenzene	340	U
87-86-5-----	Pentachlorophenol	840	U
85-01-8-----	Phenanthrene	340	U
120-12-7-----	Anthracene	340	U
86-74-8-----	Carbazole	340	U
84-74-2-----	Di-n-butylphthalate	340	U
206-44-0-----	Fluoranthene	340	U
129-00-0-----	Pyrene	340	U
85-68-7-----	Butylbenzylphthalate	340	U
91-94-1-----	3,3'-Dichlorobenzidine	340	U
56-55-3-----	Benzo(a)anthracene	340	U
218-01-9-----	Chrysene	340	U
117-81-7-----	bis(2-Ethylhexyl)phthalate	430	B
117-84-0-----	Di-n-octylphthalate	340	U
205-99-2-----	Benzo(b)fluoranthene	340	U
207-08-9-----	Benzo(k)fluoranthene	340	U
50-32-8-----	Benzo(a)pyrene	340	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	340	U
53-70-3-----	Dibenz(a,h)anthracene	340	U
191-24-2-----	Benzo(g,h,i)perylene	340	U

(1) Cannot be seperated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB021415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.02

Sample wt/vol: 30.7 (g/mL) G

Lab File ID: F9110511.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 2 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	330	U
111-44-4-----	bis(2-Chloroethyl) ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	bis(2-Chloroisopropyl) ether	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-di-n-propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
111-91-1-----	bis(2-Chloroethoxy)methane	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	22	JB
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
59-50-7-----	4-Chloro-3-methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	330	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	830	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	830	U
131-11-3-----	Dimethylphthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	830	U
83-32-9-----	Acenaphthene	330	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6-----	alpha-BHC	1.3	U
319-85-7-----	beta-BHC	1.3	U
319-86-8-----	delta-BHC	1.3	U
58-89-9-----	gamma-BHC (Lindane)	1.3	U
76-44-8-----	Heptachlor	1.3	U
309-00-2-----	Aldrin	1.3	U
1024-57-3-----	Heptachlor epoxide	1.3	U
959-98-8-----	Endosulfan I	1.3	U
60-57-1-----	Dieldrin	2.5	U
72-55-9-----	4,4'-DDE	2.5	U
72-20-8-----	Endrin	2.5	U
33213-65-9-----	Endosulfan II	2.5	U
72-54-8-----	4,4'-DDD	2.5	U
1031-07-8-----	Endosulfan sulfate	2.5	U
50-29-3-----	4,4'-DDT	2.5	U
72-43-5-----	Methoxychlor	13	U
53494-70-5-----	Endrin ketone	2.5	U
7421-93-4-----	Endrin aldehyde	2.5	U
5103-71-9-----	alpha-Chlordane	1.3	U
5103-74-2-----	gamma-Chlordane	1.3	U
8001-35-2-----	Toxaphene	83	U
Surrogate amount spiked		6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB040708

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.04

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

% Moisture: 2 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	33	U
11104-28-2-----Aroclor-1221	33	U
11141-16-5-----Aroclor-1232	33	U
53469-21-9-----Aroclor-1242	33	U
12672-29-6-----Aroclor-1248	33	U
11097-69-1-----Aroclor-1254	33	U
11096-82-5-----Aroclor-1260	33	U
Surrogate amount spiked	6.63	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EN43SB051415

Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.05

Sample wt/vol: 4.8 (g/mL) G

Lab File ID: R35101.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: not dec. 5

Date Analyzed: 10/22/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
74-87-3	CHLOROMETHANE	5	U
74-83-9	BROMOMETHANE	5	U
75-01-4	VINYL CHLORIDE	5	U
75-00-3	CHLOROETHANE	5	U
75-09-2	METHYLENE CHLORIDE	3	J
67-64-1	ACETONE	5	U
75-15-0	CARBON DISULFIDE	5	U
75-35-4	1 1-DICHLOROETHENE	5	U
75-34-3	1 1-DICHLOROETHANE	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	CHLOROFORM	5	U
107-06-2	1 2-DICHLOROETHANE	5	U
78-93-3	2-BUTANONE	5	U
71-55-6	1 1 1-TRICHLOROETHANE	5	U
56-23-5	CARBON TETRACHLORIDE	5	U
75-27-4	BROMODICHLOROMETHANE	5	U
78-87-5	1 2-DICHLOROPROPANE	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	TRICHLOROETHENE	5	U
124-48-1	DIBROMOCHLOROMETHANE	5	U
79-00-5	1 1 2-TRICHLOROETHANE	5	U
71-43-2	BENZENE	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	BROMOFORM	5	U
108-10-1	4-METHYL-2-PENTANONE	5	U
591-78-6	2-HEXANONE	5	U
127-18-4	TETRACHLOROETHENE	5	U
108-88-3	TOLUENE	2	JB
79-34-5	1 1 2 2-TETRACHLOROETHANE	5	U
108-90-7	CHLOROBENZENE	5	U
100-41-4	ETHYL BENZENE	5	U
100-42-5	STYRENE	5	U
1330-20-7	Xylene (Total)	5	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.05

Sample wt/vol: 30.4 (g/mL) G

Lab File ID: F9110514.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 5 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N

pH: 7.9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl) ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	27	JB
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	350	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 5 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.4	U
319-85-7	beta-BHC	1.4	U
319-86-8	delta-BHC	1.4	U
58-89-9	gamma-BHC (Lindane)	1.4	U
76-44-8	Heptachlor	1.4	U
309-00-2	Aldrin	1.4	U
1024-57-3	Heptachlor epoxide	1.4	U
959-98-8	Endosulfan I	1.4	U
60-57-1	Dieldrin	2.6	U
72-55-9	4,4'-DDE	2.6	U
72-20-8	Endrin	2.6	U
33213-65-9	Endosulfan II	2.6	U
72-54-8	4,4'-DDD	2.6	U
1031-07-8	Endosulfan sulfate	2.6	U
50-29-3	4,4'-DDT	2.6	U
72-43-5	Methoxychlor	14	U
53494-70-5	Endrin ketone	2.6	U
7421-93-4	Endrin aldehyde	2.6	U
5103-71-9	alpha-Chlordane	1.4	U
5103-74-2	gamma-Chlordane	1.4	U
8001-35-2	Toxaphene	87	U
Surrogate amount spiked		7.02	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SB051415

Job Name: SWL-TULSA
 Lab Code: SWOK Case No.: TETPI SDG No.: 40790
 Matrix: (soil/water) SOIL Lab Sample ID: 40790.05
 Sample wt/vol: 30.6 (g/mL) G Lab File ID: _____
 % Moisture: 5 decanted: (Y/N) ___ Date Received: 10/20/99
 Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99
 Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/99
 Injection Volume: 0.5 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.9 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	34	U
11104-28-2-----	Aroclor-1221	34	U
11141-16-5-----	Aroclor-1232	34	U
53469-21-9-----	Aroclor-1242	34	U
12672-29-6-----	Aroclor-1248	34	U
11097-69-1-----	Aroclor-1254	34	U
11096-82-5-----	Aroclor-1260	34	U
Surrogate amount spiked		6.88	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.06

Sample wt/vol: 30.7 (g/mL) G

Lab File ID: F9110515.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 8.2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.

COMPOUND

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl) ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	23	JB
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	840	U
95-95-4	2,4,5-Trichlorophenol	340	U
91-58-7	2-Chloronaphthalene	840	U
88-74-4	2-Nitroaniline	340	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	840	U
99-09-2	3-Nitroaniline	340	U
83-32-9	Acenaphthene	340	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) SOIL

Lab Sample ID: 40790.06

Sample wt/vol: 30.7 (g/mL) G

Lab File ID: F9110515.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) N

Date Extracted: 10/21/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/05/99

Injection Volume: 2 (uL)

Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 8.2

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q

51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
117-81-7	bis(2-Ethylhexyl)phthalate	61	JB
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

b Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/03/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----alpha-BHC	1.3	U
319-85-7-----beta-BHC	1.3	U
319-86-8-----delta-BHC	1.3	U
58-89-9-----gamma-BHC (Lindane)	1.3	U
76-44-8-----Heptachlor	1.3	U
309-00-2-----Aldrin	1.3	U
1024-57-3-----Heptachlor epoxide	1.3	U
959-98-8-----Endosulfan I	1.3	U
60-57-1-----Dieldrin	2.5	U
72-55-9-----4,4'-DDE	2.5	U
72-20-8-----Endrin	2.5	U
33213-65-9-----Endosulfan II	2.5	U
72-54-8-----4,4'-DDD	2.5	U
1031-07-8-----Endosulfan sulfate	2.5	U
50-29-3-----4,4'-DDT	2.5	U
72-43-5-----Methoxychlor	13	U
53494-70-5-----Endrin ketone	2.5	U
7421-93-4-----Endrin aldehyde	2.5	U
5103-71-9-----alpha-Chlordane	1.3	U
5103-74-2-----gamma-Chlordane	1.3	U
8001-35-2-----Toxaphene	83	U
Surrogate amount spiked	6.67	

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PEN-43SBDD03

Lab Name: SWL-TULSA

Lab Code: SWOK Case No.: TETPI SDG No.: 40790

Matrix: (soil/water) SOIL Lab Sample ID: 40790.06

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

% Moisture: 3 decanted: (Y/N) ___ Date Received: 10/20/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 10/21/99

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/99

Injection Volume: 0.5 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	33	U
11104-28-2-----	Aroclor-1221	33	U
11141-16-5-----	Aroclor-1232	33	U
53469-21-9-----	Aroclor-1242	33	U
12672-29-6-----	Aroclor-1248	33	U
11097-69-1-----	Aroclor-1254	33	U
11096-82-5-----	Aroclor-1260	33	U
Surrogate amount spiked		6.76	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TB101999-01

Lab Name: SWL-TULSA

Contract: PENSACOLA

Lab Code: SWOK

Case No.: TETPITT SAS No.:

SDG No.: 40790

Matrix: (soil/water) WATER

Lab Sample ID: 40790.07

Sample wt/vol: 5 (g/mL) ML

Lab File ID: K29953.D

Level: (low/med) LOW

Date Received: 10/20/99

% Moisture: not dec. _____

Date Analyzed: 10/28/99

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	5	U
75-01-4-----	Vinyl Chloride	5	U
74-83-9-----	Bromomethane	5	U
75-00-3-----	Chloroethane	5	U
75-35-4-----	1,1-Dichloroethene	5	U
67-64-1-----	Acetone	5	U
75-15-0-----	Carbon Disulfide	5	U
75-09-2-----	Methylene Chloride	5	U
75-34-3-----	1,1-Dichloroethane	5	U
540-59-0-----	1,2-Dichloroethene (total)	5	U
78-93-3-----	2-Butanone	5	U
67-66-3-----	Chloroform	5	U
71-55-6-----	1,1,1-Trichloroethane	5	U
56-23-5-----	Carbon Tetrachloride	5	U
71-43-2-----	Benzene	5	U
107-06-2-----	1,2-Dichloroethane	5	U
79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5---	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	5	U
108-88-3-----	Toluene	5	U
10061-02-6---	trans-1,3-Dichloropropene	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
591-78-6-----	2-Hexanone	5	U
124-48-1-----	Dibromochloromethane	5	U
108-90-7-----	Chlorobenzene	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7----	Xylene (total)	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U

APPENDIX G
DRUM CHARACTERIZATION SHEETS

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 numbered
 geophysics

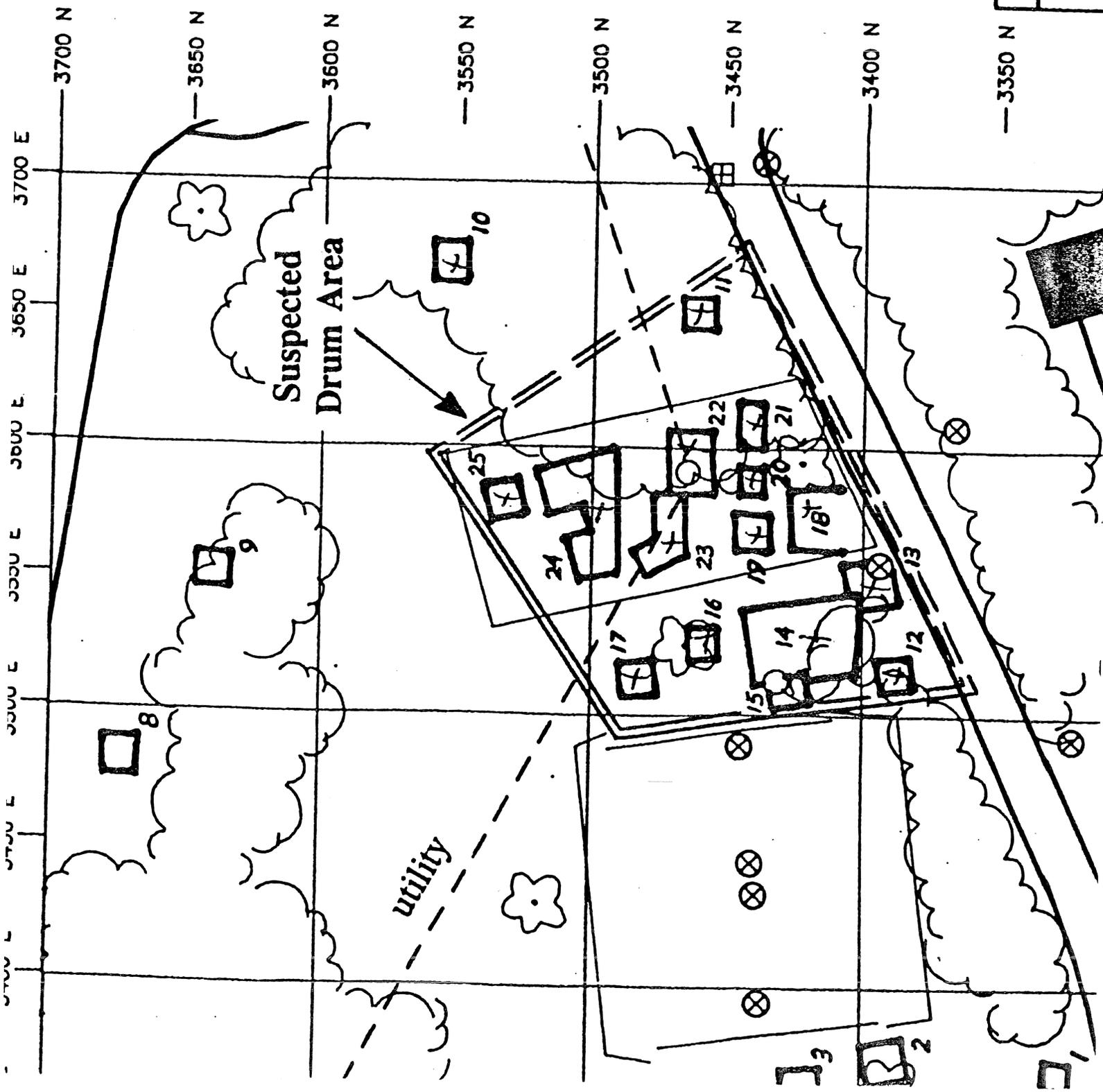
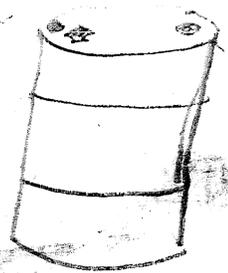


Fig.
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 Site 10 West, N

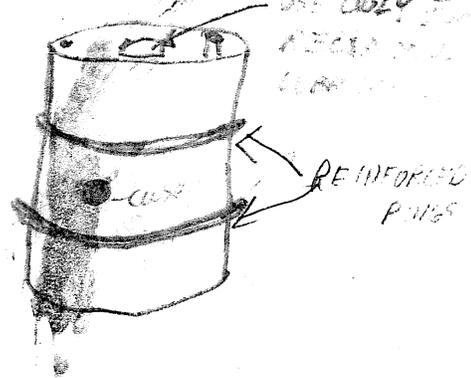
**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: <u>700 PG 8177</u>		Date: <u>11/14/04</u>	Project #: <u>2004</u>
Project Description: <u>BURIED ANOMALY INVESTIGATION</u> <u>ANOMALY 20</u>		Drum # <u>1</u>	Field Crew/Role: <u>U BELDIS</u>
Drum Size	Drum Type	Head Configuration	Identifiable markings:
Unknown	Steel <input checked="" type="checkbox"/>	Ring top (no bungs)	Sketch drum/container position
30 gallon	Aluminum	Ring top (bungs)	
55 gallon <input checked="" type="checkbox"/>	Plastic	Closed top	
80 Gallon	Glass	Unknown	
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)	
		<u>OPEN HOLE</u>	
Estimated Volume: <u>4 gal</u>			
General condition of the drum/container: <u>INTACT</u>			Can it be handled/moved and re-staged or over-packed? <u>EYES - OVERPACKED</u>
Screening Data			Drum Contents (Indicate % if mixture of more than one media)
Radioactivity <u>1</u> mR Background		mR	Solids Classification
PID <u>0</u> eV Lamp		ppm	Trash
<u>0</u> ppm (background)			Liquids Viscosity
FID <u>0</u> ppm (background)		ppm	Other
Combustibility	%LEL	%O ₂	Drum Contents (Color)
Draeger Multi-test			Unknown
Air Reactive		Δ Temp	Red
Water Reactive		Δ Temp	Yellow
Water solubility	Yes	No	Amber
		% Partial	Purple
Flammable	Yes	No	Black
pH			<u>TRUCK LIKE</u>
Cyanide		ppm (Draeger Tube over Water Bath)	Orange
			Green
			Greenish Blue
Area surrounding drums/containers (stressed vegetation, distribution pathways):			
Comments: <u>See attached safe work permit for protective/hazard control measures</u> <u>See attached drum/container inventory</u>			

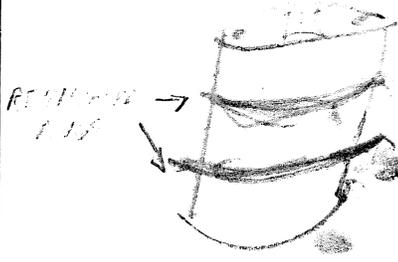
**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: <u>10/6/00</u>	Project #: <u>NO189</u>	
Project Description: <u>BURIED ANOMALY INVESTIGATION</u> <u>ANOMALY 20</u>		Drum # <u>2</u>	Field Crew/Role: <u>DE KUBELDIS</u>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: <u>NONE</u>	
Unknown	Steel ✓	Ring top (no bungs)	Sketch drum/container position 	
30 gallon	Aluminum	Ring top (bungs)		
55 gallon ✓	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
Estimated Volume: _____		General condition of the drum/container: <u>INTACT</u>		
Screening Data		Can it be handled/moved and re-staged or over-packed? <u>YES - OVERPACKED</u>		
Radioactivity <u>7</u> mR Background	<u>41</u> mR	Drum Contents (Indicate % if mixture of more than one media)		
PID <u>0</u> ppm (background)	<u>30</u> ppm	Solids Classification	Liquids	Viscosity
FID _____ ppm (background)	_____ ppm	Trash	Other	
Combustibility	%LEL _____ %O2 _____	Drum Contents (Color)		
Draeger Multi-test	_____	Unknown	Red	
Air Reactive	_____ Δ Temp	Cream	Yellow	
Water Reactive	_____ Δ Temp	Clear	Amber	
Water solubility	Yes _____ No _____ % Partial _____	White	Purple	
Flammable	Yes _____ No _____	Gray	Black	
pH	_____	Orange	Brown	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Green	Other:	
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
See Attached Safe Work Permit for Protective/Hazard Control Measures See Attached Drum/Container Inventory				

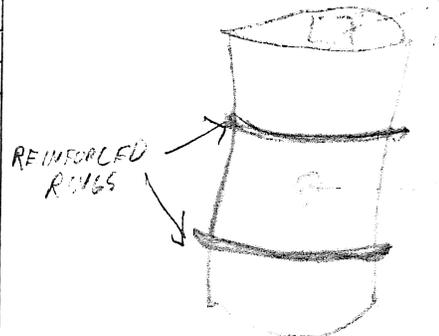
**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: <u>C70 11 2003</u>		Date: <u>02/02</u>	Project #: <u>NO 11</u>	
Project Description: <u>BURIED ANOMALY INVESTIGATION</u> <u>ANOMALY 20</u>		Drum # <u>5</u>	Field Crew/Role: <u>DE KUBELIS</u>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: <u>LABEL</u>	
Unknown	Steel <input checked="" type="checkbox"/>	Ring top (no bungs)	Sketch drum/container position 	
30 gallon	Aluminum	Ring top (bungs)		
55 gallon <input checked="" type="checkbox"/>	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
Estimated Volume: <u>1/3 FULL</u>				
General condition of the drum/container: <u>INTACT</u>		Can it be handled/moved and re-staged or over-packed? <u>OVERPACKED</u>		
Screening Data		Drum Contents (Indicate % if mixture of more than one media)		
Radioactivity <u>1</u> mR Background	<u>21</u> mR	Solids Classification	Liquids <input checked="" type="checkbox"/>	Viscosity
PID <u>2</u> eV Lamp ppm (background)	ppm	Trash	Other	
FID <u> </u> ppm (background)	ppm	Drum Contents (Color)		
Combustibility	%LEL %O2	Unknown <input checked="" type="checkbox"/>	Red	
Draeger Multi-test		Cream	Yellow	
Air Reactive	Δ Temp	Clear	Amber	
Water Reactive	Δ Temp	White	Purple	
Water solubility	Yes <u> </u> No <u> </u> % Partial	Gray	Black	
Flammable	Yes <u> </u> No <u> </u>	Orange	Brown	
pH		Green	Other:	
Cyanide	<u> </u> ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): <u> </u>				
Comments: <u>HEAVY USE OF...</u>				
See Attached Safe Work Permit for Protective/Hazard Control Measures				
See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: <i>BURIED AND/OR INVESTIGATION AND/OR JO</i>		Drum # <i>1</i>	Field Crew/Role: <i>DE KUBELIS</i>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: Sketch drum/container position 	
Unknown	Steel <input checked="" type="checkbox"/>	Ring top (no bungs)		
30 gallon	Aluminum	Ring top (bungs)		
55 gallon	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
_____	_____	_____		
Estimated Volume: _____				
General condition of the drum/container: <i>FAIR</i>			Can it be handled/moved and re-staged or over-packed? <i>3 - OVER PACKED</i>	
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity _____ mR Background	_____ mR	Solids Classification	Liquids <input checked="" type="checkbox"/>	Viscosity
PID _____ eV Lamp	_____ ppm	Trash	Other	
_____ ppm (background)				
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility _____ %LEL _____ %O2		Unknown	Red	
Draeger Multi-test _____		Cream	Yellow	
Air Reactive _____ Δ Temp		Clear	Amber	
Water Reactive _____ Δ Temp		White	Purple	
Water solubility _____ Yes _____ No	_____ % Partial	Gray	Black	
Flammable _____ Yes _____ No		Orange	Brown	
pH _____		Green	Other:	
Cyanide _____ ppm	(Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: <i>BURIED ANOMALY INVESTIGATION ANOMALY 80</i>		Drum # <i>5</i>	Field Crew/Role: <i>DE KUBELIS</i>	
Drum Size	Drum Type	Head Configuration	Identifiable markings:	
Unknown	Steel	Ring top (no bungs)		
30 gallon	Aluminum	Ring top (bungs)		
55 gallon	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
Estimated Volume: _____			Can it be handled/moved and re-staged or over-packed? <i>OVERPACKED</i>	
General condition of the drum/container: <i>FAIR</i>				
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity _____ mR Background	_____ mR	Solids Classification	Liquids <i>BASED ON VISCOSITY DRUM TYPE</i>	
PID _____ eV Lamp _____ ppm (background)	_____ ppm	Trash	Other	
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility	%LEL _____ %O2 _____	Unknown	Red	
Draeger Multi-test		Cream	Yellow	
Air Reactive	_____ Δ Temp	Clear	Amber	
Water Reactive	_____ Δ Temp	White	Purple	
Water solubility	Yes _____ No _____ % Partial _____	Gray	Black	
Flammable	Yes _____ No _____	Orange	Brown	
pH		Green	Other:	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: <i>DURIED ANOMALY INVESTIGATION ANOMALY 20</i>		Drum #	Field Crew/Role: <i>DE KUBENIS</i>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: 	
Unknown	Steel	Ring top (no bungs)		
30 gallon	Aluminum	Ring top (bungs)		
55 gallon	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
_____	_____	_____		
Estimated Volume: _____				
General condition of the drum/container: <i>FAIR</i>			Can it be handled/moved and re-staged or over-packed? <i>-OVER PACKED</i>	
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity <i>4</i> mR Background	<i><1</i> mR	Solids Classification	Liquids Viscosity	
PID <i>0</i> eV Lamp ppm (background)	<i>10</i> ppm	Trash	Other	
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility	%LEL %O2	Unknown	Red	
Draeger Multi-test		Cream	Yellow	
Air Reactive	Δ Temp	Clear	Amber	
Water Reactive	Δ Temp	White	Purple	
Water solubility	Yes No % Partial	Gray	Black	
Flammable	Yes No	Orange	Brown	
pH		Green	Other:	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

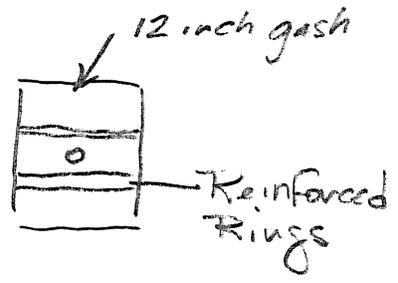
Site Name: Site 43 Date: 10/07/97 Project #: N0189

Project Description: Burial Anomaly Investigation - Anom 20 Drum # 7 Field Crew/Role: T. Dickson / D. Kubeldis

Drum Size	Drum Type	Head Configuration
Unknown	Steel ✓	Ring top (no bungs)
30 gallon	Aluminum	Ring top (bungs)
55 gallon ✓	Plastic	Closed top
80 Gallon	Glass	Unknown
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)
		<u>Center Bung</u>

Identifiable markings: None

Sketch drum/container position



Estimated Volume: 50% Rainwater

Filled w/ Rainwater

General condition of the drum/container: POOR

Can it be handled/moved and re-staged or over-packed? Yes was Overpacked

Screening Data

Radioactivity <u>1 m?</u> mR Background	<u>NT</u> mR
PID _____ eV Lamp	<u>NT</u> ppm
_____ ppm (background)	
FID _____ ppm (background)	_____ ppm
Combustibility <u>NT</u>	%LEL %O2
Draeger Multi-test <u>NT</u>	
Air Reactive <u>NT</u>	_____ Δ Temp
Water Reactive <u>NT</u>	_____ Δ Temp
Water solubility <u>N/A</u>	_____ Yes _____ No
Flammable <u>NT</u>	_____ % Partial
pH <u>NT</u>	_____ Yes _____ No
Cyanide <u>NT</u>	_____ ppm (Draeger Tube over Water Bath)

Drum Contents (Indicate % if mixture of more than one media)

Solids Classification	Liquids <u>Rainwater</u>
Trash	Viscosity
	Other

Drum Contents (Color)

Unknown	Red
Cream	Yellow
Clear ✓	Amber
White	Purple
Gray	Black
Orange	Brown
Green	Other:
Greenish Blue	

Area surrounding drums/containers (stressed vegetation, distribution pathways): Slightly Stressed - Landfill - Limited top cover over metal debris

Comments: Frogs were living in the drum

✓ See Attached Safe Work Permit for Protective/Hazard Control Measures
See Attached Drum/Container Inventory

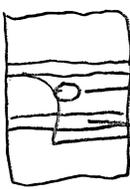
**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: GRIFFIN PROPERTY INVESTIGATION ANOMALY 20		Drum #: _____	Field Crew/Role: DE YURBES	
Drum Size	Drum Type	Head Configuration	Identifiable markings: _____	
Unknown	Steel	Ring top (no bungs)	Sketch drum/container position 	
30 gallon	Aluminum	Ring top (bungs)		
55 gallon ✓	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
_____	_____	_____		
Estimated Volume: _____				
General condition of the drum/container: FA R			Can it be handled/moved and re-staged or over-packed? YES - OVER PACKED	
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity _____ mR Background	_____ mR	Solids Classification	Liquids Viscosity	
PID _____ eV Lamp _____ ppm (background)	_____ ppm	Trash	Other	
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility	%LEL _____ %O2 _____	Unknown	Red	
Draeger Multi-test	_____	Cream	Yellow	
Air Reactive	_____ Δ Temp _____	Clear	Amber	
Water Reactive	_____ Δ Temp _____	White	Purple	
Water solubility	_____ Yes _____ No _____ % Partial	Gray	Black	
Flammable	_____ Yes _____ No	Orange	Brown	
pH	_____	Green	Other:	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: <u>Site 43</u>		Date: <u>10/07/99</u>	Project #: <u>N 0189</u>
Project Description: <u>Byried anomaly Investigation - Anomaly 20</u>		Drum # <u>9</u>	Field Crew/Role: <u>T. Dickson / D Kuboldis</u>
Drum Size	Drum Type	Head Configuration	Identifiable markings:
Unknown	Steel ✓	Ring top (no bungs)	<u>NONE</u>
30 gallon	Aluminum	Ring top (bungs)	Sketch drum/container position 
55 gallon ✓	Plastic	Closed top ✓ <u>101 Type</u>	
80 Gallon	Glass	Unknown	
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)	
Estimated Volume: <u>3-5 Gallons</u>			Residual Oil Leak
General condition of the drum/container: <u>FAIR</u>			
Screening Data			Can it be handled/moved and re-staged or over-packed? <u>Drum over packed pending sampling & analysis</u>
Radioactivity	<u><1</u> mR Background	<u>NT</u> mR	Drum Contents (Indicate % if mixture of more than one media) <u>Drum not opened - Evaluation based on residual</u>
PID	<u>NT</u> eV Lamp	<u>NT</u> ppm (background)	Solids Classification
FID	<u>NT</u> ppm (background)	<u>NT</u> ppm	Liquids Viscosity ✓
Combustibility	<u>NT</u> %LEL	<u>NT</u> %O2	Trash
Draeger Multi-test	<u>NT</u>	<u>NT</u>	Other
Air Reactive	<u>NT</u> Δ Temp	<u>NT</u> Δ Temp	Drum Contents (Color)
Water Reactive	<u>NT</u> Yes <u>NT</u> No	<u>NT</u> % Partial	Unknown
Water solubility	<u>NT</u> Yes <u>NT</u> No	<u>NT</u> % Partial	Red
Flammable	<u>NT</u> Yes <u>NT</u> No	<u>NT</u> % Partial	Cream
pH	<u>NT</u> ppm	<u>NT</u> ppm	Clear
Cyanide	<u>NT</u> ppm (Draeger Tube over Water Bath)	<u>NT</u> ppm	White
Area surrounding drums/containers (stressed vegetation, distribution pathways):			Gray
Comments: <u>Other drums found in the area were labeled Reclamation Lubrication oil</u>			Orange
See Attached Safe Work Permit for Protective/Hazard Control Measures			Green
See Attached Drum/Container Inventory			Greenish Blue
			Other: <u>Blackish brown liquid looking a small bung opening</u>

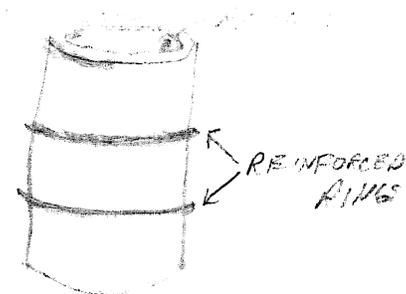
**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: <u>Site 43; CTO 0096</u>		Date: <u>10/07/99</u>	Project #: <u>N0189</u>
Project Description: <u>Buried anomaly investigation - anomaly 20</u>		Drum # <u>10</u>	Field Crew/Role: <u>T. Dickson / D. Kubeldis</u> <u>Drum Characterization</u>
Drum Size	Drum Type	Head Configuration	Identifiable markings: <u>Top - Use only for Reclaiming Lubricating & Sketch drum/container position</u>
Unknown	Steel ✓	Ring top (no bungs)	
30 gallon	Aluminum	Ring top (bungs)	
55 gallon ✓	Plastic	Closed top	
80 Gallon	Glass	Unknown	
Other (Specify)	Metal/Other (Specify Type)	Other (Specify) <u>Central Bung</u>	
Estimated Volume: <u>Potentially 1/4 to 1/3 Full - Based on weight</u>			 <p align="right"><u>Central Bung</u> <u>Separate Support Rings</u></p>
General condition of the drum/container: <u>Fair to poor</u>			
Screening Data			Can it be handled/moved and re-staged or over-packed? <u>Yes - Overpacked pending sampling & analysis</u>
Radioactivity <u>< 1</u> mR Background	<u>NT</u> mR	Solids Classification	Liquids <u>✓ Based on Viscosity drum type</u>
PID _____ eV Lamp _____ ppm (background)	<u>NT</u> ppm	Trash	Other <u>however no sloshing detected - possible sediments</u>
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)	
Combustibility <u>NT</u>	%LEL _____ %O2 _____	Unknown	Red
Draeger Multi-test <u>NT</u>		Cream	Yellow
Air Reactive <u>NT</u>	_____ Δ Temp _____	Clear	Amber
Water Reactive <u>NT</u>	_____ Δ Temp _____	White	Purple
Water solubility <u>NT</u>	_____ Yes _____ No _____ % Partial	Gray	Black
Flammable <u>NT</u>	_____ Yes _____ No	Orange	Brown
pH <u>NT</u>		Green	Other:
Cyanide <u>NT</u>	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue	
Area surrounding drums/containers (stressed vegetation, distribution pathways): <u>Areas surrounding drum burial area was also the site of extensive metallic debris/burial activity, possibly accounting for reduced growth</u>			
Comments: _____ _____ _____			
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory			

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: <i>BURIED DUMPS INVESTIGATION ANOMALY 20</i>		Drum # _____	Field Crew/Role: <i>PE KUBERTS</i>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: 	
Unknown	Steel	Ring top (no bungs)		
30 gallon	Aluminum	Ring top (bungs)		
55 gallon	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
_____	_____	_____		
_____	_____	_____		
Estimated Volume: _____				
General condition of the drum/container: <i>FAIR</i>			Can it be handled/moved and re-staged or over-packed? <i>YES - OVERPAINED</i>	
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity <i>10</i> mR Background	<i>10</i> mR	Solids Classification	Liquids Viscosity	
PID <i>10</i> eV Lamp <i>10</i> ppm (background)	<i>10</i> ppm	Trash	Other	
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility	%LEL %O2	Unknown	Red	
Draeger Multi-test		Cream	Yellow	
Air Reactive	Δ Temp	Clear	Amber	
Water Reactive	Δ Temp	White	Purple	
Water solubility	Yes _____ No _____ % Partial	Gray	Black	
Flammable	Yes _____ No _____	Orange	Brown	
pH		Green	Other:	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

Site Name: _____		Date: _____	Project #: _____	
Project Description: <u>BURIED ANOMALY INVESTIGATION</u> <u>ANOMALY 20</u>		Drum # <u>12</u>	Field Crew/Role: <u>DE KUBELGIS</u>	
Drum Size	Drum Type	Head Configuration	Identifiable markings: <u>NONE</u>	
Unknown	Steel	Ring top (no bungs)	Sketch drum/container position 	
30 gallon	Aluminum	Ring top (bungs)		
55 gallon	Plastic	Closed top		
80 Gallon	Glass	Unknown		
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
_____	_____	_____		
Estimated Volume: _____				
General condition of the drum/container: <u>FAIR</u>			Can it be handled/moved and re-staged or over-packed? <u>YES - OVERPACKED</u>	
Screening Data			Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity <u>NT</u> mR Background	<u>NT</u> mR	Solids Classification	Liquids Viscosity	
PID <u>NT</u> eV Lamp	<u>NT</u> ppm	Trash	Other	
FID _____ ppm (background)	_____ ppm	Drum Contents (Color)		
Combustibility	_____ %LEL _____ %O2	Unknown	Red	
Draeger Multi-test	_____	Cream	Yellow	
Air Reactive	_____ Δ Temp	Clear	Amber	
Water Reactive	_____ Δ Temp	White	Purple	
Water solubility	_____ Yes _____ No	Gray	Black	
Flammable	_____ Yes _____ No	Orange	Brown	
pH	_____	Green	Other:	
Cyanide	_____ ppm (Draeger Tube over Water Bath)	Greenish Blue		
Area surrounding drums/containers (stressed vegetation, distribution pathways): _____ _____				
Comments: _____ _____ _____				
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory				

**Figure 1
DRUM/CONTAINER CHARACTERIZATION SHEET**

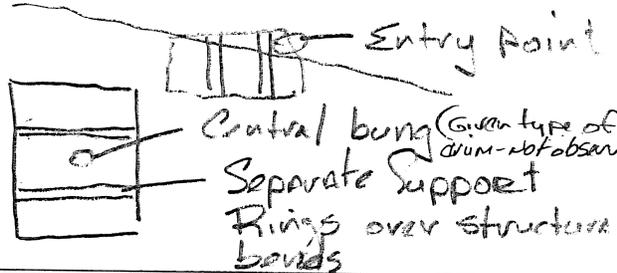
Site Name: <u>Site 43; CTO 0096</u>		Date: <u>10/07/99</u>	Project #: <u>N 0137</u>
Project Description: <u>Buried Bromley Investigation - Anomaly 15</u>		Drum # <u>13</u>	Field Crew/Role: <u>T. Dickson / D. Kubeldis</u>
Drum Size	Drum Type	Head Configuration	Identifiable markings: Sketch drum/container position 
Unknown	Steel ✓	Ring top (no bungs)	
30 gallon ✓	Aluminum ✓	Ring top (bungs)	
55 gallon	Plastic	Closed top	
80 Gallon	Glass	Unknown	
Other (Specify)	Metal/Other (Specify Type)	Other (Specify)	
Estimated Volume: <u>Crushed - Full of diet & Cock Roaches</u>			
General condition of the drum/container: <u>Poor - Crushed, several points of Entry</u>		Can it be handled/moved and re-staged or over-packed? <u>Overpacked - Pending Sampling & Analysis</u>	
Screening Data		Drum Contents (Indicate % if mixture of more than one media)	
Radioactivity <u><1</u> mR Background	<u><1</u> mR	Solids Classification <u>Soils/Sediment</u>	Liquids Viscosity
PID <u>10.6</u> eV Lamp <u>3.3</u> ppm (background)	<u>14.6</u> ppm	Trash <u>Brown humus material</u>	Other
FID ___ ppm (background) <u>NT</u>	___ ppm	Drum Contents (Color)	
Combustibility <u>NT</u>	%LEL ___ %O2 ___	Unknown	Red
Draeger Multi-test <u>NT</u>		Cream	Yellow
Air Reactive <u>NT</u>	___ Δ Temp	Clear	Amber
Water Reactive <u>NT</u>	___ Δ Temp	White	Purple
Water solubility <u>NT</u>	___ Yes ___ No ___ % Partial	Gray	Black
Flammable <u>NT</u>	___ Yes ___ No	Orange	Brown
pH <u>NT</u>		Green	Other:
Cyanide <u>NT</u>	___ ppm (Draeger Tube over Water Bath)	Greenish Blue	
Area surrounding drums/containers (stressed vegetation, distribution pathways): <u>Grassy Area - Area well maintained - No stressed appearance</u>			
Comments: <u>Heavy cock roach population</u>			
<input checked="" type="checkbox"/> See Attached Safe Work Permit for Protective/Hazard Control Measures <input checked="" type="checkbox"/> See Attached Drum/Container Inventory			

Figure 2
DRUM INVENTORY LOG

Drum Number #	Drum/Container Type	Media (Contents)	Estimated Volume	Date - Contents Characterized Sampled	Recommended Sample Analyses	Comments
1	55 GAL	< 1 GAL LIQUID	< 1 GAL	10/6/99		
2			EMPTY	10/6/99		
3		LIQUID BASED DRUM-TYPE	1/3 FULL (18 GAL)	10/6/99		
4		LIQUID BASED DRUM-TYPE	1/3 FULL (18 GAL)	10/6/99		
5		LIQUID BASED DRUM-TYPE	1/3 FULL (18 GAL)	10/6/99		
6			EMPTY(?)	10/6/99		
7		LIQUID BASED DRUM-TYPE	1/2 FULL	10/7/99		
8			EMPTY(?)	10/7/99		
9		LIQUID BASED DRUM-TYPE	3-5 GAL	10/7/99		
10		LIQUID BASED DRUM-TYPE	1/4 - 1/3 FULL	10/7/99		
11		LIQUID BASED DRUM-TYPE	EMPTY(?)	10/7/99		
12		LIQUID BASED DRUM-TYPE	EMPTY(?)	10/7/99		
13	30 GAL	SOLIDS/FOG	FULL	10/7/99		
14		WASTY WATER	< 1	10/2/99		
5	DRUMS IN DETERIORATED & EMPTY CONDITION WERE CRUSHED & OVERPACKED					

APPENDIX H
EXCAVATION PHOTOGRAPHS





APPENDIX I

SITE CHARACTERIZATION REPORT ADDENDUM



TETRA TECH NUS, INC.

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TtNUS/TAL-01-022/0189-4.3

March 9, 2001

Project No. N0189

Joe Fugitt, P.G.

Remedial Project Manager

Technical Review/Federal Facilities

Florida Department of Environmental Protection

2600 Blair Stone Road

Tallahassee, Florida 32399-2400

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 096

Subject: Site Characterization Report Addendum
Site 43
U.S. Naval Air Station Pensacola
Pensacola, Florida

Mr. Fugitt:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Site Characterization Report (SCR) Addendum for Site 43 located at Naval Air Station (NAS) Pensacola, Pensacola, Florida. This Letter Report has been prepared for the U.S. Navy Southern Division Naval Facilities Engineering Command under Contract Tank Order 096, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888.

The purpose of the investigation was to determine the contents of drums excavated from Site 43 during the site characterization (SCR, TtNUS, April 2000). The analytical results for the drum contents were compared to the Soil Clean-up Target Levels (SCTLs) in Chapter 62-777, F.A.C.

PREVIOUS INVESTIGATIONS

A Site Characterization was conducted in October 1999 (TtNUS). The purpose of the investigation was to excavate buried drums and evaluate the impact of the drums and their contents on the soil and groundwater. The site characterization activities and findings are presented in the SCR (TtNUS, April 2000). Steel drums were excavated, placed in fourteen (14) steel DOT-approved overpack containers, and staged at a secure area at NAS Pensacola. The contents of the drums were not sampled for laboratory analysis during the site characterization.

DRUM CHARACTERIZATION SAMPLING

In January 2001, TtNUS personnel evaluated each of the overpacked containers. The overpacked containers were opened and checked for organic vapors with a Flame Ionization Detector (FID), prior to sampling the contents of the steel drums with a Coliwassa Tube. Twelve (12) overpacked containers held steel drums with insufficient content volume/mass to sample. The remaining two (2) overpacked containers held one (1) steel drum each (Drum Nos. 9 and 15) with sufficient content volume/mass. The contents of the two (2) steel drums were sampled and submitted to a fixed-base laboratory to be analyzed for the following parameters:

- Total Residual Petroleum Hydrocarbon (TRPH);
- Gasoline Range Organics (GRO);
- Diesel Range Organics (DRO);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Selected metals.

The parameters selected were based on the surface and subsurface soil results from the site characterization (Appendix F, SCR) and the drum characterization findings (Appendix G, SCR). The results from the drum sampling activities and subsequent recommendations are discussed in the following sections.

ANALYTICAL RESULTS

The two steel drum samples (43DR00901 and 43DR01501) were submitted to a fixed-base laboratory. The samples were analyzed for the previously listed parameters by the following analytical methods:

- TRPH – FDEP FL-PRO
- GRO – SW-846 8015mod

- DRO – SW-846 8015mod
- PAHs – Sw-846 8310
- Metals – SW-846 6010

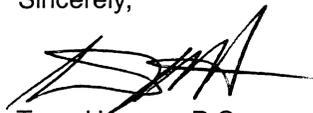
The drum sample analytical results are included in Table 1, Attachment A. TRPH was detected at 29.9 (43DR00901) and 51.3 (43DR01501) mg/kg. DRO was detected at 10.9 mg/kg in sample 43DR01501. Seven PAHs [benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene] were detected in sample 43DR01501. Benzo(a)pyrene (0.14J mg/kg) was detected above the residential direct exposure (DE1) FDEP SCTL (0.1 mg/kg). Eleven metals (antimony, arsenic, barium, calcium, copper, iron, lead, nickel, potassium, vanadium, and zinc) were detected in both drum samples. Arsenic (1.2 mg/kg) and barium (188 mg/kg) were detected above the DE1 FDEP SCTL (0.8 and 110 mg/kg, respectively) in sample 43DR00901. In sample 43DR01501, antimony (40.1 mg/kg), barium (683 mg/kg), copper (682 mg/kg), iron (75,500 mg/kg), and vanadium (52.3 mg/kg) were detected above the DE1 FDEP SCTL. Arsenic (6.7 mg/kg) and lead (2,120 mg/kg) were detected above the DE1 and industrial direct exposure (DE2) FDEP SCTL in sample 43DR01501.

It should be noted that the PAH analyses were conducted outside of the hold-time prescribed in the analytical method (Data Validation Report, Attachment B). Because the PAHs were analyzed outside of the hold-time, the PAH results maybe biased low. However, with the exception of benzo (a) pyrene, the PAH reported concentrations are much lower than the FDEP SCTLs and would not likely exceed the FDEP SCTLs even if the PAHs had been analyzed within the required hold-time.

CONCLUSION AND RECOMMENDATION

The two (2) steel drums sampled, had metals and PAHs at concentrations exceeding DE1 FDEP SCTLs. The contents of the drums will be properly disposed as non-hazardous waste.

Sincerely,



Terry Hansen, P.G.
Florida Professional Geologist No. 234
Tetra Tech NUS, Inc.

CC: R. Joyner (NAS Pensacola)
B. Hill (SOUTHNAVFACENGCOM)
G. Townsend (USEPA)
G. Wilfley (CH2M HILL)
B. Caldwell (EnSafe, Inc.)
A. Harris (EnSafe, Inc.)
T. Hansen (2 copies)

PROFESSIONAL REVIEW CERTIFICATION

Site Characterization Report Addendum

Site 43

Naval Air Station, Pensacola, Florida

This Site Characterization Report Addendum was prepared under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time the report was prepared. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of additional information on the assessment described in this report. This report was developed specifically for the referenced site and should not be construed to apply to any other site.



Terry Hansen, P.G.
Florida License No. 234



Date

ATTACHMENT A
Analytical Data Table

TABLE 1

ANALYTICAL SUMMARY FOR ORGANIC COMPOUNDS and INORGANIC ANALYTES DETECTED IN SOIL SAMPLES
 SITE 43 - DRUM SAMPLING
 NAVAL AIR STATION PENSACOLA, PENSACOLA, FLORIDA

Sample No.	43DR00901	43DR01501
Sample Location	Drum 9	Drum 15
Collect Date	12/15/2000	12/15/2000

	DE1 ¹ /DE2 ² /LE ³ (mg/kg)		
Total Petroleum			
Hydrocarbons⁴ (mg/kg)	340/2500/340	29.9	51.3
Diesel Range			
Organics⁵ (mg/kg)	NA	--	10.9 ^J
Gasoline Range			
Organics⁶ (mg/kg)	NA	--	--
Polycyclic Aromatic			
Hydrocarbons⁷ (mg/kg)			
Benzo(a)Pyrene	0.1 /0.5/8.0	--	0.14^J
Benzo(b)Fluoranthene	1.4/4.8/10	--	0.135 ^J
Benzo(g,h,i)Perylene	2300/41000/32000	--	0.126 ^J
Benzo(k)Fluoranthene	15/52/25	--	0.0942 ^J
Fluoranthene	2900/48000/1200	--	0.243 ^J
Indeno(1,2,3-cd)Pyrene	1.5/5.3/28	--	0.16 ^J
Pyrene	2200/37000/880	--	0.214 ^J
Metals⁸ (mg/kg)			
Antimony	26 /240/5.0	--	40.10
Arsenic	0.8/3.7 /29	1.20	6.70
Barium	110** /87000/1600	188	483
Calcium	NA	6,580	8,610
Copper	110** /76000/**	108	682
Iron	23000 /480000/**	17,700	75,500
Lead	400/920 **	251	2,120
Nickel	110**/28000/130	29.70	36.60
Potassium	NA	2,530	242
Vanadium	15** /7400/980	60.10	52.30
Zinc	23000/560000/6000	1,060	6,380

¹ DE1= Direct Exposure limit for residential area from Chapter 62-777, F.A.C.

² DE2= Direct Exposure limit for industrial area from Chapter 62-777, F.A.C.

³ LE= Leachability for groundwater limit from Chapter 62-777, F.A.C.

⁴ FDEP FL-PRO, ⁵ SW-846 8015, ⁶ SW-846 8015, ⁷ SW-846 8310, ⁸ SW-846 6010

^J Indicates the presence of a chemical at an estimated concentration.

Bold indicates exceedance of regulatory limits.

-- Not Detected

ATTACHMENT B
Laboratory Analytical Report
Data Validation Report



Tetra Tech NUS, Inc.

Internal Correspondence

TO: Mr. Terry Hansen **DATE:** January 18, 2001
FROM: Suzanne I. Smith **CC:** File
SUBJECT: Organic Data Validation – TPH, DRO, and GRO
CTO096 – NAS Pensacola
SDG F8427
SAMPLES: 2/Soils
43DR00901 43DR01501

OVERVIEW

The sample set for CTO096, SDG F8427; Naval Air Station Pensacola, Pensacola, Florida consists of two (2) soil environmental samples. The environmental samples were analyzed for Total Petroleum Hydrocarbons (TPHs), Diesel Range Organics (DROs), and Gasoline Range Organics (GROs).

The samples were collected by Tetra Tech NUS on December 15, 2000 and analyzed by Accutest Southeast Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to FDEP FL-PRO (TPHs) and SW-846 8015 mod. (DROs and GROs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- Data Completeness *
- Holding Times *
- Initial/Continuing Calibration Standards *
- Laboratory Method/Field Quality Control Blanks *
- Detection Limits *

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Total Petroleum Hydrocarbon Fraction

The matrix spike and matrix spike duplicate recoveries were outside acceptable recovery limits. No action was taken, however, due to the fact that the spiked sample had a high analyte concentration and the laboratory control spike was in range.

All other quality control criteria for this fraction were met.

Diesel Range Organics Fraction

DRO detect for sample 43DR01501 was flagged as estimated "J" due to imprecision below the reporting limit.

All quality control criteria for this fraction were met.

Gasoline Range Organics Fraction

All quality control criteria for this fraction were met.

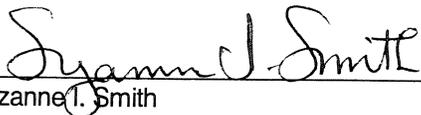
Executive Summary

Laboratory performance: No actions were taken based on laboratory performance.

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Suzanne I. Smith

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the laboratory
3. Appendix C - Supporting Documentation

Qualifier Codes:

- A = Lab Blank Contamination**
- B = Field Blank Contamination**
- C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance**
- D = MS/MSD Noncompliance**
- E = LCS/LCSD Noncompliance**
- F = Lab Duplicate Imprecision**
- G = Field Duplicate Imprecision**
- H = Holding Time Exceedance**
- I = ICP Serial Dilution Noncompliance**
- J = GFAA PDS - GFAA MSA's $r < 0.995$**
- K = ICP Interference - include ICSAB % R's**
- L = Instrument Calibration Range Exceedance**
- M = Sample Preservation**
- N = Internal Standard Noncompliance**
- O = Poor Instrument Performance (i.e., base-time drifting)**
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)**
- Q = Other problems (can encompass a number of issues)**
- R = Surrogates Recovery Noncompliance**
- S = Pesticide/PCB Resolution**
- T = % Breakdown Noncompliance for DDT and Endrin**
- U = Pes/PCB D% between columns for positive results**
- V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)**
- W = EMPC result**
- X = Signal to noise response drop**
- Y = % Solid content is less than 30%**

DATA QUALIFIER DEFINITIONS:

- U - Value is a nondetected result as reported by the laboratory and should not be considered present.
- J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
- UJ - Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A
Qualified Analytical Results

CTO096-NAS PENSACOLA
SOIL DATA
Accutest, NJ
SDG: F8427

SAMPLE NUMBER: 43DR00901
 SAMPLE DATE: 12/15/00
 LABORATORY ID: F8427-1
 QC_TYPE: NORMAL
 % SOLIDS: 0.2 %
 UNITS: MG/KG
 FIELD DUPLICATE OF:

43DR01501
 12/15/00
 F8427-2
 NORMAL
 0.2 %
 MG/KG

//
 100.0 %

//
 100.0 %

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS	13	U		6.5	U				
DRG TPH (C8-C40)	29.9			51.3					
TOTAL PETROLEUM HYDROCARBONS	20	U		10.9	J	P			

DRG

F8427

HOLDING TIME

01/04/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	43DR00901	F8427-1	NORMAL	F8427	GRO	12/15/00	/ /	12/22/00	0	0	7
MG/KG	43DR01501	F8427-2	NORMAL	F8427	GRO	12/15/00	/ /	12/22/00	0	0	7
MG/KG	43DR00901	F8427-1	NORMAL	F8427	TPH	12/15/00	12/20/00	12/21/00	5	1	6
MG/KG	43DR01501	F8427-2	NORMAL	F8427	TPH	12/15/00	12/19/00	12/22/00	4	3	7

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID: 43DR00901	
Lab Sample ID: F8427-1	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
Method: SW846 8015 M SW846 3550B	Percent Solids: 41.9
Project: NAS Pensacola	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00622.D	1	12/21/00	SKW	12/19/00	OP2458	GZF28
Run #2							

CAS No.	Compound	Result	RL	Units Q
	TPH (C10-C28)	ND	20	mg/kg

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		40-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

0127

Report of Analysis

Client Sample ID: 43DR00901							
Lab Sample ID: F8427-1					Date Sampled: 12/15/00		
Matrix: SO - Soil					Date Received: 12/16/00		
Method: FLORIDA-PRO	SW846	3550B			Percent Solids: 41.9		
Project: NAS Pensacola							

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP12515.D	1	12/21/00	SKW	12/20/00	OP2464	GOP498
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	29.9	20	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	91%		40-140%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

0057

Report of Analysis

Client Sample ID: 43DR00901	
Lab Sample ID: F8427-1	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
Method: SW846 8015	Percent Solids: 41.9
Project: NAS Pensacola	

Run #1 ^a	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	UV002091.D	50	12/22/00	RA	n/a	n/a	GUV79

CAS No.	Compound	Result	RL	Units	Q
	TPH-GRO (C6-C10)	ND	13	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		50-125%
98-08-8	aaa-Trifluorotoluene	91%		50-125%

(a) Sample introduction performed using method 5030A.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 43DR01501		Date Sampled: 12/15/00
Lab Sample ID: F8427-2		Date Received: 12/16/00
Matrix: SO - Soil		Percent Solids: 68.2
Method: SW846 8015 M SW846 3550B		
Project: NAS Pensacola		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00630.D	1	12/22/00	SKW	12/19/00	OP2458	GZF29
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	10.9	12	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	82%		40-140%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

0130

Report of Analysis

Client Sample ID: 43DR01501	Date Sampled: 12/15/00
Lab Sample ID: F8427-2	Date Received: 12/16/00
Matrix: SO - Soil	Percent Solids: 68.2
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Pensacola	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP12523.D	1	12/22/00	SKW	12/20/00	OP2464	GOP498
Run #2							

CAS No.	Compound	Result	RL	Units Q
	TPH (C8-C40)	51.3	12	mg/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		40-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

0060

Report of Analysis

Client Sample ID: 43DR01501	
Lab Sample ID: F8427-2	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
Method: SW846 8015	Percent Solids: 68.2
Project: NAS Pensacola	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	UV002094.D	50	12/22/00	RA	n/a	n/a	GUV79
Run #2							

CAS No.	Compound	Result	RL	Units Q
	TPH-GRO (C6-C10)	ND	6.5	mg/kg

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		50-125%
98-08-8	aaa-Trifluorotoluene	90%		50-125%

(a) Sample introduction performed using method 5030A.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

APPENDIX C
Support Documentation

Sequence Name: C:\HPCHEM\2\SEQUENCE\122200.S

Comment:

Operator: RachidA

Data Path: C:\HPCHEM\2\DATA\122200\

Pre-Seq Cmd:

Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only - () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 DailyCal	17	UV002087	GROSOIL	GRO defining mix
2 DailyCal	18	UV002088	GROSOIL	400ppb CCV
3 Spike	19	UV002089	GROSOIL	BS
4 Blank	20	UV002090	GROSOIL	MB
5 Sample	21	UV002091	GROSOIL	F8427-1,4.42gr/5ml-100ul
6 Spike	22	UV002092	GROSOIL	F8427-1MS,4.42gr/5ml-100ul
7 Duplicate	23	UV002093	GROSOIL	F8427-1MSD,4.42gr/5ml-100ul
8 Sample	24	UV002094	GROSOIL	F8427-2,5.63gr/5ml-100ul
9 Sample	25	UV002095	GROSOIL	F8460-1,5.57gr/5ml-100ul
10 Spike	26	UV002096	GROSOIL	BS
11 DailyCal	27	UV002097	GROSOIL	CCV

0053

GC Analysis Log

Date: 122200
 Analyst Signature: [Signature]
 Analysis Method: P015
 Column: 6.7 x 50 2.2
 Method File: GEOSDIL
 Instrument ID: UV
 Detector: FID/PID
 Run Batch: 79
 Calibration Date: 102800

Data File	Sample ID	Sample Amt.	Matrix	PII	ALS #	Dil.	Method	Vial #	Comments
UV2087	GROWIN				17				
	CCV				18				V1872
	BS				19	50			V1913
	MB				20				V1914
	F8427-1	4.42			21			12472	V1891
	-IMS				22			12472	ND 5030A
	-IMSD				23			12472	GC1145
	F8460-1	5.63			24			12472	
	OPC	5.57			25	200		12472	ND
	CCV	54			26			12461	RROR 2000
					27				

[Signature]

Notes:

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid

Sequence Name: C:\HPCHEM\2\OLDSEQ~1\102800.S

Comment:

Operator: RachidA

Data Path: C:\HPCHEM\2\DATA\102800\

Pre-Seq Cmd:

Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 DailyCal	17	UV001890	GROSOIL	GRO defining mix
2 Calibration	18	UV001891	GROSOIL	100ppb CCV
3 Calibration	19	UV001892	GROSOIL	200ppb CCV
4 Calibration	20	UV001893	GROSOIL	400ppb CCV
5 Calibration	21	UV001894	GROSOIL	700ppb CCV
6 Calibration	22	UV001895	GROSOIL	1000ppb CCV
7 Spike	23	UV001896	GROSOIL	BS, 5gr
8 Blank	24	UV001897	GROSOIL	MB, 5gr
9 Sample	25	UV001898	GROSOIL	F7928-1, 4.71gr/5ml-100ul
10 Spike	26	UV001899	GROSOIL	F7928-1MS, 4.71gr/5ml-100ul
11 Duplicate	27	UV001900	GROSOIL	F7928-1MSD, 4.71gr/5ml-100ul
12 Spike	28	UV001901	GROSOIL	QC
13 DailyCal	29	UV001902	GROSOIL	CCV

0055

GC Analysis Log

Date: 10/2/2000 Analyst Signature: [Signature] Run Batch: UV66
 Analysis Method: Soils Column: KTXSR.2 Detector: FID/PID
 Method File: GR0SOIL Instrument ID: UV Calibration Date: 09/26/00

Data File	Sample ID	Sample Amt.	Matrix	PH	ALS #	Dil.	Method	Vial #	Comments
UV001896	GR0WIN	5ml	W	7	17	1	805	-	V1803
91	100 ppb	↓	↓		18			-	V1827
92	200	↓	↓		19			-	
93	400	↓	↓		20			-	
94	700	↓	↓		21			-	
95	1000	↓	↓		22			-	
96	BS	5gk	S		23	50		11276	V1786 ✓
97	M.B	↓	↓		24			+	V1828 ✓
98	F7923-1	4.71gk	↓		25			11276	ND ✓
99	-1MS	↓	↓		26			↓	NO SPIKE?
900	-1MSD	↓	↓		27			↓	HIGH
01	QC	5ml	↓		28	1		↓	FAILED HIGH.
UV001902	CCV	↓	↓		29	1		↓	
UV001902									

Notes:

Matrix: Designate W for water, L for non-aqueous liquid, S for soil, SOL for solid, and TCLP or SPLP for leachates.

Sequence Name: C:\HPCHEM\2\SEQUENCE\1222PRO.S

Comment:

Operator: stephw

Data Path: C:\HPCHEM\2\DATA\1222pro\

Pre-Seq Cmd:

Post-Seq Cmd:

90P498

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	1	OP12518	FL_PRO	1020ppm TPHS ccv s975
2 Sample	2	OP12519	FL_PRO	340ppm TPHS s977
3 Sample	3	OP12520	FL_PRO	solvent blank
4 Sample	4	OP12521	FL_PRO	op2464-mb
5 Sample	5	OP12522	FL_PRO	F8412-3,40x
6 Sample	6	OP12523	FL_PRO	F8427-2
7 Sample	7	OP12524	FL_PRO	1020ppm ccv

0120

Sequence Name: C:\HPCHEM\2\SEQUENCE\0913PRO.S
Comment:
Operator: nareshj
Data Path: C:\HPCHEM\2\DATA\0913PRO\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	OP10745	FL_PRO	340ppm tphs s924
2	Sample	2	OP10746	FL_PRO	680ppm tphs s923
3	Sample	3	OP10747	FL_PRO	1020ppm tphs s922
4	Sample	4	OP10748	FL_PRO	1360ppm tphs s921
5	Sample	5	OP10749	FL_PRO	1700ppm tphs s920
6	Sample	6	OP10750	FL_PRO	850ppm QC tphs s925
7	Sample	7	OP10751	FL_PRO	Sol Blk

0122

Sequence Name: C:\HPCHEM\2\SEQUENCE\1221PRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\2\DATA\1221pro\
Pre-Seq Cmd:
Post-Seq Cmd:

gop498

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	1	OP12494	FL_PRO	1020ppm TPHS ccv s975
2 Sample	2	OP12495	FL_PRO	340ppm TPHS s977
3 Sample	3	OP12496	FL_PRO	solvent blank
4 Sample	4	OP12497	FL_PRO	op2464-mb
5 Sample	5	OP12498	FL_PRO	op2464-bs
6 Sample	6	OP12499	FL_PRO	F8387-3
7 Sample	7	OP12500	FL_PRO	F8414-1
8 Sample	8	OP12501	FL_PRO	F8412-1
9 Sample	9	OP12502	FL_PRO	F8412-2
10 Sample	10	OP12503	FL_PRO	F8412-3,10x
11 Sample	11	OP12504	FL_PRO	F8412-4,10x
12 Sample	12	OP12505	FL_PRO	F8412-5,10x
13 Sample	13	OP12506	FL_PRO	F8433-1
14 Sample	14	OP12507	FL_PRO	1020ppm ccv
15 Sample	15	OP12508	FL_PRO	F8414-1,4x
16 Sample	16	OP12509	FL_PRO	F8412-1,80x
17 Sample	17	OP12510	FL_PRO	F8412-2,5x
18 Sample	18	OP12511	FL_PRO	F8412-3,4x
19 Sample	19	OP12512	FL_PRO	F8412-4,2x
20 Sample	20	OP12513	FL_PRO	op2464-ms,2x
21 Sample	21	OP12514	FL_PRO	op2464-msd,2x
22 Sample	22	OP12515	FL_PRO	F8427-1
23 Sample	23	OP12516	FL_PRO	F8427-2,10x
24 Sample	24	OP12517	FL_PRO	1020ppm ccv

0124

GC ANALYSIS LOG

DATE: 12-21-00
 COLUMN TYPE: RTX-SMS
 INSTRUMENT: FID 2

METHODS: FL PRO
 METHOD FILE: FL PRO
 CALIB. DATE: 9-13-00

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
0P12494	1	1020ppmTPHScv	FL PRO		S975			✓	passed
12495	2	340ppmTPHIS			S977			✓	passed
12496	3	solvent blank						✓	BDL
12497	4	0P2464-mb		30g/ml	S	0P2464	1x	✓	BDL
12498	5	-bs						✓	
12499	6	F8387-3						✓	TPH=32.2
12500	7	F8414-1						✓	RR4x
12501	8	F8412-1						✓	RR80x
12502	9	-2						✓	RR5x
12503	10	-3						✓	RR4x
12504	11	-4					10x	✓	RR4x
12505	12	-5						✓	RR2x
12506	13	F8433-1						✓	TPH=(16)(18)
12507	14	1020ppmccv						✓	BDL
12508	15	F8414-1						✓	passed
12509	16	F8412-1		30g/ml	S	0P2464	4x	✓	TPH=(4)(31.7)
12510	17	-2					80x	✓	TPH=(80)(29.8)
12511	18	-3					5x	✓	TPH=(5)(33.6)
12512	19	-4					4x	✓	RR40x
12513	20	0P2464-MS					2x	✓	TPH=(2)(37.1)
12514	21	-MSD						✓	
12515	22	F8427-1						✓	
12516	23	-2					1x	✓	TPH=12.5
12517	24	1020ppmccv					10x	✓	RR1x

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:

ANALYST: JAW
 RUN BATCH: 900498
 AMOUNT INJECTED: 1 ul

SOLID SAMPLE PREP REPORT

Date: 12/20/00

Method*: FL Pro

Batch#: OP 2464

Batch Started On: 12/20/00

Prior Number Of Samples in Batch: 0

Analyst: DP/

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2464 MB	X	30.0ml -	0.5ml		1.0ml	
OP 2464 BS	X			0.5ml		
F8387-3	7					
F8414-1	6					
F8412-1	5					
-2	5					
-3	5					
-4	5					MS, MSD
-5	5					
F8433-1	1					
F8427-1	2					
-2	2					
<div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em; opacity: 0.5;"> Re 12/21/00 </div>						
OP 2464 MS	5	300	0.5ml	0.5ml	1.0ml	F8412-4
OP 2464 MSD	↓	↓	↓	↓	↓	F8412-4
OP	DUP					

WMC Surrogate ID: E769A Conc: 100ppm Exp. Date: 5/27/01 Bath Temp.: 72°C
 witness pp Spike ID: E778 Conc: 100ppm Exp. Date: 6/18/01 Bath Temp2.: _____
 CH2CL2 Lot# CA118 Hexane Lot# _____ Na2SO4 Lot# T44269
 Silica Gel Reagent #: 995185 Reagent #: _____ Reagent #: _____

Comments: _____

Relinquished By: Roopa Ula

Date: 12/21/00

0126

Accepted By: Naval J. ...

Date: 12-21-00

*Prep method for SW846 methods is 3550B for soils and 3580A for oils.

Sequence Name: C:\HPCHEM\1\SEQUENCE\1120DRO.S

Comment:

Operator: stephw

Data Path: C:\HPCHEM\1\DATA\1120dro\

Pre-Seq Cmd:

Post-Seq Cmd:

g2f 16

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only - () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	1	ZF00356	F_DRO	R.T. C10-C28
2 Sample	2	ZF00357	F_DRO	250ppm ccv s978
3 Sample	3	ZF00358	F_DRO	500ppm ccv s978
4 Sample	4	ZF00359	F_DRO	1000ppm ccv s978
5 Sample	5	ZF00360	F_DRO	1500ppm ccv s978
6 Sample	6	ZF00361	F_DRO	2000ppm ccv s978
7 Sample	7	ZF00362	F_DRO	solvent blank
8 Sample	8	ZF00363	F_DRO	op2325-mb
9 Sample	9	ZF00364	F_DRO	op2325-bs
10 Sample	10	ZF00365	F_DRO	F8107-1
11 Sample	11	ZF00366	F_DRO	F8107-2
12 Sample	12	ZF00367	F_DRO	F8107-3
13 Sample	13	ZF00368	F_DRO	F8107-4
14 Sample	14	ZF00369	F_DRO	op2325-ms
15 Sample	15	ZF00370	F_DRO	op2325-msd
16 Sample	16	ZF00371	F_DRO	1000ppm ccv
17 Sample	17	ZF00372	F_DRO	F8109-1,40x
18 Sample	18	ZF00373	F_DRO	F8109-2
19 Sample	19	ZF00374	F_DRO	F8109-3
20 Sample	20	ZF00375	F_DRO	F8109-4
21 Sample	21	ZF00376	F_DRO	1000ppm ccv
22 Sample	22	ZF00377	F_DRO	op2335-mb
23 Sample	23	ZF00378	F_DRO	op2335-bs
24 Sample	24	ZF00379	F_DRO	F8163-1
25 Sample	25	ZF00380	F_DRO	F8163-2
26 Sample	26	ZF00381	F_DRO	F8163-3
27 Sample	27	ZF00382	F_DRO	F8163-4
28 Sample	28	ZF00383	F_DRO	F8163-5
29 Sample	29	ZF00384	F_DRO	F8163-6
30 Sample	30	ZF00385	F_DRO	F8163-7
31 Sample	31	ZF00386	F_DRO	F8163-8
32 Sample	32	ZF00387	F_DRO	1000ppm ccv
33 Sample	33	ZF00388	F_DRO	F8163-9
34 Sample	34	ZF00389	F_DRO	op2335-ms
35 Sample	35	ZF00390	F_DRO	op2335-msd
36 Sample	36	ZF00391	F_DRO	F8163-10
37 Sample	37	ZF00392	F_DRO	F8163-11
38 Sample	38	ZF00393	F_DRO	F8163-12
39 Sample	39	ZF00394	F_DRO	F8163-13
40 Sample	40	ZF00395	F_DRO	F8163-14
41 Sample	41	ZF00396	F_DRO	F8163-15
42 Sample	42	ZF00397	F_DRO	1000ppm ccv

0190

GC ANALYSIS LOG

DATE: 11-20-00
 COLUMN TYPE: DB-5
 INSTRUMENT: FID 3

METHODS: DRO (8015 M)
 METHOD FILE: DRO.F
 CALIB. DATE: 11-20-00

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN COMMENTS
ZF00356	1	RT C10-C28	8015					ANALYST: SW RUN BATCH: 92f16 AMOUNT INJECTED: 2 ul
357	2	250 ppm DRO			S978		50:400	✓
358	3	500 ppm DRO					100:400	✓
359	4	1000 ppm DRO					200:400	✓
360	5	1500 ppm DRO					300:400	✓
361	6	2000 ppm DRO					400:400	✓
362	7	solvent blank						Passed, RSD < 20%
363	8	Op2325-mb		30g/10ml	S	Op2325	1x	BDL
364	9	-bs						BDL
365	10	F8107-1						✓
366	11	-2						BDL
367	12	-3						BDL
368	13	-4						BDL
369	14	Op2325-MS						BDL
370	15	-MSd						BDL
371	16	1000 ppm CCV						✓
372	17	F8109-1		30g/1ml	S	Op2325	40x	Passed
373	18	-2					1x	DRD = (40)(16.9)
374	19	-3						BDL
375	20	-4						BDL
376	21	1000 ppm CCV						BDL
377	22	Op2335-mb		30g/1ml	S	Op2335	1x	Passed
378	23	-bs						BDL
379	24	F8103-1						✓
								DRD = 40.7

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil

Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Analyst's Signature:



GC ANALYSIS LOG

DATE: 11-20-00			METHODS: DRO 8015M			ANALYST: SW		
COLUMN TYPE: DB-5			METHOD FILE: DRO-F			RUN BATCH: 92f16		
INSTRUMENT: FID 3			CALIB. DATE: 11-20-00			AMOUNT INJECTED: 2		
DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN COMMENTS
ZF00380	25	F8163-2	8015	30g/1ml	S	0p2335	1x	DR0=30.6
381	26	-3						DR0=12.9 J
382	27	-4						BDL
383	28	-5						BDL
384	29	-6						BDL
385	30	-7						BDL
386	31	-8						BDL
387	32	1000ppm CCV						passed
388	33	F8163-9		30g/1ml	S	0p2335	1x	BDL
389	34	0p2335-MS						✓
390	35	-MSD						✓
391	36	F8163-10						BDL
392	37	-11						BDL
393	38	-12						BDL
394	39	-13						BDL
395	40	-14						BDL
396	41	-15						BDL
397	42	1000ppm CCV						passed

Analyst's Signature: *[Handwritten Signature]*

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
 Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)

Sequence Name: C:\HPCHEM\1\SEQUENCE\1222DRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\1\DATA\1222dro\
Pre-Seq Cmd:
Post-Seq Cmd:

g2f29

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	ZF00625	F_DRO	R.T. C10-C28
2	Sample	2	ZF00626	F_DRO	1000ppm ccv s978
3	Sample	3	ZF00627	F_DRO	solvent blank
4	Sample	4	ZF00628	F_DRO	op2458-mb
5	Sample	5	ZF00629	F_DRO	F8396-6,100x
6	Sample	6	ZF00630	F_DRO	F8427-2
7	Sample	7	ZF00631	F_DRO	1000ppm ccv

0193

Sequence Name: C:\HPCHEM\1\SEQUENCE\1221DRO.S
Comment:
Operator: stephw
Data Path: C:\HPCHEM\1\DATA\1221dro\
Pre-Seq Cmd:
Post-Seq Cmd:

g2f28

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	1	ZF00600	F_DRO	R.T. C10-C28
2 Sample	2	ZF00601	F_DRO	1000ppm ccv s978
3 Sample	3	ZF00602	F_DRO	solvent blank
4 Sample	4	ZF00603	F_DRO	op2463-mb
5 Sample	5	ZF00604	F_DRO	op2463-bs
6 Sample	6	ZF00605	F_DRO	F8413-3
7 Sample	7	ZF00606	F_DRO	F8413-4
8 Sample	8	ZF00607	F_DRO	F8429-1
9 Sample	9	ZF00608	F_DRO	op2463-ms, 4x
10 Sample	10	ZF00609	F_DRO	op2463-msd, 4x
11 Sample	11	ZF00610	F_DRO	F8429-1, 5x
12 Sample	12	ZF00611	F_DRO	1000ppm ccv
13 Sample	13	ZF00612	F_DRO	op2458-mb
14 Sample	14	ZF00613	F_DRO	op2458-bs
15 Sample	15	ZF00614	F_DRO	F8396-1
16 Sample	16	ZF00615	F_DRO	op2458-ms
17 Sample	17	ZF00616	F_DRO	op2458-msd
18 Sample	18	ZF00617	F_DRO	F8396-2
19 Sample	19	ZF00618	F_DRO	1000ppm ccv
20 Sample	20	ZF00619	F_DRO	F8396-3
21 Sample	21	ZF00620	F_DRO	F8396-4
22 Sample	22	ZF00621	F_DRO	F8396-6
23 Sample	23	ZF00622	F_DRO	F8427-1
24 Sample	24	ZF00623	F_DRO	F8427-2, 20x
25 Sample	25	ZF00624	F_DRO	1000ppm ccv

0195

GC ANALYSIS LOG

DATE: 12-21-00
 COLUMN TYPE: DB-5
 INSTRUMENT: FID 3

METHODS: 8015 M DRO
 METHOD FILE: DRO
 CALIB. DATE: 11-20-00

ANALYST: SW
 RUN BATCH: 92f28
 AMOUNT INJECTED: 2

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	SAMPLE AMOUNT	MATRIX	EXT. BATCH	DILUTION FACTOR	RUN OK	COMMENTS
ZF00600	1	R.T. C10-C28	DRO					✓	
6001	2	1000 ppm ccv			S978		200:400	✓	passed
6002	3	solvent blank						✓	BDL
6003	4	0p2463-mb		1000 ml/ml	W	0p2463	1x	✓	BDL
6004	5	-bs		↓				✓	
6005	6	F8413-3		980 ml/ml				✓	DRO=0.259
6006	7	-4		↓				✓	BDL
6007	8	F8429-1		↓				✓	RR5x
6008	9	0p2463-MS		480 ml/ml			4x	✓	
6009	10	-MSD		↓			4x	✓	
6010	11	F8429-1		980 ml/ml			5x	✓	DRO=(S)(1.1)
6011	12	1000 ppm ccv						✓	passed
6012	13	0p2458-mb		30g/ml	S	0p2458	1x	✓	BDL
6013	14	-bs		↓				✓	
6014	15	F8396-1		↓				✓	DRO=19.4
6015	16	0p2458-MS		↓				✓	
6016	17	-MSD		↓				✓	
6017	18	F8396-2		↓				✓	DRO=27.7
6018	19	1000 ppm ccv						✓	passed
6019	20	F8396-3		30g/ml	S	0p2458	1x	✓	DRO=27.1
6020	21	-4		↓				✓	DRO=24.4
6021	22	-6		↓				✓	RR 100x
6022	23	F8327-1		↓				✓	BDL
6023	24	-2		↓				✓	RR 1x

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
 Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)
 Analyst's Signature: *[Signature]*

SOLID SAMPLE PREP REPORT

Date: 12/19/00

Method*: ORO 8015

Batch#: OP 2458

Batch Started On: 12/19/00

Prior Number Of Samples in Batch : 0

Analyst: _____

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2458 MB	✓	30.0g	0.5ml		1.0ml	
OP 2458 BS	X			0.5ml		
F8396-1	3					MS/msd
-2	3					
-3	3					
-4	3					
-6	3					
F8427-1	2					
-2	2	↓	↓		↓	
<div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); opacity: 0.5;"> <p>12/19/00 OP</p> </div>						
OP 2458 MS	3	30.0	0.5ml	0.5ml		F 8396-1
OP 2458 MSD	3	↓				↓
OP	DUP					

OP Surrogate ID: F769A Conc: 100 ppm Exp. Date: 5/27/01 Bath Temp.: _____

OP Spike ID: F775 Conc: 2000 ppm Exp. Date: 6-7-01 Bath Temp2.: _____

CH2CL2 Lot# CA118 Hexane Lot# _____ Na2SO4 Lot# 8024

Silica gel Reagent #: 995185 Reagent #: _____ Reagent #: _____

Comments: _____

Relinquished By: Darshna Patel Date: 12/19/00

Accepted By: Narash Date: 12-19-00

0197

*Prep method for SW846 methods is 3550B for soils and 3580A for oils.



Tetra Tech NUS, Inc.

Internal Correspondence

TO: Mr. Terry Hansen **DATE:** February 12, 2001
FROM: Suzanne I. Smith **CC:** File
SUBJECT: Organic and Inorganic Data Validation – PAH and Metals
CTO096 – NAS Pensacola
SDG F8427R
SAMPLES: 2/Soils
43DR00901 43DR01501

OVERVIEW

The sample set for CTO096, SDG F8427R; Naval Air Station Pensacola, Pensacola, Florida consists of two (2) soil environmental samples. The environmental samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs) and Metals.

The samples were collected by Tetra Tech NUS on December 15, 2000 and analyzed by Accutest Southeast Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8310 and SW-846 Method 6010B analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- Data Completeness *
- Holding Times
- Initial/Continuing Calibration Standards *
- Laboratory Method/Field Quality Control Blanks *
- Detection Limits *

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Polycyclic Aromatic Hydrocarbon Fraction

The continuing calibration check sample failed high for benzo(a)pyrene. Results for benzo(a)pyrene were flagged "C" for calibration noncompliance.

Holding times were exceeded for all samples therefore all results are flagged "J" as estimated due to holding time noncompliance.

All other quality control criteria for this fraction were met.

Metals Fraction

Laboratory Blank Analysis

Affected sample : 43DR00901

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Action Level(soil)</u>
Antimony	5.4 ug/L	2.7 mg/kg
Calcium	7.1 mg/kg ¹	35.5 mg/kg
Copper	0.75 ug/L	0.375 mg/kg
Iron	32.4 ug/L	16.2 mg/kg
Lead	2.7 ug/L	1.35 mg/kg
Nickel	5.8 ug/L	2.9 mg/kg
Potassium	43 mg/kg ¹	215 mg/kg
Vanadium	0.63 ug/L	0.315 mg/kg
Zinc	0.22 mg/kg ¹	1.1 mg/kg

¹ Maximum concentration is present in the preparation blank.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in initial, continuing, and preparation blanks. Dilution factors, percent solids, and sample aliquots were taken into consideration when evaluating for blank contamination, but not in the quantities above. Results between the Instrument Detection Limit (IDL) and the action level are reported as nondetects.

All other quality control criteria for this fraction were met.

Executive Summary

Laboratory performance:

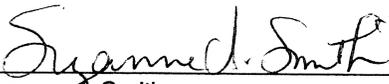
The PAH continuing calibration check sample failed high for benzo(a)pyrene. Results for benzo(a)pyrene were flagged "J" for calibration noncompliance. Holding times were exceeded for PAHs in all samples therefore all results are flagged "J" as estimated due to holding time noncompliance. The result for Antimony in sample 43DR00901 is between the Instrument Detection Limit (IDL) and the action level and is reported as a nondetect.

Other factors affecting data quality: None.

•Page - 3
Memo: Mr. T. Hansen
February 12, 2001

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Suzanne Smith

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the laboratory
3. Appendix C - Supporting Documentation

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
- D = MS/MSD Noncompliance
- E = LCS/LCSD Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = GFAA PDS - GFAA MSA's $r < 0.995$
- K = ICP Interference - include ICSAB % R's
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation
- N = Internal Standard Noncompliance
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = Pest/PCB D% between columns for positive results
- V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
- W = EMPC result
- X = Signal to noise response drop
- Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

- U - Value is a nondetected result as reported by the laboratory and should not be considered present.
- J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
- UJ - Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A
Qualified Analytical Results

CTO096-NAS PENSACOLA
SOIL DATA
 Accutest, NJ
 SDG: F8427R

SAMPLE NUMBER: 43DR00901
 SAMPLE DATE: 12/15/00
 LABORATORY ID: F8427-1R
 QC_TYPE: NORMAL
 % SOLIDS: 100.0 %
 UNITS: UG/KG
 FIELD DUPLICATE OF:

43DR01501
 12/15/00
 F8427-2R
 NORMAL
 100.0 %
 UG/KG

//
 100.0 %
 //
 100.0 %

POLYNUCLEAR AROMATIC HYDROCARBONS	RESULT			QUAL			CODE	RESULT			QUAL			CODE
	RESULT	QUAL	CODE	RESULT	QUAL	CODE		RESULT	QUAL	CODE	RESULT	QUAL	CODE	
1-METHYLNAPHTHALENE	800	UU	H	490	UU	H								
2-METHYLNAPHTHALENE	800	UU	H	490	UU	H								
ACENAPHTHENE	1600	UU	H	980	UU	H								
ACENAPHTHYLENE	1600	UU	H	980	UU	H								
ANTHRACENE	800	UU	H	490	UU	H								
BENZO(A)ANTHRACENE	800	UU	H	490	UU	H								
BENZO(A)PYRENE	160	UU	C	140	J	C								
BENZO(B)FLUORANTHENE	160	UU	H	135	J	H								
BENZO(G,H,I)PERYLENE	160	UU	H	126	J	H								
BENZO(K)FLUORANTHENE	160	UU	H	94.2	J	HP								
CHRYSENE	800	UU	H	490	UU	H								
DIBENZO(A,H)ANTHRACENE	160	UU	H	98	UU	H								
FLUORANTHENE	800	UU	H	243	J	HP								
FLUORENE	800	UU	H	490	UU	H								
INDENO(1,2,3-CD)PYRENE	160	UU	H	160	J	H								
NAPHTHALENE	800	UU	H	490	UU	H								
PHENANTHRENE	800	UU	H	490	UU	H								
PYRENE	800	UU	H	214	J	HP								

HOLDING TIME
02/09/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	43DR00901	F8427-1R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
MG/KG	43DR01501	F8427-2R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
UG/KG	43DR00901	F8427-1R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47
UG/KG	43DR01501	F8427-2R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47

SOIL DATA
Accutest, NJ
SDG: F8427R

SAMPLE NUMBER: 43DR00901
 SAMPLE DATE: 12/15/00
 LABORATORY ID: F8427-1R
 QC_TYPE: NORMAL
 % SOLIDS: 100.0 %
 UNITS: MG/KG
 FIELD DUPLICATE OF:

43DR01501
 12/15/00
 F8427-2R
 NORMAL
 100.0 %
 MG/KG

//
 100.0 %

//
 100.0 %

INORGANICS	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
ANTIMONY	1.4	BU	A	40.1					
ARSENIC	1.2			6.7					
BARIUM	188			483					
CALCIUM	6580			8610					
COPPER	108			682					
IRON	17700			75500					
LEAD	251			2120					
NICKEL	29.7			36.6					
POTASSIUM	2530			242	B				
VANADIUM	60.1			52.3					
ZINC	1060			6380					

HOLDING TIME

02/09/01

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	43DR00901	F8427-1R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
MG/KG	43DR01501	F8427-2R	NORMAL	F8427R	M	12/15/00	01/31/01	02/01/01	47	1	48
UG/KG	43DR00901	F8427-1R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47
UG/KG	43DR01501	F8427-2R	NORMAL	F8427R	PAH	12/15/00	01/30/01	01/31/01	46	1	47

APPENDIX B

Results as Reported by the Laboratory



Report of Analysis

Client Sample ID: 43DR00901	
Lab Sample ID: F8427-1R	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
Method: EPA 8310 SW846 3550B	Percent Solids: 41.9
Project: NAS Pensacola	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA006230.D	1	01/31/01	MRE	01/30/01	OP2650	GAA232
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	1600	ug/kg	
208-96-8	Acenaphthylene	ND	1600	ug/kg	
120-12-7	Anthracene	ND	800	ug/kg	
56-55-3	Benzo(a)anthracene	ND	800	ug/kg	
50-32-8	Benzo(a)pyrene	ND	160	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	160	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	160	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	160	ug/kg	
218-01-9	Chrysene	ND	800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	160	ug/kg	
206-44-0	Fluoranthene	ND	800	ug/kg	
86-73-7	Fluorene	ND	800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	160	ug/kg	
91-20-3	Naphthalene	ND	800	ug/kg	
90-12-0	1-Methylnaphthalene	ND	800	ug/kg	
91-57-6	2-Methylnaphthalene	ND	800	ug/kg	
85-01-8	Phenanthrene	ND	800	ug/kg	
129-00-0	Pyrene	ND	800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		22-130%
92-94-4	p-Terphenyl	90%		53-130%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: 43DR00901	Date Sampled: 12/15/00
Lab Sample ID: F8427-1R	Date Received: 12/16/00
Matrix: SO - Soil	Percent Solids: 41.9
Project: NAS Pensacola	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method
Antimony	1.4 B	12.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Arsenic	1.2	1.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Barium	188	40.1	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Calcium	6580	1000	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Copper	108	5.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Iron	17700	20.1	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Lead	251	20.1	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Nickel	29.7	8.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Potassium	2530	1000	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Vanadium	60.1	10.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Zinc	1060	4.0	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B

RL = Reporting Limit



Report of Analysis

Client Sample ID: 43DR01501	
Lab Sample ID: F8427-2R	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
Method: EPA 8310 SW846 3550B	Percent Solids: 68.2
Project: NAS Pensacola	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA006250.D	1	01/31/01	MRE	01/30/01	OP2650	GAA232
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	980	ug/kg	
208-96-8	Acenaphthylene	ND	980	ug/kg	
120-12-7	Anthracene	ND	490	ug/kg	
56-55-3	Benzo(a)anthracene	ND	490	ug/kg	
50-32-8	Benzo(a)pyrene	140	98	ug/kg	
205-99-2	Benzo(b)fluoranthene	135	98	ug/kg	
191-24-2	Benzo(g,h,i)perylene	126	98	ug/kg	
207-08-9	Benzo(k)fluoranthene	94.2	98	ug/kg	J
218-01-9	Chrysene	ND	490	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	98	ug/kg	
206-44-0	Fluoranthene	243	490	ug/kg	J
86-73-7	Fluorene	ND	490	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	160	98	ug/kg	
91-20-3	Naphthalene	ND	490	ug/kg	
90-12-0	1-Methylnaphthalene	ND	490	ug/kg	
91-57-6	2-Methylnaphthalene	ND	490	ug/kg	
85-01-8	Phenanthrene	ND	490	ug/kg	
129-00-0	Pyrene	214	490	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		22-130%
92-94-4	p-Terphenyl	82%		53-130%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: 43DR01501	
Lab Sample ID: F8427-2R	Date Sampled: 12/15/00
Matrix: SO - Soil	Date Received: 12/16/00
	Percent Solids: 68.2
Project: NAS Pensacola	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method
Antimony	40.1	7.9	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Arsenic	6.7	0.65	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Barium	483	26.2	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Calcium	8610	655	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Copper	682	3.3	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Iron	75500	13.1	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Lead	2120	13.1	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Nickel	36.6	5.2	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Potassium	242 B	655	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Vanadium	52.3	6.5	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B
Zinc	6380	2.6	mg/kg	1	01/31/01	02/01/01 JK	SW846 6010B

RL = Reporting Limit

APPENDIX C
Support Documentation



Sample Summary

Tetra-Tech, NUS

Job No: F8427R

NAS Pensacola
Project No: Site 43, N0189

Sample Number	Collected		Time By	Received	Matrix		Client Sample ID
	Date				Code	Type	
F8427-1R	12/15/00	11:00	LWS	12/16/00	SO	Soil	43DR00901
F8427-2R	12/15/00	11:15	LWS	12/16/00	SO	Soil	43DR01501

Quantitation Report (QT Reviewed)

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
 Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
 Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
 Sample : CC194-20 Inst : DAD
 Misc : op2650,gaa232,soil,,,5, Multiplr: 1.00
 IntFile Signal #1: events.e IntFile Signal #2: events2.e
 Quant Time: Jan 31 10:45 2001 Quant Results File: 8310_46.RES

Quant Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
 Title : PAH's BY EPA 8310
 Last Update : Wed Jan 31 10:10:18 2001
 Response via : Initial Calibration
 DataAcq Meth : 8310_46.M

Volume Inj. : 15ul
 Signal #1 Phase : Pinnacle PAH Signal #2 Phase: Pinnacle PAH
 Signal #1 Info : DAD 270nm Signal #2 Info : DAD 254nm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppm	ppm
System Monitoring Compounds						
8) S O-Terphenyl	8.35	8.35	6969639	11741904	20.989	20.939
Spiked Amount	20.000	Range	22 - 130	Recovery =	104.95%	104.70%
12) S P-Terphenyl	10.38	10.38	28887138	15067178	21.412	22.354
Spiked Amount	20.000	Range	53 - 130	Recovery =	107.06%	111.77%
Target Compounds						
1) Naphthalene	5.99	5.99	9251530	5879985	21.423	22.018
2) Acenaphthylene	6.54	6.54	3584309	3708722	21.302	21.295
3) 1-Methyl Naphtha	6.88	6.88	7963978	3600369	21.488	22.472
4) 2-Methyl Naphtha	7.08	7.08	7834154	4937222	21.426	22.136
5) Acenaphthene	7.29	7.29	6114404	2192220	21.640	22.042
6) Fluorene	7.48	7.48	20807266	25408623	21.165	21.933
7) Phenanthrene	8.05	8.05	18322222	57808750	21.038	19.939
9) Anthracene	8.61	8.62	1647182	75773858	20.257	18.220
10) Fluoranthene	9.15	9.15	16396570	15518767	21.642	21.236
11) Pyrene	9.62	9.62	23251241	15530526	21.071	22.577
13) Benzo(a)Anthrace	10.89	10.89	22899373	17017010	10.866	10.770
14) Chrysene	11.26	11.26	26228454	26031223	10.423	11.245
15) Benzo(b)Fluorant	12.26	12.26	11865355	17471984	10.746	10.749
16) Benzo(k)Fluorant	12.81	12.81	7221557	12354265	10.702	10.160
17) Benzo(a) Pyrene	13.40	13.40	14166458	15655660	11.703	11.815 High
18) Dibenzo(a,h)anth	14.19	14.19	11324187	3690478	10.833	11.120
19) Benzo(g,h,i) Per	14.97	14.97	7804220	5805803	10.802	10.940
20) Indeno(1,2,3-cd)	15.52	15.52	5884680	12353987	10.573	10.129

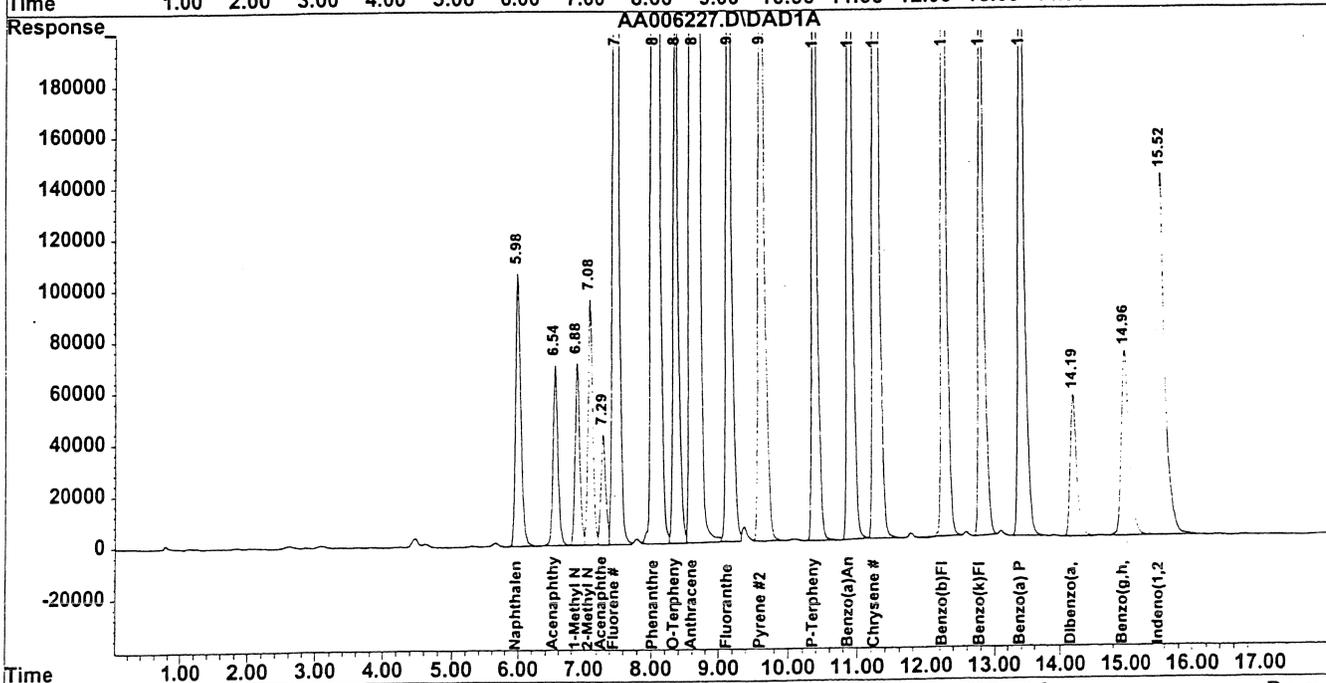
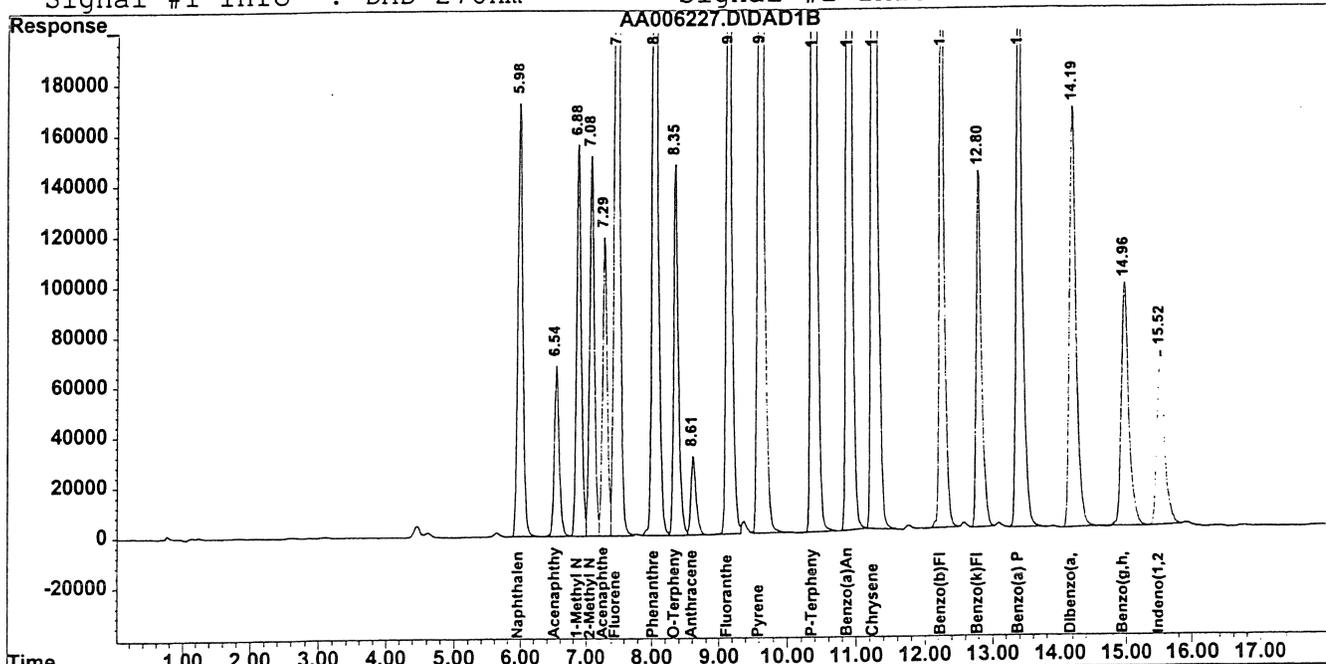
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Quantitation Report

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
Sample : CC194-20 Inst : DAD
Misc : op2650,gaa232,soil,,5, Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Jan 31 10:45 2001 Quant Results File: 8310_46.RES

Quant Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Wed Jan 31 10:10:18 2001
Response via : Multiple Level Calibration
DataAcq Meth : 8310_46.M

Volume Inj. : 15ul
Signal #1 Phase : Pinnacle PAH Signal #2 Phase: Pinnacle PAH
Signal #1 Info : DAD 270nm Signal #2 Info : DAD 254nm



Evaluate Continuing Calibration Report

Signal #1 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1B.CH Vial: 1
 Signal #2 : F:\HPCHEM\1\DATA\0131PAH\AA006227.D\DAD1A.CH
 Acq On : 31-Jan-2001, 10:28:09 Operator: MIKEE
 Sample : CC194-20 Inst : DAD
 Misc : op2650,gaa232,soil,,,5, Multiplr: 1.00
 IntFile Signal #1: events.e IntFile Signal #2: events2.e

Method : C:\HPCHEM\1\METHODS\8310_46.M (Chemstation Integrator)
 Title : PAH's BY EPA 8310
 Last Update : Thu Feb 01 09:29:31 2001
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 200%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1 Naphthalene	20.000	21.423	-7.1	105	0.00
2 Acenaphthylene	20.000	21.302	-6.5	103	0.00
3 1-Methyl Naphthalene	20.000	21.488	-7.4	105	0.00
4 2-Methyl Naphthalene	20.000	21.426	-7.1	104	0.00
5 Acenaphthene	20.000	21.640	-8.2	105	0.00
6 Fluorene	20.000	21.165	-5.8	102	0.00
7 Phenanthrene	20.000	21.038	-5.2	102	0.00
8 S O-Terphenyl	20.000	20.989	-4.9	102	0.01
9 Anthracene	20.000	20.257	-1.3	100	0.00
10 Fluoranthene	20.000	21.642	-8.2	104	0.00
11 Pyrene	20.000	21.071	-5.4	103	0.00
12 S P-Terphenyl	20.000	21.412	-7.1	104	0.00
13 Benzo(a)Anthracene	10.000	10.866	-8.7	105	0.00
14 Chrysene	10.000	10.423	-4.2	104	0.00
15 Benzo(b)Fluoranthene	10.000	10.746	-7.5	103	0.00
16 Benzo(k)Fluoranthene	10.000	10.702	-7.0	104	0.00
17 Benzo(a) Pyrene	10.000	11.703	-17.0#	112	0.00
18 Dibenzo(a,h)anthracene	10.000	10.833	-8.3	106	0.00
19 Benzo(g,h,i) Perylene	10.000	10.802	-8.0	105	-0.01
20 Indeno(1,2,3-cd)pyrene	10.000	10.573	-5.7	102	-0.01

Signal #2

1 Naphthalene	20.000	22.018	-10.1	107	0.00
2 Acenaphthylene	20.000	21.295	-6.5	101	0.00
3 1-Methyl Naphthalene	20.000	22.472	-12.4	108	0.00
4 2-Methyl Naphthalene	20.000	22.136	-10.7	108	0.00
5 Acenaphthene	20.000	22.042	-10.2	108	0.00
6 Fluorene	20.000	21.933	-9.7	106	0.00
7 Phenanthrene	20.000	19.939	0.3	98	0.00
8 S O-Terphenyl	20.000	20.939	-4.7	102	0.01
9 Anthracene	20.000	18.220	8.9	94	0.00
10 Fluoranthene	20.000	21.236	-6.2	102	0.00
11 Pyrene	20.000	22.577	-12.9	109	0.00
12 S P-Terphenyl	20.000	22.354	-11.8	109	0.00
13 Benzo(a)Anthracene	10.000	10.770	-7.7	104	0.00
14 Chrysene	10.000	11.245	-12.4	109	0.00
15 Benzo(b)Fluoranthene	10.000	10.749	-7.5	104	0.00
16 Benzo(k)Fluoranthene	10.000	10.160	-1.6	98	0.00
17 Benzo(a) Pyrene	10.000	11.815	-18.2#	114	0.00
18 Dibenzo(a,h)anthracene	10.000	11.120	-11.2	108	0.00
19 Benzo(g,h,i) Perylene	10.000	10.940	-9.4	106	0.00
20 Indeno(1,2,3-cd)pyrene	10.000	10.129	-1.3	98	-0.01

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
---	---	---	-----	-----	-----	-----	-----
No	1	1	8310_46	AA006227	01:01		CC194-20
No	2	2	8310_46	AA006228	02:01		OP2650-BS
No	3	3	8310_46	AA006229	03:01		OP2650-MB
No	4	4	8310_46	AA006230	04:01		F8427-1R
No	5	5	8310_46	AA006231	05:01		F8427-2R
No	6	6	8310_46	AA006232	06:01		F8798-1
No	7	7	8310_46	AA006233	07:01		F8798-2
No	8	8	8310_46	AA006234	08:01		F8798-3
No	9	9	8310_46	AA006235	09:01		F8812-1
No	10	10	8310_46	AA006236	10:01		F8812-2
No	11	11	8310_46	AA006237	11:01		F8812-3
No	12	12	8310_46	AA006238	12:01		CC194-10
No	13	13	8310_46	AA006239	13:01		F8812-4
No	14	14	8310_46	AA006240	14:01		F8812-5, 4
No	15	15	8310_46	AA006241	15:01		F8812-6
No	16	16	8310_46	AA006242	16:01		F8812-7, 4
No	17	17	8310_46	AA006243	17:01		OP2650-MS, 4
No	18	18	8310_46	AA006244	18:01		OP2650-MSD, 4
No	19	19	8310_46	AA006245	19:01		F8812-8
No	20	20	8310_46	AA006246	20:01		F8812-9
No	21	21	8310_46	AA006247	21:01		F8812-10
No	22	2	8310_46	AA006248	22:01		F8812-17, 4
No	23	1	8310_46	AA006249	23:01		CC194-20
No	24	3	8310_46	AA006250	24:01		F8427-2R
No	25	4	8310_46	AA006251	25:01		F8812-1
No	26	5	8310_46	AA006252	26:01		F8812-2, 4
No	27	6	8310_46	AA006253	27:01		F8812-3
No	28	1	8310_46	AA006254	28:01		ECC194-20

HPLC ANALYSIS LOG

DATE: 03/1/01
 COLUMN TYPE: Pin. PAH
 INSTRUMENT: HPLC 1

METHODS: 8310
 METHOD FILE: 8310-46
 CALIB. DATE: 12-4-00

ANALYST: M. Eger
 RUN BATCH: GAA 232
 AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AM006227	1	CC194-20	5210	S981				2X	✓	high fr B(A)P
28	2	OP2650-BS		S	OP2660	305	5	1X	✓	
29	3	L - MB							✓	
30	4	F8427-1R							✓	ND (DDH)
31	5	L - 2R							✓	PR For B(A)P
32	6	F8498-1							✓	ND
33	7	L - 2							✓	ND
34	8	L - 3							✓	ND
35	9	F8812-1							✓	ND
36	10	L - 2							X	PR for B(A)P
37	11	L - 3							X	PR for B(A)P
38	12	CC194-10		S981				4X	✓	PASSED
39	13	F8812-4		S	OP2650	305	5	1X	✓	BDL
40	14	-5					10	4X	✓	
41	15	L - 4					5	1X	✓	ND
42	16	L - 7						4X	✓	Benzo(k)SgH2
43	17	OP2650-MS						4X	✓	
44	18	L - MSD						4X	✓	
45	19	F8812-8						1X	✓	
46	20	-9							✓	
47	21	-10							✓	
48	2	-17					10	4X	✓	ND
49	1	CC194-20		S981					✓	Benzo(k)SgH2
50	3	F8427-2R		S	OP2650	305	5	1X	✓	PASSED
51	4	F8812-1		L			5		✓	(DDH)

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
 Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)
 Analyst's Signature: M. Eger
 061

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310_46	AA005557	01:01	L6 PAH	S939
No	2	2	8310_46	AA005558	02:01	L1 PAH	
No	3	3	8310_46	AA005559	03:01	L2 PAH	
No	4	4	8310_46	AA005560	04:01	L3 PAH	
No	5	5	8310_46	AA005561	05:01	L4 PAH	
No	6	6	8310_46	AA005562	06:01	L5 PAH	
No	7	7	8310_46	AA005563	07:01	L6 PAH	
No	8	8	8310_46	AA005564	08:01	PAH ICV	S940
No	9	9	8310_46	AA005565	09:01	OP2376-BS2	
No	10	10	8310_46	AA005566	10:01	OP2376-MB2	
No	11	11	8310_46	AA005567	11:01	F8241-2,100RE	
No	12	12	8310_46	AA005568	12:01	F8241-4,4RE	
No	13	13	8310_46	AA005569	13:01	F8241-6,20RE	
No	14	14	8310_46	AA005570	14:01	F8241-8,30	
No	15	15	8310_46	AA005571	15:01	F8240-1RE	
No	16	16	8310_46	AA005572	16:01	F8240-2	
No	17	17	8310_46	AA005573	17:01	F8240-3RE	
No	18	5	8310_46	AA005574	18:01	L4 PAH	
No	19	18	8310_46	AA005575	19:01	F8240-4RE	
No	20	19	8310_46	AA005576	20:01	F8240-5RE	
No	21	20	8310_46	AA005577	21:01	F8240-6RE	
No	22	21	8310_46	AA005578	22:01	F8240-7RE	
No	23	22	8310_46	AA005579	23:01	F8240-8,2RE	
No	24	23	8310_46	AA005580	24:01	F8240-9RE	
No	25	24	8310_46	AA005581	25:01	F8240-10RE	
No	26	5	8310_46	AA005582	26:01	L4 CCV	

METHODS: 8310
 METHOD FILE: 8310-246
 CALIB. DATE: 12-4-00

DATE: 12-4-00
 COLUMN TYPE: Pin. PAH
 INSTRUMENT: HPLC 1

ANALYST: M. Sgan
 RUN BATCH: GAA194
 AMOUNT INJECTED: 15 ul

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	MATRIX	OP BATCH	INITIAL AMOUNT	FINAL VOLUME	DILUTION FACTOR	RUN OK	COMMENTS
AA00557	1	L6 PAH	8310	5939				1X	✓	
58	2	L1						100X	✓	
59	3	L2						20X	✓	
60	4	L3						4X	✓	
61	5	L4						2X	✓	
62	6	L5						1.5:2	✓	
63	7	L6						1X	✓	
64	8	PAH ICU		5940				1X	✓	PASSED
65	9	DP 2376 - B52		W DP2376		1000		1X	✓	
66	10	I - W82				1000		1X	✓	
67	11	F8241 - 2 RE				980		100X	✓	
68	12	I - 4 RE				980		4X	✓	
69	13	I - 6 RE				980		20X 4X	✓	(20X)
70	14	I - 8 RE				990		30X	✓	FROM 1st BATCH
71	15	F8240 - 1 RE				970		1X	✓	
72	16	I - 2 RE				980		I	✓	
73	17	I - 3 RE				980		I	✓	
74	5	CCV		5939				2X	✓	PASSED
75	18	F8240 - 4 RE		W		980		1X	✓	
76	19	I - 5 RE				980		I	✓	
77	20	I - 6 RE				970		I	✓	
78	21	I - 7 RE				950		I	✓	
79	22	I - 8 RE				980		2X	✓	
80	23	I - 9 RE				1000		1X	✓	
81	24	I - 10 RE				960		I	✓	IND

Matrix: Designate "W" for Water, "S" for Soil, and "O" for Oil
 Sample Amount: Initial Sample Weight (g) or Volume (ml) / Final Volume (ml)
 Analyst's Signature: M. Sgan
 011

SOLID SAMPLE PREP REPORT

Date: 01/30/01

Method*: 8310

Batch#: OP2650

Batch Started On: 01/30/01

Prior Number Of Samples in Batch: 0

Analyst: sl

Sample ID	Bottle Number	Amount Extracted (g)	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 2650 MB	X	30.0	0.5 mL	-	5.0	
OP 2650 BS	X			0.5 mL		
F8227-1	2					
-2	2					
F8798-1	1					
-2	2					
-3	1					
F8812-1	1					
-2	1					
-3	1					
-4	1					
-5	1				10.0	
-6	1				5.0	
-7	3					MS/MSD
-8	1					
-9	1					
-10	4					
-17	3	↓	↓		10.0	
<div style="border: 1px solid black; width: 100%; height: 20px; margin: 5px auto;"></div>						
<div style="border: 1px solid black; width: 100%; height: 20px; margin: 5px auto;"></div>						
<div style="border: 1px solid black; width: 100%; height: 20px; margin: 5px auto;"></div>						
OP 2650 MS	3	36.0	0.5 mL	0.5 mL	5.0	F8812-7
OP 2650 MSD	3	↓	↓	↓	↓	↓
OP	DUP					

Surrogate ID: E763 D Conc: 200 ppm Exp. Date: 5-13-01 Bath Temp.: 72°C
 Witness DP
 Spike ID: E766 Conc: 200/100 ppm Exp. Date: 05/13/01 Bath Temp2.: -
 CH2CL2 Lot# CA118 Hexane Lot# - Na2SO4 Lot# T44630
 Acetonitrile Reagent #: 00739C Reagent #: - Reagent #: -

Comments: _____

Relinquished By: Tom Lidka Date: 01/30/01

Accepted By: Nash Jia Date: 1/31/01

USEPA method is 3550R for soils and 3580A for oils.

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: F8427R
 Account: TETRFLTA - Tetra-Tech, NUS
 Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC
 QC Limits: result < RL

Date Analyzed: 02/01/01
 Run ID: MA2196

Methods: SW846 6010B
 Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	9.44	anr							
Antimony	5.0	2.56	1.7	<5.0	1.9	<5.0	0.40	<5.0	2.0	<5.0
Arsenic	10	3.15	0.83	<10	-1.1	<10	0.63	<10	0.19	<10
Barium	200	.94	0.38	<200	0.060	<200	0.010	<200	0.080	<200
Beryllium	5.0	.22	anr							
Cadmium	5.0	.27	anr							
Calcium	1000	10.2	9.3	<1000	2.1	<1000	<u>14.9</u>	<1000	4.2	<1000
Chromium	10	.35	anr							
Cobalt	50	.55	anr							
Copper	25	.71	<u>0.75</u>	<25	-0.040	<25	-0.030	<25	-0.28	<25
Iron	300	9.02	3.6	<300	3.7	<300	8.5	<300	6.0	<300
Lead	5.0	1.16	<u>2.7</u>	<5.0	0.93	<5.0	0.96	<5.0	1.1	<5.0
Magnesium	5000	25.5	anr							
Manganese	15	.26	anr							
Molybdenum	50	1.01								
Nickel	40	.8	0.12	<40	-0.29	<40	0.050	<40	0.0	<40
Potassium	5000	49	387	<5000	344	<5000	339	<5000	377	<5000
Selenium	10	2.5	anr							
Silver	10	.59	anr							
Sodium	5000	173	anr							
Thallium	10	2.07	anr							
Tin	50	1.03								
Vanadium	50	.58	<u>0.63</u>	<50	0.080	<50	0.040	<50	-0.060	<50
Zinc	20	.36	<u>1.6</u>	<20	0.31	<20	0.020	<20	0.45	<20

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: F8427R
 Account: TETRFLTA - Tetra-Tech, NUS
 Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC
 QC Limits: result < RL

Date Analyzed: 02/01/01
 Run ID: MA2196
 Methods: SW846 6010B
 Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	9.44	anr							
Antimony	5.0	2.56	1.3	<5.0	2.4	<5.0	4.5	<5.0	5.4	<6.0<
Arsenic	10	3.15	1.7	<10	0.98	<10	0.40	<10	1.1	<10
Barium	200	.94	0.060	<200	0.18	<200	0.27	<200	0.36	<200
Beryllium	5.0	.22	anr							
Cadmium	5.0	.27	anr							
Calcium	1000	10.2	7.3	<1000	6.3	<1000	7.8	<1000	9.0	<1000
Chromium	10	.35	anr							
Cobalt	50	.55	anr							
Copper	25	.71	-0.12	<25	-0.16	<25	0.41	<25	0.41	<25
Iron	300	9.02	4.5	<300	24.9	<300	26.5	<300	32.4	<300<
Lead	5.0	1.16	0.96	<5.0	1.8	<5.0	1.3	<5.0	1.1	<5.0
Magnesium	5000	25.5	anr							
Manganese	15	.26	anr							
Molybdenum	50	1.01								
Nickel	40	.8	1.4	<40	3.5	<40	5.3	<40<	5.8	<40<
Potassium	5000	49	372	<5000	355	<5000	387	<5000	420	<5000
Selenium	10	2.5	anr							
Silver	10	.59	anr							
Sodium	5000	173	anr							
Thallium	10	2.07	anr							
Tin	50	1.03								
Vanadium	50	.58	-0.010	<50	0.13	<50	0.32	<50	0.62	<50
Zinc	20	.36	0.20	<20	0.33	<20	0.18	<20	0.34	<20

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

QC Batch ID: MP3301
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 01/31/01

Metal	RL	IDL	MB raw	final
Aluminum	20.0	.94		
Antimony	6.0	.26	0.10	<6.0
Arsenic	0.50	.32	0.01	<0.50
Barium	20.0	.09	0.07	<20.0
Beryllium	0.50	.02		
Cadmium	0.40	.03	anr	
Calcium	500	1	<u>7.1</u>	<500
Chromium	1.0	.04	anr	
Cobalt	5.0	.06		
Copper	2.5	.07	0.06	<2.5
Iron	10.0	.9	<u>2.8</u>	<10.0
Lead	10.0	.12	<u>0.17</u>	<10.0
Magnesium	500	2.6		
Manganese	1.5	.03		
Molybdenum	5.0	.1		
Nickel	4.0	.08	0.07	<4.0
Potassium	500	4.9	<u>43.0</u>	<500
Selenium	10.0	.25		
Silver	1.0	.06		
Sodium	500	17.3		
Thallium	1.0	.21		
Tin	5.0	.1		
Vanadium	5.0	.06	0.03	<5.0
Zinc	2.0	.04	<u>0.22</u>	<2.0

Associated samples MP3301: F8427-1R, F8427-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC Date Analyzed: 02/01/01 Methods: SW846 6010B
Analyst: JK Run ID: MA2196
Parameters: Sb,As,Ba,Ca,Cu,Fe,Pb,Ni,K,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:08	MA2196-ICV1	1		
09:13	MA2196-ICB1	1		
09:40	MA2196-CCV1	1		
09:46	MA2196-CCB1	1		
09:52	MA2196-CRI1	1		
09:57	MA2196-CRIA1	1		
10:04	MA2196-ICSA1	1		
10:10	MA2196-ICSAB1	1		
10:15	MA2196-CCV2	1		
10:20	MA2196-CCB2	1		
10:26	MP3301-MB1	1		
10:32	MP3301-B1	1		
10:37	MP3301-D1	1		
10:42	<u>F8427-1R</u>	1		
10:48	MP3301-S1	1		
11:06	MP3301-SD1	5		
11:12	<u>F8427-2R</u>	1		
11:17	ZZZZZZ	1		
11:26	MP3299-MB1	1		
11:34	MA2196-CCV3	1		
11:40	MA2196-CCB3	1		
11:48	MP3299-B1	1		
11:54	MP3299-D1	1		
11:59	F8834-1A	1		(sample used for QC only; not part of login F8427R)
12:04	MP3299-S1	1		
12:09	MP3299-S2	1		
12:15	MP3299-SD1	5		
12:20	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:41	MP3299-SD1	5		
12:46	MA2196-CCV4	1		
12:52	MA2196-CCB4	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F8427R
Account: TETRFLTA - Tetra-Tech, NUS
Project: TETRFLTA1910 - NAS Pensacola

File ID: IR0201M1.ASC Date Analyzed: 02/01/01 Methods: SW846 6010B
Analyst: JK Run ID: MA2196
Parameters: Sb,As,Ba,Ca,Cu,Fe,Pb,Ni,K,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:58	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:47	MA2196-CCV5	1		
13:53	MA2196-CCB5	1		
14:02	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:17	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:28	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:44	ZZZZZZ	1		
14:49	MA2196-CCV6	1		
14:54	MA2196-CCB6	1		
15:00	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:21	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:36	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:47	MA2196-CCV7	1		
15:52	MA2196-CCB7	1		

Refer to raw data for calibration curve and standards.

Metals Digestion Log: Soil

M# 3301

Method Of Digestion: SW8463050B Temp: 95 Thermometer ID#: 46

<u>HNO₃</u>	<u>HCl</u>	<u>H₂O₂</u>
—	—	—
FISHER	FISHER	FISHER
1100041	419100	983019

Sample #	Wt	Final Vol	% Solid	Digestion Factor	Date	Comments
F8427-1R ^{DUP}	1.013	100			1-31-01	
F8427-1R ^{MS}	1.09					2 mL ACC 219 + 1 mL CN6348 + 1.5 mL ACC 108
-1R MS	1.15					SAME AS MS
F8427-1R	1.19					
-2R	1.12					
F8835-1	1.10					
F8840-1	1.15					
-2	1.21					
-3	1.07					
-4	1.12					
-5	1.00					
-6	1.16					
-7	1.06					
-8	1.13					
F8843-1	1.01					
-2	0.97					
-3	1.07					
-4	1.14					
-5	1.01					
-6	1.04					
-7	1.21					
-8, -9	1.08 / 1.03					
B/SB						
B/SB						SAME AS MS

Analyst's Signature:

Date: 1-31-01

QC Review: _____

Date: _____



CH2M HILL
115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA
30346-1278
Tel 770.604.9095
Fax 770.604.9282

November 1, 2002

Mr. Bill Hill
Southern Division, Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, SC 29419-9010

Subject: Contract No. N62467-98-D-0995
Contract Task Order No. 0027
Naval Air Station (NAS) Pensacola - Pensacola, Florida
Draft Project Completion Report for the Excavation of Contaminated Soil and
Groundwater Monitoring at Site 43

Dear Mr. Hill:

CH2M HILL Constructors, Inc. (CCI) is pleased to provide the enclosed Draft Project Completion Report for the Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 documenting CCI activities at NAS Pensacola, Pensacola, Florida.

Please call me at (770) 604-9182, ext. 390 or e-mail me at gwilfley@ch2m.com if you have any questions or comments regarding the enclosed information.

Sincerely,

CH2M HILL CONSTRUCTORS, INC.

A handwritten signature in black ink that reads "Greg Wilfley".

Greg Wilfley
Project Manager

Enclosures

cc: Allison Harris/EnSafe
Brian Caldwell/EnSafe
Greg Campbell/NAS Pensacola
Gena Townsend/USEPA
Tracie Vaught/FDEP
Terry Hansen/TtNUS
CCI Project File No. 154039

Project Completion Report
Excavation of Contaminated Soil and
Groundwater Monitoring at Site 43

Naval Air Station Pensacola
Pensacola, Florida

Revision 00

Contract No. N62467-98-D-0995
Contract Task Order No. 0027

Submitted to
Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Prepared by



115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

October 2002

Release of this document requires the prior notification
of the chief official of the activity studied.

**Project Completion Report
Excavation of Contaminated Soil and
Groundwater Monitoring at Site 43**

**Naval Air Station Pensacola
Pensacola, Florida**

Revision No. 00

**Contract No. N62467-98-D-0995
Contract Task Order No. 0027**

Prepared by



115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

Submitted to

**Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

October 2002

Prepared/Approved By:

Greg Wilfley, Project Manager

Date

Approved By:

R. Scott Newman, Program Manager

Date

Client Acceptance:

U.S. Navy Responsible Authority

Date

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Certificate of Completion

CH2M HILL Constructors, Inc., attests that, to the best of its knowledge and belief, the Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, delivered under Contract No. N62467-98-D-0995, Naval Air Station Pensacola, Pensacola, Florida, CTO 0027, has been completed, inspected, and tested, and complies with the contract.

Ryan Bitely
Project QC Manager

Date



This Project Completion Report for Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, Naval Air Station Pensacola, Pensacola, Florida, was prepared under the direction of a Florida registered Professional Engineer.


Chris Hood, P.E. No. 53927

10/24/02 Expire 02/03
Date

Distribution List

	<u>Copies</u>
Southern Division, Naval Facilities Engineering Command	4
Ron Joyner, NAS Pensacola Environmental	1
Mark Shull, NAS Pensacola ROICC	1
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- Appendix A Contractor Production Reports and Contractor Quality Control Reports
- Appendix B Project Photographs
- Appendix C Data Validation Report
- Appendix D Utility Excavation Permit
- Appendix E Pre- and Post-Excavation Survey
- Appendix F Offsite Backfill Analytical Results
- Appendix G Geotechnical Test and Results
- Appendix H Waste Disposal Documentation
- Appendix I Field Data Sheets

Acronyms and Abbreviations

bls	below land surface
btoc	below top of casing
°C	degrees Celsius
CCI	CH2M HILL Constructors, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
CompQAP	Comprehensive Quality Assurance Plan
CWO4	Chief Warrant Officer 4
DO	dissolved oxygen
DoD	Department of Defense
DPT	direct-push technology
DQOs	Data Quality Objectives
DTW	depth to water
EISOPQAM	Environmental Investigation Standard Operating Procedures and Quality Assurance Manual
EQIS	Environmental Quality Industrial Services
EPA	U.S. Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Residual Organic
GCTLs	groundwater cleanup target levels
IR	Installation Restoration
IRA	Interim Remedial Action
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mS/cm	micro Siemens per centimeter
NACIP	Naval Assessment and Control of Installation Pollutants
NAS	Naval Air Station
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command
NEESA	Naval Energy and Environmental Support Activity
NTU	nephelometric turbidity unit
PA	Preliminary Assessment
PCBs	polychlorinated biphenyls
PPE	personal protective equipment
QA	Quality Assurance
QC	Quality Control
RCI	reactivity/corrosivity/ignitability
RL	reporting limit
ROICC	Resident Officer in Charge of Construction

SARA	Superfund Amendments and Reauthorization Act of 1986
SCTLs	soil cleanup target levels
SI	Site Inspection
SPLP	synthetic precipitation leaching procedure
SVOC	semivolatile organic compounds
TAL	target analyte list
TCL	target compound list
TCLP	toxicity characteristic leaching procedure
TOC	top of casing
TtNUS	Tetra Tech NUS
UCL	upper confidence level
UXO	unexploded ordinance
VOC	volatile organic compound

Executive Summary

As outlined in the project scope, CH2M HILL Constructors, Inc. (CCI) conducted the following activities at Naval Air Station (NAS) Pensacola, Site 43:

- Sampled, delineated, and removed contaminants of concern (COC).
- Removed metal debris observed during excavation.
- Transported and disposed of metal impacted soil and debris to an approved permitted offsite facility.
- Conducted quality control (QC) activities during construction and quality assurance (QA) reporting to document the Interim Remedial Action (IRA) efforts.

Forty-one native surface soil samples, 21 subsurface samples, and associated QA/QC samples were collected by CCI in the vicinity of the identified remedial areas for the source delineation of the associated metals, including antimony, arsenic, barium, copper, iron, lead, nickel, vanadium, and zinc. Severn Trent Laboratories, located in Pensacola, Florida, analyzed samples collected for the specified COC in each particular area. Based on the laboratory results, areas for excavation were defined.

Of the initial 15 anomalous areas delineated for contamination, six areas exceeded the cleanup criteria. These areas were former Pit Numbers 4, 14, 15, 16, 20, and 22. A total of 657 cubic yards of soil and debris were removed from these areas at Site 43.

Due to limited space onsite, excavated soil was either stockpiled or directly loaded into transport vehicles. The soil was analyzed and determined to be hazardous for lead and was manifested accordingly. In addition, approximately 20 to 25 rusted metal drums and drum parts, and inert ornamental ordnance and munitions were uncovered during the excavation in addition to the 14 drums found during the initial site investigation. The soil, drums, drum parts, and inert ornamental ordnance and munitions were disposed of at Michigan Disposal Waste Treatment Facility in Belleville, Michigan. Decontamination wastewater was analyzed and determined to be non-hazardous waste. The subcontractor disposed of the wastewater and two drums that contained unknown liquids.

Excavated areas were backfilled with a clayey soil for the liner and topsoil for the upper 1 foot, compacted, and tested using a nuclear density gauge for required density and moisture content. All areas were hydro-seeded with a blend of brown top millet and Bermuda grass, as well as, lawn fertilizer.

Baseline groundwater sampling was conducted prior to excavation activities and a subsequent round of semi-annual groundwater sampling was conducted after excavation activities were complete. Iron concentrations in groundwater were below the established NAS Pensacola background concentration of 1,707 micrograms per liter ($\mu\text{g}/\text{L}$) for two consecutive sampling events.

CCI recommends No Further Action regarding groundwater at the site and that the temporary monitoring wells be properly abandoned. Additionally, No Further Action is recommended for soil at Site 43.

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) has been contracted by the Department of the Navy, Southern Division, Naval Facilities Engineering Command (NAVFAC), to prepare this Project Completion Report to document the work performed at Site 43 by CCI at the Naval Air Station (NAS) Pensacola in Pensacola, Florida. This work was performed under Contract No. N62467-98-D-0995, CTO No. 0027 and in accordance with the following documents:

- Management approach outlined in the CCI Contract Management Plan (July 1998)
- CCI Basewide Work Plan - Revision 00 (June 2000)
- CCI Work Plan Addendum 03 - Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, NAS Pensacola, Revision 00 (April 2001)

This report is organized into the following sections:

Section 1.0 Introduction includes a summary of the scope of the project, site setting, regulatory framework, and the remedial action objectives for the work.

Section 2.0 Significant Events includes a discussion of the chronology of events and lists the Interim Remedial Action (IRA) participants.

Section 3.0 Soil Delineation includes a summary of the soil investigation conducted to delineate the extent of the excavation.

Section 4.0 Interim Remedial Action Activities provides a summary of the IRA activities undertaken during the performance of the work.

Section 5.0 Groundwater Monitoring presents the results of the baseline and first semi-annual groundwater events.

Section 6.0 Data Quality Evaluation summarizes the results of the soil and groundwater investigations.

Section 7.0 Problems Encountered summarizes the problems encountered during the course of work.

Section 8.0 Final Inspections documents the final inspection performed in completing the work.

Section 9.0 Conclusions and Recommendations provides information on any conclusions and recommendations drawn by CCI during the performance of the work at Site 43.

Section 10.0 Works Cited lists the references used in completing the work at Site 43.

The following support information is presented as appendices to this Project Completion Report:

- Appendix A Contractor Production Reports and Contractor Quality Control Reports
- Appendix B Project Photographs
- Appendix C Data Validation Report

- Appendix D Pre- and Post-Excavation Survey
- Appendix E Utility Excavation Permit
- Appendix F Offsite Backfill Analytical Results
- Appendix G Geotechnical Test and Results
- Appendix H Waste Disposal Documentation (including Waste Disposal Profile, Copies of the Generators Waste Manifests, Certified Weight Tickets, and Certificates of Disposal)
- Appendix I Field Data Sheets

1.1 Project Scope

In CCI's Work Plan Addendum 03 – Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, NAS Pensacola, Revision 00 (April 2001), CCI proposed to Southern Division, NAVFAC to perform the following activities:

- Mobilization and setup
- Site utility clearance
- Former sample point location survey
- Soil sampling for horizontal and vertical delineation
- Pre-excavation survey
- Excavation of contaminated soil
- Post excavation survey
- Site restoration
- Waste management and disposal
- Decontamination and demobilization
- Semi-annual groundwater monitoring well sampling

This report documents the completion of each of these activities.

1.2 Site Background

1.2.1 Site Setting

Site 43 is located at the southwest corner of Murray and Taylor Roads of the Naval Air Station as shown on Figure 1-1. The site, which includes a tennis court, an old building foundation, and access roads to the officer's quarters, is approximately 40,000 square feet in size (Figure 1-2). The site was historically used to dispose of metallic wastes resembling drums of unknown contents. The discovery of buried drums occurred in December 1992, when a child playing with a metal detector discovered two partially buried drums exposed at the surface, east of the tennis court. No odors, visible soil stains, or other indications of contamination were observed at the time the drums were discovered. Results from a Site Characterization Investigation conducted in April 2000, indicated that surface soil, subsurface soil to a depth of 3.5 feet, and groundwater have been impacted by the historical use of Site 43 as a drum storage area (Tetra Tech NUS [TtNUS], 2000).

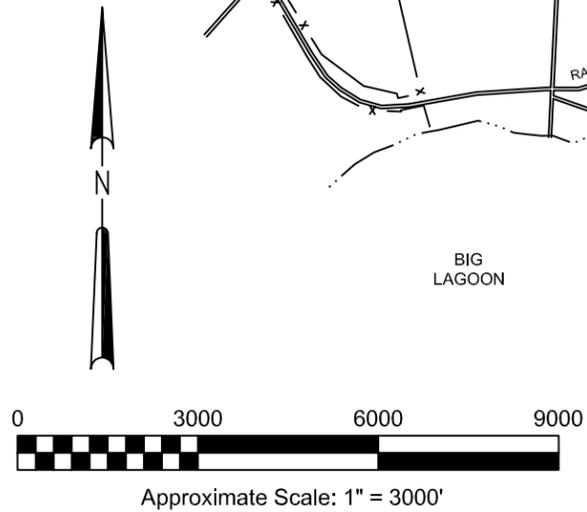
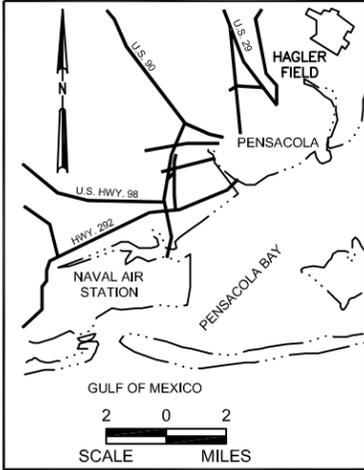
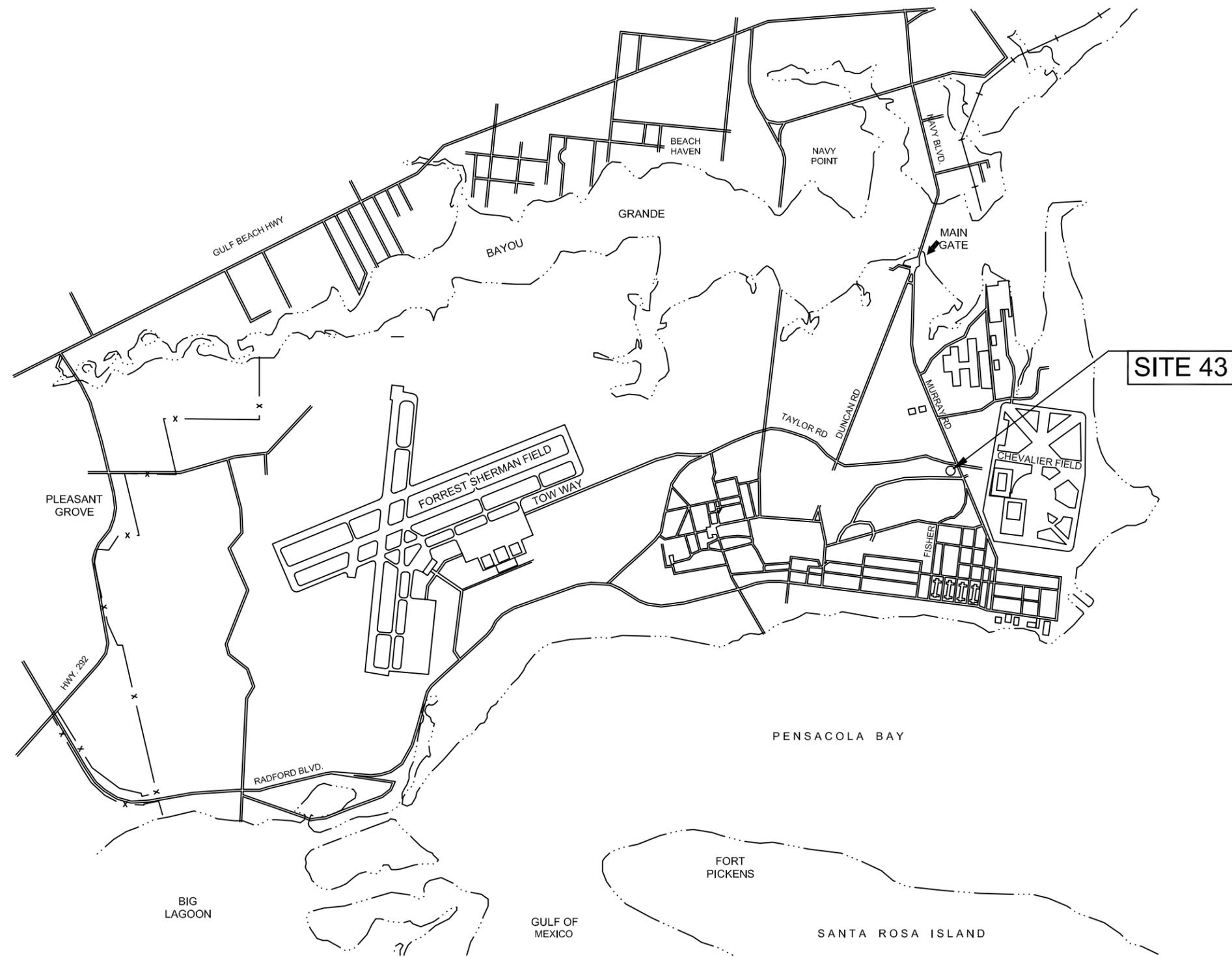


FIGURE 1-1
 Site Location Map
 Site 43, NAS Pensacola



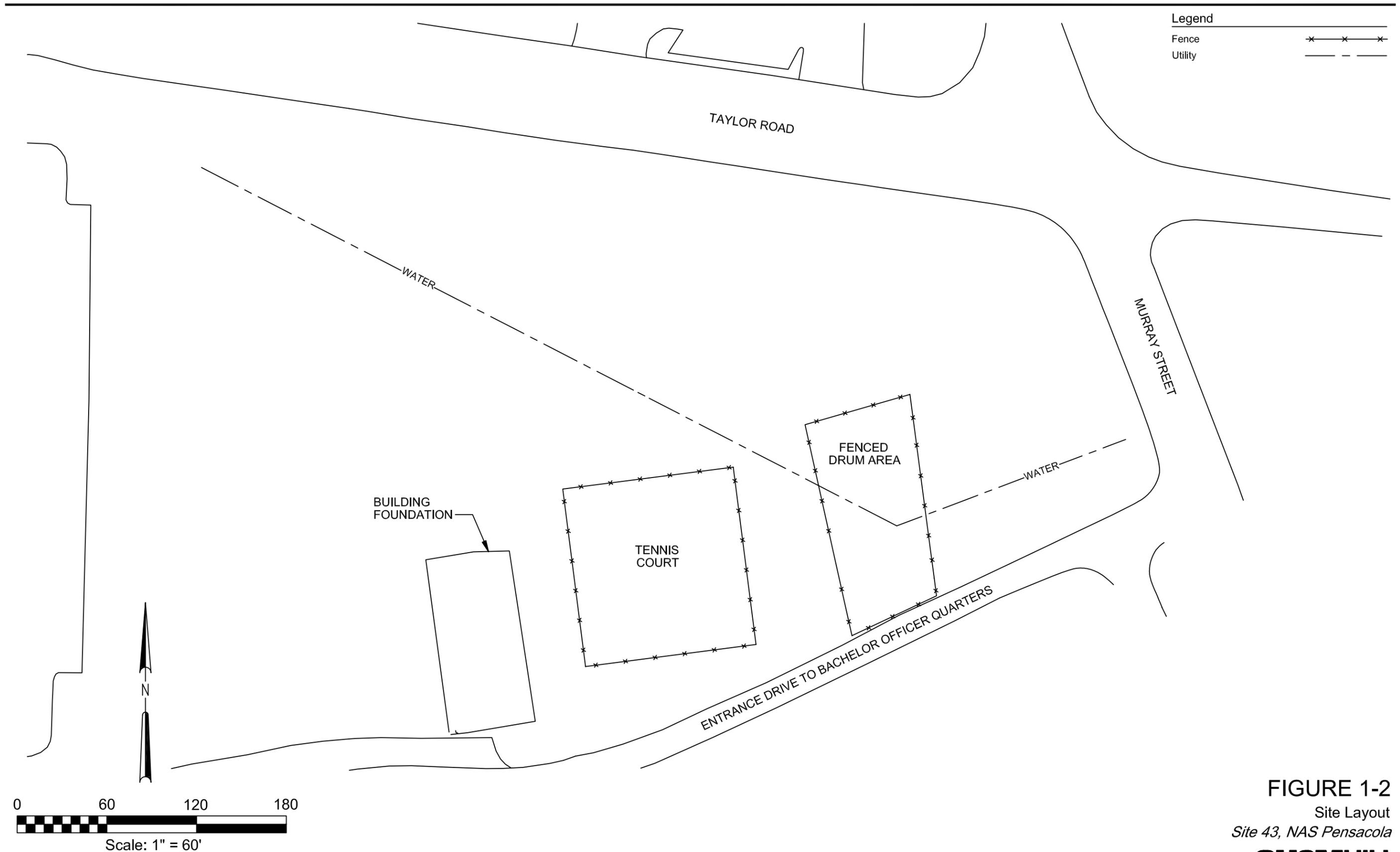


FIGURE 1-2
 Site Layout
 Site 43, NAS Pensacola

1.2.2 Geology/Hydrogeology

Regional

NAS Pensacola is located in the extreme southeastern portion of Escambia County, Florida, which lies within the Coastal Plain Province of the United States. As described in the *Initial Assessment of NAS Pensacola* (Naval Energy and Environmental Support Activity [NEESA], 1983), NAS Pensacola lies within the coastal lowland that is characterized by a series of broad, nearly level marine terraces that extend several miles from the coast and merge with the narrow terraces along the Escambia and Perdido Rivers. NAS Pensacola is bordered on the south by Big Lagoon, on the east by Pensacola Bay, and on the north by Bayou Grande. Swampy areas exist on or near the western portion of NAS Pensacola, and manmade drainage ways and storm drains feed into the short intermittent streams emptying into the bay and bayou. No perennial streams enter or exit NAS Pensacola, but the marshy areas and three small lakes retain water throughout the year. The general elevation of NAS Pensacola is approximately 40 feet above mean sea level (TtNUS 2000).

The surficial geology of the area consists of Pleistocene marine deposits made up of light brown to tan fine quartz sand with associated stringers and lenses of gravel and clay. Underlying these deposits, increasing with age, are the Citronelle Formation, the Miocene Coarse Clastics, the Pensacola Clay, the Tampa Formation, the Chickasawhay Limestone, the Bucatunna Clay member of the Byram Formation, the Ocala Group, the Lisbon equivalent, the Tallahatta Formation, and the Hatchetigbee Formation. The Pleistocene deposits and Citronelle formation are often impossible to differentiate, and together range in thickness from approximately 30 to 800 feet across the county (NEEESA, 1983).

The groundwater is under artesian conditions where layers of clay, sandy clay, or hardpan are present, and under non-artesian conditions where such clays and hardpans are absent. Water levels in the shallow aquifer range from zero to approximately 30 feet below land surface (bls) across in the NAS Pensacola area. The groundwater flow has historically been toward the Gulf of Mexico and the Escambia and Perdido rivers, although groundwater flow can vary locally due to the effect of topography or surface water bodies. The aquifer recharge is most dominantly from local precipitation. The Floridan aquifer is separated from the Sand and Gravel aquifer by a thick section of clay and is subdivided into two parts, upper and lower, by an extensive clay bed (TtNUS 2000).

Site-Specific

Based on the lithologic descriptions provided by TtNUS during the Site Characterization Investigation, the subsurface soil generally consists of light to dark brown, fine to medium sand with interspersed white fine sand (TtNUS, 2000). Groundwater was encountered between 13 and 124 feet bls during this investigation.

1.2.3 Previous Investigations

During a geophysical investigation conducted by EnSafe/ Allen & Hoshall (EnSafe) in March 1994, 25 geophysical anomalies were discovered in and around Site 43 (Figure 1-3). Surface soil samples collected from the anomalous areas indicated impacts of semi-volatile organic compounds (SVOCs) and metals in 20 locations. Excavations were performed in most of the 25 geophysical anomaly areas.



FIGURE 1-3
 Geophysical Anomaly Locations
 Site 43, NAS Pensacola



Fourteen drums and various metal debris were removed from the excavations at anomalous areas 15 and 20 and the native soil was returned to the holes. The drums were over-packed and staged offsite. Subsurface soil samples were collected from the bottoms of the two excavations. These samples exhibited SVOCs and metals concentrations at levels exceeding the Florida soil cleanup target levels (SCTLs). Soil samples were also collected from the five monitoring well boreholes from 14 to 15 feet bls. No soil criteria exceedences were found in the soil samples. The Site Characterization Report recommended further soil sampling for delineation followed by IRA activities to minimize human health and ecological risks (TtNUS, 2000).

1.3 Regulatory Framework

IRA activities at Site 43 are regulated under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

2.0 Significant Events

The following sections provide a timeline of the main construction events and list the IRA participants.

2.1 Chronology of Events

The chronology of events for the main construction activities is listed in Table 2-1.

TABLE 2-1
Chronology of Events

Event	Date
CCI Cost Proposal to Southern Division, NAVFAC	May 17, 2001
CCI Basewide Work Plan	June 2000
CCI Work Plan Addendum 03	April 2001
Former sample point location survey	September 10, 2001
Surface soil sampling	August 23, 2001
Surface and subsurface soil sampling	September 10 and 11, 2001
Surface soil sampling	September 24, 2001
Surface soil sampling	November 19, 2001
Groundwater monitoring wells located. Water levels measured. Baseline groundwater sampling was conducted for wells PEN-43-1S and PEN-43-4S.	November 28, 2001
Surface Soil Sampling	December 06, 2001
Redeveloped wells PEN-43-2S, PEN-43-3S and PEN-43-5S to remove the silt.	December 07, 2001
Pre-excavation survey; Monitoring wells PEN-43-2S, PEN-43-3S and PEN-43-5S were sampled as a continuation of the baseline sampling event.	December 12, 2001
In-situ disposal profile sampling	January 28, 2002
A complete round of water levels was collected across the site.	February 01, 2002
Remediation mobilization	April 03, 2002
Utility excavation permit approval	April 10, 2002
Excavation contaminated soil	April 11, 2002
Load-out contaminated soil for offsite disposal	April 12, 2002
Interruption of activities due to potential unexploded ordnance (UXO) threat	April 15, 2002
Resolution of UXO threat and return to excavation/load-out	April 19, 2002
Completion of excavation and load-out	April 23, 2002
Completion of excavation backfill and compaction	April 26, 2002
Restoration of area complete	May 03, 2002
Complete pre-final/final inspection	May 06, 2002

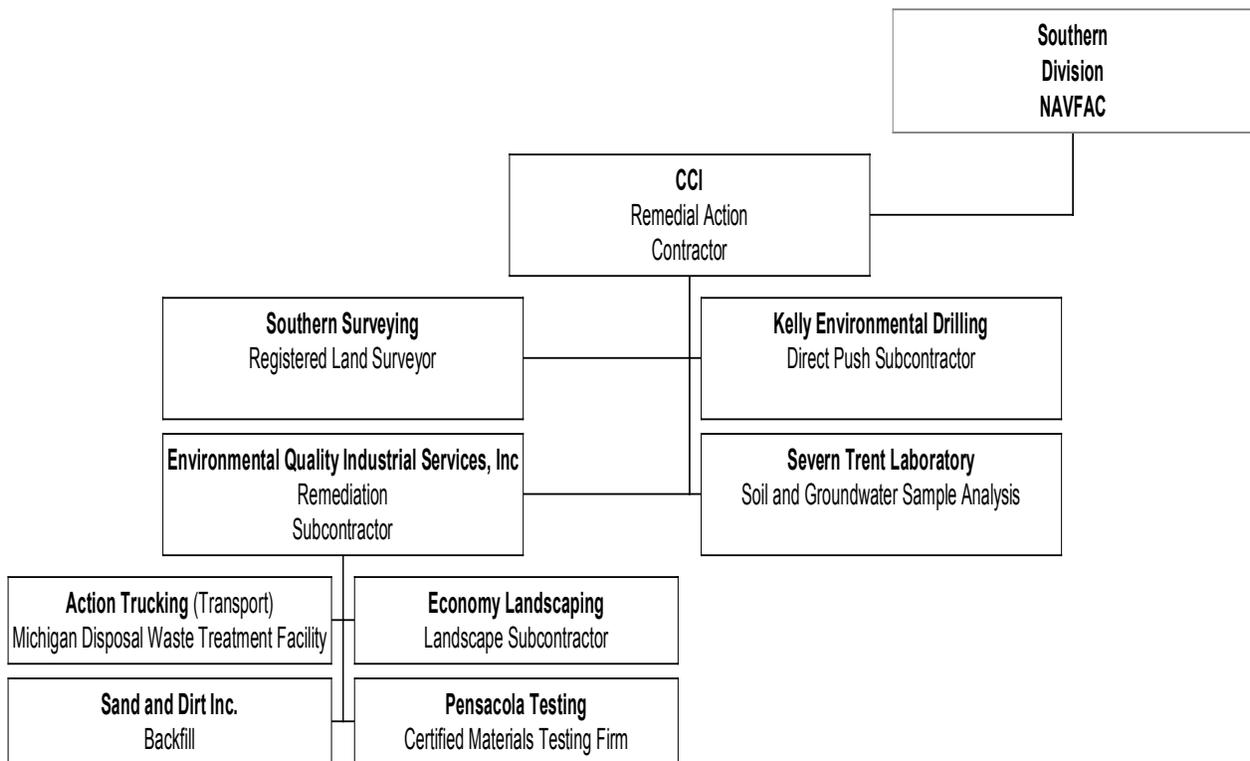
TABLE 2-1
Chronology of Events

Event	Date
Final demobilization	May 06, 2002
Semiannual groundwater sampling conducted for wells PEN-43-1S, -3S, -4S, and -5S	June 13, 2002
Well PEN-43-2S redeveloped	June 24, 2002
Semiannual groundwater sampling conducted for well PEN-43-02	June 27, 2002
Transportation and disposal of decontamination generated wastes	August 21, 2002

2.2 Remedial Action Participants

The remedial action participants and their respective responsibilities for the soil removal are shown on Figure 2-1.

FIGURE 2-1
Interim Remedial Action Participants



3.0 Soil Delineation

Surface and subsurface soil samples were collected for delineation of contaminants of potential concern (COPCs) prior to excavation activities to eliminate leaving the excavation open for prolonged periods and to facilitate accurate quantification of soil.

Of the 15 anomalous areas determined to have surface or subsurface soil exceedences during the site characterization study, only 6 areas were determined to require further investigation and possible remediation. The contaminated areas that were chosen to be further evaluated were determined by establishing a 95 percent upper confidence level (UCL) based on the results of the 17 surface soil samples that were collected in April 2000 (TtNUS, 2000). The concentrations of the COPCs to which humans receptors will be exposed over time were estimated to determine a 95 percent UCL on the mean of COPC concentrations. Section 2.1.3 of CCI's Work Plan Addendum describes the statistical analyses used to create the newly established cleanup levels.

The cleanup goal for antimony was originally set at the FDEP (CCI, 2001) leachability criteria under Chapter 62-777 Florida Administrative Code (FAC) (5.0 milligrams per kilograms [mg/kg]). Antimony was detected at most locations both in surface and subsurface concentrations and was often the driver for additional sampling. The background soil concentration for antimony at NAS Pensacola is 9.48 mg/kg. Antimony was also detected using the synthetic precipitation leaching procedure (SPLP) method in soil to a depth of at least 6 feet bls, but has not been present in groundwater. Therefore, a reasonable approach would be to change the cleanup criteria to be protective of residential direct exposure (26 mg/kg) rather than using the cleanup criteria for leachability to groundwater. Upon reviewing draft technical memorandums summarizing the findings at the site, both EPA and FDEP representatives accepted 26 mg/kg as the new target cleanup value for antimony in surface soil at Site 43. Table 3-1 presents the remedial goals established for the identified COCs at the site using either 62-777 or the 95 percent UCL statistical approach.

TABLE 3-1
Remedial Goals

COC	Surface Soil Criteria(mg/kg)	Subsurface Soil Criteria (mg/kg)
Antimony	26*	26*
Arsenic	21.93***	29**
Barium	1533***	1,600**
Copper	11,226***	N/A
Iron	81,900***	N/A
Lead	9,390***	N/A
Nickel	116.4**	130**
Vanadium	158.1***	N/A
Zinc	23,000*	6,000**

* Chapter 62-777 Residential Direct Exposure

**Chapter 62-777 Leachability based on Groundwater

***Established using 95%percent UCL

N/A = Not Applicable

mg/kg = milligrams per kilogram

3.1 Mobilization

CCI personnel, equipment, subcontractors, and materials mobilized to NAS Pensacola on September 10, 2001, to establish former sample point locations and conduct the initial series of delineation/confirmation samples for the NAS Pensacola Site 43 Remediation Project. Subcontractors utilized for the various tasks are listed in Section 2-1.

3.2 Field Observation

CCI provided oversight of all field operations throughout the course of the project. CCI field oversight staff included a project manager and a site superintendent/health and safety officer, and quality control manager. Detailed records of subcontractor activities were maintained in field logbooks and site field records, including daily Contractor Production Reports and Contractor Quality Control Reports (Appendix A). These reports were completed by CCI. In addition, photographs of all site activities were collected throughout the project. Representative photographs documenting the work are included in Appendix B.

3.3 Site Utility Clearance

During the soil sampling phase of the project, CCI utilized the excavation permit obtained by the Comprehensive Long-term Environmental Action Navy (CLEAN) contractor (TtNUS), as provided by NAS Pensacola Environmental. The permit noted there were no utilities in the area of proposed soil sampling, but underground power and telephone lines were located along the entrance road south of the site. Site utilities were not marked.

3.4 Former Sample Location Point Location Survey

On September 10, 2001, a Florida Registered Land Surveyor from Southern Surveying, Inc. of Navarre, Florida, located the former sample points where elevated concentrations of contaminants were detected. The land surveyor used the State plain coordinates provided by the CLEAN contractor to re-establish the former sample point locations. Wooden stakes were used to identify the former sample point locations. Once located, the original sample points were used as benchmarks to establish a baseline grid system for further delineation sampling.

3.5 Soil Sample Collection

The soil sampling began with collection of surface samples on the perimeter of each of the six identified hot spot areas (Areas 4, 14, 15, 16, 20, and 22); one surface sample from each side at the proposed excavation limits; and one subsurface sample at the surveyed-in original sample point (more on the larger areas). If the analytical data indicated the remedial goals were achieved, no further sampling was conducted. If remedial goals were not achieved then additional sample(s) were collected 5 feet further out from the previous sample(s). Some samples were also analyzed for leachability using EPA Method 1312, SPLP. If the sample results showed no leaching potential, no further sampling was conducted. However, if leaching occurred, the vertical and horizontal extent was determined by

collecting additional samples at 5-foot intervals until an excavation volume could be assessed. This sampling pattern was proposed to continue until the remediation cleanup goals were reached. If the vertical delineation sample results exceeded subsurface soil criteria, additional samples were collected at 5-foot intervals, beginning from 5 to 6 feet bls until clean soil was found or until the groundwater table was reached, whichever occurred first.

From August 23 through September 24, 2001, 41 native surface soil samples, 21 subsurface samples, and associated QA/QC samples were collected by CCI in the vicinity of the identified remedial areas for the source delineation of the associated metals. Figure 3-1 presents the sample locations. The surface soil samples were taken from 0 to 2 feet bls and analyzed for the specified COCs for that area. The determination of whether to continue collecting samples was based on the analytical results of the initial samples.

Initially, analytical results were compared to the cleanup goals established in the approved work plan (CCI, 2001). As discussed above, antimony was the driver for much of the soil exceedences. Based on the change in the antimony cleanup criterion from 5 mg/kg to 26 mg/kg and to complete the delineation of all COCs at the site, CCI remobilized in November and December 2001 to the site to delineate the extent of metals at the site. Since large quantities of metal debris had been encountered, CCI extended the sampling boundary to the edge of the road to the south of the site, the tree line to the east of the site, and to the tennis court west of the drum area and collected perimeter samples. Because some sample results were found to be below criteria, samples were collected inward toward the contamination from the perimeter until the area had been delineated.

Shallow soil samples were collected using decontaminated stainless steel hand augers. The deeper samples were collected using drill rig equipped for direct-push technology (DPT). Kelly Environmental Drilling of Ft. Walton Beach, Florida performed the DPT drilling. Soil was placed into stainless steel bowls, thoroughly mixed using stainless steel spoons, and placed in glass jars. All sampling was conducted in accordance with CCI's Basewide Work Plan for NAS Pensacola (CCI, 1999), FDEP Standard Operating Procedures and the EPA, Region IV Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISOPQAM) dated May 1996, revised 1997.

All samples were delivered to Severn Trent Laboratories in Pensacola, Florida (a Navy-approved laboratory). Samples were analyzed for select metals by EPA Method 6010B. Select samples were analyzed for leachable metals using EPA Method 1312, SPLP.

3.6 Results

Large areas of metal debris were encountered at the site primarily near the tennis court area to the west, midway through the tree line to the east, to the road to the south, and to the swale to the north (about 10 yards north of fenced area). Groundwater was encountered from 13 to 14 feet bls.

Table 3-2 summarizes the surface soil results. Table 3-3 summarizes the subsurface soil results. The analytical data validation is included in Appendix C. Figure 3-2 presents the soil exceedences.

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS18-S-02		43SS19-S-02		43SS20-S-02		43SS21-S-02		43SS25-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	4.9 U	--	0.31 B	--	0.26 B	--	5.3 U	--	4.4 U	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	12	--
Iron	81,900*	--	--	--	--	--	--	--	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	48	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory guidelines are **BOLD**.

SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels

B = Report Value is less than the RL but greater than or equal to the MDL

E = The reported value is estimated due to the presence of interference

J = estimated value

N = The spiked sample recovery is not within the control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS26-S-02		43SS27-S-02		43SS28-S-02		43SS31-S-02		43SS32-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	25	--	23	--	4.8 U	--	31	--	60	--
Arsenic	21.93*	--	--	--	--	--	--	30	--	18	--
Barium	1533*	--	--	--	--	--	--	2300	--	2200	--
Copper	11,226*	2300	--	1100	--	6.0	--	2900	--	5800	--
Iron	81,900*	--	--	--	--	--	--	98000	--	59000	--
Lead	9,390*	9800	--	4000	--	20	--	9900	--	10000	--
Nickel	116.4*	--	--	--	--	--	--	110	--	410	--
Vanadium	158.1*	--	--	--	--	--	--	130	--	670	--
Zinc	23,000***	--	--	--	--	--	--	10000	--	9100	--

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory guidelines are **BOLD**.

SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels

B = Report Value is less than the RL but greater than or equal to the MDL

E = The reported value is estimated due to the presence of interference

J = estimated value

N = The spiked sample recovery is not within the control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SO36-S-06 Dupe of 43SS32 0-2'		43SS33-S-02 0-2'		43SS34-S-02 0-2'		43SS35-S-02 Dupe of 43SS34 0-2'		43SS40-S-02 0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
		Metals									
Antimony	26***	30	24 B	54	--	44	250 U	20	--	16 N	--
Arsenic	21.93*	35	25 U	32	--	52	25 U	28	--	--	--
Barium	1533*	1900	320	2000	--	2300	770	2400	--	--	--
Copper	11,226*	40,000	550	54,000	--	4500	57	3500	--	7600 N	--
Iron	81,900*	69,000	1500	120,000	--	150,000	190 B	53,000	--	79000 N	--
Lead	9,390*	16,000	1300	9800	--	12,000	630	23,000	--	4000 N	--
Nickel	116.4*	400	310	60	--	160	25 U	62	--	569 N	--
Vanadium	158.1*	870	56	31	--	40	50 U	34	--	--	--
Zinc	23,000***	13,000	27,000	34,000	--	11,000	1200	15000	--	--	--

Notes:
 * Based on 3x the 95% Upper Confidence Level
 ** Based on Chapter 62-777 FAC Leachability based on groundwater
 ***Based on Chapter 62-777 FAC Direct Exposure for Residential
 Sample concentrations exceeding regulatory guidelines are **BOLD**.
 SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels
 B = Report Value is less than the RL but greater than or equal to the MDL
 E = The reported value is estimated due to the presence of interference
 J = estimated value
 N = The spiked sample recovery is not within the control limits
 U = undetected
 mg/kg = milligrams per kilogram
 µg/L = micrograms per liter
 -- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS41-S-02		43SS42-S-01		43SS43-S-02		43SS44-S-02		43SS45-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	9.1	--	23	--	17	--	850	--	460	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	610	--	440	--	4700	--	3400	--	3400	--
Iron	81,900*	13000	--	14000	--	110,000	--	--	--	--	--
Lead	9,390*	1800	--	1200	--	4500	--	60,000	--	7000	--
Nickel	116.4*	42	--	20	--	130	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:
 * Based on 3x the 95% Upper Confidence Level
 ** Based on Chapter 62-777 FAC Leachability based on groundwater
 ***Based on Chapter 62-777 FAC Direct Exposure for Residential
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 E = The reported value is estimated due to the presence of interference
 J = estimated value
 N = The spiked sample recovery is not within the control limits
 U = undetected
 mg/kg = milligrams per kilogram
 µg/L = micrograms per liter
 -- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS46-S-02		43SS47-S-02		43SS48-S-02		43SS49-S-02		43SS50-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	300	--	59	--	50	--	31	--	21	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	9.2	--
Barium	1533*	--	--	--	--	--	--	--	--	930	--
Copper	11,226*	7200	--	4200	--	2900	--	1100	--	6400	--
Iron	81,900*	--	--	--	--	--	--	--	--	31,000	--
Lead	9,390*	29,000	--	6900	--	6900	--	4400	--	2700	--
Nickel	116.4*	--	--	--	--	--	--	--	--	44	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	41	--
Zinc	23,000***	--	--	--	--	--	--	--	--	3900	--

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory guidelines are **BOLD**.

SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels

B = Report Value is less than the RL but greater than or equal to the MDL

E = The reported value is estimated due to the presence of interference

J = estimated value

N = The spiked sample recovery is not within the control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS51-S-02		43SS52-S-02		43SS53-S-02		43SS59-S-03 Dupe of 43SS53-S-02		43SS54-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	7.9	--	23	--	11	--	24	--	49	--
Arsenic	21.93*	12	--	19	--	9.9	--	--	--	--	--
Barium	1533*	660	--	1100	--	690	--	--	--	--	--
Copper	11,226*	900	--	69,000	--	1500	--	3700	--	8000	--
Iron	81,900*	60,000	--	72,000	--	32,000	--	74,000	--	150,000	--
Lead	9,390*	2100	--	4200	--	2900	--	3400	--	26,000	--
Nickel	116.4*	140	--	370	--	59	--	--	--	--	--
Vanadium	158.1*	26	--	120	--	34	--	--	--	--	--
Zinc	23,000***	3800	--	19,000	--	3900	--	--	--	--	--

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory guidelines are **BOLD**.

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J = estimated value

N = The spiked sample recovery is not within the control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS55-S-02		43SS56-S-02		43SS57-S-02		43SS58-S-02 Dupe of 43SS57-S-02		43SS60-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	26	--	16	--	15	--	23	--	24	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	4800	--	6400	--	1500	--	1700	--	--	--
Iron	81,900*	180,000	--	62,000	--	45,000	--	77,000	--	--	--
Lead	9,390*	13,000	--	5700	--	4400	--	5300	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	210
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:
 * Based on 3x the 95% Upper Confidence Level
 ** Based on Chapter 62-777 FAC Leachability based on groundwater
 ***Based on Chapter 62-777 FAC Direct Exposure for Residential
 Sample concentrations exceeding regulatory guidelines are **BOLD**.
 SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels
 B = Report Value is less than the RL but greater than or equal to the MDL
 E = The reported value is estimated due to the presence of interference
 J = estimated value
 N = The spiked sample recovery is not within the control limits
 U = undetected
 mg/kg = milligrams per kilogram
 µg/L = micrograms per liter
 -- = Not Analyzed

TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS61-S-02		43SS62-S-02		43SS63-S-02		43SS71-S-02 Dupe of 43SS63		43SS64-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	7.8	--	0.41 B	--	20	--	5.8	--	26	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	35,000	--	21,000	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	70	--	26	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

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** Based on Chapter 62-777 FAC Leachability based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory guidelines are **BOLD**.

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U = undetected

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS65-S-02		43SS66-S-02		43SS67-S-02		43SS68-S-02		43SS69-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	13	--	50	--	57	--	34 NE	--	29	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	51,000	--	110,000 N	--	--	--
Lead	9,390*	--	--	--	--	3700 B3	--	9,300 NB3	--	--	--
Nickel	116.4*	80	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS70-S-02		43SS80-S-02		43SS102-S-02 Dup of 43SS80		43SS81-S-02		43SS82-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	20	--	0.8 B	--	0.47 B	--	8.3	--	68 N	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	--	--	--	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

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Exposure for Residential

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mg/kg = milligrams per kilogram

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS83-S-02		43SS84-S-02		43SS85-S-02		43SS86-S-02		43SS87-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	7.1	--	2.2 B	--	0.91 B	--	0.55 B	--	18	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	--	--	--	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	610	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS88-S-02 Dup of 43SS87		43SS89-S-02		43SS90-S-02		43SS91-S-02		43SS92-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	3.7 B	--	8.8	--	4.4	--	4.8 U	--	23	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	--	--	--	--	--	--
Lead	9,390*	1200	--	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS93-S-02		43SS94-S-02		43SS95-S-02		43SS96-S-02		43SS97-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	0.34 B	--	.43 B	--	31	--	53	--	24	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	--	--	--	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS98-S-02		43SS99-S-02		43SS100-S-02		43SS101-S-02 Dup of 43SS100		43SS103-S-02	
		0-2'		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	26***	13	--	25	--	3.2 B	--	4.2	--	2.3 B	--
Arsenic	21.93*	--	--	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	56,000 EN	--	12,000	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--	--	--

Notes:

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TABLE 3-2
Surface Soil Results

Compounds	Regulatory Guidelines	43SS104-S-02		43SS110-S-02		43SS111-S-02		43SS112-S-02 Dupe of 43SS111	
		0-2'		0-2'		0-2'		0-2'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals									
Antimony	26***	24	--	7	--	12	--	11	--
Arsenic	21.93*	--	--	--	--	--	--	--	--
Barium	1533*	--	--	--	--	--	--	--	--
Copper	11,226*	--	--	--	--	--	--	--	--
Iron	81,900*	--	--	--	--	--	--	--	--
Lead	9,390*	--	--	--	--	--	--	--	--
Nickel	116.4*	--	--	--	--	--	--	--	--
Vanadium	158.1*	--	--	--	--	--	--	--	--
Zinc	23,000***	--	--	--	--	--	--	--	--

Notes:

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Exposure for Residential

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SPLP = Leachability values may be derived using the SPLP test to calculate site-specific soil cleanup target levels

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J = estimated value

N = The spiked sample recovery is not within the control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

Table 3-3
Subsurface Soil Results

Compounds	Regulatory Guidelines	43SO05-S-03		43SO05-S-8		43SO05-S-13		43SO07-S-06		43SO07-S-8	
		2-3'		7-8'		12-13'		5-6'		7-8'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals											
Antimony	5**	58	17 B	0.48	--	0.59 B	--	0.85 B	14 B	0.35 B	--
Arsenic	29**	--	--	--	--	--	--	1.0	25 U	0.46 B	--
Barium	1600**	--	--	--	--	--	--	56	520	2.6	--
Copper	SPLP	6900	59	1.0	50 U	0.84 U	24 B	120 N	8900 N	0.85 B	58
Iron	SPLP	66000	560	1400	660	200	1100	3200 N	1000	1500	310 B
Lead	SPLP	5200	560	2.3	25 U	0.46	16	450 N	4800	1.4	25 U
Nickel	130**	--	--	--	--	--	--	3.2	71	0.7	--
Vanadium	980**	--	--	--	--	--	--	32	42 B	9.2	--
Zinc	6,000***	--	--	--	--	--	--	290 N	13000	4.0	--

Notes:

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Exposure for Residential

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guidelines are **BOLD**.

the SPLP test to calculate site-specific soil
cleanup target levels

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presence of interference

J = estimated value

N = The spiked sample recovery is not within the
control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

Table 3-3
Subsurface Soil Results

Compounds	Regulatory Guidelines	43SO07-S-100 Dupe Of 43SS007-S-8 7-8'		43SO07-S-13 12-13'		43SO10-S-03 2-3'		43SO10-S-8 7-8'		43SO10-S-13 12-13'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
		Metals									
Antimony	5**	0.32 B	--	0.46 B	--	30	250 U	0.68 B	--	1.0 B	--
Arsenic	29**	0.34 B	--	0.46 U	--	--	--	--	--	--	--
Barium	1600**	2.7	--	0.50 B	--	--	--	--	--	--	--
Copper	SPLP	0.79 B	--	0.91 U	44 B	6500	19 B	1.8	21 B	0.37 B	32
Iron	SPLP	1500	--	97	900	--	--	--	--	--	--
Lead	SPLP	1.3	--	0.63	38	8200	47	2.3	--	1.1	22
Nickel	130**	0.69	--	0.46 U	--	--	--	--	--	--	--
Vanadium	980**	9.2	--	0.18 B	--	--	--	--	--	--	--
Zinc	6,000***	4.3	--	1.0 B	--	--	--	--	--	--	--

Notes:
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Table 3-3
Subsurface Soil Results

Compounds	Regulatory Guidelines	43SO12-S-06 5-6'		43SO12-S-11 10-11'		43SO12-S-100 Dupe of 43SO12-S-11 10-11'		43SO12-S-14 13-14'		43SO14-S-03 2-3'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
		Metals									
Antimony	5**	4.7 U	250 U	0.53 B	--	0.47 B	--	0.66 B	--	8.8	11 B
Arsenic	29**	--	--	--	--	--	--	--	--	--	--
Barium	1600**	--	--	--	--	--	--	--	--	--	--
Copper	SPLP	7.1	310	0.82 B	50 U	0.70 B	--	1.3	84	1700	45 B
Iron	SPLP	1500	12000	290	1100	270	--	160	1800	--	--
Lead	SPLP	35	760	1.3	25 U	1.2	--	1.6	70	3300	160
Nickel	130**	0.65	17 B	0.27 B	--	0.48 U	--	0.23 B	--	--	--
Vanadium	980**	--	--	--	--	--	--	--	--	--	--
Zinc	6,000***	--	--	--	--	--	--	--	--	--	--

Notes:
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 ** Based on Chapter 62-777 FAC Leachability based on groundwater
 ***Based on Chapter 62-777 FAC Direct Exposure for Residential
 Sample concentrations exceeding regulatory guidelines are **BOLD**.
 the SPLP test to calculate site-specific soil cleanup target levels
 B = Report Value is less than the RL but greater than or equal to the MDL
 E = The reported value is estimated due to the presence of interference
 J = estimated value
 N = The spiked sample recovery is not within the control limits
 U = undetected
 mg/kg = milligrams per kilogram
 µg/L = micrograms per liter
 -- = Not Analyzed

Table 3-3
Subsurface Soil Results

Compounds	Regulatory Guidelines	43SO14-S-8 7-8'		43SO14-S-13 12-13'		43SO15-S-03 2-3'		43SO30-S-06 5-6'		43SO31-S-06 5-6'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
		Metals									
Antimony	5**	0.30 B	--	0.68 B	--	4.0 U	250 U	--	--	0.79 B	--
Arsenic	29**	--	--	--	--	--	--	--	--	0.48 U	--
Barium	1600**	--	--	--	--	--	--	--	--	14	--
Copper	SPLP	1.6	50 U	0.51 B	--	--	--	--	--	2.5	--
Iron	SPLP	--	--	--	--	--	--	--	--	1600	--
Lead	SPLP	1.2	--	5.0	--	--	--	--	--	11	--
Nickel	130**	--	--	--	--	--	--	--	--	0.68	--
Vanadium	980**	--	--	--	--	--	--	--	--	3.3	--
Zinc	6,000***	--	--	--	--	--	--	--	--	13	--

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability
based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory
guidelines are **BOLD**.

the SPLP test to calculate site-specific soil
cleanup target levels

B = Report Value is less than the RL but greater
than or equal to the MDL

E = The reported value is estimated due to the
presence of interference

J = estimated value

N = The spiked sample recovery is not within the
control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

Table 3-3
Subsurface Soil Results

Compounds	Regulatory Guidelines	43SO32-S-06		43SO33-S-06		43SO34-S-06	
		5-6'		5-6'		5-6'	
		mg/kg	SPLP µg/L	mg/kg	SPLP µg/L	mg/kg	SPLP µg/L
Metals							
Antimony	5**	0.36 B	--	0.29 B	--	0.50 B	250 U
Arsenic	29**	0.38 B	--	0.37 B	--	0.47 B	25 U
Barium	1600**	2.5	--	5.8	--	11	310
Copper	SPLP	1.1	--	1.4	--	0.75 B	35 B
Iron	SPLP	1300	--	1500	--	1600	1100
Lead	SPLP	3.1	--	7.5	--	1.7	38
Nickel	130**	0.64	--	0.66	--	0.59	25 U
Vanadium	980**	2.9	--	3.2	--	3.3	110
Zinc	6,000***	6.9	--	10	--	4	5

Notes:

* Based on 3x the 95% Upper Confidence Level

** Based on Chapter 62-777 FAC Leachability
based on groundwater

***Based on Chapter 62-777 FAC Direct

Exposure for Residential

Sample concentrations exceeding regulatory
guidelines are **BOLD**.

the SPLP test to calculate site-specific soil
cleanup target levels

B = Report Value is less than the RL but greater
than or equal to the MDL

E = The reported value is estimated due to the
presence of interference

J = estimated value

N = The spiked sample recovery is not within the
control limits

U = undetected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

-- = Not Analyzed

Legend

Fence	— x — x — x —
Utility	— — — — —
Tree	
Previous Surface Soil Sample Location	▲
Previous Subsurface Soil Sample Location	△
Previous Surface Soil Sample Designation	PEN-43SS14
Previous Subsurface Soil Sample Designation	PEN-43SV07
Surface Soil Sample Location	●
Subsurface Soil Sample Location	○
Surface Soil Sample Designation	43SS18
Subsurface Soil Sample Designation	43SO05
Proposed Excavation Area (0-2')	

Notes:

- All results are shown in mg/kg.
- The applicable surface soil criteria are:

Antimony	26
Arsenic	21.93
Barium	1,533
Copper	11,226
Iron	81,900
Lead	9,390
Nickel	116.4
Vanadium	158.1
Zinc	23,000
- The applicable subsurface soil criteria are:

Antimony	5
Arsenic	29
Barium	1,600
Nickel	130
Zinc	6,000
- NE = No exceedance of applicable criteria

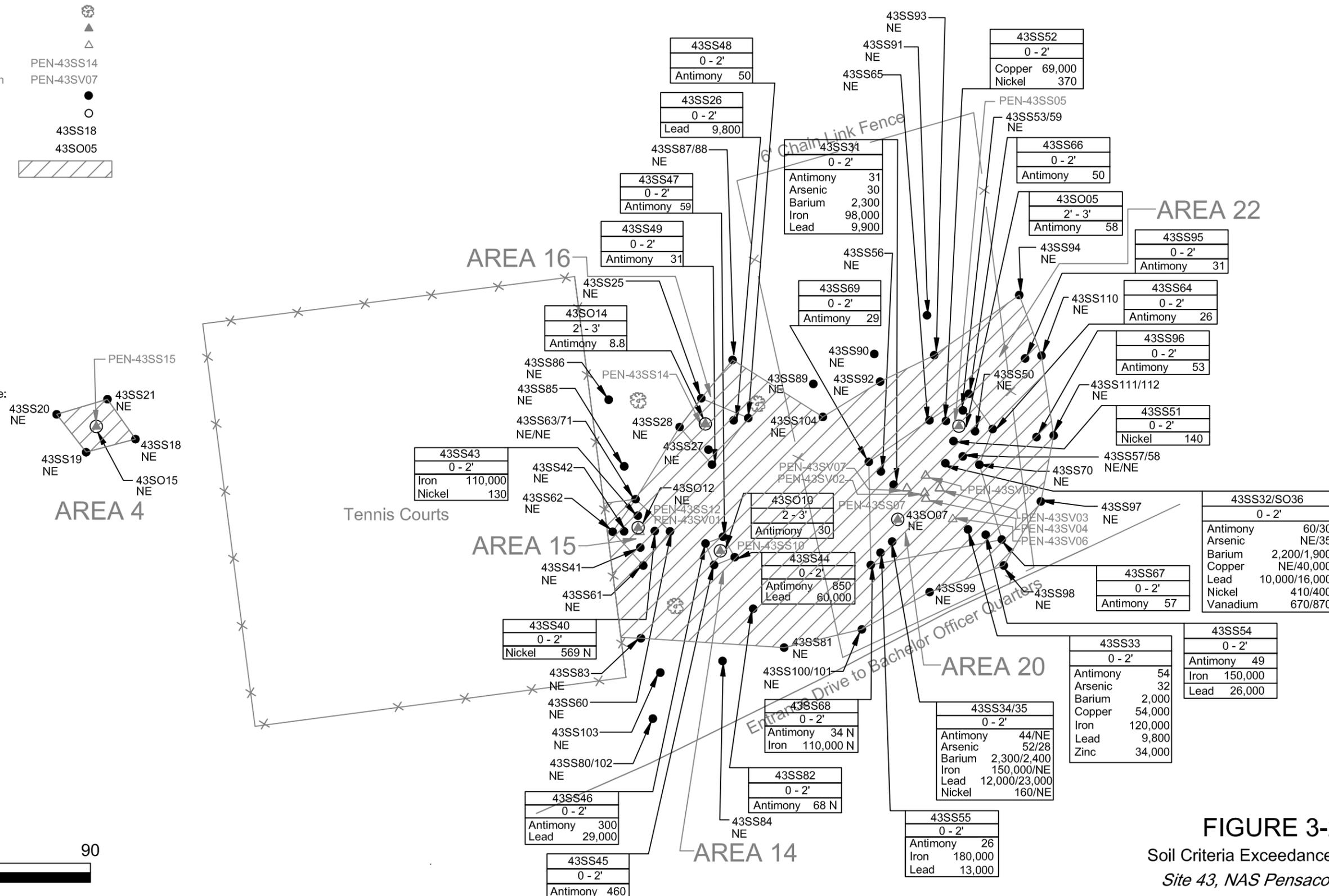


FIGURE 3-2
Soil Criteria Exceedances
Site 43, NAS Pensacola



3.6.1 Area 4

Four surface samples (43SS18, 43SS19, 43SS20 and 43SS21) and one subsurface sample (43SO05) were collected at Area 4 and analyzed for antimony. There were no exceedences in Area 4.

3.6.2 Area 14

One subsurface sample (43SO10) was initially collected in the center of Area 14. The sample was collected from 2 to 3 feet bls and analyzed for antimony, copper, and lead. All three metals were detected; the antimony concentration exceeded criteria. The only cleanup criteria for lead and copper in Chapter 62-777 FAC is based on the leachability of the contaminants. Therefore, the sample was analyzed using SPLP. Both copper and lead leached from this sample. Two additional deeper samples were collected from beneath this sample from 7 to 8 feet bls and 12 to 13 feet bls. Antimony did not exceed the criterion in the 7 to 8 feet bls sample, and the total copper and lead results were very low. However, copper leached from the sample using SPLP. Copper and lead were detected at low concentrations in the 12 to 13 feet bls sample. SPLP analytical results for the 12 to 13 feet bls indicated both metals showed a leaching potential.

Four surface samples were also collected from Area 14 approximately 5 feet from the center sample. Samples 43SS44, 43SS45, 43SS46 and 43SS47 were collected from 0 to 2 feet bls and analyzed for antimony, copper and lead. The antimony criterion of 29 mg/kg was exceeded in each of the four surface soil samples. The lead criterion was exceeded in two of the four surface soil samples. Figure 3-2 presents the soil exceedences.

3.6.3 Area 15

Initially, one subsurface sample (43SO12) was collected from 5 to 6 feet bls at Area 15 and analyzed for antimony, copper, iron, lead and nickel. Concentrations of copper, iron, lead and nickel were detected. Since the cleanup of copper and lead must be determined using the SPLP method, the sample was analyzed using SPLP. Copper, iron, lead and nickel leached from the 5 to 6 feet bls sample. Therefore, two additional subsurface samples were collected beneath this initial sample from 10 to 11 feet and 13 to 14 feet bls. Groundwater was encountered at 14 feet bls. The 10 to 11 feet bls sample was analyzed for copper, iron and lead using the total and SPLP methods. Iron continued to leach from the soil at this depth. Lower concentrations of metals were detected in the 13 to 14 feet bls sample. Copper, iron and lead leached from the 13 to 14 foot sample using the SPLP.

Four surface soil samples were collected approximately 5 feet out from the center location (43SO12) at Area 15. Samples 43SS40, 43SS41, 43SS42 and 43SS43 were analyzed for antimony, copper, iron, lead and nickel. The antimony criterion of 5.0 mg/kg was exceeded in all four surface samples (all were below the direct exposure criterion of 26 mg/kg). Sample 43SS40 also exceeded the nickel criterion. Sample 43SS43 also exceeded the iron and nickel criteria.

Four additional surface soil samples were collected approximately 5 feet from the previous four samples. Samples 43SS60, 43SS61, 43SS62 and 43SS63 (plus its duplicate 43SS71) were analyzed for antimony. Additionally, sample 43SS63 was analyzed for iron and nickel. SPLP results for sample 43SS60 indicate nickel will leach from the sample. Iron and nickel

concentrations were not above criteria in sample 43SS63. The antimony criterion of 5.0 mg/kg was exceeded in samples 43SS60, 43SS61 and 43SS63, the direct exposure criterion for antimony was not exceeded. Figure 3-2 presents the soil exceedences.

3.6.4 Area 16

Two of the original four surface soil samples collected in Area 16 exhibited concentrations of metals above the regulatory criteria. Samples were analyzed for antimony, copper and lead. Sample 43SS26 exceeded the criterion for antimony (5.0 mg/kg) and lead while sample 43SS27 exceeded the criterion for antimony only. However, none of the surface samples exceeded the new applicable criterion of 26 mg/kg. The 2 to 3 feet bls sample (43SO14) collected from Area 16 exceeded the subsurface criteria for antimony. Copper and lead were also detected so the SPLP was performed on the sample. Antimony, copper and lead leached from the 2 to 3 feet bls sample. Two additional samples were collected from beneath Area 14 from 7 to 8 feet and 12 to 13 feet bls. Low concentrations of total antimony, copper and lead were detected. SPLP was performed on the 7 to 8 feet bls sample and analyzed for copper. No copper was detected using the SPLP. SPLP was not performed on the 12 to 13 feet bls sample.

Two additional surface soil samples were collected approximately 5 feet out from samples 43SS26 and 43SS27 (43SS48 and 43SS49, respectively) and analyzed for antimony, copper and lead. Antimony criterion (26 mg/kg) was exceeded in both locations. Figure 3-2 presents the soil exceedences.

3.6.5 Area 20

Initially, five borings were completed in Area 20. Center sample 43SO07 was completed to 6 feet bls while samples were collected from 43SS31, 43SS32, 43SS33, 43SS34 from 0 to 2 feet bls and from 5 to 6 feet bls. All samples were analyzed for antimony, arsenic, barium, copper, iron, lead, nickel, vanadium and zinc. There were detections of copper, iron and lead so the SPLP method was run on the 5 to 6 feet bls sample. Antimony, barium, copper, iron, lead, nickel and zinc leached from the sample. Therefore, an additional sample was collected immediately beneath this area from 7 to 8 feet bls and analyzed for total metals. There were no exceedences but there were detections of copper, iron and lead so the SPLP method was performed on the sample. Copper and iron leached from the 7 to 8 feet bls sample. One additional sample was collected from the same area from 12 to 13 feet bls and analyzed for total metals. There were no exceedences; however, iron and lead were detected. The SPLP results for in the 12 to 13 feet bls sample indicate copper, iron and lead will leach from the sample.

Surface soil sample 43SS31 exceeded criteria for antimony (26 mg/kg), arsenic, barium, copper, iron and lead. Sample 43SS32 exceeded criteria for antimony, barium, lead, nickel and vanadium. Sample 43SS33 exceeded criteria for antimony, arsenic, barium, copper, iron, lead, and zinc. Sample 43SS34 exceeded criteria for antimony, arsenic, barium, iron, lead and nickel. SPLP was performed on 43SS34. Barium, copper, iron, nickel and zinc leached from the sample.

Four additional surface soil samples were collected approximately 5 feet out from the previous surface soil samples. Samples 43SS54, 43SS55, 43SS56 and 43SS57 (plus its

duplicate 43SS58) were analyzed for antimony, copper, iron and lead. Antimony criterion of 5.0 mg/kg was exceeded in all four surface samples, however only one sample, 43SS54 exceeded the direct exposure criterion of 26 mg/kg. Iron and lead criteria were also exceeded in samples 43SS54 and 43SS55.

Four additional surface soil samples were collected approximately 5 feet out from the second set of surface soil samples. Samples 43SS67, 43SS68, 43SS69 and 43SS70 were analyzed for antimony. Samples 43SS67 and 43SS68 were also analyzed for iron and lead. Antimony criterion (5.0 mg/kg) was again exceeded in all samples. Three samples (43SS67 - 69) also exceeded the direct exposure criterion of 26 mg/kg. Sample 43SS68 also exceeded the criteria for iron. Figure 3-2 presents the soil exceedences.

3.6.6 Area 22

Subsurface sample 43SO05 was collected in the center of Area 22 from 2 to 3 feet bls and analyzed for total antimony, copper, iron and lead and by SPLP. Total results exceeded the criteria of 5.0 (leachability) and 26 mg/kg (direct exposure) for antimony. Total copper, iron and lead were also detected and leached from the sample by the SPLP method (as did antimony). Additional samples were collected in this area from 7 to 8 feet and 12 to 13 feet bls. Antimony concentrations were below the 5.0 mg/kg criterion in both samples. Iron leached from the 7 to 8 feet bls sample. Both iron and lead leached from the 12 to 13 feet bls sample using the SPLP.

Four surface soil samples were collected approximately 5 feet out from the center sample. Samples 43SS50, 43SS51, 43SS52 and 43SS53 were analyzed for antimony, arsenic, barium, copper, iron, lead, nickel, vanadium and zinc. All samples exceeded the antimony criterion of 5.0 mg/kg but were below the 26 mg/kg criterion. Sample 43SS51 also exceeded the criteria for nickel and sample 43SS52 also exceeded the criteria for copper and nickel.

Three additional surface soil samples were collected approximately 5 feet out from the previous samples (except in the southeast corner where Area 22 began overlapping with Area 20). All samples were analyzed for antimony. Sample 43SS65 was also analyzed for nickel. All samples exceeded the antimony criterion of 5.0 mg/kg but none exceeded 26 mg/kg (direct exposure). Nickel concentrations did not exceed criteria. Figure 3-2 presents the soil exceedences.

3.6.7 Perimeter Sampling

None of the 14 initial perimeter surface samples collected at the site showed exceedences of the applicable criteria. Consequently, eight additional samples were collected inward towards the source area to help better define and thus decrease the volume of soil to be removed. Of these additional eight samples, five showed no exceedences and therefore the proposed removal area was decreased. Figure 3-2 presents the soil exceedences.

3.7 Summary Discussion

Metals exceeding cleanup criteria include antimony, arsenic, barium, copper, iron, lead, nickel, vanadium and zinc. All were found at concentrations above the cleanup criteria and the background soil concentrations established for NAS Pensacola. A few of these metals

also leached from the soil using the SPLP methodology. Figure 3-2 presents the soil exceedences.

During the site characterization activities conducted by TtNUS, only iron and aluminum were detected in groundwater at concentrations exceeding cleanup criteria. The iron in groundwater at Site 43 ranged from 1,390 to 2,980 micrograms per liter ($\mu\text{g/L}$). Iron and aluminum concentrations are regulated by secondary drinking water standards. The secondary cleanup criterion for iron is 300 $\mu\text{g/L}$ (Chapter 62-550 FAC). The background concentration of iron in groundwater at NAS Pensacola is 1,707 $\mu\text{g/L}$. Due to naturally occurring iron in the Sand and Gravel aquifer (Geraghty & Miller 1984 and 1986), NAS Pensacola drinking water is supplied from off-base. None of the other metals detected in soil have migrated to the water table at concentrations above the groundwater criteria. The closest surface water body is approximately 3,500 feet east of the site; therefore, migration to surface water is unlikely. Figure 3-3 presents the iron SPLP results in subsurface soil.

The Data Quality Evaluation (DQE) performed for the analytical results is presented in and Appendix C.

Based on the metals concentrations found at Site 43 in surface soil, there are two proposed excavation areas, a small one west of the tennis court (Area 4) and a larger one east of the tennis court (encompassing Areas 14, 15, 16, 20, and 22). Figure 3-4 presents the proposed excavation area. The following table presents the proposed volumes of soil associated with these excavations.

TABLE 3-4
Excavation Volumes

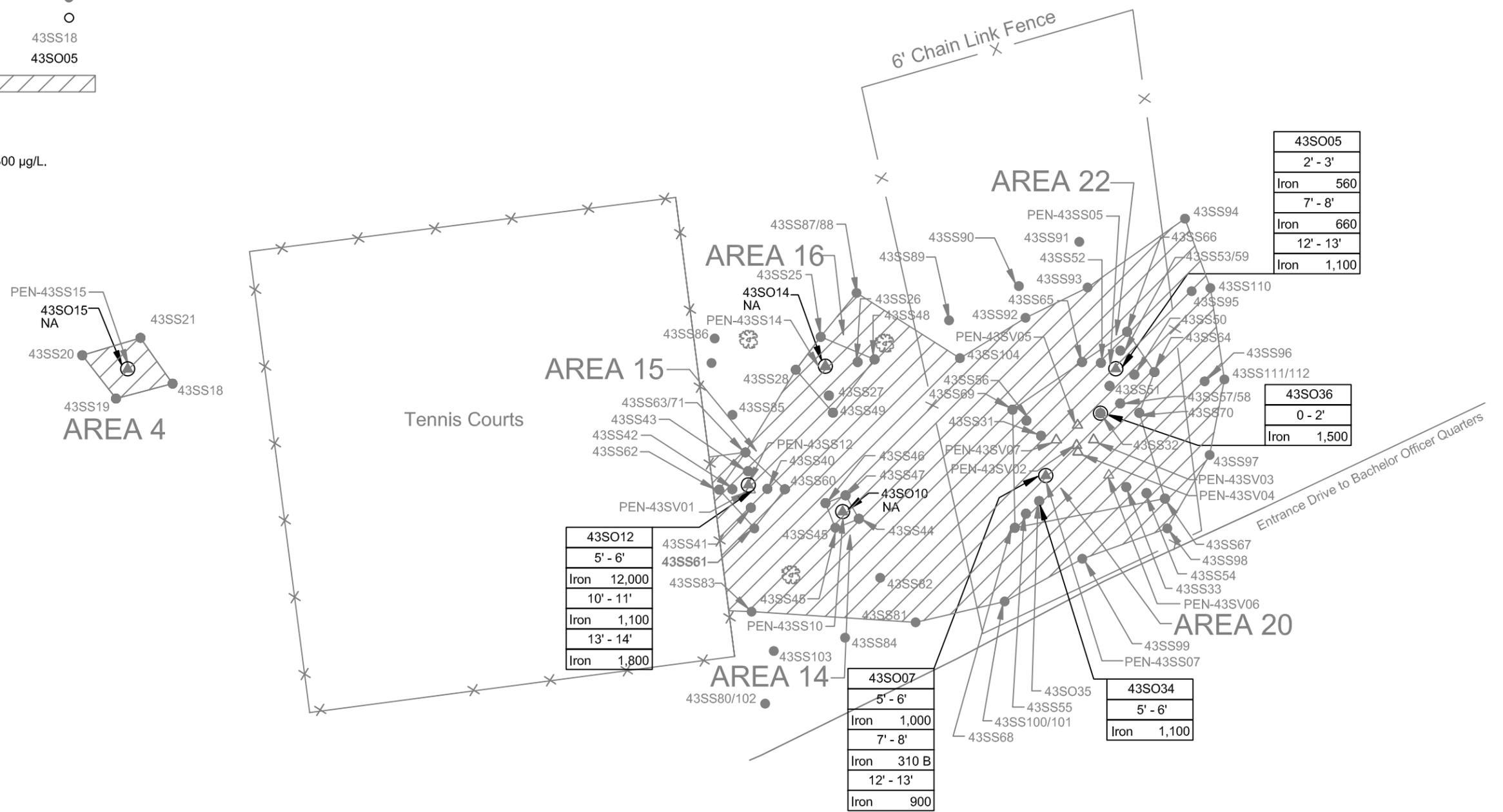
Excavation Area	Depth	Volume (cubic yards)
4	0-2	16
14, 15, 16, 20 and 22	0-2	641
TOTAL CUBIC YARDS		657

Legend

Fence	—x—x—x—
Utility	—|—|—|—|—
Tree	⊗
Previous Surface Soil Sample Location	▲
Previous Subsurface Soil Sample Location	△
Previous Surface Soil Sample Designation	PEN-43SS14
Previous Subsurface Soil Sample Designation	PEN-43SV07
Surface Soil Sample Location	●
Subsurface Soil Sample Location	○
Surface Soil Sample Designation	43SS18
Subsurface Soil Sample Designation	43SO05
Proposed Excavation Area (0-2')	▨

Notes:

1. All results are shown in µg/L.
2. The applicable groundwater criterion for iron is 300 µg/L.
3. NA = Not analyzed



43SO12
5' - 6'
Iron 12,000
10' - 11'
Iron 1,100
13' - 14'
Iron 1,800

43SO07
5' - 6'
Iron 1,000
7' - 8'
Iron 310 B
12' - 13'
Iron 900

43SO05
2' - 3'
Iron 560
7' - 8'
Iron 660
12' - 13'
Iron 1,100

43SO36
0 - 2'
Iron 1,500

43SO34
5' - 6'
Iron 1,100

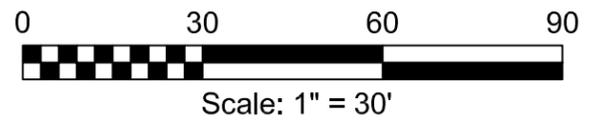


FIGURE 3-3
Iron SPLP Results in Subsurface Soil
Site 43, NAS Pensacola



Legend	
Fence	—x—x—x—
Utility	—
Tree	⊗

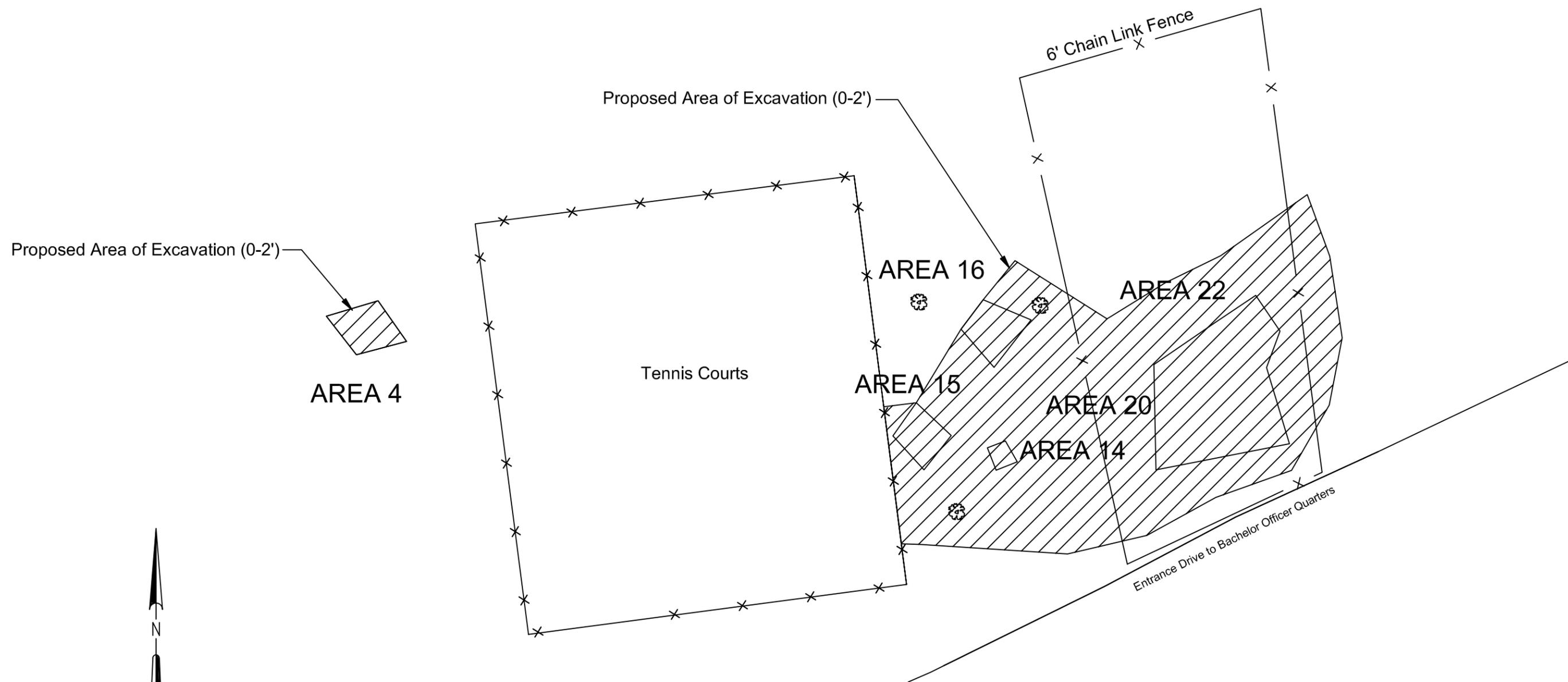


FIGURE 3-4
 Proposed Excavation Areas
Site 43, NAS Pensacola



4.0 Interim Remedial Action

4.1 Mobilization

CCI personnel, equipment, subcontractors, and materials mobilized to NAS Pensacola on April 3, 2002, to perform IRA activities at Site 43. Subcontractors utilized for the various tasks are listed in Section 2-2.

4.2 Site Utility Clearance

During the initial sampling phases of the project CCI utilized the excavation permit obtained by the CLEAN contractor, as provided by NAS Pensacola Environmental. However, prior to start-up of excavation a new permit was obtained to ensure that all utilities were clearly identified for the activities. The second permit was obtained on April 10, 2002. Several utilities, including multi-pair telephone line and water lines, were identified either at the periphery of the excavation area or in the excavation area. A copy of the excavation permit is included in Appendix D.

4.3 Pre-excavation Survey

During the course of establishing the extent of contamination through pre-excavation sampling, the individual sample points were surveyed to State plain coordinates and elevations. On December 12, 2002, a Registered Florida Land Surveyor from Southern Surveying, Inc. surveyed the limits of proposed excavation. The survey drawing is provided in Appendix E.

4.4 Excavation of Contaminated Soil

As stated in the Section 3.7, two areas were recommended for excavation at Site 43. One small area measuring approximately 10 by 10 feet was in an area formerly known as Pit No. 4, west of the tennis court. The larger area encompassed former Pit Nos. 14, 15, 16, 20, and 22. Figure 3-4 presents the proposed excavation area. The upper 2 feet of surface soil was to be removed in each location to protect human health and the environment. In addition, while the excavation was open, areas in which significant metal debris was observed would be excavated.

In preparation for excavation, the 6-foot-high chain-linked fence was removed from the excavation area. Additionally, in order to preserve the 11 existing live oak and laurel oak trees at the site, (as specified by the NAS Pensacola Natural Resources Manager) the limits of the excavations adjacent to the trees were trenched to a minimum depth of 2 feet bls. The trenching was intended to minimize damage to the root system of the trees, but it also provided clear delineation of the excavation limits. Two trees (a palm and a poplar) were removed from the excavation area.

Excavation began on April 11, 2002, by CCI subcontractor Environmental Quality Industrial Services (EQIS) using a trackhoe. Due to limited space onsite, a combination of temporarily stockpiling soil and direct loading of soil into transport vehicles was employed. As expected, significant debris was encountered slightly below the surface to approximately 2 feet bls. In two distinct areas, significant metal debris was removed to depths of 3 to 4 feet bls. Approximately 20 to 25 rusted metal drums and drum parts were uncovered during the excavation. Two of the recovered drums contained liquid (less than 1 gallon each). Each drum was over-packed, labeled, and staged in a remote area designated by NAS Pensacola personnel pending analysis of the liquids. The empty drums were crushed and disposed with the soil. Additionally, the 14 drums unearthed during the preliminary investigation conducted by the CLEAN contractor in November 2000 were disposed of with the remaining waste.

Distinct dark discoloration of the soil was observed in and around the debris layer. To the extent possible the discolored soil was removed during the excavation. However, due to the structural and ecological limitations (tennis court and trees) to the excavation, all of discolored soil was not removed.

On Friday, April 12, 2002, during the course of excavating the contaminated soil at Site 43, three 24-inch-long by 10-inch-diameter projectile shaped objects were unearthed that resembled unexploded ordinance (UXO). The objects were found in the southeastern corner of the former fenced-in area and appeared to be made of concrete with metallic nose cones. As a precautionary measure, CCI halted activities in the area and notified Mr. Ron Joyner of the NAS Pensacola Environmental office. Mr. Joyner informed CCI that similar objects had previously been unearthed at another project site on base and were determined to be inert practice bombs and not UXO. Mr. Joyner notified the NAS Pensacola UXO First Response Team. In addition, the CCI field team notified the CCI Project Manager, CCI Navy RAC Program Safety Manager, and CH2M HILL UXO Manager. Based on the historical information provided by Mr. Joyner, CCI resumed operations.

On Monday, April 15, 2002, the NAS Pensacola UXO First Response Team visited the site and removed the projectile-like objects. Chief Warrant Officer 4 (CWO4) James Clarke informed CCI that excavation operations could continue since he believed the objects were ornamental and posed no threat.

During the course of excavation at western side of the site, an 18-inch round, steel object was unearthed. Upon visual inspection, it appeared that the object had a copper plug in the center. Once again, excavation operations were halted; however, soil load-out operations continued. The CCI field team made the appropriate notifications and both Mr. Joyner and CWO4 Clarke returned to the site. CWO4 Clarke informed CCI that the object appeared to be a Civil War era cannon ball and that it appeared to be the type that did carry an explosive charge. CWO4 Clarke retrieved the cannon ball and informed CCI that the excavation could resume. Shortly after CWO4 Clarke departed the site, Mr. Joyner and CCI personnel examined the excavation area and found other suspicious debris. CWO4 Clarke again was called to the site to examine the articles. CWO4 Clarke removed the articles and informed CCI that a preliminary test of the fuse area of the cannon ball confirmed it was ignitable. CWO4 Clarke notified the team that the UXO Response Team from Eglin Air Force Base was en route to NAS Pensacola to remove the cannon ball and planned to detonate it at a bombing range at Eglin. CCI's plan of action was determined and included the following:

- 1) Stop all intrusive activities at the site.
- 2) Stop all offsite transportation of previously loaded out soil and debris.
- 3) Stop all treatment operations of the soil and debris previously shipped to the disposal facility in Belleville, Michigan.
- 4) Have all transport trucks en route to the disposal facility return to NAS Pensacola immediately.

On April 16, 2002, CCI's Project Manager and UXO Manager arrived onsite. The 18-inch cannon ball was tentatively identified as a Cohern Mortar. The UXO Manager noted that this particular type of munition had been discovered at NAS Pensacola in the recent past and determined to be UXO. During the next 2 days, several meetings were conducted, as well as telephone calls, resulting in the decision to off-load five tractor-trailer loads of soil and debris previously excavated from Site 43 elsewhere on the facility. A remote location near Sherman Field was selected for the off-loading and staging of the contaminated soil and debris.

On April 18, 2002, CCI was informed that the Cohern Mortar removed from NAS Pensacola had been take to Eglin Air Force Base and split open by shape charges at the range. The mortar was determined to be inert, having no explosive charge. In addition, the other suspicious articles removed from the site were tested and also found to be non-explosive. Based on this information an action plan was formulated as follows:

Screen the soil staged east of Sherman Field for UXO

If no UXO is found:

Notify EQs Michigan Facility to begin treating the previously received Site 43 soil

Load out the soil staged east of Sherman Field for transit to EQ's Michigan facility

Resume excavation activities at Site 43

If UXO is found:

CCI to temporarily secure Site 43

CCI to begin UXO plan development for NAS Pensacola and EQ's Michigan Facility

CCI to provide UXO response to NAS Pensacola and EQ's Michigan Facility

On April 19, 2002, a CCI UXO Technician/UXO Safety Officer mobilized to NAS Pensacola to supervise the soil screening activities. The five tractor-trailer loads of soil and debris taken to Sherman Field were transferred to an adjoining lined staging area in 1-foot lifts. The soil and debris was visually inspected for UXO and UXO-related material. During the screening, objects that appeared to be UXO in nature were closely examined by CCI and set aside. The screening resulted in the recovery of a 6-inch solid steel cannon ball and a concrete projectile. CWO4 Clarke and Mark Shull from the Resident Office in Charge of Construction (ROICC) were informed of the discovery and apprised of the situation. CWO4 Clarke inspected the items, notified CCI that they were inert, and removed them from the area.

Unfortunately, the excavation permit process does not include UXO or potential UXO. Therefore, CCI could not predict potential complications related to the discovery of potential UXO. Changing operations and plans during this period resulted in schedule and financial impacts to the project.

At the end of the IRA, 31 truckloads with an accumulative total of 747.62 tons of soil and debris had been removed from the site. The soil was transported to the Michigan Disposal Waste Treatment Facility in Belleville, Michigan. Photographs of the field activities are included in Appendix B.

4.5 Post Excavation Surveying

After excavation activities were complete, Southern Surveying, Inc. conducted the post excavation survey to ensure that the limits established during the pre-excavation survey were maintained. A copy of the survey is included in Appendix E.

4.6 Backfill and Site Restoration

Prior to completing the excavation activities at the site, EQIS collected representative soil samples from the selected offsite backfill source from Sand and Dirt, Inc. The soil was analyzed to ensure its suitability for use at the project site. Both physical and chemical analyses were conducted. Two types of backfill were selected, a clayey soil for a 1-foot-thick, semi-permeable liner and a topsoil for the upper 1 foot. A sample from both soil types was composited and analyzed for chemical parameters. The clay liner was also tested for physical parameters.

4.6.1 Chemical Analysis of Backfill

One sample was collected from the proposed backfill barrow pit and analyzed for target compound list (TCL), volatile organic compounds (VOCs) (Method 8260B), TCL SVOCs (8270C), TCL pesticides (8081A), TCL herbicides (8151A), target analyte list (TAL) metals (Methods 3050B/6010B/7471A, polychlorinated biphenyls (PCBs) (Method 8082), (Florida Petroleum Residual Organic [FL-PRO] method) total recoverable petroleum hydrocarbons, and pH. The analytical results indicated the soil was non-detect for all parameters tested except metals. The arsenic concentration of 1.06 mg/kg was above the FDEP SCTL residential maximum concentration for arsenic of 0.8 mg/kg. However, arsenic is naturally occurring in the area and the site-specific cleanup goal for arsenic in surface soil is 21.93 mg/kg, therefore the backfill was accepted as clean fill. The results of the backfill analyses are presented in Appendix F.

4.6.2 Physical Properties Testing of Backfill

Pensacola Testing Labs, a certified materials testing firm, analyzed representative samples of the backfill material to be used as the semi-permeable lay liner for soil classification, moisture content, dry density, and compactability. The analysis revealed the soil was a high clay content, low permeability soil that met the classification standards established for optimum field parameters for compaction. Geotechnical results are presented in Appendix G.

4.6.3 Backfilling

Once the survey was complete, a 1-foot layer of fine silty, sandy clay backfill was placed into the excavation to act as a semi-permeable layer. This clay layer was compacted to 98 percent modified proctor to ensure that it would provide a substantial barrier from surface water infiltration. The top 1 foot of backfill was clean and capable of sustaining vegetative growth. The topsoil was compacted with three passes of heavy equipment.

4.6.4 Compaction Testing

Upon completion of the critical subsurface lift of backfill compaction using the clayey backfill, Pensacola Testing Labs, performed compaction testing via a nuclear density gauge. During the initial testing, the backfilled soil failed to meet the required density and optimum moisture content. Several additional passes over the soil were completed and the backfill soil was retested and met the required density and moisture content. Geotechnical results are presented in Appendix G.

4.6.5 Site Restoration

The entire area was hydro-seeded with a blend of brown top millet and Bermuda grass, as well as lawn fertilizer. The seeded area was watered approximately 2 hours per day for the first 7 days to ensure growth. Photos of the restored site are included in Appendix B.

4.7 Equipment Decontamination

All equipment was decontaminated with a low-volume, high-pressure washer prior to demobilizing the project site. Plastic sheeting was placed in one corner of the excavation area and, using the existing sides and constructed earthen berms, the rinsate from the pressure washing activities was contained. All rinsate generated by the activities was contained in metal drums pending analysis. Decontamination of personnel and personal protective equipment (PPE) was performed in accordance with the health and safety plan and applicable provisions of 29 Code of Federal Regulation (CFR) 1910.120 and loaded in the trucks with the soil and other solid debris.

4.8 Waste Management and Disposal

4.8.1 Solid Wastes

During the initial soil sampling phase in January, CCI collected *in-situ* waste characterization soil samples within the established limits of the areas to be excavated. These sample were analyzed for toxicity characteristic leaching procedure (TCLP) VOCs (Methods 1311/8260B), TCLP SVOCs (Methods 1311/8270C), TCLP pesticides (Methods 1311/8081A), TCLP herbicides (Methods 1311/8151A), TCLP metals (Methods 1311/3010A/6010B/7470A), PCBs (Method 8082), reactivity, corrosivity, Ignitability (RCI), TCL VOCs (Method 8260B), TAL metals (Methods 3050B/6010B/7471A), and pH.

The TCLP results for lead ranged from 24.4 to 27.2 milligrams per liter (mg/L). This concentration exceeds the maximum concentration for toxicity pursuant to 40 CFR, Part 261.24 (Table 1), which states that if the lead concentration exceeds 5 mg/L, the source is

deemed toxic and must be treated as a hazardous waste. Therefore, the contaminated soil was determined to be hazardous for lead (D008) and would require offsite treatment prior to final disposition. Analytical results of the disposal profile are included in Appendix H.

CCI provided NAS Pensacola Hazardous Waste Management with a waste approval package for the waste stream. This package included the following:

- Hazardous waste profile
- Analytical results
- Transporter/disposal facility permit and insurance information
- Completed sample waste manifest

Mr. James Bartee with NAS Pensacola Hazardous Waste Management signed the disposal profiles. Mr. James Bartee and his designee, Mr. Edward Dolihite, signed the manifests for the shipment of waste each day. During the course of shipment at the conclusion of each day, Mr. Bartee and/or Mr. Dolihite were provided the generator copies of the open manifests. The remainder of the copies was provided to the transporter to accompany the load in transit. Copies of the waste manifests, certificates of disposal and weigh tickets are included in Appendix H.

On April 12, 2002, soil and debris began being loaded into 20 cubic yard dump trailers for transportation to the disposal facility. The dump trailers were lined with plastic liners, with each load manifested as hazardous for lead (D008) and placarded accordingly. A total of 31 loads with an accumulative total of 747.62 tons of soil and debris were removed from the site. All of the soil was transported to Michigan Disposal Waste Treatment Facility in Belleville, Michigan.

The 20 to 25 metal drums and drum parts unearthed during the IRA and the 14 drums recovered during the initial assessment in November 2000 by TtNUS were also loaded with the soil and other debris from the site. The drums, soil, and debris were transported and disposed at the waste facility in Michigan.

4.8.2 Liquid Wastes

As a result of the IRA activities, decontamination wastewater and well purge-water were generated. Approximately 200 gallons of water was accumulated into metal drums. All of the drums were labeled and samples collected for disposal analysis. The waste water was analyzed for TCL VOCs (Method 8260B), TCL SVOCs (8270C), TCL pesticides (8081A), TCL herbicides (8151A), TAL metals (Methods 3050B/6010B/7471A, PCBs (Method 8082), RCI, and pH. The analytical results indicated the water was non-hazardous.

Two of the drums removed from the excavation during the IRA contained small amounts of liquid (less than 1 gallon each). One drum contained a clear, odorless liquid that could merely be water, while the other drum contained a dark, viscous, liquid that could be some type of oil. The drums were temporarily set aside pending sampling. However, during the drum sampling event, the drum containing the clear liquid was dry. The other drum containing oily liquid was sampled; however, only half of the required sample volume remained. As a consequence, insufficient sample was available to properly characterize the waste, which resulted in a RCRA empty drum.

Analytical results of the liquid waste streams are included in Appendix H. The subcontractor disposed of the decontamination water and the two empty drums on August 21, 2002.

4.9 Demobilization

On May 6, 2002, CCI and subcontractors demobilized from the remediation portion of the project.

5.0 Groundwater Monitoring

CCI conducted baseline groundwater monitoring events on November 28, 2001, and December 12, 2001. The first semi-annual sampling was conducted on June 13 and June 27, 2002. Five wells (PEN-43-01S through PEN-43-05S) were included in the monitoring program. During the baseline sampling event, each of the proposed wells was located and inspected. The monitoring well locations are shown on Figure 5-1.

During the baseline event, three of the proposed monitoring wells located were noted to be dry and apparently had silted in over time. The wells contained between 3 and 4 feet of silt. These wells were redeveloped to clear out the silt and subsequently sampled. During the semi-annual sampling event in June, one of the wells had silted in and was redeveloped a second time. A summary of site activities for Site 43 is presented in Table 2-1.

5.1 Groundwater Elevations

Complete rounds of water levels were measured in each of the monitoring wells at Site 43 on February 1 and July 10, 2002. These groundwater elevations are listed in Table 5-1.

During the February event, groundwater appeared to be flowing radially inward toward the drum storage area. This is consistent with historical flow. However, after the interim removal action was complete, the water levels were measured and the flow appeared to be to the east, towards Pensacola Bay. This flow direction is what would be expected from a site in this area without subsurface interferences. Figures 5-2 and 5-3 depict the groundwater flow direction for the February and July 2002 water level events, respectively.

TABLE 5-1
Groundwater Elevation Data

Monitoring Well	TOC Elevation (feet NAVD)	Screened Interval (feet bls)	Well Depth (feet bls)	DTW (feet btoc)	GWE (feet NAVD)	Well Depth (feet bls)	DTW (feet btoc)	GWE (feet NAVD)
			02/01/2002			07/10/2002		
PEN-43-01S	19.95	9.5 to 19.5	19.19	15.10	4.85	19.19	15.68	4.27
PEN-43-02S	21.07	9.4 to 19.4	18.70	16.10	4.97	18.40	16.68	4.39
PEN-43-03S	21.50	9.5 to 19.5	19.00	16.32	5.18	18.99	16.88	4.62
PEN-43-04S	14.46	5 to 15	15.05	8.73	5.73	15.05	9.25	5.20
PEN-43-05S	20.57/20.40*	9 to 19	19.15	16.54	4.03	18.90	15.89	4.51

bls below land surface
 GWE groundwater elevation
 btoc below top of casing
 NAVD North American Vertical Datum
 DTW depth to water
 TOC top of casing

*The TOC was changed by 0.17 feet during construction activities for this well

PEN-43-03S

PEN-43-01S

PEN-43-04S

PEN-43-05S

PEN-43-02S

Legend

Fence	—x—x—x—
Utility	- - - - -
Monitoring Well Designation	⊕ PEN-43-04S
Geophysical Anomaly	[19]

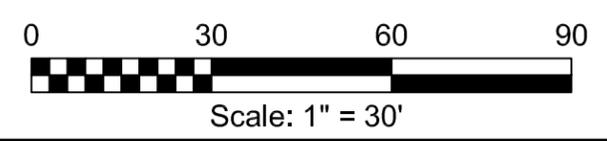


FIGURE 5-1
 Monitoring Well Location Map
 Site 43, NAS Pensacola



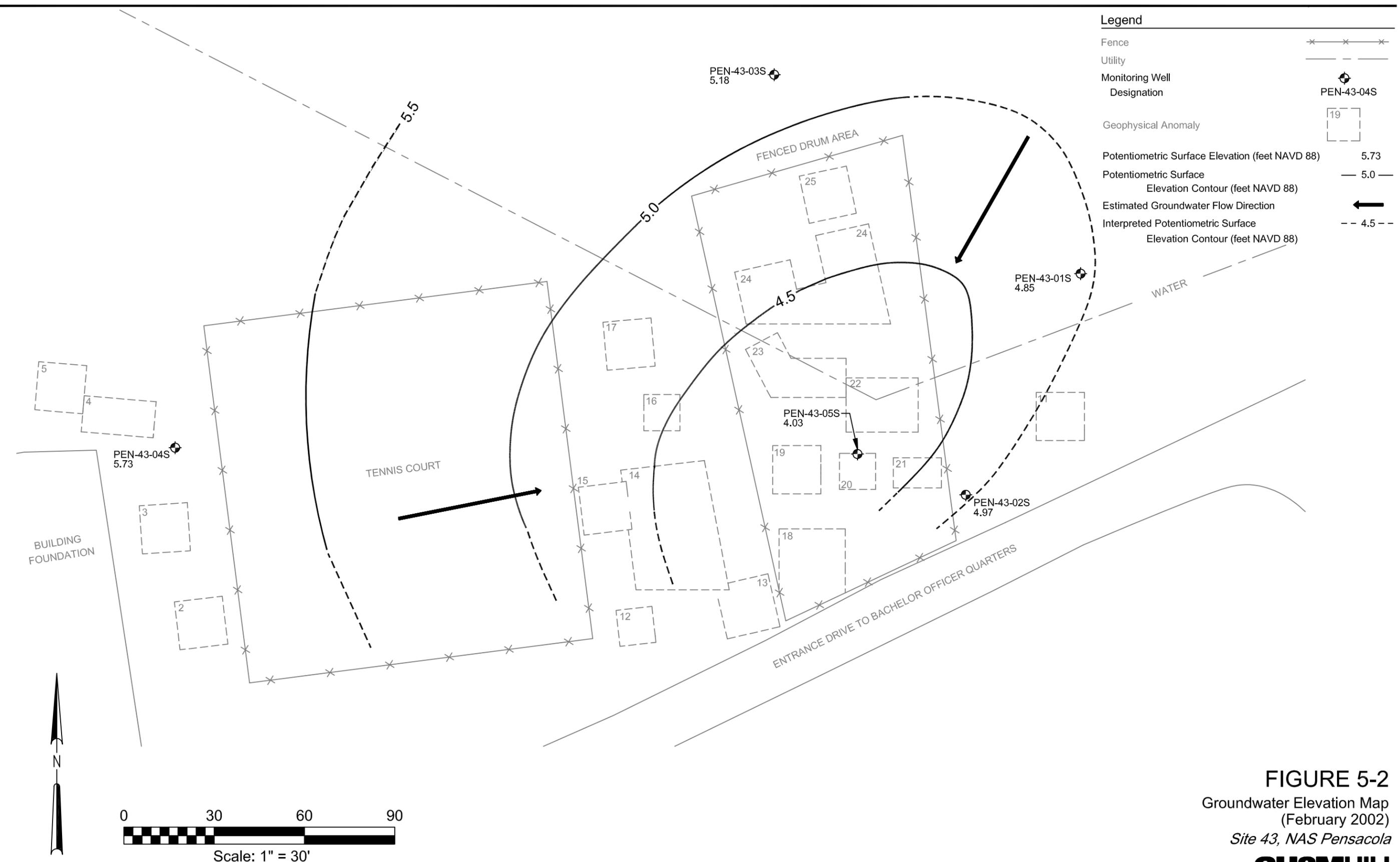


FIGURE 5-2
 Groundwater Elevation Map
 (February 2002)
 Site 43, NAS Pensacola



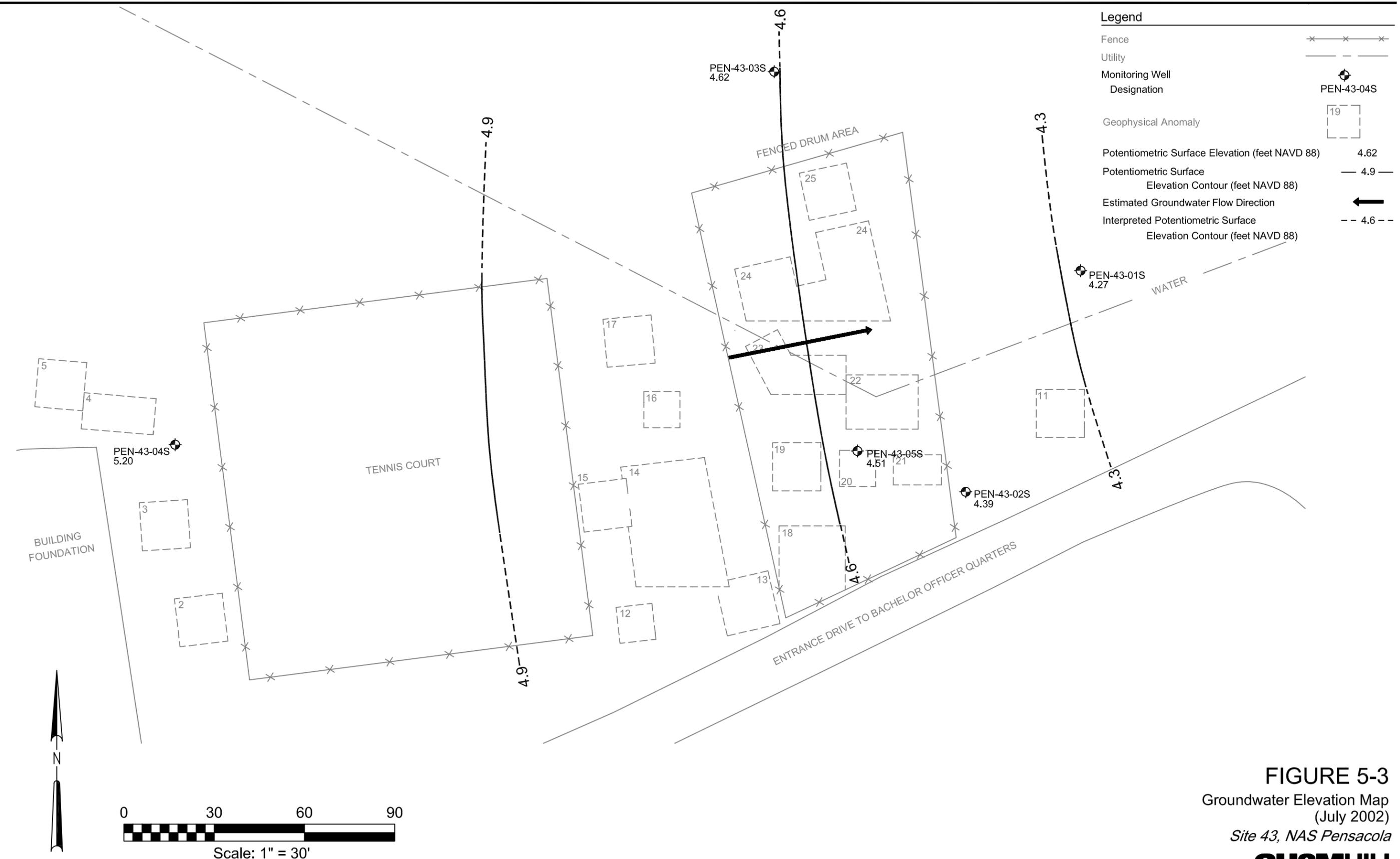


FIGURE 5-3
 Groundwater Elevation Map
 (July 2002)
 Site 43, NAS Pensacola



5.2 Groundwater Sampling and Laboratory Analyses

Groundwater sampling was performed in accordance with FDEP Standard Operating Procedures, Department of Environmental Regulation QA-001/92. Prior to sampling, the field parameters (temperature, pH, conductivity, turbidity, and dissolved oxygen [DO]) were measured at each monitoring well. The field parameter data are summarized in Table 5-2. The field data sheets are presented in Appendix I. Samples were collected using a peristaltic pump and Teflon tubing.

TABLE 5-2
Groundwater Field Parameter Data

Monitoring Well	Measurement Date	Water Temperature (°C)	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
PEN-43-01S	11/28/2001	23.4	5.98	0.65	10	8.22
	06/13/2002	22.25	5.21	0.88	202	6.45
PEN-43-02S	12/12/2001	23.3	6.1	0.19	0	3.00
	06/27/2002	25.05	5.57	0.137	30.6	4.99
PEN-43-03S	12/12/2001	24.9	6.1	0.13	0	0.52
	06/13/2002	23.37	5.41	0.176	5	4.98
PEN-43-04S	11/28/2001	24.3	6.29	0.138	< 1	7.14
	06/13/2002	24.07	5.49	0.158	6	5.50
PEN-43-05S	12/12/2001	24.8	5.9	0.10	11	0.00
	06/13/2002	23.97	5.17	0.083	98	6.44

°C degrees Celsius
mg/L milligrams per liter
mS/cm micro Siemens per centimeter
NTU nephelometric turbidity unit

Laboratory analyses for the groundwater sampling were provided by Severn Trent Laboratories, Inc., Pensacola, Florida, in accordance with their FDEP-approved Comprehensive Quality Assurance Plan (CompQAP). Groundwater samples were analyzed for iron by SW-846 method 6010B. All purge water was containerized in metal drums and was subsequently disposed by the subcontractor at the EQIS facility in Atlanta, Georgia.

5.3 Groundwater Analytical Results

Iron concentrations detected during the baseline event in December 2001 ranged from less than 64 to 140 µg/L. None of the samples exceeded the background concentration of 1,707 µg/L for iron at NAS Pensacola. Concentrations were also below the FDEP groundwater cleanup target level (GCTL) for iron of 300 µg/L (Chapter 62-777 FAC).

Iron concentrations detected during the semi-annual sampling event in June 2002 ranged from 190 to 820 µg/L. The iron concentrations were higher in each well than during the

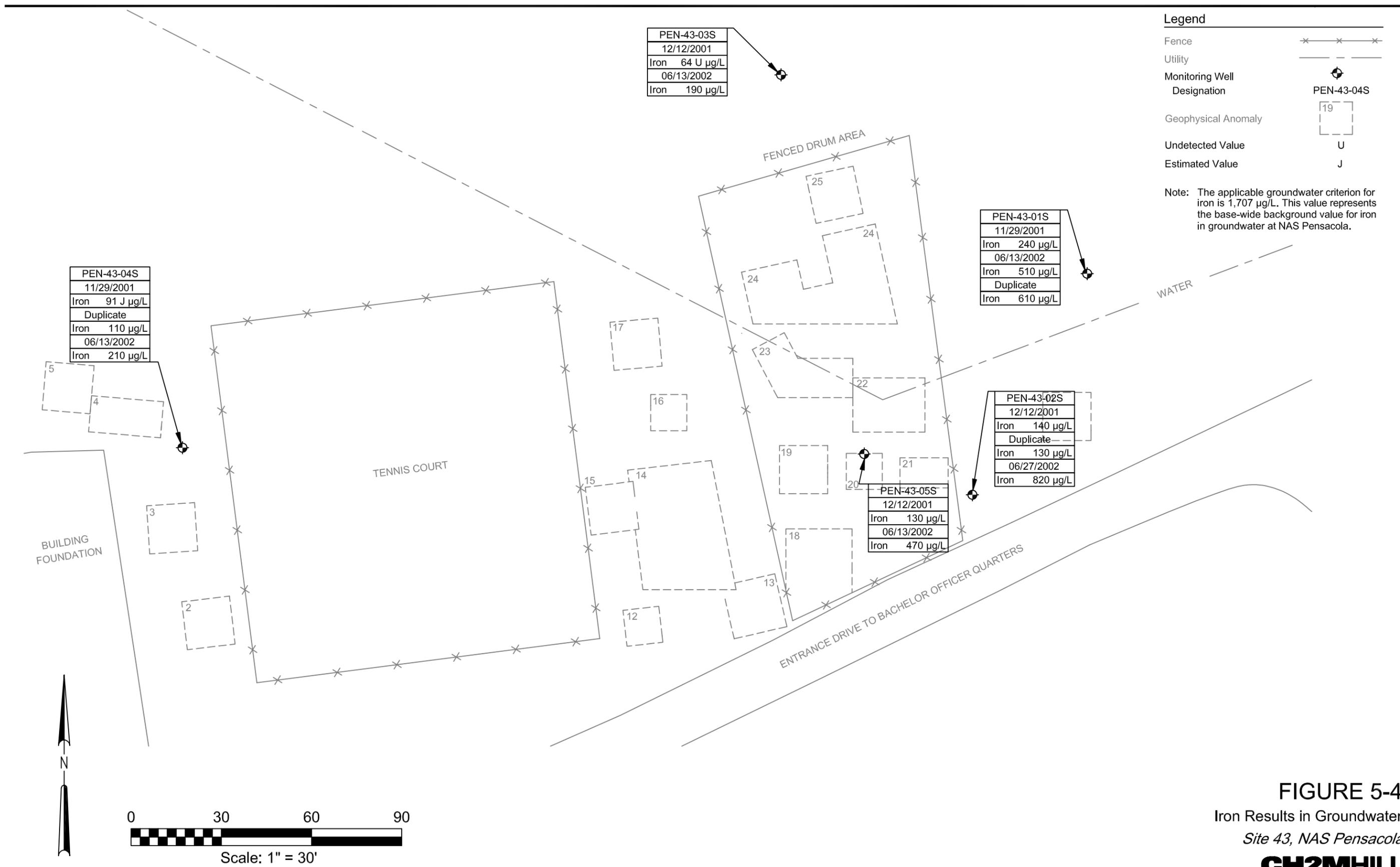
baseline event. Since the interim removal activities disturbed the shallow soils, a slight increase in groundwater concentrations could be expected due to the initial releases; however, the remedial actions removed the source of groundwater contamination and concentrations are expected to decrease. Additionally, none of the samples exhibited iron concentrations above the background concentration for iron at NAS Pensacola (1,707 µg/L). Concentrations in three monitoring wells were above the FDEP GCTL for iron of 300 µg/L.

Analytical results from the baseline and semi-annual groundwater sampling events are summarized in Table 5-3 and the data evaluation is provided in Appendix C. Iron concentrations detected in each monitoring well sampled are shown on Figure 5-4.

TABLE 5-3
Groundwater Analyses Summary

Monitoring Well	Date Sampled	Iron (µg/L)
PEN-43-01S	11/28/2001	240
	06/13/2002	510
Duplicate of PEN-43-1S	06/13/2002	610
PEN-43-02S	12/12/2001	140
Duplicate of PEN-43-2S	12/12/2001	130
	06/27/2002	820
PEN-43-03S	12/12/2001	64 U
	06/13/2002	190
PEN-43-04S	11/28/2001	91 J
Duplicate of PEN-43-4S	11/28/2001	110
	06/13/2002	210
PEN-43-05S	12/12/2001	130
	06/13/2002	470
Cleanup value (NAS Pensacola background concentration)		1,707

µg/ L micrograms per liter
J = estimated value
U = undetected



PEN-43-03S
12/12/2001
Iron 64 U µg/L
06/13/2002
Iron 190 µg/L

PEN-43-01S
11/29/2001
Iron 240 µg/L
06/13/2002
Iron 510 µg/L
Duplicate
Iron 610 µg/L

PEN-43-04S
11/29/2001
Iron 91 J µg/L
Duplicate
Iron 110 µg/L
06/13/2002
Iron 210 µg/L

PEN-43-02S
12/12/2001
Iron 140 µg/L
Duplicate
Iron 130 µg/L
06/27/2002
Iron 820 µg/L

PEN-43-05S
12/12/2001
Iron 130 µg/L
06/13/2002
Iron 470 µg/L

Legend

Fence	—x—x—x—
Utility	— — — —
Monitoring Well	⊕
Designation	PEN-43-04S
Geophysical Anomaly	[19]
Undetected Value	U
Estimated Value	J

Note: The applicable groundwater criterion for iron is 1,707 µg/L. This value represents the base-wide background value for iron in groundwater at NAS Pensacola.

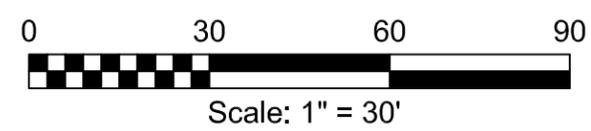


FIGURE 5-4
Iron Results in Groundwater
Site 43, NAS Pensacola



6.0 Data Quality Evaluation

The complete Data Validation Report is included in Appendix D.

7.0 Problems Encountered

7.1 Potential UXO

As detailed in Section 4.4, potential UXO was unearthed at the site. Unfortunately, the excavation permit process does not include UXO or potential UXO clearance. Therefore, CCI could not predict potential complications related to the discovery of potential UXO. The landfill cell at the Michigan facility containing the waste that had already been disposed was closed down, and trucks that were enroute to the facility were called back. The soil was temporarily stockpiled and screened at a remote location on the Base and had to be reloaded after inspection. Various UXO personnel were called onto the site, and time was lost. Changing operations and plans during this period resulted in schedule and financial impacts to the project.

7.2 Monitoring Wells

As detailed in Section 5, three of the proposed monitoring wells at the site were noted to be dry during the baseline event and apparently had silted in over time. The wells contained between 3 and 4 feet of silt. These wells were redeveloped to clear out the silt and subsequently sampled. During the semi-annual sampling event in June, one of the wells had silted in again and was redeveloped a second time. There were slight schedule and financial impacts to the project due to the numerous remobilizations to the site.

8.0 Final Inspection

On May 6, 2002, base personnel performed an inspection of the work for compliance with the scope of work and acceptance. Mr. Mark Shull and Mr. Jerry Flemming, NAS Pensacola ROICC, conducted the inspection. No deficiencies were noted and Mr. Shull stated the site was very acceptable.

9.0 Conclusions and Recommendations

9.1 Conclusions

- Antimony, arsenic, barium, copper, iron, lead, nickel vanadium and zinc were detected in soil at concentrations exceeding the established cleanup criteria.
- Thirty-one truck loads with an accumulative total of 747.62 tons of soil and debris were transported to Michigan Disposal Waste Treatment Facility in Belleville, Michigan.
- Fourteen drums from the initial site investigation and 20 to 25 drums and drum parts were also loaded and disposed of in the Michigan landfill.
- Ornamental ordnance and munitions were found in the excavation area and were determined to be inert and disposed of in the Michigan landfill.
- Iron concentrations detected during the baseline event in December 2001 ranged from less than 64 µg/L to 140 µg/L. None of the samples exhibited iron concentrations above the background concentration for iron at NAS Pensacola of 1,707 µg/L.
- Iron concentrations detected during the semi-annual sampling event in June 2002 ranged from 190 to 820 µg/L. None of the samples exhibited iron concentrations above the background concentration for iron at NAS Pensacola (1,707 µg/L).

9.2 Recommendations

- The contaminated soil and surface debris at the site has been removed, therefore CCI recommends No Further Action for soil at the site.
- The iron concentrations in groundwater at the site have been below the established background level/cleanup criterion for iron for two consecutive sampling events. Additionally, the source of groundwater contamination has been removed. CCI recommends No Further Action for groundwater at the site.
- The temporary monitoring wells at the site should be properly abandoned.

10.0 Works Cited

CH2M HILL Constructors, Inc. *Contract Management Plan*, Contract No. N62467-98-D-0995. July 1998.

CH2M HILL Constructors, Inc. *Basewide Work Plan Naval Air Station Pensacola, Pensacola, Florida*. June 2000.

CH2M HILL Constructors, Inc. *Work Plan Addendum 03, NAS Pensacola*. April 2001.

Geraghty & Miller, Inc. *Verification Study, Assessment of Potential Ground-Water Pollution at Naval Air Station, Pensacola, Florida*. 1984.

Geraghty & Miller, Inc. *Characterization Study, Assessment of Potential Ground-Water Pollution at Naval Air Station, Pensacola, Florida*. 1986.

Naval Energy and Environmental Support Activity. *Initial Assessment Study of Naval Air Station Pensacola*. June 1983.

Tetra Tech NUS, Inc. *Site Characterization Report for Site 43, NAS Pensacola, Pensacola, Florida*. April 2000.

Appendix A

Contractor Production Reports and Contractor Quality Control Reports

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/13/01 – 01/27/02	Report No:	36	
Project Name/Location:	NAS Pensacola	CTO No	0027	
Project No.	154039	Contract No:	N62467-98-C-0095	
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)			
Site Superintendent:		Site Safety Officer:		
AM Weather:		PM Weather:		
Min Temp (°F):		Max Temp (°F):		
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0	
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0	
Cumulative Total of Work Hours From Previous Report:	392	Total Work Hours From Start of Construction:	392	
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:				
No Site Activity				
Equipment and Material Received				
Equipment / Material		Equipment No	Number/Volume/Weight	
Construction and Plant Equipment				
Plant/Equipment	Arrived	Departed	Safety Check Performed By	
Number of Hours				
		Used	Idle	
		Repair		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>				
No Site Activity				
Visitors to the Site: No site activity				
CCI and CH2M Hill Man-hours				
Employee	Employer	Employee No.	Title/Trade	
Work Performed		Work Location	Hours Worked	
Total Man-hours Today			0	
Total Man-hours This Year			293	
Subcontractor Man-hours				
Employee	Employer	Employee No.	Title/Trade	
Work Performed		Work Location	Hours Worked	
Total Man-hours Today			0	
Total Man-hours This Year			99	

Report Comments: No site activity for the previous 46 days

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/08/01 – 12/11/01	Report No:	34			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	370	Total Work Hours From Start of Construction:	370			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						277
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						93

Report Comments: No site activity for the previous 5 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/07/01	Report No:	33			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Moderate, Humid, and Calm	PM Weather:	Warm, Humid, and Calm			
Min Temp (°F):	52	Max Temp (°F):	71			
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	18	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	18			
Cumulative Total of Work Hours From Previous Report:	352	Total Work Hours From Start of Construction:	370			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0730	1700	SD	9 ½		
CCI Laptop Computer / Printer	0730	1700	SD	9 ½		
CCI Sampling Equip./Supplies	0730	1700	SD	9 ½		
CH2M Hill, Inc POV	0845	1700	PZ	8		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: None Noted Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 15 & 43	9 ½
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 15 & 43	8
Total Man-hours Today						18
Total Man-hours This Year						277



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/07/01	Report No:	33			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						93

Report Comments:

- After the water volumes in Wells 15GR69, and 15GR70 were calculated (based on diameter of the well casing and length of the water column), 4 well volumes were purged from each well and collected in drums.
- In addition to the well re-development, 7 surface soil samples and appropriate duplicate, matrix spike, and matrix spike duplicate samples were collected. Prior to and at the conclusion of the event equipment rinsate samples were collected as well.
- After completing the well re-development and soil sampling at Site 15 activities switched to Site 43 and purging of Wells NAS-43-2s, NAS-43-3s, and NAS-43-5s was started. The wells were purged to a minimum of 4 well volumes based on the above mentioned method of calculation.
- In addition to re-developing the wells at site 43, 2 surface soil samples, duplicate, matrix spike, and matrix spike duplicate samples were collected.
- All the samples were labeled, packaged for delivery, iced and documented on a chain of custody.
- The samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/06/01	Report No:	32			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Moderate, Humid, and Calm	PM Weather:	Warm, Humid, and Calm			
Min Temp (°F):	52	Max Temp (°F):	71			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	13	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	13			
Cumulative Total of Work Hours From Previous Report:	339	Total Work Hours From Start of Construction:	352			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0830	1700	SD	8 ½		
CCI Laptop Computer / Printer	0830	1700	SD	8 ½		
CCI Sampling Equip./Supplies	0830	1700	SD	8 ½		
CH2M Hill, Inc POV	1310	1700	PZ	4		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: None Noted Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 15 & 43	8 ½
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 15	4
Total Man-hours Today						13
Total Man-hours This Year						259



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/06/01	Report No:	32			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						93

Report Comments:

- CCI returned to Site 43 with materials and supplies to attempt to clear/open the three wells that were dry. A metal pipe was plunged down into the wells and with some effort passed through the blockage to the water level. Upon retrieval of the metal pipe it appeared that the well had been plugged thin fibrous roots. The mating of roots were broken up by the pipe and a non-quantifiable portion of the root mating was removed from the well, as it was caught inside the pipe. The same process was employed to open other two wells in question.
- Wells NAS-43-2s, NAS-43-3s, and NAS-43-5s were now cleared and ground water was obtainable.
- As result of clearing the wells in the above mentioned manner Eric Burrell, CCI QAM and Chris Hood, CH2M Hill, PE. were asked how well sampling should be addressed. Eric Burrell provided the QC and COMQAP requirements and following procedure to redevelop the wells.
 1. A minimum of 3 to 5 well volumes purge of each well
 2. Allow the well to stand undisturbed for 24-hours
 3. Follow normal low flow well sampling procedure
 Chris Hood concurred with the requirements.
- While awaiting instruction on the well re-development, the three dry wells at Site 15 were cleared/opened in the same manner. These wells included 15GR66, 15GR69, and 15GR70.
- After the water volume in Well 15GR66 was calculated (based on diameter of the well casing and length of the water column), 4 well volumes were purged from the well and collected in a drum.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/03/01	Report No:	30			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Cool, Humid, and Calm	PM Weather:	Moderate, Humid, and Calm			
Min Temp (°F):	48	Max Temp (°F):	62			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	12	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	9	Total Worked Hours on Job Site This Date:	21			
Cumulative Total of Work Hours From Previous Report:	318	Total Work Hours From Start of Construction:	339			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and Southern Survey, Inc (SSI) personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Southern Survey, Inc. (SSI) Pick-up and Survey Equipment		N/A	1ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0800	1415	SD	8 ¼		
CCI Laptop Computer / Printer	0800	1415	SD	8 ¼		
CCI Sampling Equip./Supplies	1145	1345	SD	4		
CH2M Hill, Inc POV	0800	1345	PZ	8 ¼		
SSI Pick-up and Survey Equip.	0830	1145	PM	3 ¼		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: Mr. Mark Gibson with NAS Pensacola Environmental Department.						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 15 & 43	8
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 15	4
Total Man-hours Today						12
Total Man-hours This Year						246

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/03/01	Report No:	30			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Surveyor	Location Survey	Site 15 & 43	3
Joe Stewart	SSI	N/A	Helper	Location Survey	Site 15 & 43	3
Chris Thaggard	SSI	N/A	Helper	Location Survey	Site 15 & 43	3
Total Man-hours Today						9
Total Man-hours This Year						93

Report Comments:

- Southern Surveying, Inc. (SSI) mobilized back to NAS Pensacola to survey in additional sample points at Site 43 and locate the missing well at Site 15.
- Mr. Mark Gibson was at Site 43 today to identify the excavation boundaries around the trees. Mr. Gibson pointed out to CCI how close the purposed soil remediation excavations could come to the base of the surrounding trees. As Mr. Gibson identified the boundary SSI surveyed in those locations. These locations would latter be reflected on drawing presented to SO. Div., EPA, FDEP for excavation limits. In addition, just prior to excavation SSI would be used locate and delineate the excavation boundaries. Furthermore, Mr. Gibson specifically requested that the perimeter of the excavation be trenched in to a minimum depth of 2-feet below land surface (BLS). Cutting cleanly through the tree roots in an effort to minimize long term damage to the trees. CCI assured Mr. Gibson that his request would be accomplished during the remediation phase.
- SSI performed the requested location survey and excavation delineation at Site 43 and switched activities to Site 15.
- At Site 15, SSI was able to quickly locate well 15GS71.
- Earlier Greg Wilfley had directed that a sample be collected at 15GR36 instead of 15GR07. Once well 15GS71 was located, samples were collected from 15GS71 and 15GR36. The samples were labeled, packaged for delivery, iced and documented on a chain of custody.
- Amy Twitty and Greg Wilfley had resolved that the dry wells at Sites 15 & 43 were likely the result of either debris or sediment build-up. Additional effort to open/clean out the wells will take place in the near future.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/30/01 – 12/02/01	Report No:	29			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	318	Total Work Hours From Start of Construction:	318			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						234
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments: No site activity for the previous 4 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/29/01	Report No:	28			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, and Calm	PM Weather:	Moderate, Humid, and Calm			
Min Temp (°F):	62	Max Temp (°F):	75			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	16	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	16			
Cumulative Total of Work Hours From Previous Report:	302	Total Work Hours From Start of Construction:	318			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0800	1600	SD	8		
CCI Laptop Computer / Printer	0800	1600	SD	8		
CCI Sampling Equip./Supplies	0800	1600	SD	8		
CH2M Hill, Inc POV	0800	1600	RB	8		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 15 & 43	8
Ryan Bitely	CH2M Hill	32814	QAM	Sampling	Site 15 & 43	8
Total Man-hours Today						16
Total Man-hours This Year						234



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/29/01	Report No:	28			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments:

- Samples were collected from the wells with water in them at Site 15, the samples were labeled, packaged for delivery, iced and documented on a chain of custody. The wells sampled were as follows: 15GS68, 15GR65, 15GR03, and 15GS07.
- Wells 15GS69, 15GR04, 15GR66, and 15GR70 were not sampled due their being dry. Well 15GR71 was not located.
- Amy Twitty and Greg Wilfley were compiling well data and previous well sampling information from records and talking to the CLEAN Contractor. However, a conclusion as to the water level (dry well) quandary was not resolved.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/28/01	Report No:	27			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, and Calm	PM Weather:	Moderate, Humid, and Calm			
Min Temp (°F):	58	Max Temp (°F):	70			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	16	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	16			
Cumulative Total of Work Hours From Previous Report:	286	Total Work Hours From Start of Construction:	302			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Well Sampling Equipment (Water Level, Horiba, Geo-Pumps, Turbidity Meter)		N/A	2 ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0800	1600	SD	8		
CCI Laptop Computer / Printer	0800	1600	SD	8		
CCI Sampling Equip./Supplies	0800	1600	SD	8		
CH2M Hill, Inc POV	0800	1600	RB	8		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 15 & 43	8
Ryan Bitely	CH2M Hill	32814	QAM	Sampling	Site 15 & 43	8
Total Man-hours Today						16
Total Man-hours This Year						218

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/28/01	Report No:	27			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments:

- CCI mobilized to Site 43 and located the 5 monitoring wells at the site. The following water levels were observed:

NAS-43-1s	4.33 feet of water
NAS-43-2s	Dry
NAS-43-3s	Dry
NAS-43-4s	6.42 feet of water
NAS-43-5s	Dry
- Both NAS-43-1s and NAS-43-4s were purged and sampled, but due to no water being present in NAS-43-2s, NAS-43-3s, and NAS-43-5s no samples were collected.
- The wells were secured at Site 42 and activities switched to Site 15. CCI attempted to locate the compliance wells at Site 15. However, one well was not located, one well was mistaken for a deeper well, and one well was damaged. The remaining 6 wells were located and water levels checked. The following is a list of the wells and their status:

15GS69	Dry
15GS68	4.70 feet of water
15GR65	3.33 feet of water
15GR03	1.68 feet of water
15GR04	Dry
15GR07	26.46 feet of water (Mistaken Well)
15GR66	Dry
15GR70	Dry
15GR71	Not located
- As a result of the well surveys at Site 15 & 43 a field determination made, to review previous sample data and records to attempt a determination of why so many wells were dry.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/21/01 – 11/27/01	Report No:	26			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Yes	No				
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	286	Total Work Hours From Start of Construction:	286			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						202
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments: No site activity for the previous 7 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/19/01	Report No:	24			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, and Calm	PM Weather:	Hot, Humid, and Calm			
Min Temp (°F):	58	Max Temp (°F):	65			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	16	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	16			
Cumulative Total of Work Hours From Previous Report:	262	Total Work Hours From Start of Construction:	278			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0815	1615	SD	8		
CCI Laptop Computer / Printer	0815	1615	SD	8		
CCI Sampling Equip./Supplies	0815	1615	SD	8		
CH2M Hill, Inc POV	0815	1615	RB	8		
CH2M Hill, Inc POV						
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight Sampling	Site 43	8
Ryan Bitely	CH2M Hill	32814	QAM	Sampling	Site 43	8
Total Man-hours Today						16
Total Man-hours This Year						194



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/19/01	Report No:	24			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments:

- CCI collected 22 surface soil samples at Site 43. These samples were collected from where the outer limit of debris/ discolored soil was identified to the closest previously sampled point. Prior to and at the conclusion of sampling, QA rinsate samples were collected from the sampling equipment. Additionally, the pertinent duplicate, matrix spike, and matrix spike duplicate samples were collected during the course of sampling. All the samples were labeled, packaged for transport, iced, and documented on a Chain of Custody. For additional information, please refer to the sample log and Chain of Custody.
- The site was secured.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	11/03/01 – 11/18/01	Report No:	23			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:		0	JA Jones Total Worked Hours:		
Subcontractor(s) Total Worked Hours:		0	Total Worked Hours on Job Site This Date:			
Cumulative Total of Work Hours From Previous Report:		262	Total Work Hours From Start of Construction:			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						178
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments: No site activity for the previous 16 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/13/01 – 11/01/01	Report No:	21			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:		0	JA Jones Total Worked Hours:		
Subcontractor(s) Total Worked Hours:		0	Total Worked Hours on Job Site This Date:			
Cumulative Total of Work Hours From Previous Report:		256	Total Work Hours From Start of Construction:			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						172
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						84

Report Comments: No site activity for the previous 20 days

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/12/01	Report No:	20			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, and Calm	PM Weather:	Hot, Humid, and Calm			
Min Temp (°F):	72	Max Temp (°F):	78			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
CCI Total Worked Hours:	8	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	14	Total Worked Hours on Job Site This Date:	22			
Cumulative Total of Work Hours From Previous Report:	234	Total Work Hours From Start of Construction:	256			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and Southern Surveying, Inc. (SSI) personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0700	1500	SD	8		
CCI Laptop Computer / Printer	0700	1500	SD	8		
CCI Sampling Equip./Supplies						
CH2M Hill, Inc POV						
CH2M Hill, Inc POV						
SSI Pick-up/Surveying Equipment	0800	1500	PM	7		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight Surveying	Site 15 & 43	8
Total Man-hours Today						8
Total Man-hours This Year						172



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/12/01	Report No:	20			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Surveyor	Locating sample points	15 & 43	7
Joe Stewart	SSI	N/A	Helper	Locating sample points	15 & 43	7
Total Man-hours Today						14
Total Man-hours This Year						84

Report Comments:

- Southern Survey, Inc. returned to NAS Pensacola to locate all the sample points at sites 15 & 43 using state plain coordinates. Both Sites 15 & 43 were surveyed with all the sample point locations identified.
- The sites were secured.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/10/01 – 10/11/01	Report No:	19
Project Name/Location:	NAS Pensacola	CTO No	0027
Project No.	154039	Contract No:	N62467-98-C-0095
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)		
Site Superintendent:		Site Safety Officer:	
AM Weather:		PM Weather:	
Min Temp (°F):		Max Temp (°F):	
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Yes	No	
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0
Cumulative Total of Work Hours From Previous Report:	234	Total Work Hours From Start of Construction:	234
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:			
No Site Activity			
Equipment and Material Received			
Equipment / Material		Equipment No	Number/Volume/Weight
Construction and Plant Equipment			
Plant/Equipment	Arrived	Departed	Safety Check Performed By
		Number of Hours	
		Used	Idle
		Repair	
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>			
No Site Activity			
Visitors to the Site: No site activity			
CCI and CH2M Hill Man-hours			
Employee	Employer	Employee No.	Title/Trade
Work Performed		Work Location	Hours Worked
			0
Total Man-hours Today			0
Total Man-hours This Year			164
Subcontractor Man-hours			
Employee	Employer	Employee No.	Title/Trade
Work Performed		Work Location	Hours Worked
			0
Total Man-hours Today			0
Total Man-hours This Year			70

Report Comments: No site activity for the previous 2 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/09/01	Report No:	18			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, and Calm	PM Weather:	Hot, Humid, and Calm			
Min Temp (°F):	75	Max Temp (°F):	80			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	4	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	8	Total Worked Hours on Job Site This Date:	12			
Cumulative Total of Work Hours From Previous Report:	222	Total Work Hours From Start of Construction:	234			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and Southern Surveying, Inc. (SSI) personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Southern Surveying, Inc. (SSI) Pick-up Truck/Surveying Equipment		N/A	1ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0730	1130	SD	4		
CCI Laptop Computer / Printer	0730	1130	SD	4		
CCI Sampling Equip./Supplies						
CH2M Hill, Inc POV						
CH2M Hill, Inc POV						
SSI Pick-up/Surveying Equipment	0730	1130	PM	4		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Surveying	Site 15 & 43	4
Total Man-hours Today						4
Total Man-hours This Year						164

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/09/01	Report No:	18			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Surveyor	Locating sample points	15 & 43	4
Joe Stewart	SSI	N/A	Helper	Locating sample points	15 & 43	4
Total Man-hours Today						8
Total Man-hours This Year						70

Report Comments:

- Southern Survey, Inc. mobilized to NAS Pensacola to located the sample points at sites 15 & 43. As directed by Greg Wilfley the Project Manager, the outer perimeters of sample points at both sites were to be located, using state plain coordinates. Both Sites 15 & 43 were surveyed and the outer limits of the expected excavation were identified.
- The sites were secured.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	10/08/01 – 10/08/01	Report No:	17			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	222	Total Work Hours From Start of Construction:	222			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						160
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						62

Report Comments: No site activity for the previous 5 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/25/01 – 10/02/01	Report No:	15			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:		0	JA Jones Total Worked Hours:		
Subcontractor(s) Total Worked Hours:		0	Total Worked Hours on Job Site This Date:			
Cumulative Total of Work Hours From Previous Report:		197	Total Work Hours From Start of Construction:			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						135
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						62

Report Comments: No site activity for the previous 9 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/24/01	Report No:	14			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Clear, and Calm	PM Weather:	Hot, Humid, Clear, and Calm			
Min Temp (°F):	80	Max Temp (°F):	85			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:		10	JA Jones Total Worked Hours:		0	
Subcontractor(s) Total Worked Hours:		0	Total Worked Hours on Job Site This Date:		10	
Cumulative Total of Work Hours From Previous Report:		187	Total Work Hours From Start of Construction:		197	
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	1030	1345	SD	3 ¼		
CCI Laptop Computer / Printer	1030	1345	SD	3 ¼		
CCI Sampling Equip./Supplies	1030	1345	SD	3 ¼		
CH2M Hill, Inc POV	1015	1345	RB	3 ½		
CH2M Hill, Inc POV	1030	1345	PZ	3 ¼		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: No Site Visitors Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 43	3 ¼
Ryan Bitely	CH2M Hill	32814	QA Manager	Sampling	Site 43	3 ½
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 43	3 ¼
Total Man-hours Today						10
Total Man-hours This Year						135



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/24/01	Report No:	14			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						62

Report Comments:

- CCI collected third round surface soil samples at Site 43. Prior to and at the conclusion of sampling, QA rinsate samples were collected from the sampling equipment. Additionally, the pertinent duplicate, matrix spike, and matrix spike duplicate samples were collected during the course of sampling. All the samples were labeled, packaged for transport, iced, and documented on a Chain of Custody. For additional information, please refer to the sample log and Chain of Custody.
- During course of sampling an observation that areas with elevated metals levels appeared to have significant debris and discolored soil/material associated with it. Given the previous statement, additional boring were conducted at what appear surficially as the boundary of the burial area. The extent of discolored/debris laden area was larger than initially expected. The field notes reflect the locations of the boring relative to the fenced boundary of the site.
- The site was secured.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/18/01 – 09/23/01	Report No:	13			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	187	Total Work Hours From Start of Construction:	187			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						125
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						62

Report Comments: No site activity for the previous 6 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/12/01 – 09/16/01	Report No:	11			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	163	Total Work Hours From Start of Construction:	163			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No Site Activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						101
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						62

Report Comments: No Site Activity

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/11/01	Report No:	10			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Clear, and Calm	PM Weather:	Hot, Humid, Clear, and Calm			
Min Temp (°F):	82	Max Temp (°F):	93			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	25	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	14	Total Worked Hours on Job Site This Date:	39			
Cumulative Total of Work Hours From Previous Report:	118	Total Work Hours From Start of Construction:	163			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with the CCI, CH2M Hill, and KED personnel						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0730	1500	SD	7 ½		
CCI Laptop Computer / Printer	0730	1500	SD	7 ½		
CCI Rental Storage Trailer	0730	1500	SD	7 ½		
CCI Sampling Equip./Supplies	0730	1500	SD	7 ½		
CH2M Hill, Inc POV	0730	1500	RB	7 ½		
CH2M Hill, Inc POV	0730	1500	PZ	7 ½		
KED Direct Push Technology (DPT) rig w/ sampling equipment	0800	1500	BK	7		
KED Pick-up & decontamination trailer	0800	1500	BK	3	4	
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site:						
No Site Visitors Today						

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/11/01	Report No:	10			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 43 & 15	9
Ryan Bitely	CH2M Hill	32814	QA Manager	Sampling	Site 43 & 15	8
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 43 & 15	8
Total Man-hours Today						25
Total Man-hours This Year						101
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Bobby Kelly	KED	Unk	Driller	Subsurface Soil Sampling	Site 43 & 15	7
Isaac Barnes	KED	Unk	Helper	Subsurface Soil Sampling	Site 43 & 15	7
Total Man-hours Today						14
Total Man-hours This Year						62

Report Comments:

- CCI, CH2M Hill, and KED personnel returned to Site 43 and prepared to collect the remaining second round of surface samples and first round of subsurface samples. Prior to commencement of sampling, QA rinsate samples were collected from the sampling equipment. These samples were labeled, packaged for transport, iced, and documented on a Chain of Custody.
- The entire remaining second round of surface samples and first round subsurface samples were collected at site 43 today. All of the samples were labeled, iced, packaged for transport, and documented on a Chain of Custody. Additionally, the pertinent duplicate, matrix spike, matrix spike duplicate, and QA samples were collected during the course of sampling. For additional information please refer to the sample log and Chain of Custody.
- During the course of sampling Site 43, project personnel were informed of the tragic events, which occurred at the World Trade Center and Pentagon Sites. Although difficult, sampling progress and all personnel were encouraged to keep the focus on the activities at hand.
- Upon completion of sampling at Site 43, operations were process of switching to focus on Site 15. During the course of transferring equipment and personnel to Site 15, NAS Pensacola's Basewide Security Level was upgrade to FORCE-CON DELTA, which secured all access to the Base. As a result of relocating equipment, KED personnel were detained at the main entrance of the Base. CCI was notified of KED detention and subsequent intense conversations with NAS Pensacola Security Forces permitted KED re-entrance to the Base.
- CCI and KED collected subsurface samples from a single point at Site 15, as well prior to and at the conclusion of sampling QA rinsate samples were collected. All of the samples were labeled, packaged for transport, iced, and documented on a Chain of Custody.
- Once KED had completed their contracted sampling effort, they decontaminated their equipment with all of the decontamination water collected. KED demobilized their equipment from NAS Pensacola.
- Mr. Ed Burns with NAS Pensacola Golf Course Management informed CCI that due to the heightened level of security on Base, all non-essential personnel were being asked to leave and CCI informed Mr. Burns that they would comply with the request.
- The site was secured.
- All of the samples were delivered to Severn Trent Laboratory in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/10/01	Report No:	09			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Clear, and Calm	PM Weather:	Hot, Humid, Clear, and Calm			
Min Temp (°F):	85	Max Temp (°F):	94			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:		26	JA Jones Total Worked Hours:			
Subcontractor(s) Total Worked Hours:		10	Total Worked Hours on Job Site This Date:			
Cumulative Total of Work Hours From Previous Report:		82	Total Work Hours From Start of Construction:			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with the CCI & CH2M Hill personnel. Kelly Environmental Drilling (KED) personnel were provided a project orientation, Health and Safety Plan overview, and a review of the activities hazards analysis.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Hill, Inc POV		N/A	1 ea.			
KED - Direct push rig w/sampling equipment		Unk	1 ea.			
KED - Pick-up & decontamination trailer		Unk	1 ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0845	1700	SD	9		
CCI Laptop Computer / Printer	0845	1700	SD	8		
CCI Rental Storage Trailer	0845	1700	SD	8		
CCI Sampling Equip./Supplies	0845	1700	SD	8		
CH2M Hill, Inc POV	0830	1700	RB	8		
CH2M Hill, Inc POV	0845	1700	PZ	8		
KED Direct Push Technology (DPT) rig w/sampling equipment	1145	1700	BK	7		
KED Pick-up & decontamination trailer	1145	1700	BK	1	4	
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site:						
No Site Visitors Today						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	09/10/01	Report No:	09			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight/Sampling	Site 43	10
Ryan Bitely	CH2M Hill	32814	QA Manager	Sampling	Site 43	8
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 43	8
Total Man-hours Today						26
Total Man-hours This Year						76
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Bobby Kelly	KED	Unk	Driller	Subsurface Soil Sampling	Site 43	5
Isaac Barnes	KED	Unk	Helper	Subsurface Soil Sampling	Site 43	5
Total Man-hours Today						10
Total Man-hours This Year						48

Report Comments:

- CCI and CH2M Hill personnel remobilized to Site 43 and prepared to begin collection of the second group of surface soil samples. Per the Basewide Work Plan Addendum, binary sampling was required at Site 43 due to most of the initial samples exceeded the clean-up criteria concentrations. Sample collection was delineated as follows:
 - Individual sample points with exceedances were outlined in all four directions (i.e., North, South, East, West) 5-feet from the sample origin. A sample was collected for each of the outlining sample point locations.
 - Samples points representing the perimeter of an area/pit with exceedances were stepped out 5-feet further in the same direction/side directions (i.e., North, South, East, West) they represented, with a sample collected at that point.
- KED mobilized their DPT rig and Decontamination Trailer to collect subsurface samples at both sites 15 & 43. Prior to commencement of activities KED's personnel were provided a site orientation, safety plan overview, and an activities hazards analysis review.
- KED up a temporary decontamination station at Site 15, KED joined CCI at Site 43 and began prepared to collect of subsurface soil samples. Prior to collection of samples CCI collected QA rinsate samples from the sampling equipment, these samples were labeled, iced, packaged for transport, and documented on a Chain of Custody.
- Both binary surface samples and primary subsurface samples were collected at site 43 today. All of the samples were labeled, iced, packaged for transport, and documented on a Chain of Custody. Additionally, the pertinent duplicate, matrix spike, and matrix spike duplicate samples were collected during the course of sampling. For additional information please refer to the sample log and Chain of Custody.
- At the conclusion of the day's sampling addition QA rinsate samples were collected from the sampling equipment.
- The site and equipment was secured for the day.



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/24/01	Report No:	03			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Partly Cloudy, & Calm	PM Weather:	Hot, Humid, Partly Cloudy, & Calm			
Min Temp (°F):	89	Max Temp (°F):	96			
			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	31	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	12	Total Worked Hours on Job Site This Date:	43			
Cumulative Total of Work Hours From Previous Report:	29	Total Work Hours From Start of Construction:	72			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with all site personnel, the topic of today's discussion was a review of heat related illness prevention.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0600	1700	SD	11		
CCI Laptop Computer / Printer	0600	1700	SD	11		
CCI Rental Storage Trailer	0700	1600	SD	9		
CCI Sampling Equip./Supplies	0700	1600	SD	9		
CH2M Hill, Inc POV	0700	1600	RB	9		
CH2M Hill, Inc POV	0700	1600	PZ	9		
CH2M Hill, Inc POV	0900	1200	AT	3		
SSI Pick-up/Survey Equipment	0900	1200	PM	3		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site:						
No Site Visitors Today						



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/24/01	Report No:	03
Project Name/Location:	NAS Pensacola, Site 15 & 43	CTO No	0027
Project No.	154039	Contract No:	N62467-98-C-0095

CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight & Sampling	Site 15	11
Ryan Bitely	CH2M Hill	32814	QA Manager	Sampling	Site 43	9
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 43	9
Amy Twitty	CH2M Hill	16529	PM	Sampling	Site 43	3
Total Man-hours Today						31
Total Man-hours This Year						40
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Party Chief	Sample Point Location	Site 15 & 43	3
Justin Allen	SSI	N/A	Surv. Tech	Sample Point Location	Site 15 & 43	3
Total Man-hours Today						6
Total Man-hours This Year						38

Report Comments:

- SSI crew finished locating surface structures and land marks, as well as, set-up control points.
- CCI/CH2M Hill personnel mobilized to Site 15 and collected both surface and subsurface soil samples, the Sampling Plan in the Basewide Work Plan Addendum. Prior to sampling all of the sample points were laid out and clearly identified, by means of written the sample identification numbers on grade stakes.
- 9 of the 11 pits were sampled today with 2 pits remaining to be sampled.
- All samples were collected, labeled, packaged, iced, and documented on the Chain of Custody. Latter that afternoon the samples were delivered to Severn Trent Laboratory, in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/23/01	Report No:	02			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Partly Cloudy, & Calm	PM Weather:	Hot, Humid, Partly Cloudy, & Calm			
Min Temp (°F):	88	Max Temp (°F):	95			
			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	31	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	12	Total Worked Hours on Job Site This Date:	43			
Cumulative Total of Work Hours From Previous Report:	29	Total Work Hours From Start of Construction:	72			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
A project Health and Safety Meeting was conducted with the CH2M Hill and new subcontracted surveyor employees to provide them a site orientation and Safety Plan review.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Hill, Inc POV		N/A	3 ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0600	1600	SD	10		
CCI Laptop Computer / Printer	0600	1600	SD	10		
CCI Rental Storage Trailer	0700	1500	SD	8		
CCI Sampling Equip./Supplies	0700	1500	SD	8		
CH2M Hill, Inc POV	0700	1500	RB	8		
CH2M Hill, Inc POV	0700	1500	PZ	8		
CH2M Hill, Inc POV	0900	1400	AT	5		
SSI Pick-up/Survey Equipment	0830	1430	PM	6		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site:						
No Site Visitors Today						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/23/01	Report No:	02
Project Name/Location:	NAS Pensacola, Site 15 & 43	CTO No	0027
Project No.	154039	Contract No:	N62467-98-C-0095

CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight & Sampling	Site 15 & 43	10
Ryan Bitely	CH2M Hill	32814	QA Manager	Sampling	Site 43	8
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Sampling	Site 43	8
Amy Twitty	CH2M Hill	16529	PM	Sampling	Site 43	5
Total Man-hours Today						31
Total Man-hours This Year						40
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Party Chief	Sample Point Location	Site 15 & 43	6
Justin Allen	SSI	N/A	Surv. Tech	Sample Point Location	Site 15 & 43	6
Total Man-hours Today						12
Total Man-hours This Year						32

Report Comments:

- SSI crew continued locating all of the requested former sample point locations at Site 15 before noon. The points were denoted with stakes bearing the former sample point ID number and a hub in the ground in case the stakes were removed or destroyed.
- When SSI finished locating the former sample point locations at Site 15, they located surface structures and land marks, as well as, set-up control points.
- CCI/CH2M Hill personnel mobilized to Site 43 and collected both surface and subsurface soil samples, the Sampling Plan in the Basewide Work Plan Addendum. Prior to sampling all of the sample points were laid out and clearly identified, by means of written the sample identification numbers on grade stakes.
- The following samples were collected:

43SS15	43SO12	43SS21	43SS25	43SS20	43SO14
43SS18	43SS19	43SS20	43SS26	43SS10	43SS27
43SS28	43SO05	43SS31	43SO07	43SO31	43SS32
43SS33	43SS34				

All "SS" samples are surface samples and all "SO" samples are subsurface samples

- All samples were collected, labeled, packaged, iced, and documented on the Chain of Custody. Latter that afternoon the samples were delivered to Severn Trent Laboratory, in Pensacola, Florida.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/22/01	Report No:	01			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Hot, Humid, Partly Cloudy, & Calm	PM Weather:	Hot, Humid, Partly Cloudy, & Calm			
Min Temp (°F):	85	Max Temp (°F):	92			
			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	9	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	20	Total Worked Hours on Job Site This Date:	29			
Cumulative Total of Work Hours From Previous Report:	0	Total Work Hours From Start of Construction:	29			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
A project Health and Safety Meeting was conducted with the Subcontracted Surveyors to provide them a site orientation and Safety Plan review						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Hill Constructors, Inc. (CCI) Pick-up Truck/Tools		5251	1 ea.			
CCI Laptop Computer / Printer			1 ea.			
CCI Rental Storage Trailer			1 ea.			
CCI Sampling Equip./Supplies			Misc.			
Southern Surveying , Inc. (SSI) Pick-up Truck/Survey Equipment			2 ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up Truck/Tools	0800	1700	SD	9		
CCI Laptop Computer / Printer	0800	1700	SD	9		
CCI Rental Storage Trailer	1500	1700	SD	2		
CCI Sampling Equip./Supplies	1500	1700	SD	2		
SSI Pick-up/Survey Equipment	0830	1630	PM	8		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site:						
No Site Visitors Today						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	08/22/01	Report No:	01
Project Name/Location:	NAS Pensacola, Site 15 & 43	CTO No	0027
Project No.	154039	Contract No:	N62467-98-C-0095

CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Site Super	Oversight	Site 15 & 43	9
Total Man-hours Today						9
Total Man-hours This Year						9
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Party Chief	Sample Point Location	Site 15 & 43	8
Bill Stiffey	SSI	N/A	PM	Sample Point Location	Site 15 & 43	4
Bobby Tuner	SSI	N/A	Surv. Tech	Sample Point Location	Site 15 & 43	8
Total Man-hours Today						20
Total Man-hours This Year						20

Report Comments:

- SSI mobilized their crew and survey equipment to NAS Pensacola, after brief introductions a preparatory/initial phase meeting was conducted with their personnel to ensure everyone new their roles and responsibilities. In addition, a site orientation and safety plan review that encompassed both Sites 15 & 43 conducted.
- SSI located all of the requested former sample point locations at Site 43 before noon. The points were denoted with stakes bearing the former sample point ID number and a hub in the ground incase the stakes were removed or destroyed.
- SSI proceeded with locating the former sample point locations at Site 15, however, they were unable to complete the location before the end of the day.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	05/05/02	Report No:	70			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	1956	Total Work Hours From Start of Construction:	1956			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activities Today						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted						
Visitors to the Site:						
None Noted						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						835
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						1106

Report Comments:

No Site Activities Today

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/28/02	Report No:	63			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	1529	Total Work Hours From Start of Construction:	1529			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activities Today						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activities Today						
Visitors to the Site:						
No Site Activities Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
						0
Total Man-hours Today						0
Total Man-hours This Year						727
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
						0
Total Man-hours Today						0
Total Man-hours This Year						792

Report Comments:

No Site Activities Today

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/26/02	Report No:	61			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Partly Cloudy, Light Breeze	PM Weather:	Warm, Cloudy, Breezy			
Min Temp (°F):	75	Max Temp (°F):	75			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	18	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	51	Total Worked Hours on Job Site This Date:	69			
Cumulative Total of Work Hours From Previous Report:	1399	Total Work Hours From Start of Construction:	1468			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Excavation around Power Lines)						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Sand and Dirt Inc. (SDI) 18 yd ³ Dump Trucks (Backfill Soil)			126 yd ³			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI POV	0730	1530	GW	8		
CH2M Hill POV	0800	1700	PZ	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS	10		
EQIS Trackhoe	0700	1700	BS	10		
EQIS backhoe	0700	1700	SG	10		
EQIS Dozer	0700	1700	BS	10		
PT Pick-up and Density Test Equip.	1120	1200	RB	1		
SDI Backfill				126 yd ³		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted						
Visitors to the Site:						
None Noted						



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/26/02	Report No:	61			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Greg Wilfley	CCI	15831	PM	Site Remediation	Site 43	8
Phyllis Zerangue	CH2M Hill	31159	QAM	Site Remediation	Site 43	10
Total Man-hours Today						18
Total Man-hours This Year						701
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	10
Randy Beal	PT	N/A	Test Tech.	Site Remediation	Site 43	1
Total Man-hours Today						51
Total Man-hours This Year						757

Report Comments:

Site 43

- SDI delivered 126 yd³ of Top Dressing backfill. The backfill was place above the initial 1-foot lift and compacted with three passes of the rubber tired loader.
- PT came back to the site and re-tested the two points that had failed yesterday. Both areas met the minimum of 98% compaction with an overall compaction average of 102%
- EQIS had stockpiled the remainder of the backfill soil required to finish backfilling the excavation area and now were spreading and compacting the fill.
- By the end of the day the entire excavation area at site 43 was backfilled and rough graded.

Site 15

- EQIS began switching operations to Site 15, they installed silt fence and high visibility construction fence, as well as, began removal of soil from atop buried utilities.
- During the course of uncovering buried water lines EQIS broke the same 1" PVC water line that they had broken a week ago, only in a different place.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/25/02	Report No:	60			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clear, Calm	PM Weather:	Hot, Humid, Clear, Calm			
Min Temp (°F):	83	Max Temp (°F):	90			
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	39	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	51	Total Worked Hours on Job Site This Date:	90			
Cumulative Total of Work Hours From Previous Report:	1309	Total Work Hours From Start of Construction:	1399			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Heat Stress Prevention)						
Equipment and Material Received						
Equipment / Material	Equipment No	Number/Volume/Weight				
CCI POV	N/A	1ea				
CH2M Hill POV	N/A	1ea				
Pensacola Testing (PT) pick-up and Density Testing Equipment	N/A	1ea				
Sand and Dirt Inc. (SDI) 18 yd ³ Dump Trucks (Backfill Soil)		560 yd ³				
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1400	SD	7		
CCI POV	0600	1600	GW	10		
CH2M Hill POV	0800	1700	PZ	9		
CH2M Hill POV	0700	1700	EB	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS	10		
EQIS Trackhoe	0700	1700	BS	0	10	
EQIS backhoe	0700	1700	SG	0	10	
EQIS Dozer	0700	1700	BS	10		
PT Pick-up and Density Test Equip.	1120	1200	RB	1		
SDI Backfill				560 yd ³		

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/25/02	Report No:	60			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Changed Conditions/Delays/Conflicts Encountered: (List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.) None Noted						
Visitors to the Site: None Noted						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Greg Wilfley	CCI	15831	PM	Mobilization	Site 43	6
Greg Wilfley	CCI	15831	PM	Site Remediation	Site 43	4
Scott Dunbar	CCI	18507	SS	Site Remediation	Site 43	10
Phyllis Zerangue	CH2M Hill	31159	QAM	Site Remediation	Site 43	9
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 43	10
Total Man-hours Today						39
Total Man-hours This Year						683
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	10
Randy Beal	PT	N/A	Test Tech.	Site Remediation	Site 43	1
Total Man-hours Today						51
Total Man-hours This Year						706

Report Comments:

Site 43

- SDI delivered 560 yd³ of silty sand clay soil for backfill. The backfill was place in the excavation in 1-foot lift and compacted with three passes of the rubber tired loader.
- Upon EQIS completing the first lift of soil into the excavation PT came out the site and conducted compaction testing using a Nuclear Density Gauge. Only one of the three required test locations achieved 98% compaction as required. Because of the two failed tests EQIS was not allowed to continue backfilling the excavation and had to re-compact the failed areas of the excavation.
- EQIS scheduled PT for addition testing tomorrow morning.
- Phyllis Zerangue mobilized to the Site to relieve Ryan Bitely of QA duties, as Ryan was scheduled to begin another CCI/Navy RAC project.
- Greg Wilfley mobilized to the project to stand in for Scott Dunbar, as Scott had prior personal commitments for the next day and a half.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/24/02	Report No:	59			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clear, Calm	PM Weather:	Hot, Humid, Clear, Calm			
Min Temp (°F):	78	Max Temp (°F):	92			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;"> <p>JOB</p> <p>SAFETY</p> </div> </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	20	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	55	Total Worked Hours on Job Site This Date:	75			
Cumulative Total of Work Hours From Previous Report:	1234	Total Work Hours From Start of Construction:	1309			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Dozer Operation and Vehicle Traffic Hazards)						
Equipment and Material Received						
Equipment / Material	Equipment No	Number/Volume/Weight				
EQIS Dozer	N/A	1ea				
SSI Pick-up & Survey Equipment	N/A	1ea				
Sand and Dirt Inc. (SDI) 18 yd ³ Dump Trucks (Backfill Soil)		180 yd ³				
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1700	SD	10		
CCI POV	0700	1700	EB	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS	10		
EQIS Trackhoe	0700	1700	BS	1	9	
EQIS backhoe	0700	1700	SG	1	9	
EQIS Dozer	0800	1700	BS	9		
SDI Backfill				180 yd ³		
SSI Pick-up & Survey Equipment	0830	1030	PM	2 ½		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted						
Visitors to the Site:						
None Noted						



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/24/02	Report No:	59			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS	Site Remediation	Site 43	10
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 43	10
Total Man-hours Today						20
Total Man-hours This Year						643
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	10
Pat McCohan	SSI	N/A	Surveyor	Site Remediation	Site 43	2 ½
Bobby Turner	SSI	N/A	Rod Man	Site Remediation	Site 43	2 ½
Total Man-hours Today						55
Total Man-hours This Year						655

Report Comments:

Site 43

- EQIS pressure washed the trackhoe and loader and the trackhoe was subsequently transported to Site 15 for the up coming work.
- SSI surveyed the vertical and horizontal limits of the excavation and CCI provide SSI with a rod-man to enter the exclusion zone.
- EQIS had Sand and Dirt Inc. the approved backfill source bring-in 180 yd³ of sandy clay soil for backfill. The backfill was place in the excavation in 1-foot lift and compacted with three passes of the rubber tired loader. EQIS was allowed to use this method of compaction, based on fact that they (EQIS) was at risk if the compaction failed to meet the specified density.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/23/02	Report No:	58			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Partly Cloudy, Light Breeze	PM Weather:	Hot, Humid, Clear, Calm			
Min Temp (°F):	65	Max Temp (°F):	88			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> JOB SAFETY </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	20	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	50	Total Worked Hours on Job Site This Date:	70			
Cumulative Total of Work Hours From Previous Report:	1164	Total Work Hours From Start of Construction:	1234			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Heavy Equipment Swing and Vehicle Traffic Hazards)						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Action Trucking (AT) 22 yd ³ Tractor-Trailer			12ea			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1700	SD	10		
CCI POV	0700	1700	EB	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS	10		
EQIS Trackhoe	0700	1700	BS	10		
EQIS backhoe	0700	1700	SG	10		
EQIS Aerosol Monitor	0700	1700	SG	10		
EQIS Photo-Ionization Detector	0700	1700	SG	10		
AT Tractor-Trailers				12		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted						
Visitors to the Site: CWO4 James Clarke, NAS Pensacola Ordinance Officer Mr. Ron Joyner, NAS Pensacola Environmental						



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/23/02	Report No:	58			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS	Site Remediation	Site 43	10
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 43	10
Total Man-hours Today						20
Total Man-hours This Year						623
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	10
Total Man-hours Today						50
Total Man-hours This Year						600

Report Comments:

Site 43

- EQIS' resume excavation and load out activities at Site 43.
- Mr. Jimmy Bartee signed manifests for today's load out of soil.
- During the course of the excavation, an additional UXO looking Steel sphere was unearthed and CWO4 Clarke, Mr. Mark Schull, and Mr. Ron Joyner were notified of the finding. Both Mr. Ron Joyner and CWO4 Clarke came out to the site and looked at the object. CWO4 Clarke said that he thought it looked like a weight that might have had a chain attached to it, but that it wasn't UXO. Based on CWO4 Clarke's evaluation all of the soil was shipped to EQ's facility in Michigan.
- EQIS loaded out 11 ½ tractor-trailer loads of soil from Site 43. Upon completion of the load out activities 100% of the soil to be excavated was removed from site, for final disposal.
- EQIS dry decontaminated the backhoe that is to be transported over to Site 15 in the morning and set-up to begin pressure washing the trackhoe and loader.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/22/02	Report No:	57			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Partly Cloudy, Light Breeze	PM Weather:	Hot, Humid, Clear, Calm			
Min Temp (°F):	75	Max Temp (°F):	90			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	20	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	50	Total Worked Hours on Job Site This Date:	70			
Cumulative Total of Work Hours From Previous Report:	1094	Total Work Hours From Start of Construction:	1164			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Ensure no plastic sheeting or debris gets blown on the runways)						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Action Trucking (AT) 22 yd ³ Tractor-Trailer			9ea			
EQIS Backhoe		N/A	1ea			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1700	SD	10		
CCI POV	0700	1700	EB	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS	10		
EQIS Trackhoe	0700	1700	BS	10		
EQIS backhoe	0700	1700	SG	10		
EQIS Aerosol Monitor	0700	1700	SG	10		
EQIS Photo-Ionization Detector	0700	1700	SG	10		
AT Tractor-Trailers				9		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
Visitors to the Site: None Noted						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/22/02	Report No:	57			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS	Site Remediation	Site 43	10
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 43	10
Total Man-hours Today						20
Total Man-hours This Year						603
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	10
Total Man-hours Today						50
Total Man-hours This Year						550

Report Comments:

Site 43

- After EQIS' decontaminated their excavator, it was transported from the staging area east of Sherman Field to to Site 43 to resume excavation at the site.
- Mr. Jimmy Bartee signed manifests for today's load out of soil.
- EQIS resumed excavation at Site 43 with both EQIS and CCI carefully observing excavation operations to watch for suspected UXO looking objects.
- EQIS loaded out the soil stockpiled at the stage area east of Sherman Field, as a precautionary measure EQIS scraped about 2-inches of soil from below the poly linear the stockpiled soil was on.
- 5 ¼ tractor-trailer loads of soil was loaded out at the staging area and 4 ¾ tractor-trailer loads of soil was loaded out from Site 43.
- At the conclusion of the day, EQIS had excavated the 85% of the soil at Site 43 and stockpiled it inside the excavation limits for load out tomorrow. In addition, the 10' x 10' x 2' excavation area to the west of the tennis court had been excavated today and stockpile with the other soil.

Site Superintendent's Signature

Date



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/20/02 & 04/21/02	Report No:	56			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
JOB SAFETY	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	1094	Total Work Hours From Start of Construction:	1094			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activities yesterday or today						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activities yesterday or today						
Visitors to the Site:						
No Site Activities yesterday or today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
						0
Total Man-hours Today						0
Total Man-hours This Year						583
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
						0
Total Man-hours Today						0
Total Man-hours This Year						500

Report Comments:

No Site Activities yesterday or today

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/19/02	Report No:	55			
Project Name/Location:	NAS Pensacola		CTO No	0027		
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clear, Calm		PM Weather:	Hot, Humid, Clear, Calm		
Min Temp (°F):	73	Max Temp (°F):	90			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>				Yes	No	
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CCI Total Worked Hours:		36	JA Jones Total Worked Hours:		0	
Subcontractor(s) Total Worked Hours:		50	Total Worked Hours on Job Site This Date:		86	
Cumulative Total of Work Hours From Previous Report:		1008	Total Work Hours From Start of Construction:		1094	
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>				<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>				<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: UXO recognition and Safety Precautions)						
George Overby, CH2M Hill UXO Tech. Was provided a safety plan orientation and AHA review for Site 43.						
Equipment and Material Received						
Equipment / Material			Equipment No	Number/Volume/Weight		
EQIS 50' x 100' 30mil. HDPE linear				1ea		
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1700	SD	10		
CCI POV	0700	1700	EB	10		
EQIS Pick-up	0700	1700	WR	10		
EQIS POV	0700	1700	SG	10		
EQIS Equipment Trailer	0700	1700	WR	10		
EQIS Loader	0700	1700	BS		10	
EQIS Trackhoe	0700	1700	BS	10		
EQIS Aerosol Monitor	0700	1700	SG		10	
EQIS Photo-Ionization Detector	0700	1700	SG		10	
EQIS Ploy Sheeting 20' x 100' Rolls				3		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
Visitors to the Site: None Noted						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee	Title/Trade	Work Performed	Work Location	Hours

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/19/02	Report No:	55			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
	No.		Worked			
Scott Dunbar	CCI	18507	SS	Site Remediation	Sites 15 & 43	8
Eric Burrell	CCI	18508	QAM	Site Remediation	Sites 15 & 43	8
George Overby	CH2M Hill	31170	UXO Tech	Site Remediation	Site 43	8
George Overby	CH2M Hill	31170	UXO Tech	Mobe and Demobe	Site 43	8
Eric Burrell	CCI	18508	QAM	Demobilization	Sites 15 & 43	4
Total Man-hours Today						36
Total Man-hours This Year						583
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Sites 15 & 43	10
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Sites 15 & 43	10
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Sites 15 & 43	10
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Sites 15 & 43	10
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Sites 15 & 43	10
Total Man-hours Today						50
Total Man-hours This Year						500

Report Comments:

Site 43

- The 50' x 100' 30mil. HDPE linear that CCI instructed EQIS was delivered to the site today.
- EQIS' excavator was transported to the staging area east of Sherman Field to conduct the UXO Screening.
- EQIS laid out an adjacent stockpile area for the soils to be transferred into during the screening process.
- George Overby, CH2M Hill UXO technician was picked up at the Pensacola Regional Airport and during the trip back to the site he was brought up to speed on the previous activities and issues.
- EQIS, CCI and CH2M Hill sorted through the 5 tractor-trailer loads of soil and nearly the end of the exercise, a 4 1/2" cannon ball was uncovered. In addition, the previously mentioned concrete projectile was also recovered. CWO4 Clarke, Mr. Mark Schull, Mr. Ron Joyner, and Greg Wilfley were informed of the discoveries.
- CWO4 Clarke was the first to arrive at the site and after looking at the items uncovered, he said that the cannon by was of the type that was solid and didn't pose a UXO threat. Mr. Mark Schull arrived at site a little while after CWO4 Clarke, he was informed of Mr. Clarke's assessment.
- Mr. Schull instructed CCI to proceed as planned.

Site 15

- EQIS completed the physical location of the buried utilities and stored water service to Building 747 and the green house. EQIS used wooden stakes and steel T posts to mark the physical location of the utilities and the lateral limits of the excavation.
- Based of the findings of the soil screening, EQIS was instructed to secure activities at Site 15 and to move back to resume activities at Site 43.



CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/18/02	Report No:	54			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clear, Calm	PM Weather:	Hot, Humid, Clear, Calm			
Min Temp (°F):	75	Max Temp (°F):	91			
			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	16	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	40	Total Worked Hours on Job Site This Date:	56			
Cumulative Total of Work Hours From Previous Report:	952	Total Work Hours From Start of Construction:	1008			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and EQIS personnel. (Topic: Site 15 Health and Safety Plan review highlighting the contaminants of concern, deep excavation hazards, and physical hazards associated with the site).						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0700	1530	SD	8		
CCI POV	0700	1530	EB	8		
EQIS Pick-up	0700	1530	WR	8		
EQIS POV	0700	1530	SG	8		
EQIS Equipment Trailer	0700	1530	WR	8		
EQIS Loader	0700	1530	BS	1	7	
EQIS Trackhoe	0700	1530	BS	4	4	
EQIS Aerosol Monitor	0700	1530	SG		8	
EQIS Photo-Ionization Detector	0700	1530	SG		8	
EQIS Ploy Sheeting 20' x 100' Rolls				3		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
The plan determined yesterday for continuance of activities was changed again today, causing additional costs to the project.						
Visitors to the Site: None Noted						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/18/02	Report No:	54			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS	Site Remediation	Sites 15 & 43	8
Eric Burrell	CCI	18508	QAM	Site Remediation	Sites 15 & 43	8
Total Man-hours Today						16
Total Man-hours This Year						547
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Sites 15 & 43	8
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Sites 15 & 43	8
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Sites 15 & 43	8
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Sites 15 & 43	8
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Sites 15 & 43	8
Total Man-hours Today						40
Total Man-hours This Year						450

Report Comments:

Site 43

- EQIS decontaminated their loader and they were awaiting instructions on how to proceed with securing Site 43. In addition, EQIS submitted the backfill soil proctor analysis, which was review by Eric Burrell and found acceptable.
- CCI visited CWO4 Clarke's office to find out the results of the tests conducted on the mortar/cannon ball. CWO4 Clarke informed CCI that Eglin EOD had to use 3 shape charges to split open the ball and found it to be polished inside, meaning that the explosive charge was not present and the ball was considered inert.
- Mr. Mark Schull, NAS Pensacola ROICC, informed CCI that he had spoken to Mr. Jimmy Jones and Mr. Bill Hill with So. Div. and a new action plan devised and was as follows:
 - CCI was instructed to sort through the 5 tractor-trailer loads of soil stage east of Sherman Field. Based on that screening.
 - If no live ordinance was found as a result of the screening, notify EQ's Michigan Facility to process the 230 tons of soil on hold at the facility and CCI with EQIS should resume excavation at Site 43.
 - If live ordinance is found, continue working at Site 15 and more discussion actions for Site 43 would take place.
- Greg Wilfley called the project and informed CCI that he had been directed by Mr. Bill Hill with So. Div., similarly to the previously mentioned instruction and to proceed as instructed. The CCI field team raised the question of who would do the actual UXO screening, a field team member or qualified UXO technician. Greg Wilfley concurred with the implied concern of have a qualified UXO technician conducted the screen and would arrange to have a UXO technician on site for the screening.
- CCI informed EQIS of the change in plan and instructed them to arrange to move their excavator to the staging area east of Sherman Field to conduct the UXO Screening.

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

- That evening Greg Wilfley and Ben Redmond called the CCI field team and informed them that a UXO technician would mobilize to the site to conduct the screening tomorrow. CCI informed EQIS that the UXO screening would be conducted tomorrow.

Site 15

- EQIS had their excavator moved over to Site 15 and began site preparation activities including manually and with the excavator physically locating the underground utilities.
- While EQIS was attempting to physically locate a buried 1" pvc water line, they inadvertently broke the line. The Golf Course Maintenance personnel quickly secured water and EQIS temporarily capped the line. Once the capped portion of the water line was recharged it was noted that Building 747 and the greenhouse were without water and temporary arrangements were made until the line could be correctly repaired

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/17/02	Report No:	53			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clear, Calm	PM Weather:	Hot, Scattered Clouds, Calm			
Min Temp (°F):	73	Max Temp (°F):	84			
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	46	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	54	Total Worked Hours on Job Site This Date:	100			
Cumulative Total of Work Hours From Previous Report:	852	Total Work Hours From Start of Construction:	952			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI, CH2M Hill, EQIS, and SSI personnel. (Topic: Informed the crew of the change in location to Site 15 and the Chemical, Physical, and Utility Hazards associated with the site).						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
SSI Pick-up and Survey Equipment		N/A	1ea.			
Silt Fence		N/A	600 Linear ft.			
Steel T Fence Posts		N/A	50			
Sand Bags		N/A	100			
High Visibility Construction Fence		N/A	600 Linear ft.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0730	1600	SD	8		
CCI Rental Car	0730	1600	GW	8		
CCI POV	0730	1600	EB	8		
CH2M Hill, Inc POV	0730	1300	RB	6		
CH2M Hill Rental Car	0730	1600	BR	8		
EQIS Pick-up	0730	1600	WR	8		
EQIS POV	0730	1600	SG	8		
EQIS Equipment Trailer	0730	1600	WR	8		
EQIS Loader	0730	1600	BS	4	4	
EQIS Trackhoe	0730	1600	BS	8		
EQIS Aerosol Monitor	0730	1600	SG		0	
EQIS Photo-Ionization Detector	0730	1600	SG		0	

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/17/02		Report No:	53		
Project Name/Location:	NAS Pensacola		CTO No	0027		
Project No.	154039		Contract No:	N62467-98-C-0095		
SSI Pick-up & Survey Equipment	0815	1600	PM	7 ½		
Action Trucking					5	
<p>Changed Conditions/Delays/Conflicts Encountered: (List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.) The underground utilities located at Site 15 will significantly impact EQIS' s schedule adding approximately an additional two days. CCI requested EQIS to provide a daily rate for Standby for Site 43 and a for the additional costs associated with the unexpected utilities related delays at Site 15.</p>						
<p>Visitors to the Site: None Noted</p>						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Greg Wilfley	CCI	15831	PM	Demobilization	Site 43	4
Ben Redmond	CH2M Hill	31276	EOD	Demobilization	Site 43	4
Greg Wilfley	CCI	15831	PM	Site Remediation	Site 43	8
Ben Redmond	CH2M Hill	31276	EOD	Site Remediation	Site 43	8
Scott Dunbar	CCI	18507	SS	Site Remediation	Sites 15 & 43	8
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Sites 15 & 43	6
Eric Burrell	CCI	18508	QAM	Mobilization	Sites 15 & 43	4
Eric Burrell	CCI	18508	QAM	Site Remediation	Sites 15 & 43	4
Total Man-hours Today						46
Total Man-hours This Year						531
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Sites 15 & 43	8
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Sites 15 & 43	8
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Sites 15 & 43	8
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Sites 15 & 43	8
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Sites 15 & 43	8
Pat McCohan	SSI	N/A	Surveyor	Site Remediation	Sites 15 & 43	7 ½
Bobby Turner	SSI	N/A	Rod Man	Site Remediation	Sites 15 & 43	7 ½
Total Man-hours Today						54
Total Man-hours This Year						410

Report Comments:

Site 43

- Field operations remained on hold at Site 43 today.

CONTRACTOR PRODUCTION REPORT (ATTACH ADDITIONAL SHEETS AS NECESSARY)

- The 5 tractor trailer loads of soil previously on hold and awaiting temporary disposition were transferred from the NAS Pensacola Transportation Yard to a staging area East of Sherman Field. One truck at a time was escorted to the staging area and the soil was dumped on to a poly sheeting liner. During the course of this operation Mr. Ben Redmond (CH2M Hill UXO) was present at the staging area to provide guidance and ensure that adequate safety measures were taken. All 5 tractor-trailer loads were off loaded without any incidents. However, upon dumping the fourth of the five loads, one of the large concrete projectiles looking articles was observed. Given that an item of this size had been previously loaded onto a truck without being notice affirm the need for this exercise, as well as, suspending treatment operations at EQ's Michigan Facility.
- CCI anticipated prolonged delays at Site 43, therefore EQIS was instructed to decontaminate their heavy equipment in preparation of moving over to Site 15.
- SSI surveyed the completed portion of the excavation at Site 43, CCI provided the rodman for surveying inside the exclusion zone. The portion of the Site 43 excavation that had been completely excavated included the area between the tennis court and the former security fence around Site 43 and a 10' wide strip along the north boundary of the large excavation. These areas were surveyed to confirm limits both horizontal and vertical limits.
- Eric Burrell arrived on site to relieve Ryan Bitely of QC duties, as Ryan had to return to another CCI/Navy RAC project. Eric Burrell was provided a site orientation including a review of the Site Safety Plan and AHA's, as well as, an overview of the project specifics and issues.
- CCI attended a meeting at the ROICC Office with pertinent base personnel to discuss the resolutions to the issues regarding Site 43. Personnel in attendance included:
 - Mark Schull, NAS Pensacola ROICC Project Manager
 - LT.CMDR Grealish, XO- NAS Pensacola PWC
 - Lt. ?, NAS Pensacola Health and Safety Officer
 - Ron Joyner, NAS Pensacola Environmental
 - CWO4 James Clarke, NAS Pensacola Ordinance Officer
 - Ben Redmond, CH2M Hill Ordinance Business Group Vice President
 - Greg Wilfley, CCI Project Manager
 - Scott Dunbar, CCI Site Superintendent
 - Eric Burrell, CCI QA/QC Manager

CWO4 Clarke started the meeting with emphasizing that in his opinion Site 43 was not a UXO site, due to the fact that live ordinance had not been confirmed. The articles that were suspected of being UXO and that were transported from NAS Pensacola to Eglin AFB. by EDO technicians yesterday were confirmed to be none UXO in nature. However, the Mortar/Cannon Ball that had not been detonated yet, but was expected to be later today. In addition, the other articles that appeared to be UXO in nature were examined by Eglin EDO and determined none UXO.

Mr. Redmond explained to the meeting participants that CCI as a Navy Contractor was governed by specific regulations and directives that require contractors to handle situations such as Site 43 in a manner protective of the Navy. Therefore, prudent judgement dictates CCI using conservative precaution with its approach to resolving the situation. CCI is prepared to meet the requirements of securing and completing Site 43's activities regardless of the determination of whether or not the site is determined to be a UXO site or not. Mr. Redmond further explained CCI/CH2M Hills qualifications for performing UXO remediation and our potential approach if the site is determined to be a UXO site.

After some debate over the various interpretations of the status of the site, the consensus of the parties involved (with the exception of CWO4 Clarke), agreed that Site 43 should be handled as a UXO site until proven otherwise. However, more information (i.e., the contents of the mortar/cannon ball) is required to make a conclusive determination. CWO4 Clarke maintaining the position that the site was not a UXO site, until proven so.

After the prolonged discussion, Mr. Jimmy Jones and Mr. Bill Hill were conference in via telephone to the meeting. Mr. Jones and Mr. Hill were updated as to the previous discussion and consensus. A tentative plan was developed as a result of the meeting. The plan included the following action items for CCI:

- Proceed with securing Site 43
- Switch EQIS operations from Site 43 to Site 15 as quickly as possible.
- Prepare cost estimates for the completion of Site 43 a UXO site.
- Develop UXO Safety & Work Plans

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

- Screen the 5 tractor-trailer loads of soil staged east of Sherman Field for UXO
- Screen the soil previously transported to EQ's Michigan Facility as quickly as possible to get them back in operation.
- Because of the meeting, CCI instructed EQIS to make preparations to secure Site 43 and move forward with switching operations to Site 15 as quickly as possible. Greg Wilfley and Ben Redmond demobilized the site to return to the office to begin preparation of a cost estimate and develop the necessary plans.

Site 15

- NAS Pensacola Utilities Locators returned to Site 15 to complete locating the underground utilities. The locators were able to find some of the piping and electrical with their location equipment, however some locations were scaled of old drawings. Mr. Tommy Thomas informed CCI that there could likely be utilities encountered that couldn't be located due to inadequate drawings. In addition, Mr. Thomas thought that power and telephone lines located with the excavation area at Pit 8 were most likely not in service any longer, as they had serviced a building which no longer exists.
- SSI laid out the excavation limits at Site 15, as well as, they surveyed in the utility mark locations.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/16/02	Report No:	52			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Warm, Humid, Clearing, Calm	PM Weather:	Warm, Scattered Clouds, Calm			
Min Temp (°F):	68	Max Temp (°F):	78			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	46	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	45	Total Worked Hours on Job Site This Date:	91			
Cumulative Total of Work Hours From Previous Report:	761	Total Work Hours From Start of Construction:	852			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI, CH2M Hill, and EQIS personnel. (Topic: Provide crew with information related to the potential UXO discovery)						
A site safety plan orientation and AHA review was conducted with Ben Redmond, CH2M Hill, Inc.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Hill Rental Car			1ea.			
CCI Rental Car			1ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0730	1630	SD	9		
CH2M Hill, Inc POV	0730	1630	RB	9		
CCI Rental Car	0730	1630	GW	9		
CH2M Hill Rental Car	0730	1600	BR	8 ½		
EQIS Pick-up	0730	1630	WR	3	6	
EQIS POV	0730	1630	SG	3	6	
EQIS Equipment Trailer	0730	1630	WR	3	6	
EQIS Loader	0730	1630	BS	3	6	
EQIS Trackhoe	0730	1630	BS	3	6	
EQIS Aerosol Monitor	0730	1630	SG	3	6	
EQIS Photo-Ionization Detector	0730	1630	SG	3	6	
Action Trucking					5	
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
Potential unexploded ordinance that was discovered at Site 43, which had operation shut down, the better part of the day.						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	04/16/02	Report No:	52			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Visitors to the Site: MR. Ron Joyner, NAS Pensacola Environmental Chief Miller, NAS Pensacola Archaeological						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Greg Wilfley	CCI	15831	PM	Mobilization	Site 43	5
Ben Redmond	CH2M Hill	31276	EOD	Mobilization	Site 43	5
Greg Wilfley	CCI	15831	PM	Site Remediation	Site 43	9
Ben Redmond	CH2M Hill	31276	EOD	Site Remediation	Site 43	9
Scott Dunbar	CCI	18507	SS	Site Remediation	Site 43	9
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 43	9
Total Man-hours Today						46
Total Man-hours This Year						483
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Steve Grant	EQIS	EQ 1	PM	Site Remediation	Site 43	9
Bobby Styles	EQIS	EQ 2	Sup/EO	Site Remediation	Site 43	9
Willie Rudley	EQIS	EQ 3	Lab	Site Remediation	Site 43	9
Kenny Tyler	EQIS	EQ 4	Lab	Site Remediation	Site 43	9
Riley Perrin	EQIS	EQ 5	EO	Site Remediation	Site 43	9
Total Man-hours Today						45
Total Man-hours This Year						370

Report Comments:

Site 43

- Mr. Ben Redmond and Greg Wilfley had mobilized to Pensacola last night and arrived at the site this morning. Mr. Redmond and Greg Wilfley were advised in detail of yesterday's discovery. After a Health and Safety Plan Orientation they were examined the excavation area. Two articles that had not been retrieved yesterday by NAS Pensacola Ordinance were examined by Mr. Redmond. Mr. Redmond stated that the articles he looked at could indeed be UXO in nature, however he didn't think they would cause a significant threat. Further, Mr. Redmond explained that the Cannon ball as it was described would pose a significant threat if it were charged with black powder.
- EQIS was instructed to make tentative arrangements to switch operational activities to Site 15.
- CCI initiated a meeting with pertinent base personnel to discuss the ramifications of the potential UXO discovery at Site 43 and determine immediate direction for the project. Personnel in attendance included:
 - Ron Joyner, NAS Pensacola Environmental
 - Greg Wilfley, CCI Project Manager
 - James Clarke, NAS Pensacola Ordinance Officer
 - Ben Redmond, CH2M Hill Ordinance Business Group Vice President
 - Mark Schull, NAS Pensacola ROICC Project Manager
 Mr. Redmond started the meeting with a briefing of his role at CH2M Hill, as well as, his background experience. Greg Wilfely tabled the immediate issues, which included:
 - The five loads of soil excavated from Site 43, must be off loaded and the trucks released.
 - EQ Michigan Disposal Facility is on hold with treatment of the soil previously transported soil.

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

- Site is temporarily secured and CCI's subcontractor is making preparations to switch operations to Site 15. However, resolution for the long term shut down of Site 15 and security concerns may be required.

CWO4 Clarke informed the attendees, that the Mortar/Cannon Ball was transported from NAS Pensacola to Eglin AFB. by EDO technicians last night and would be detonated today. In addition, the other articles that appeared to be UXO in nature were examined by Eglin EDO and determined none UXO.

Results of the meeting are as follows:

- Further excavation activities at Site 43 will remain of hold until the Mortar/Cannon ball can be detonated to determine if it was charged.
 - Treatment of the previously transported soil at EQ's Michigan Facility will remain on hold pending the results previously listed.
 - NAS Pensacola Environmental/Public Works will determine and designate a location to off load the five trucks as soon as possible.
 - CCI's subcontractor is to make necessary changes to switch operation from Site 43 to Site 15.
-
- In anticipation of temporarily storing the 5-loads of soil on the tractor-trailers, as well as, the likely hood that the soil couldn't be off loaded back at Site 43. CCI instructed EQIS to get a heavy linear (i.e., 20-60 mil HDPE) large enough to cover the pile of soil from the loads (i.e., 50' x 100'). EQIS began to source the linear immediately.
 - Mr. Ron Joyner with NAS Pensacola Environmental notified CCI that several locations had been identified for storage of the 5 tractor-trailer loads of soil. CCI and Mr. Joyner looked at the choices of locations and the location at the laydown area east of Sherman Field was selected for accessibility, security, and relative remoteness to people.
 - EQIS was instructed to get the trucks ready to move and of load that afternoon, however EQIS was unable to get in touch with the truck drivers.

Site 15

- NAS Pensacola Utilities Surveyor, Tommy Thomas located the subsurface utilities at Site 15. CCI met Mr. Thomas at the site and was present during the survey, noting the location and types of buried utilities.
- The extent of subsurface utilities at Site was significantly more than had been anticipated. Greg Wilfley was informed of the potential impacted the utilities would have on EQIS's productivity and given that CCI had a unit rate contract with EQIS it was anticipated that EQIS would ask for an adjustment or change condition clarification.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	03/07/02 and 03/28/02	Report No:	43			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:		0	JA Jones Total Worked Hours:		
Subcontractor(s) Total Worked Hours:		0	Total Worked Hours on Job Site This Date:			
Cumulative Total of Work Hours From Previous Report:		411	Total Work Hours From Start of Construction:			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						312
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						99

Report Comments: No site activity for the previous 21 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	02/02/02 and 03/05/02	Report No:	41	
Project Name/Location:	NAS Pensacola	CTO No	0027	
Project No.	154039	Contract No:	N62467-98-C-0095	
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)			
Site Superintendent:		Site Safety Officer:		
AM Weather:		PM Weather:		
Min Temp (°F):		Max Temp (°F):		
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0	
Cumulative Total of Work Hours From Previous Report:	407	Total Work Hours From Start of Construction:	407	
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:				
No Site Activity				
Equipment and Material Received				
Equipment / Material		Equipment No	Number/Volume/Weight	
Construction and Plant Equipment				
Plant/Equipment	Arrived	Departed	Safety Check Performed By	
			Number of Hours	
			Used Idle Repair	
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>				
No Site Activity				
Visitors to the Site: No site activity				
CCI and CH2M Hill Man-hours				
Employee	Employer	Employee No.	Title/Trade	
			Work Performed	
			Work Location	
			Hours Worked	
Total Man-hours Today			0	
Total Man-hours This Year			308	
Subcontractor Man-hours				
Employee	Employer	Employee No.	Title/Trade	
			Work Performed	
			Work Location	
			Hours Worked	
Total Man-hours Today			0	
Total Man-hours This Year			99	

Report Comments: No site activity for the previous 33 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	02/01/02	Report No:	40			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Yes	No				
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
CCI Total Worked Hours:	2	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	2			
Cumulative Total of Work Hours From Previous Report:	405	Total Work Hours From Start of Construction:	407			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
Due to the limited activities on site no daily tailgate safety meeting was conducted.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools						
CCI Soil Sampling Equipment						
CH2M Hill Water Level	0830	1030	RB	2		
CH2M Hill, Inc POV	0830	1030	RB	2		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>				None Noted Today		
Visitors to the Site: None Noted Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS			
Ryan Bitely	CH2M Hill	32814	QAM	Monitoring Water Level	Site 43	2
Total Man-hours Today						2
Total Man-hours This Year						308

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	01/29/02 and 01/30/02	Report No:	38			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:		Site Safety Officer:				
AM Weather:		PM Weather:				
Min Temp (°F):		Max Temp (°F):				
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	CCI Total Worked Hours:	0	JA Jones Total Worked Hours:	0		
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	0			
Cumulative Total of Work Hours From Previous Report:	403	Total Work Hours From Start of Construction:	403			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>			<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>			<input checked="" type="checkbox"/>	<input type="checkbox"/>		
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
No Site Activity						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
No Site Activity						
Visitors to the Site: No site activity						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						304
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						99

Report Comments: No site activity for the previous 2 days

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	01/28/02	Report No:	37			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Scott Dunbar	Site Safety Officer:	Scott Dunbar			
AM Weather:	Cool, Clear, Calm	PM Weather:	Moderate, Clear, Calm			
Min Temp (°F):	40	Max Temp (°F):	51			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> JOB SAFETY </div>	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	11	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	0	Total Worked Hours on Job Site This Date:	11			
Cumulative Total of Work Hours From Previous Report:	392	Total Work Hours From Start of Construction:	403			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI and CH2M Hill personnel.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CCI Pick-up w/ tools		5251	1 ea.			
CCI Soil sampling equipment		N/A	2 sets			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CCI Pick-up w/ tools	0800	1330	SD	5 ½		
CCI Soil Sampling Equipment	0800	1330	SD	5 ½		
CH2M Hill, Inc POV	0800	1330	RB	5 ½		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: None Noted Today						
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	SS	Dis. profile sampling	Site 15 & 43	5 ½
Ryan Bitely	CH2M Hill	32814	QAM	Dis. profile sampling	Site 15 & 43	5 ½
Total Man-hours Today						11
Total Man-hours This Year						304

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	01/28/02	Report No:	37			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Total Man-hours Today						0
Total Man-hours This Year						99

Report Comments:

Site 15

- CCI returned to the site to collect insitu disposal profile samples.
- Pits 7, 8, and 9 were consolidated into one representative sample, with sample location depth to 0-10' below land surface in Pit 8 and 0-2' below land surface depths in Pit 7 & 9.
- Pits 6 and 11 were consolidated into a second representative sample, with sample depth of 0-2' below land surface.
- All parameters for each sample representing the various pits (accept VOCs) were collected as homogenized composite samples, with the VOCs collected as grab samples. The samples collected were labeled, packaged for transport, iced, and documented on a chain of custody.

Site 43

- CCI returned to the site to collect insitu disposal profile samples.
- Pits 4, 14, 15, and 16 were consolidated into one representative sample.
- A second sample representing Pits 20 & 22 was also collected.
- Sample depths to 0-2' below land and all parameters for each sample representing the various pits (accept VOCs) were collected as homogenized composite samples, with the VOCs collected as grab samples. The samples collected were labeled, packaged for transport, iced, and documented on a chain of custody.

Later that day the samples were shipped via Fed-Ex to Gulf Coast Analytical, in Baton Rouge, Louisiana.

Site Superintendent's Signature

Date

CONTRACTOR PRODUCTION REPORT

(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/12/01	Report No:	35			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
Task/Activity/Site:	Site 15 (Golf Course Maintenance) and 43 (Command Housing)					
Site Superintendent:	Darryl Gates	Site Safety Officer:	Darryl Gates			
AM Weather:	Moderate, Clear, Calm	PM Weather:	Warm, Clear, Calm			
Min Temp (°F):	50	Max Temp (°F):	62			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center;"> <p>JOB SAFETY</p> </div> </div>			Yes	No		
	Was A Job Safety Meeting Held This Date? <small>(If Yes, attach copy of the meeting minutes)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Were There Any Lost Time Accidents This Date? <small>(If Yes, attach copy of completed OSHA report)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CCI Total Worked Hours:	16	JA Jones Total Worked Hours:	0			
Subcontractor(s) Total Worked Hours:	6	Total Worked Hours on Job Site This Date:	22			
Cumulative Total of Work Hours From Previous Report:	370	Total Work Hours From Start of Construction:	392			
Was Trenching/Scaffold/HV Electrical/High Work Done? <small>(If Yes, attach statement or checklist showing inspection performed)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Was Hazardous Material/Waste Released Into The Environment? <small>(If Yes, attach description of incident and proposed action)</small>		<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Have Safety Requirements Been Met? <small>(If No, explain in the next box)</small>		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
List Safety Violations, Corrective Instructions Given, Corrective Actions Taken and Results of Safety Inspections Conducted:						
The daily tailgate safety meeting was conducted with CCI, CH2M Hill, and Southern Survey, Inc. (SSI) personnel.						
Equipment and Material Received						
Equipment / Material		Equipment No	Number/Volume/Weight			
CH2M Hill GeoPumps		N/A	2 ea.			
CH2M Hill Horiba U-23		N/A	2 ea.			
CH2M Hill Water Level Indicators		N/A	2 ea.			
Southern Survey, Inc. (SSI) Pick-up and Survey equipment		N/A	1 ea.			
Construction and Plant Equipment						
Plant/Equipment	Arrived	Departed	Safety Check Performed By	Number of Hours		
				Used	Idle	Repair
CH2M Hill, Inc POV	0800	1630	DG	8	½	
CH2M Hill GeoPumps	0800	1630	DG	8	½	
CH2M Hill Horiba U-23	0800	1630	DG	8	½	
CH2M Hill Water Level Indicators	0800	1630	DG	8	½	
SSI Pick-up w/survey equipment	0830	1130	PC	3		
Changed Conditions/Delays/Conflicts Encountered: <small>(List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site, and weather conditions, etc.)</small>						
None Noted Today						
Visitors to the Site: None Noted Today						

CONTRACTOR PRODUCTION REPORT
(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	12/12/01	Report No:	35			
Project Name/Location:	NAS Pensacola	CTO No	0027			
Project No.	154039	Contract No:	N62467-98-C-0095			
CCI and CH2M Hill Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Darryl Gated	CCI	16994	Site Super	Survey/Sampling	Site 15 & 43	8
Phyllis Zerangue	CH2M Hill	31159	Sample Tech	Survey/Sampling	Site 15 & 43	8
Total Man-hours Today						16
Total Man-hours This Year						293
Subcontractor Man-hours						
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Pat McCrohan	SSI	N/A	Surveyor	Sample point location survey	Site 43	3
Joe Stewart	SSI	N/A	Helper		Site 43	3
Total Man-hours Today						6
Total Man-hours This Year						99

Report Comments:

Site 43

- CCI returned to the site to collect water samples from recently re-developed wells and oversee sample point location survey conducted by SSI.
- Upon SSI's arrival the collected topographic and Northing/Easting coordinates for the more recent sample point locations.
- CCI collected samples from Wells NAS-43-2S, NAS-43-5S, and NAS-43-3S, the samples were collected after purging three well volumes and the readings stabilized. During the purge process pH, Conductivity, Turbidity, Dissolved Oxygen, Temperature, and Oxidation-Reduction Potential was monitored. The samples collected were labeled, packaged for transport, iced, and documented on a chain of custody.

Site 15

- CCI returned to the site to collect water samples from the three recently re-developed wells.
- Wells 15-GS-69, 15-GS-66, and 15-GS-70 were sampled after purging three well volumes and the readings stabilized. pH, Conductivity, Turbidity, Dissolved Oxygen, Temperature, and Oxidation-Reduction Potential were monitored while the wells were being purged. The samples were labeled, packaged for transport, iced, and documented on a chain of custody.

All the samples collected today were transported to STL laboratory in Pensacola Florida.

Site Superintendent's Signature

Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Site 15 and 43 Waste Disposal Characterization Soil Sampling conducted today			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					01/28/02
			Project QC Manager' Signature		Date



CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

Date:	12/06/01	Report No:	39
Project Name/Location:	NAS Pensacola	CTO No	027
Project No.	154039	Contract No:	N62467-98-D-0995
Task/Activity/Site:	Re-develop Groundwater Wells at Sites 15 and 43; Additional Soil Sampling at Site 43		
Project QC Manager:	Ryan Bitely	QC Inspector:	N/A

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work (Attach Checklist for Each Definable Feature of Work)	Preparatory	Initial	Follow-Up
1	Re-develop Groundwater Wells at Sites 15 and 43	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Soil Sampling at Sites 15 and 43	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DEFINABLE FEATURE OF WORK COMMENTS

DFOW No.	Phase	Comment/Finding/Action
1	Follow-up	Re-develop remaining wells at Site 15 and complete those at Site 43; purge each well 2 hours after clearing clogged materials
2	Follow-up	Additional soil sampling at Sites 15 and 43

SAMPLING / TESTING PERFORMED

Sampling/Testing Performed	Sampling/Testing Company	Site Technician
Soil Sampling	STL Pensacola	Scott Dunbar

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Re-develop remaining wells at Site 15 and conduct additional soil sampling at site 15; Continue re-development of wells at Site 43 and conduct additional soil sampling at site 43			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					12/06/01
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Re-develop Groundwater Wells at Site 15 NAS Pensacola			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					12/05/01
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Additional surveying conducted on extra sample points as well as tree boundary/excavation boundary limits for sites 15 and 43; Sampled two additional wells at site 15 for baseline groundwater			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A				
Soil Stockpiles				
			Yes	No
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Accumulation Area				
			Yes	No
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above: N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.				12/03/01
		Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Baseline groundwater sampling at five wells on site 43 and nine wells at Site 15 came up with interesting information; a total of five wells from both sites had enough water to be sampled; apparently root growth or silting in the screened intervals of the wells have choked the water supply of the wells			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					11/28/01
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Southern Surveying conducted input sample points into survey grid for sites 15 and 43			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:				
N/A				
Soil Stockpiles				
			Yes	No
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Accumulation Area				
			Yes	No
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above:				
N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.				10/09/01
		Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Soil sampling continued for the third iteration at Site 43; samples taken at 5' intervals from previously analyzed over-limit sample points			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	Ryan Bitely	Signature of Inspector:	
Accumulation Area Location:	NAS Pensacola Golf Course Maintenance Area		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	4
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes		No
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes		No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					09/24/01
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT			DATE		09/10/01	
PREPARATORY PHASE						
Preliminary Tasks			Yes	No	N/A	Remarks
1. Plans and specs review complete?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Submittals have been reviewed and approved?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Stored/delivered materials comply with submittals and are properly stored?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Testing plan has been developed and reviewed?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Work method and schedule discussed with Contracting Officer Rep.?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Other preliminary work completed correctly?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Definable Feature of Work						
No Preparatory Phase activities						
Work Location:	NAS Pensacola, Pensacola, FL					
Personnel Present:	No Preparatory Phase activities					
INITIAL PHASE						
Preliminary and Ongoing Tasks			Yes	No	N/A	Remarks
1. Sample has been prepared and approved?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Workmanship complies with specifications/industry standards?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Test results are acceptable?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Work complies with contract requirements?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Preliminary work completed correctly?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Definable Feature of Work						
No Initial Phase Activities						
Work Location:	NAS Pensacola, Pensacola, FL					
Personnel Present:	No Initial Phase Activities					
Sampling/Testing Performed	Sampling/Testing Company		Site Technician			
None						
FOLLOW-UP PHASE						
Preliminary and Ongoing Tasks			Yes	No	N/A	Remarks

1. Work complies with contract requirements as approved in initial phase?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Definable Feature of Work

Site 43 Soil Sampling

Work Location: Site 43 NAS Pensacola, Pensacola, FL

Personnel Present: Scott Dunbar – CCI, Bobby Kelly and Isaac Barnes – Kelly Environmental Drilling, and Ryan Bitely and Phyllis Zerangue – CH2M HILL, Inc.

Sampling/Testing Performed	Sampling/Testing Company	Site Technician
Soil Sampling and Testing	Severn Trent Laboritorories	Phyllis Zerangue

CONTRACTOR QUALITY CONTROL REPORT	DATE 09/10/01
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Rework items identified today which were not corrected by close of business:
None

Rework items corrected today which were on the rework items list:
None

COMMENTS

Remarks:

- Today, soil sampling at Site 43 occurred for the second time. A DPT or Direct Push Rig from Kelly Environmental Drilling sampled all of the deep sample borings as well as a few sample locations which we were unable to achieve from our last attempt at Site 43.
- Along with the DPT borings, hand auger borings were taken 5 foot off of previous borings, which were determined by STL to have unacceptable concentrations of the COCs.
- The samples taken today are the following:

DPT Borings

027-43SO12-S-11-0910-01	027-43SO12-S-14-0910-01	027-43SO10-S-8-0910-01
027-43SO10-S-13-0910-01	027-43SO14-S-8-0910-01	027-43SS43-S-02-0910-01
027-43SO14-S-13-0910-01	027-43SO31-S-6-0910-01	027-43SO32-S-6-0910-01
027-43SO34-S-6-0910-01	027-43SO07-S-8-0910-01	027-43SO07-S-13-0910-01
027-43SO07-S-100-0910-01 (FD)	027-43SO12-S-100-0910-01 (FD)	
027-43SO07-S-8-0910-01 (MS/MSD)		

Hand Auger Borings

027-43SS42-S-01-0910-01	027-43SS40-S-02-0910-01	027-43SS48-S-02-0910-01
027-43SS49-S-02-0910-01	027-43SS47-S-02-0910-01	027-43SS45-S-02-0910-01
027-43SS46-S-02-0910-01	027-43SS50-S-02-0910-01	027-43SS51-S-02-0910-01
027-43SS52-S-02-0910-01	027-43SS40-S-02-0910-01 (MS/MSD)	

On behalf of the contractor, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.

QC Inspector

09/10/01
Date

CONTRACTOR QUALITY CONTROL REPORT	DATE 09/10/01
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Quality assurance representative's remarks and/or exceptions to this report:

Government Quality Control Manager

Date

CONTRACTOR QUALITY CONTROL REPORT			DATE		08/23/01	
PREPARATORY PHASE						
Preliminary Tasks			Yes	No	N/A	Remarks
1. Plans and specs review complete?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Submittals have been reviewed and approved?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Stored/delivered materials comply with submittals and are properly stored?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Testing plan has been developed and reviewed?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Work method and schedule discussed with Contracting Officer Rep.?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Other preliminary work completed correctly?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Definable Feature of Work						
No Preparatory Phase activities						
Work Location:	Site 43 NAS Pensacola, Pensacola, FL					
Personnel Present:	No Preparatory Phase activities					
INITIAL PHASE						
Preliminary and Ongoing Tasks			Yes	No	N/A	Remarks
1. Sample has been prepared and approved?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Workmanship complies with specifications/industry standards?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Test results are acceptable?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Work complies with contract requirements?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Preliminary work completed correctly?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Definable Feature of Work						
Preliminary Soil Sampling						
Work Location:	Site 43 NAS Pensacola, Pensacola, FL					
Personnel Present:	Scott Dunbar – CCI; Amy Twitty, Ryan Bitely, and Phyllis Zerangue – CH2M HILL, Inc.					
Sampling/Testing Performed	Sampling/Testing Company		Site Technician			
Soil Sampling and Testing	Severn Trent Laboratories		Phyllis Zerangue			
FOLLOW-UP PHASE						
Preliminary and Ongoing Tasks			Yes	No	N/A	Remarks

1. Work complies with contract requirements as approved in initial phase?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Definable Feature of Work					
No Follow-Up Phase activities					
Work Location:	Site 43 NAS Pensacola, Pensacola, FL				
Personnel Present: No Follow-Up Phase activities					
Sampling/Testing Performed	Sampling/Testing Company		Site Technician		
NONE					
CONTRACTOR QUALITY CONTROL REPORT				DATE	08/23/01
Rework items identified today which were not corrected by close of business: None					
Rework items corrected today which were on the rework items list: None					

COMMENTS

Remarks:

- Today, the preliminary soil sampling for CTO 27 Site 43 began at NAS Pensacola. Stakes were placed at mapped locations around the central survey marks provided by Southern Surveying Inc.
- Sampling Site 43 was a challenging endeavor as prolific debris occurred directly below the surface and up to a depth of approximately 3 feet. As we were using hand augers to obtain our samples, several of the more debris-concentrated locations were unachievable. These impenetrable locations were noted for future attempts using an alternative method of sampling.
- The samples taken at Site 43 today were collected using decontaminated hand augers, homogenized, added to the COC, labeled, packed in the iced coolers, and prepared for transport to the laboratory.
- The samples collected from Site 43 are separated by area and by specific location. The samples are the following:

027-43PREEB01-W-0823-01 027-43POSTEB01-W-0823-01

Area 4

027-43SO15-S-03-0823-01 027-43SS18-S-02-0823-01 027-43SS19-S-02-0823-01
027-43SS20-S-02-0823-01 027-43SS21-S-02-0823-01

Area 14

027-43SS10-S-03-0823-01

Area 15

027-43SO12-S-06-0823-01

Area 16

027-43SS14-S-03-0823-01 027-43SS25-S-02-0823-01 027-43SS26-S-02-0823-01
027-43SS27-S-02-0823-01 027-43SS28-S-02-0823-01

Area 20

027-43SO07-S-06-0823-01 027-43SS31-S-02-0823-01 027-43SS32-S-02-0823-01
027-43SS33-S-02-0823-01 027-43SS34-S-02-0823-01 027-43SO34-S-06-0823-01
027-43SS35-S-02-0823-01 (FD) 027-43SO36-S-06-0823-01 (FD)
027-43SO07-S-06-0823-01 (MS/MSD)

Area 22

027-43SO05-S-03-0823-01

- The following samples were unachievable:

Area 20

027-43SO31-S-06-0823-01 027-43SO32-S-06-0823-01 027-43SO33-S-06-0823-01

On behalf of the contractor, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.

QC Inspector 08/23/01
Date

CONTRACTOR QUALITY CONTROL REPORT

DATE 08/23/01

Quality assurance representative's remarks and/or exceptions to this report:

Government Quality Control Manager Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
CCI measures groundwater levels in all wells at sites 15 and 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					07/10/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
CCI conducts groundwater sampling of wells 15GS69 and PEN-43-02S.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:				
N/A				
Soil Stockpiles				
			Yes	No
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Accumulation Area				
			Yes	No
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above:				
N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.				06/27/02
		Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
CCI redevelops wells remaining from June 13 th sampling event. Wells redeveloped are 15GS69 and PEN-43-02S. These wells will be sampled hereafter.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					06/24/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
CCI conducts groundwater sampling at sites 15 and 43; 6 wells were sampled at site 15; these wells include 15GS69 (dry), 15GS68, 15GR03, 15GR65, 15GR04 (dry), 15GR36, 15GS70, and 15GS71; 4 wells were sampled at Site 43; these wells included PEN-43-01S, PEN-43-03S, PEN-43-04S, and PEN-43-05S. 15GS69 and PEN-43-02S need to be cleared of debris and redeveloped. 15GR04 is clogged with material put into well and is unreconcilable.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					06/21/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
CCI conducts groundwater sampling at sites 15 and 43; 6 wells were sampled at site 15; these wells include 15GS69 (dry), 15GS68, 15GR03, 15GR65, 15GR04 (dry), 15GR36, 15GS70, and 15GS71; 4 wells were sampled at Site 43; these wells included PEN-43-01S, PEN-43-03S, PEN-43-04S, and PEN-43-05S. 15GS69 and PEN-43-02S need to be cleared of debris and redeveloped. 15GR04 is clogged with material put into well and is unreconcilable.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A				
Soil Stockpiles				
		Yes	No	
Liner secure and intact?		<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?		<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Accumulation Area				
		Yes	No	
Is the accumulation area free of severe structural deterioration?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above: N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.		Project QC Manager' Signature		06/13/02
				Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Finish grading and hydroseed.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A				
Soil Stockpiles				
		Yes	No	
Liner secure and intact?		<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?		<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Accumulation Area				
		Yes	No	
Is the accumulation area free of severe structural deterioration?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above: N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.		Project QC Manager' Signature		05/08/02
				Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Backfill and Compaction of Excavated Area. Install silt fencing.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/25/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Backfill and Compaction of Soil. Silt Fence Removal.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:				
N/A				
Soil Stockpiles				
			Yes	No
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Accumulation Area				
			Yes	No
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above:				
N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.				04/24/02
		Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Loading Action Trucks			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/23/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Excavation of contaminated soil from Site 43. Loading out soil at Sherman Field.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/22/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Sort trough previously excavated soil at Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/19/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Site 43 activities halted. Lay out Site 15.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/17/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Site 43 activities halted.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/16/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Continue excavation @ Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/15/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Continue excavation @ Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/13/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Continue excavation @ Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/12/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Completed silt fence installation @ Site 43. Begin Excavation activities @ Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/11/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Location completed and Dig Permit signed for Site 43.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/10/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Begin the dig permitting process for sites 15 and 43;			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/08/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Begin the dig permitting process for sites 15 and 43;			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/04/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Begin the dig permitting process for sites 15 and 43;			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/04/02
			Project QC Manager' Signature		Date



CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

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CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Begin the dig permitting process for sites 15 and 43; Contact the ROICC, Base Environmental, Public Works, Sun Shine Utilities and Cultural Resources officer for signatures			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					04/03/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities for past seven consecutive days			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/27/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
One waste profile sample was re-taken at Site 15 between Pits 6 and 11. Five aliquots were homogenized into one sample and are to be analyzed for Ignitability (1030) only.			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/20/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities today			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/19/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities today			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/18/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities today			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:				
N/A				
Soil Stockpiles				
			Yes	No
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Accumulation Area				
			Yes	No
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:				
N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above:				
N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.				02/17/02
		Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities today			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/16/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities for past seven consecutive days			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment:					
N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment:					
N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment:					
N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above:					
N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/15/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
No site activities for past seven consecutive days			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/08/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Gauged depth to water and total depth at 5 groundwater monitor wells at Site 43			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A					
Soil Stockpiles					
			Yes	No	
Liner secure and intact?			<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?			<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Accumulation Area					
			Yes	No	
Is the accumulation area free of severe structural deterioration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A					
Emergency Response Equipment					
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A					
Corrective Action					
Describe actions taken to correct any deficiency noted above: N/A					
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.					02/01/02
			Project QC Manager' Signature		Date

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

MATERIALS INSPECTION			
Materials received and inspected against specifications: N/A			
SUBMITTALS INSPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Reviewed by	Action
N/A	N/A	N/A	N/A
OFF-SITE SURVEILLANCE ACTIVITIES			
Off-site surveillance activities, including action taken: N/A			
REWORK			
Rework items identified today which were not corrected by close of business: N/A			
Rework items corrected today which were on the rework items list: N/A			
REPORT COMMENTS			
Conduct baseline groundwater sampling for re-developed wells; these wells had been found to be clogged with fibrous root materials and were re-developed for sampling at a later time			
ACCUMULATION AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A
Accumulation Area Location:	N/A		
No. of Containers:	N/A	No. of Tanks:	N/A
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A
Waste Containers, Tanks, and Roll-Off Boxes			
	Yes	No	
Are containers and tanks open?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of primary containment failure (rust, bulges, fluid level drop, sheen in 2 nd containment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there signs of compromised secondary containment (ripped liner, stained soil)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any liquid in secondary containment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of these questions were marked YES, please comment: N/A			
	Yes	No	
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation start date marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

CONTRACTOR QUALITY CONTROL REPORT
(ATTACH INSPECTION REPORTS AND CHECKLISTS)

If any of these questions were marked NO, please comment: N/A				
Soil Stockpiles				
		Yes	No	
Liner secure and intact?		<input type="checkbox"/>	<input type="checkbox"/>	
Cover in place and secure (as necessary)?		<input type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Accumulation Area				
		Yes	No	
Is the accumulation area free of severe structural deterioration?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there adequate aisle space between drums to allow unobstructed movement?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If any of these questions were marked NO, please comment: N/A				
Emergency Response Equipment				
		Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In working order?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spill Control	Is unused absorbent material nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is personnel protective equipment available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fire Protection	Is a fire extinguisher readily accessible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Is the fire extinguisher fully charged and seal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If any of these questions were marked NO, please comment: N/A				
Corrective Action				
Describe actions taken to correct any deficiency noted above: N/A				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report.		Project QC Manager' Signature		12/12/01
				Date

Appendix B

Project Photographs

NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-10-2002

Site:43

Viewing: Site 43 previous to excavation. Survey stakes in background.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-10-2002

Site:43

Viewing: Site 43 in the initial part of excavation. Soil is being stockpiled.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-10-2002

Site:43

Viewing: Site 43, buried 55-gallon drum.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-10-2002

Site:43

Viewing: Site 43, debris at the surface.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-17-2002

Site:43

Viewing: Debris from excavation, i.e. metal drums and suspect UXO



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-17-2002

Site:43

Viewing: Debris from excavation, i.e. metal drums and suspect UXO.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-26-2002

Site:43

Viewing: Delivered topsoil being stockpiled.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-12-2002

Site:43

Viewing: Site 43, trying to locate water line running through site.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-12-2002

Site:43

Viewing: Site 43, unearthed drums, staged for removal from site.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-12-2002

Site:43

Viewing: Site 43, unearthed drums, staged for removal from site.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-12-2002

Site:43

Viewing: Site 43, unearthed drums being checked with PID, staged for removal from site.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-12-2002

Site:43

Viewing: Site 43, unearthed drums, staged for removal from site.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Site 43, 4 1/2" cannonball.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Site 43, concrete projectile.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Site 43, 4 1/2" cannonball.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Site 43, loading of soil into truck.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Stockpiled excavated soil being staged at Sherman Field for UXO sweep.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Stockpiled excavated soil being staged at Sherman Field for UXO sweep.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Stockpiled excavated soil staged at Sherman Field being swept for UXO.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

*Viewing: Stockpiled excavated soil staged at Sherman Field being swept for
UXO.*



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 04-19-2002

Site:43

Viewing: Suspect UXO found in excavated soil.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Ryan Bitely Date: 04-26-2002

Site:43

Viewing: Onsite personnel performing compaction testing.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Phyllis Zerangue Date: 05-03-02 Time: 1330

Site:43, Perspective: Looking East,

Viewing: Hydroseeding at Site 43



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-04-2002

Site:43

Viewing: Completed excavation, Site 43.



NAS Pensacola CTO-0027, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-04-2002

Site:43

Viewing: Completed excavation, Site 43.



Appendix C

Data Validation Report

Quality Assurance Report

Site 15 & 43 Soil Study

Contract Task Order 27

Prepared for
Naval Air Station

Pensacola, Florida

February 21, 2002

Prepared by:
Christelle Newsome
Quality Assurance Chemist



115 Perimeter Center Place, Ste 700
Atlanta, Ga 330346

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CH2M Hill Constructors Inc. (CCI), on behalf of the Naval Air Station Pensacola, Contract Task Order (CTO) 27, has prepared this analytical quality assurance report (QAR) to provide the results of CCI's comprehensive review. This QAR is a synopsis of analytical data generated for soil samples and their associated quality control samples collected August 2001 through January 2002. The samples were collected during the Site 15 and 43 events, NAS Pensacola, Florida. The CCI sample identifiers, dates of collection, sample locations and analyses performed are presented on the chains of custody in Attachment I. Result summaries presenting the validated and/or qualified analytical results are provided in Attachment 2 of this analytical report.

Severn Trent Laboratories Pensacola served as the laboratory for this Site 15 and 43 soil evaluation. The laboratory analyses performed by STL Pensacola include:

- TCL pesticide/PCB compounds;
- TAL metals by ICP;
- SPLP for metals

Data for the analyses were reviewed for adherence to the specified analytical protocols in accordance with CCI Sampling Analysis Plan. All organic analysis results have been validated or qualified according to general guidance provided in the "National Functional Guidelines for Organic Data Review," EPA 540/OR-99/008, October 99. "National Functional Guidelines for Inorganic Review," EPA 540/R-94/013, February 1994. Additionally, the data were evaluated for adherence to the Department of Defense (DOD) Quality Systems Manual-Version 1 Final. (Based on NELAP Voted Revision 12-1July 1999)

GENERAL DATA QUALIFIERS

- As required by U.S. EPA protocols, all compounds which were qualitatively identified at concentrations below their respective reporting limits (RL) but above the method detection limit (MDL) have been qualified with "J" qualifiers on the data summary reports to indicate that they are quantitative estimates.

STL of Pensacola, Florida performed organic analyses of the soil samples and their associated field blanks. The samples were analyzed for U.S. EPA Contract Laboratory Program (CLP) Target Compound List (TCL) pesticide/PCB compound (dieldrin only), as specified in the associated chain of custody.

The findings of this quality assurance report are based upon the comprehensive review of the following results and detailed review summaries reported according to the CCI Level C (CLP deliverables data deliverables format): chain of custody documentation, holding times, laboratory method and field blank analyses, surrogate compound recoveries, matrix spike compound recoveries and reproducibility, initial and continuing calibration summaries, pesticide/PCB resolution check sample results, 4,4'-DDD/Endrin breakdown, pesticide compound retention time shift summary for single analytes, pesticide analysis sequence check, pesticide/PCBs dual column analysis precision, target compound identification and format, the quantitation of positive results and electronic data deliverables.

The organic analyses were performed acceptably, but require several qualifying statements. It is recommended that the analytical data be used only with the qualifying statements provided below. Any aspects of the data, which are not discussed in this report, should be considered qualitatively and quantitatively valid as reported, based on the deliverables reviewed. Result summary reports presenting the validated and qualified results are presented in Attachment 1.

ORGANIC DATA QUALIFIERS

- The positive result reported for dieldrin in the soil sample 027-15S0240-S4 is considered qualitatively invalid due to the levels at which this compound was present in associated laboratory method and/or field blanks. U.S. EPA protocol requires positive results for uncommon laboratory contaminants such dieldrin that are less than or equal to five times the level found in an associated laboratory method or field blank, to be considered qualitatively invalid. This has been indicated by placing "U" qualifiers next to the reported quantitative results for these compounds in the specified samples on the data summary report.

The positive results for the dieldrin results in the sample 027-15S0-281-S-3 are quantitative estimates. U.S. EPA protocol requires dual chromatographic column confirmation of positive results to be reported for pesticide/PCB compounds. The relative percent difference (RPD) in the results for the primary and confirmatory column analyses was greater than the acceptance criterion of 40 percent RPD for these compounds. The laboratory has reported the lower of the two results as required by U.S. EPA protocol. The positive results for these compounds in the specified samples have been marked with "J" qualifiers on the data summary report to indicate that they are quantitative estimates.

STL of Pensacola, Florida performed inorganic analyses of the soil samples and their associated field blanks. The samples were analyzed for specific U.S. EPA CLP Target Analyst List (TAL) metals, as specified in the associated chain of custody.

The findings in this report are based on a review of the following results and summaries reported according to a CLP-equivalent deliverables format: chain of custody documentation, holding times, laboratory method, equipment, and ambient blank results, matrix spike recoveries, laboratory and blind field duplicate analysis results, detection limits/sensitivity, initial and continuing calibration verification, CRDL standard analysis, laboratory control sample results, ICP interference check sample results, ICP serial dilution results, post digestion spike, the quantitation of positive results and electronic data deliverables. In addition, several samples were subjected to the Synthetic Precipitation Leaching Procedure (SPLP) and the resulting leachate was analyzed for various metals as indicated on the chain of custody. Analyses of the soil samples were performed using referenced from the U.S. EPA SW846. Analyses of the leachate samples were performed according to procedures specified in SW-846 Method 6010B

INORGANIC DATA QUALIFIERS

- The positive results reported for samples in the table below for arsenic, antimony, iron, copper and vanadium are considered qualitatively invalid due to the level at which these analytes were present in the laboratory method and/or field blanks. U.S. EPA protocol requires positive results for elemental contaminants that are less than or equal to five times the laboratory method and/or field blank contamination to be considered as qualitatively invalid. This has been indicated by placing a "U" qualifier next to the reported results on data summary reports for these samples.

Compound	Samples With Qualitatively Invalid Results
Arsenic	027-15SS321-S-7, 027-15SS323-S-7, 027-15SS325-S-7, 027-15SS328-S-7, 027-15SS329-S-7, 027-15SS324-S-7, 027-15SS110-S-7, 027-15SS311-S-7, 027-15SS312-S-7,
Antimony	027-43-SS60-S-02, 027-43-SS61-S-02,, 027-43-SS62-S-02, 027-43-SS64-S-02, 027-43-SS66-S-02, 027-43-SS69-S-02, 027-43-SS70-S-02, 027-43-SS63-S-02, 027-43-SS65-S-02, 027-43-SS67-S-02, 027-43-SS68-S-02, 027-43-SS71-S-02, 027-43-SS110-S-02, 027-43-SS111-S-02, 027-43-SS112-S-02, 027-43-SS80-S-02, 027-43-SS81-S-02, 027-43-SS86-S-02, 027-43-SS89-S-02, 027-43-SS890-S-02, 027-43-SS91-S-02, 027-43-SS94-S-02, 027-43-SS95-S-02, 027-43-SS96-S-02, 027-43-SS97-S-02, 027-43-SS98-S-02, 027-43-SS99-S-02, 027-43-SS102-S-02, 027-43-SS87-S-02, 027-43-SS88-S-02, 027-43-SS101-S-02, 027-43SS40-S-02-0910-1, 027-43SS12-S-100-0910-1, 027-43SO10-S-08-0910-1, 027-43SO14-S-8-090-1, 027-43SS51-S-02-0910-01, 027-43SS52-S-02-0910-01, 027-43SS53-S-02-0910-01, 027-43-SO31-S-6-0910-01, 027-43SO32-S-6-0910-01, , 027-43SO34-S-6-0910-01, 027-43SO07-S-100-0910-01, 027-43SO07-S-8-0910-01, 27-43SO12-S-14-0901, 27-43SO010-S-13-0910-01, 027-43SO14-S-13-0910-01, 027-43SO07-S-13-0910-01
Copper	027-43SO12-S-06-0823-01, 027-43-SS25-S-02-0823-01,

Iron

027-43SO12-S-13-0910-01

Vanadium

027-43SO07-S-13-0910-01

- Positive results or quantitation limits for samples 027-43-SO07-S-06-0823-01 and 027-43-SS40S-02-0910-01 for copper, antimony and/or zinc should be consider qualitative estimates. The results the for the laboratory duplicates of these sample were outside quality control criteria.

The lack of precision for these elements in these samples may be due to the heterogeneity of the duplicate samples. This lack of precision is anticipated, however, as the results approach the limit of detection. The positive results for these analytes in the samples mentioned should be considered quantitative estimates. This has been indicated by placing "J" qualifiers next to the reported positive results on the data summary reports for these samples.

- The positive results or detection limits reported for antimony, nickel iron or lead in the samples 027-43-SS60-S-02, 027-43-SS61-S-02, 027-43-SS62-S-02, 027-43-SS64-S-02, 027-43-SS66-S-02, 027-43-SS69-S-02, 027-43-SS70-S-02, 027-43-SS63-S-02, 027-43-SS65-S-02, 027-43-SS67-S-02, 027-43-SS68-S-02, 027-43-SS71-S-02, 027-43-SS100-S-02, 027-43-SS101-S-02, and 027- 43-SO12-S-14-0910-01 are considered quantitative estimates. The ICP serial dilution analysis results or percent difference associated with these samples were outside the established precision criterion for these analytes. Positive results for these elements were over the calibration range of the instrument and was not re-evaluated by the laboratory within established limits. This indicates the possible presence of physical or chemical interferences in these samples. This has been indicated by placing "J" qualifiers next to the positive antimony, nickel iron or lead on the data summary reports for these samples.
- The positive results and/or detection limits for antimony, copper, iron, lead, zinc or nickel in the samples 027-43SS40-S-02-0910-01, 027-43SO12-S-14-0910-01, 027-43SO07-S-13-0910-0, 027-43SO05-S-13-0910-0, 027-43SO07-S-06-0823-01, 027-43O07-S-06-0823-01 and 027-43-SS55-02-0911-01 for should be considered biased low quantitative estimates and may be higher than reported. The associated spike recoveries were outside the established quality control limit for these elements in the samples listed. The low recoveries for lead indicates the possible presence of matrix interferences in samples of similar matrix. This has been indicated by placing "J" qualifiers next to the positive results or detection limit for antimony, copper, iron, lead, zinc or nickel in these samples on the associated data summary report. The possibility of

elevated detection limits should be noted when assessing these samples for the qualitative absence of 1 antimony, copper, iron, lead, zinc or nickel.

The organic and inorganic analyses were performed acceptably, but required qualifying statements based on the deliverables reviewed and procedural modifications introduced.

This analytical quality assurance report has identified the aspects of the data which required qualification. Qualifications to the organic and inorganic laboratory data were discussed in Sections 3.0, and 4.0 respectively. These qualifiers are noted on the data summary report presented as Attachment 2 to this report.

ATTACHMENT I

Summary of Samples and Analyses



Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15-DP02-11-S-02	202032201-01	03/06/2002	8260B(VOC),TPH(FL-PRO)	Soil
027-15POSTEB-W-9	202032201-02	03/06/2002	8260B(VOC),TPH(FL-PRO)	Water
027-15-TB-020307	202073007-01	03/06/2002	8260B(VOC)	Water
027-15-DP02-S-06	C108606-1	03/21/2002	1030 ignitability	Soil
027-15-DP02-S-11	C108606-10	03/21/2002	1030 ignitability	Soil
027-15SS400-S-2	C108606-11	03/29/2002	Arsenic by 6010B	Soil
027-PREEB-W-9	C108606-12	03/29/2002	Arsenic by 6010B	Water
027-15-DP02-S-06	C108606-13	03/21/2002	1030 ignitability	Soil
027-15-DP02-S-11	C108606-14	03/21/2002	1030 ignitability	Soil
027-15&43-NW-01	C108606-15	05/07/2002	1010/20/9040B, 8260B, 8270C, 8081A, 8151, 6010B, 7470A, 8082	Water
TB-027-15&43-NW-01	C108606-16	05/07/2002	8260B	Water
027-43DP-07-0729-02	C108606-17	07/29/2002	TCLP VOC, TCLP SVOC, TCLP Pest, TCLP Herb, TCLP Metals, RIC	Oil
027-15&43-WW-01	C108606-18	05/07/2002	1010/20, 9040B, 8260B, 8270C, 8081A, 8151, 6010B, 7470A, 8082	Water
TB-027-15&43-WW-01	C108606-19	05/07/2002	8260B	Water
027-15PREEB-W-S2	C108606-2	06/13/2002	Arsenic only by 6010B	Water
027-15GR03-W-S2	C108606-20	06/13/2002	Arsenic only by 6010B	Water
027-15GR36-W-S2	C108606-21	06/13/2002	Arsenic only by 6010B	Water
027-15GS68-W-S2	C108606-22	06/13/2002	Arsenic only by 6010B	Water
027-15GS70-W-S2	C108606-3	06/13/2002	Arsenic only by 6010B	Water
027-15GS71-W-S2	C108606-4	06/13/2002	Arsenic only by 6010B	Water
027-15GS71-W-S2MS	C108606-5	06/13/2002	Arsenic only by 6010B	Water
027-15GS71-W-S2SD	C108606-6	06/13/2002	Arsenic only by 6010B	Water
027-15GS72-W-S2	C108606-7	06/13/2002	Arsenic only by 6010B	Water
027-PEN-43-01S-W-S2	C108606-8	06/13/2002	Iron only by 6010B	Water
027-PEN-43-03S-W-S2	C108606-9	06/13/2002	Iron only by 6010B	Water

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SS122-S-02-0824-01	C108676-1	08/24/2001	6010B Arsenic only	Soil
027-15SS123-S-03-0824-01	C10867610	08/24/2001	6010B Arsenic only	Soil
027-15SS124-S-02-0824-01	C108676-11	08/24/2001	6010B Arsenic only	Soil
027-15SS125-S-02-0824-01	C108676-12	08/24/2001	6010B Arsenic only	Soil
027-15SO126-S-03-0824-01	C108676-13	08/24/2001	6010B Arsenic only	Soil
027-15SS127-S-02-0824-01	C108676-14	08/24/2001	6010B Arsenic only	Soil
027-15SS128-S-02-0824-01	C108676-15	08/24/2001	6010B Arsenic only	Soil
027-15SS147-S-02-0824-01	C108676-16	08/24/2001	6010B Arsenic only	Soil
027-15SS148-S-02-0824-01	C108676-17	08/24/2001	6010B Arsenic only	Soil
027-15SS74-S-02-0824-01	C108676-18	08/24/2001	6010B Arsenic only	Soil
027-15SO149-S-02-0824-01	C108676-19	08/24/2001	6010B Arsenic only	Soil
027-15SS107-S-02-0824-01	C108676-2	08/24/2001	6010B Arsenic only	Soil
027-15SS108-S-02-0824-01	C108676-20	08/24/2001	6010B Arsenic only	Soil
027-15SS109-S-03-0824-01	C108676-21	08/24/2001	6010B Arsenic only	Soil
027-15SS110-S-02-0824-01	C108676-3	08/24/2001	6010B Arsenic only	Soil
027-15SO111-S-02-0824-01	C108676-4	08/24/2001	6010B Arsenic only	Soil
027-15SO112-S-03-0824-01	C108676-5	08/24/2001	6010B Arsenic only	Soil
027-15SO113-S-03-0824-01	C108676-6	08/24/2001	6010B Arsenic only	Soil
027-15SS114-S-02-0824-01	C108676-7	08/24/2001	6010B Arsenic only	Soil
027-15SO115-S-03-0824-01	C108676-8	08/24/2001	6010B Arsenic only	Soil
027-15SO75-S-03-0824-01	C108676-9	08/24/2001	6010B Arsenic only	Soil
027-15SS116-S-02-0824-01	C109195-01	08/24/2001	6010B Arsenic only	Soil
027-15SS117-S-02-0824-01	C109195-02	08/24/2001	6010B Arsenic only	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SS118-S-02-0824-01	C109195-03	08/24/2001	6010B Arsenic only	Soil
027-15SO119-S-03-0824-01	C109195-04	08/24/2001	6010B Arsenic only	Soil
027-15SS120-S-02-0824-01	C109195-05	08/24/2001	6010B Arsenic only	Soil
027-15SS150-S-02-0824-01	C109195-06	08/24/2001	6010B Arsenic only	Soil
027-15SO151-S-03-0824-01	C109195-07	08/24/2001	6010B Arsenic only	Soil
027-15PREEB01-W-0824-01	C109195-08	08/24/2001	6010B Arsenic only	Soil
027-15POSTEB01-W-0824-01	C109195-09	08/24/2001	6010B Arsenic only	Soil
027-15PREEB02-W-0824-01	C109195-10	08/24/2001	6010B Arsenic only	Soil
027-15SS76-S-02-0824-01	C109195-11	08/24/2001	6010B Arsenic only	Soil
027-15POSTEB02-W-0824-01	C109195-12	08/24/2001	6010B Arsenic only	Soil
027-15SS77-S-02-0824-01	C109195-13	08/24/2001	6010B Arsenic only	Soil
027-15SS78-S-02-0824-01	C109195-14	08/24/2001	6010B Arsenic only	Soil
027-15SO129-S-03-0825-01	C109195-15	08/25/2001	6010B Arsenic only	Soil
027-15SO136-S-03-0825-01	C109195-16	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO137-S-02-0825-01	C109195-17	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO138-S-02-0825-01	C109195-18	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO139-S-02-0825-01	C109195-19	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO140-S-02-0825-01	C109195-20	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO141-S-03-0825-01	C109195-21	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SO142-S-02-0825-01	C109195-22	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO143-S-02-0825-01	C109195-23	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO144-S-02-0825-01	C109195-24	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO152-S-02-0825-01	C109195-25	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO130-S-02-0825-01	C109195-26	08/25/2001	6010B Arsenic only	Soil
027-15PREEB03-W-0825-01	C109195A-01	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Water
027-15POSTEB03-W-0825-01	C109195A-02	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Water
027-15SO131-S-02-0825-01	C109195A-03	08/25/2001	6010B Arsenic only	Soil
027-15SO132-S-02-0825-01	C109195A-04	08/25/2001	6010B Arsenic only	Soil
027-15SO133-S-02-0825-01	C109195B-1	08/25/2001	6010B Arsenic only	Soil
027-15SO151-S-03-0825-01	C109227-01	08/25/2001	6010B Arsenic only	Soil
027-15SO150-S-02-0825-01	C109227-02	08/25/2001	6010B Arsenic only	Soil
027-15SO134-S-02-0825-01	C109227-03	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-15SO135-S-03-0825-01	C109227-04	08/25/2001	6010B Arsenic only, 8310 PAHs +1 and 2 Methyl-napthalene (BEQs)	Soil
027-43SS40-S-02-0910-01	C109227-04 MS	09/10/2001	6010B CU, SB, PB, NI Only	Soil
027-43SS41-S-02-0910-01	C109227-04 MSD	09/10/2001	6010B CU, SB, PB, NI Only	Soil
027-43SS42-S-01-0910-01	C109227-05	09/10/2001	6010B CU, SB, PB, NI Only	Soil
027-43SS43-S-02-0910-01	C109227-06	09/10/2001	6010B CU, SB, PB, NI Only	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-43SO12-S-11-0910-01	C109227-07	09/10/2001	6010B CU, SB, PB, NI Only 6010B CU, SB, PB, NI, FE Only by SPLP	Soil
027-43SO12-S-100-0910-01	C109227-08	09/10/2001	6010B CU, SB, PB, NI Only 6010B CU, SB, PB, NI, FE Only by SPLP	Soil
027-43SS44-S-02-0910-01	C109227-09	09/10/2001	6010B CU, SB, PB Only	Soil
027-43SS45-S-02-0910-01	C109227A-01	09/10/2001	6010B CU, SB, PB Only	Soil
027-43SO10-S-8-0910-01	C109318-01	09/10/2001	6010B CU, SB, PB Only 6010B CU,SB, PB Only by SPLP	Soil
027-43SO14-S-8-0910-01	C109318-02	09/10/2001	6010B CU, SB, PB Only 6010B CU,SB, PB Only by SPLP	Soil
027-43SS50-S-02-0910-01	C109318-03	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Soil
027-43SS51-S-02-0910-01	C109318-04	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Soil
027-43SS52-S-02-0910-01	C109318-05	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Soil
027-43SS53-S-02-0910-01	C109318-06	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Soil
027-43SS59-S-02-0910-01	C109318-07	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Soil
027-43SO31-S-6-0910-01	C109318-08	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only, 6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only by SPLP	Soil
027-43SO32-S-6-0910-01	C109318-09	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only, 6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only by SPLP	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-43SO34-S-6-0910-01	C109318-10	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only, 6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only by SPLP	Soil
027-43SO07-S-8-0910-01	C109318-11	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only, 6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only by SPLP	Soil
027-43SO07-S-100-0910-01	C109318-12	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only, 6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only by SPLP	Soil
027-43PREEB02-W-0910-01	C109318-13	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Water
027-43POSTEB-02-W-0910-01	C109318-14	09/10/2001	6010B SB, AS, BA, CU, FE, PB, NI, V and ZN only	Water
027-43SO12-S-11-0910-01	C109318-15	09/10/2001	6010B CU, SB, FE, PB, NI Only, 1312/6010B CU, SB, PB, NI, FE, Only BY SPLP	Soil
027-43SO07-S-8-0910-01	C109318-16	09/10/2001	6010B CU, SB, FE, PB, NI, V AND CU Only, 1312/6010B CU, SB, PB, NI, FE, Only BY SPLP	Soil
027-43SO10-S-8-0910-01	C109318-17	09/10/2001	6010B CU, SB, PB Only, 6010B CU, SB, PB Only by SPLP	Soil
027-43SO14-S-8-0910-01	C109318-18	09/10/2001	6010B CU, SB, PB Only, 6010B CU, SB, PB Only by SPLP	Soil
027-15SO240-S-8-0911-01	C109318-19	09/11/2001	6010B Arsenic only, 8081A Dieldrin	Soil
027-15SO240-S-10-0911-01	C109318-20	09/11/2001	6010B Arsenic only, 8081A Dieldrin	Soil
027-15PREEB-W-3-0911-01	C109318-21	09/11/2001	6010B Arsenic only, 8081A Dieldrin	Water
027-15POSTEB-W-3-0911-01	C109318-22	09/11/2001	6010B Arsenic only, 8081A Dieldrin	Water
027-15SS200-S-2-0917-01	C109318-23	09/17/2001	6010B Arsenic only	Soil
027-15SS232-S-2-0917-01	C109318-24	09/17/2001	6010B Arsenic only	Soil
027-15SS201-S-2-0917-01	C109318-25	09/17/2001	6010B Arsenic only	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SS202-S-2-0917-01	C109318-26	09/17/2001	6010B Arsenic only	Soil
027-15SS203-S-2-0917-01	C109318-27	09/17/2001	6010B Arsenic only	Soil
027-15SS204-S-2-0917-01	C109318-28	09/17/2001	6010B Arsenic only	Soil
027-15SS206-S-2-0917-01	C109318-29	09/17/2001	6010B Arsenic only	Soil
027-15SS207-S-2-0917-01	C109318-30	09/17/2001	6010B Arsenic only	Soil
027-15SS208-S-2-0917-01	C109318-31	09/17/2001	6010B Arsenic only	Soil
027-15SS210-S-2-0917-01	C109318-32	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS211-S-2-0917-01	C109318-33	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS212-S-2-0917-01	C109318-34	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS213-S-2-0917-01	C109318-35	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS214-S-2-0917-01	C109318-36	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS215-S-2-0917-01	C109318-37	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS216-S-2-0917-01	C109562-1	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS217-S-2-0917-01	C109562-10	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS218-S-2-0917-01	C109562-11	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS219-S-2-0917-01	C109562-12	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS220-S-2-0917-01	C109562-12 MS	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS221-S-2-0917-01	C109562-12 MSD	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS222-S-2-0917-01	C109562-13	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS223-S-2-0917-01	C109562-14	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil
027-15SS224-S-2-0917-01	C109562-2	09/17/2001	6010B Arsenic only, 8081 Dieldrin	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SS225-S-2-0917-01	C109562-3	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS226-S-2-0917-01	C109562-4	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS227-S-2-0917-01	C109562-5	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS228-S-2-0917-01	C109562-6	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS229-S-2-0917-01	C109562-7	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS230-S-2-0917-01	C109562-8	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS231-S-2-0917-01	C109562-9	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS234-S-2-0917-01	C109562A-1	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS209-S-2-0917-01	C110008-1	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS233-S-2-0917-01	C110008-2	09/17/2001	6010B Arsenic only, 8081 Diedrin	Soil
027-15SS205-S-2-0917-01	C110008-3	09/17/2001	6010B Arsenic only	Soil
027-15PREEB-W-4-0917-01	C110008-4	09/17/2001	6010B Arsenic only	Water
027-15POSTEB-W-4-0917-01	C110008-5	09/17/2001	6010B Arsenic only	Water
027-43SS60-S-02	C110008A-1	09/24/2001	6010B, SB Only	Soil
027-43SS65-S-02	C110008A-2	09/24/2001	6010B, SB, NI Only	Soil
027-43SS67-S-02	C110008A-3	09/24/2001	6010B, SB, FE, PB Only	Soil
027-43SS68-S-02	C110008A-4	09/24/2001	6010B, SB, FE, PB Only	Soil
027-43SS68-S-02 MS	C110008A-5	09/24/2001	6010B, SB, FE, PB Only	Soil
027-43SS68-S-02 MSD	C110008B-1	09/24/2001	6010B, SB, FE, PB Only	Soil
027-43PREEB-W-04	C110008B-2	09/24/2001	6010B, SB, FE, PB, NI Only	Soil
027-43POSTEB-W-04	C110008B-3	09/24/2001	6010B, SB, FE, PB, NI Only	Soil
027-43SS61-S-02	C110090-01	09/24/2001	6010B, SB Only	Soil
027-43SS62-S-02	C110090-02	09/24/2001	6010B, SB Only	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-43SS64-S-02	C110090-03	09/24/2001	6010B, SB Only	Soil
027-43SS66-S-02	C110090-04	09/24/2001	6010B, SB, NI Only	Soil
027-43SS69-S-02	C110090-05	09/24/2001	6010B, SB, FE, NI Only	Soil
027-43SS70-S-02	C110090-06	09/24/2001	6010B, SB, FE, NI Only	Soil
027-43SS63-S-02	C110090-07	09/24/2001	6010B, SB, FE, NI Only	Soil
027-43SS71-S-02	C110090-08	09/24/2001	6010B, SB, FE, NI Only	Soil
027-43SO12-S-14-0910-01	C110090-09	09/10/2001	6010B CU, SB, FE, PB, NI Only, 1312/6010B CU, SB, PB, NI, FE Only by SPLP	Soil
027-43SO10-S-13-0910-01	C110090-10	09/10/2001	6010B CU, SB, FE, PB, NI Only, 1312/6010B CU, SB, PB, NI, FE Only by SPLP	Soil
027-43SO14-S-13-0910-01	C110090-11	09/10/2001	6010B CU, SB, FE, PB, NI Only, 1312/6010B CU, SB, PB, NI, FE Only by SPLP	Soil
027-43SO07-S-13-0910-01	C110090-12	09/10/2001	6010B AS, BA, CU, SB, FE, PB, NI, V AND ZN Only, 6010B AS, BA, CU, SB, FE, PB, NI, V AND ZN by SPLP Only,	Soil
027-43SO05-S-13-0911-01	C110090-13	09/11/2001	6010B CU, SB, PB, FE Only,, 6010B CU, SB, PB, FE Only by SPLP	Soil
027-43SS54-S-02-0911-01	C110090-14	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS55-S-02-0911-01	C110090-15	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS56-S-02-0911-01	C110090-16	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS57-S-02-0911-01	C110090-17	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS57-S-02-0911-01MS	C110090-18	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS57-S-02-0911-01MSD	C110090-19	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SS58-S-02-0911-01	C110090-20	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SO05-S-8-0911-01	C110090-21	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SO33-S-6-0911-01	C110090-22	09/11/2001	6010B SB, CU, FE, PB, only	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-43PREEB-03-0911-01	C110090-23	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43POSTEB-03-0911-01	C110090-24	09/11/2001	6010B SB, CU, FE, PB, only	Soil
027-43SO05-S-8-0911-01	C110090-25	09/11/2001	6010B SB, CU, FE, PB, only 6010B SB, CU, FE, PB, by SPLP only	Soil
027-15SS250-S-2	C110090-26	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS251-S-2	C110090-27	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS282-S-2	C110090-28	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS252-S-2	C110090-29	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS253-S-2	C110090-30	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS254-S-2	C110090-31	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS256-S-2	C110090-32	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS257-S-2	C110090-33	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS258-S-2	C110090-34	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS260-S-2	C110090-35	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS261-S-2	C110090-36	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS262-S-2	C110090-37	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS263-S-2	C111086-1	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS264-S-2	C111086-10	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil
027-15SS265-S-2	C111086-10	10/03/2001	Arsenic only by 6010B, Diedrin by only 8081A	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SS266-S-2	C111086-10	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS267-S-2	C111086-11	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS268-S-2	C111086-12	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS269-S-2	C111086-13	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS270-S-2	C111086-2	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS271-S-2	C111086-2	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS272-S-2	C111086-2	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS273-S-2	C111086-3	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS274-S-2	C111086-4	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS275-S-2	C111086-5	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS276-S-2	C111086-6	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS277-S-2	C111086-7	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS255-S-2	C111086-8	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS259-S-2	C111086-9	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SS283-S-2	C111086A-1	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SO278-S-3	C111086B-1	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SO279-S-3	C111086B-2	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SO280-S-3	C111480-1	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15SO281-S-3	C111480-1	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-15SO284-S-3	C111480-1	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15PREEB-W-5	C111480-10	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-15POSTEB-W-5	C111480-11	10/03/2001	Arsenic only by 6010B, Dieldrin by only 8081A	Soil
027-43SO12-S-14-0910-01	C111480-12	09/10/2001	6010B CU, SB,FE, PB, NI Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO07-S-13-0910-01	C111480-13	09/10/2001	6010B CU, SB,FE, PB, NI Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO05-S-13-0910-01	C111480-14	09/10/2001	6010B CU, SB,FE, PB, NI Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO10-S-13-0910-01	C111480-15	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO14-S-13-0910-01	C111480-16	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO34-S-6-0910-01	C111480-17	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SS60-S-02	C111480-18	09/24/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO12-S-14-0910-01	C111480-19	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO10-S-13-0910-01	C111480-2	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by SPLP only	Soil
027-43SO05-S-13-0910-01	C111480-3	09/10/2001	6010B CU, SB,FE, PB Only, 6010B CU, SB,FE, PB, NI by	Soil

Sample Number	Lab Sample ID	Date Sampled	SPLP only	
			Analyses Required	Matrix
027-15SO115-S-4	C111480-4	11/02/2001	Dieldrin by only 8081A	Soil
027-15SO240-S-4	C111480-5	11/02/2001	Dieldrin by only 8081A	Soil
027-15SO240-S-4 MS	C111480-6	11/02/2001	Dieldrin by only 8081A	Soil
027-15SO240-S-4 MSD	C111480-7	11/02/2001	Dieldrin by only 8081A	Soil
027-15SO310-S-2	C111480-8	11/02/2001	Dieldrin by only 8081A	Soil
027-15SO311-S-2	C111480-9	11/02/2001	Dieldrin by only 8081A	Soil
027-15GR03-W-S1	C112154-1	11/29/2001	Arsenic only by 6010B	Water
027-15GR03-W-S1 MS	C112154-1	11/29/2001	Arsenic only by 6010B	Water
027-15GR03-W-S1 MSD	C112154-1	11/29/2001	Arsenic only by 6010B	Water
027-15GR65-W-S1	C112154-2	11/29/2001	Arsenic only by 6010B	Water
027-15GS99-W-S1	C112154-3	11/29/2001	Arsenic only by 6010B	Water
027-15PREEB-W-S1	C112154-4	11/29/2001	Arsenic only by 6010B	Water
027-43SS82-S-2	C112154-5	11/19/2001	Sb only by 6010B	Water
027-43SS103-S-2	C112155-1	11/19/2001	Sb only by 6010B	Water
027-43SS83-S-2	C112155-1	11/19/2001	Sb only by 6010B	Water
027-43SS84-S-2	C112155-1	11/19/2001	Sb only by 6010B	Water
027-43SS85-S-2	C112155-2	11/19/2001	Sb only by 6010B	Water
027-43SS92-S-2	C112155-3	11/19/2001	Sb only by 6010B	Water
027-43SS93-S-2	C112155-4	11/19/2001	Sb only by 6010B	Water
027-43SS104-S-2	C112155-5	11/19/2001	Sb only by 6010B	Water
027-15SS340-S-2	C112155-6	12/06/2001	Arsenic only by 6010B	Soil
027-15SS340-S-2 MS	C112155-7	12/06/2001	Arsenic only by 6010B	Soil
027-15SS340-S-2 MSD	C112155A-1	12/06/2001	Arsenic only by 6010B	Soil
027-15SS341-S-2	C112155A-2	12/06/2001	Arsenic only by 6010B	Soil
027-43-01S-W-S1	C112284-1	11/28/2001	Iron only by 6010B	Soil
027-43-04S-W-S1	C112284-2	11/28/2001	Iron only by 6010B	Soil
027-43-04S-W-S1 MS	C112284-3	11/28/2001	Iron only by 6010B	Soil
027-43-04S-W-S1 MSD	C112284-4	11/28/2001	Iron only by 6010B	Soil
027-43-06S-W-S1	C11469A-1	11/28/2001	Iron only by 6010B	Soil

Sample Number	Lab Sample ID	Date Sampled	Analyses Required	Matrix
027-43-PREEB-W-S1	C11469A-2	11/28/2001	Iron only by 6010B	Soil
027-43SS110-S-2	C11469A-3	12/06/2001	Sb only by 6010B	Soil
027-43SS110-S-2 MS	C11469A-4	12/06/2001	Sb only by 6010B	Soil
027-43SS110-S-2 MSD	C11469A-5	12/06/2001	Sb only by 6010B	Soil
027-43SS111-S-2	C11469A-6	12/06/2001	Sb only by 6010B	Soil
027-43SS112-S-2	C11469A-7	12/06/2001	Sb only by 6010B	Soil
027-43PREEB-W-7	C11469A-8	12/06/2001	Sb only by 6010B	Soil
027-43POSTEB-W-7	C202031108-01	12/06/2001	Sb only by 6010B	Soil
027-15GS71-W-S1	C202031108-02	12/03/2001	Arsenic only by 6010B	Water
027-15GR36-W-S1	C202031108-03	12/03/2001	Arsenic only by 6010B	Water
027-15GR66-W-S1	C202031108-04	12/12/2001	Arsenic only by 6010B	Water
027-15GS69-W-S1	C202031108-05	12/12/2001	Arsenic only by 6010B	Water
027-15GS70-W-S1	C202031108-06	12/12/2001	Arsenic only by 6010B	Water
027-15GS82-W-S1	C202031108-07	12/12/2001	Arsenic only by 6010B	Water
027-PEN-43-02S-W-S1	C202031108-08	12/12/2001	Iron only by 6010B	Water

ATTACHMENT II

Site 15 & 43

Data Summary Reports

STL Pensacola

LOG NO: C1-09195
Received: 11 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

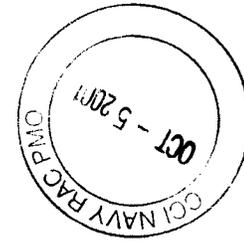
Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 171610928

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09195-1	027-43SS40-S-02-0910-01	09-10-01/13:23				
09195-2	027-43SS41-S-02-0910-01	09-10-01/12:54				
09195-3	027-43SS42-S-01-0910-01	09-10-01/13:27				
09195-4	027-43SS43-S-02-0910-01	09-10-01/13:10				
09195-5	027-43SO12-S-11-0910-01	09-10-01/12:38				
PARAMETER		09195-1	09195-2	09195-3	09195-4	09195-5
Metals (6010B)						
Antimony, mg/kg dw		1.6 1.6 ^{UJ}	9.1	23	17	0.53 0.53 ^J
Copper, mg/kg dw		7600 7600 ^J	610	440	4700	0.82 0.82 ^J
Iron, mg/kg dw		79000 79000 ^J	13000	14000	110000	290
Lead, mg/kg dw		4000 4000 ^J	1800	1200	4500	1.3
Nickel, mg/kg dw		560 560 ^J	42	20	130	0.27 0.27 ^U
Dilution Factor		1,10	1	1	1,10	1
Prep Date		09.12.01	09.12.01	09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01	09.14.01	09.14.01
Analysis Time		18:11	18:39	18:44	18:50	19:07
Batch ID		PS204	PS204	PS204	PS204	PS204
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		91	92	93	90	96

x10



001

STL Pensacola

LOG NO: C1-09195
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 171610928

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09195-6	027-43SO12-S-100-0910-01	09-10-01/12:38
PARAMETER		09195-6
Metals (6010B)		
Antimony, mg/kg dw		5.04 0.478 ¹⁹
Copper, mg/kg dw		0.70 0.70 ⁵
Iron, mg/kg dw		270
Lead, mg/kg dw		1.2
Nickel, mg/kg dw		0.48U
Dilution Factor		1
Prep Date		09.12.01
Prep Time		18:25
Analysis Date		09.14.01
Analysis Time		19:12
Batch ID		PS204
Prep Method		3050B
Analyst		CH
Percent Solids		94

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

STL Pensacola

LOG NO: C1-09195
Received: 11 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 171610928

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09195-7	027-43SS44-S-02-0910-01	09-10-01/14:14				
09195-8	027-43SS45-S-02-0910-01	09-10-01/14:19				
09195-9	027-43SS46-S-02-0910-01	09-10-01/14:51				
09195-10	027-43SS47-S-02-0910-01	09-10-01/14:01				
09195-11	027-43SS48-S-02-0910-01	09-10-01/13:39				
PARAMETER		09195-7	09195-8	09195-9	09195-10	09195-11
Copper (6010B), mg/kg dw		3400	3400	7200	4200	2900
Dilution Factor		1	1	1	1	1
Prep Date		09.12.01	09.12.01	09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01	09.14.01	09.14.01
Analysis Time		19:18	19:24	19:29	19:35	19:41
Batch ID		PS204	PS204	PS204	PS204	PS204
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Antimony (6010B), mg/kg dw		850	460	300	59	50
Dilution Factor		1	1	1	1	1
Prep Date		09.12.01	09.12.01	09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01	09.14.01	09.14.01
Analysis Time		19:18	19:24	19:29	19:35	19:41
Batch ID		PS204	PS204	PS204	PS204	PS204
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH

STL Pensacola

LOG NO: C1-09195
Received: 11 SEP 01
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Atlanta, GA 30346

Client PO. No.: 2082
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 171610928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09195-7	027-43SS44-S-02-0910-01	09-10-01/14:14				
09195-8	027-43SS45-S-02-0910-01	09-10-01/14:19				
09195-9	027-43SS46-S-02-0910-01	09-10-01/14:51				
09195-10	027-43SS47-S-02-0910-01	09-10-01/14:01				
09195-11	027-43SS48-S-02-0910-01	09-10-01/13:39				
PARAMETER		09195-7	09195-8	09195-9	09195-10	09195-11
Lead (6010B), mg/kg dw		60000	7000	29000	6900	6900
Dilution Factor		50	1	50	1	1
Prep Date		09.12.01	09.12.01	09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01	09.14.01	09.14.01
Analysis Time		18:48	19:24	18:54	19:35	32:21
Batch ID		PS204	PS204	PS204	PS204	PS204
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		83	87	87	88	87

STL Pensacola

LOG NO: C1-09195
 Received: 11 SEP 01
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Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 171610928

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
09195-12	027-43SS49-S-02-0910-01	09-10-01/13:50		
09195-13	027-43SO10-S-8-0910-01	09-10-01/14:30		
09195-14	027-43SO14-S-8-0910-01	09-10-01/14:03		
PARAMETER		09195-12	09195-13	09195-14
Copper (6010B), mg/kg dw		1100	1.8	1.6
Dilution Factor		1	1	1
Prep Date		09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01
Analysis Time		19:46	19:52	19:57
Batch ID		PS204	PS204	PS204
Prep Method		3050B	3050B	3050B
Analyst		CH	CH	CH
Antimony (6010B), mg/kg dw		31.50	10.30	10.30
Dilution Factor		1	1	1
Prep Date		09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01
Analysis Time		19:46	19:52	19:57
Batch ID		PS204	PS204	PS204
Prep Method		3050B	3050B	3050B
Analyst		CH	CH	CH

005

STL Pensacola

LOG NO: C1-09195
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 171610928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
09195-12	027-43SS49-S-02-0910-01	09-10-01/13:50		
09195-13	027-43SO10-S-8-0910-01	09-10-01/14:30		
09195-14	027-43SO14-S-8-0910-01	09-10-01/14:03		
PARAMETER		09195-12	09195-13	09195-14
Lead (6010B), mg/kg dw		4400	2.3	1.2
Dilution Factor		1	1	1
Prep Date		09.12.01	09.12.01	09.12.01
Prep Time		18:25	18:25	18:25
Analysis Date		09.14.01	09.14.01	09.14.01
Analysis Time		19:46	19:52	19:57
Batch ID		PS204	PS204	PS204
Prep Method		3050B	3050B	3050B
Analyst		CH	CH	CH
Percent Solids		90	97	96

STL Pensacola

LOG NO: C1-09195
Received: 11 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 171610928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
09195-15	027-43SS50-S-02-0910-01	09-10-01/15:00			
09195-16	027-43SS51-S-02-0910-01	09-10-01/15:07			
09195-17	027-43SS52-S-02-0910-01	09-10-01/15:20			
09195-18	027-43SS53-S-02-0910-01	09-10-01/15:37			
PARAMETER	09195-15	09195-16	09195-17	09195-18	
Metals (6010)				11	
Antimony, mg/kg dw	21	21 5.0 7.9 u	19 5.0 23 u	11 u MC	
Arsenic, mg/kg dw	9.2	12	19	9.9	
Barium, mg/kg dw	930	660	1100	690	
Copper, mg/kg dw	6400	900	69000	1500	
Iron, mg/kg dw	31000	60000	72000	32000	
Lead, mg/kg dw	2700	2100	4200	2900	
Nickel, mg/kg dw	44	140	370	59	
Vanadium, mg/kg dw	41	26	120	34	
Zinc, mg/kg dw	3900	3800	19000	3900	
Dilution Factor	1	1,10	1,10	1	
Prep Date	09.12.01	09.12.01	09.12.01	09.12.01	
Prep Time	18:25	18:25	18:25	18:25	
Analysis Date	09.14.01	09.14.01	09.14.01	09.14.01	
Analysis Time	20:14	20:20	20:25	20:31	
Batch ID	PS204	PS204	PS204	PS204	
Prep Method	3050B	3050B	3050B	3050B	
Analyst	CH	CH	CH	CH	
Percent Solids	92	90	90	92	

007

STL Pensacola

LOG NO: C1-09195
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 171610928

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09195-19	027-43SS59-S-02-0910-01	09-10-01/15:37
PARAMETER	09195-19	
Metals (6010B)		
Antimony, mg/kg dw	5.0	3700 U
Copper, mg/kg dw		3700
Iron, mg/kg dw		74000
Lead, mg/kg dw		3400
Dilution Factor		1,10
Prep Date		09.12.01
Prep Time		18:25
Analysis Date		09.14.01
Analysis Time		20:37
Batch ID		PS204
Prep Method		3050B
Analyst		CH
Percent Solids		90

008

STL Pensacola

LOG NO: C1-09195
Received: 11 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 171610928

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09195-20	027-43SO31-S-6-0910-01	09-10-01/15:25				
09195-21	027-43SO32-S-6-0910-01	09-10-01/16:18				
09195-22	027-43SO34-S-6-0910-01	09-10-01/15:10				
09195-23	027-43SO07-S-100-0910-01	09-10-01/15:41				
09195-24	027-43SO07-S-8-0910-01	09-10-01/15:41				
PARAMETER		09195-20	09195-21	09195-22	09195-23	09195-24
Metals (6010)						
Antimony, mg/kg dw		0.79B ^{19.50} U	0.36B ^{5.0} U	0.50B ^{5.0} U	0.32B ^{5.0} U	0.35B ^{5.0} U
Arsenic, mg/kg dw		0.48U	0.38B ^J	0.47B ^J	0.34B ^J	0.46B ^J
Barium, mg/kg dw		14	2.5	11	2.7	2.6
Copper, mg/kg dw		2.5	1.1	0.75B	0.79B	0.85B
Iron, mg/kg dw		1600	1300	1600	1500	1500
Lead, mg/kg dw		11	3.1	1.7	1.3	1.4
Nickel, mg/kg dw		0.68	0.64	0.59	0.69	0.70
Vanadium, mg/kg dw		3.3	2.9	3.3	9.2	9.2
Zinc, mg/kg dw		13	6.9	4.0	4.3	4.0
Dilution Factor		1	1	1	1	1
Prep Date		09.12.01	09.12.01	09.12.01	09.12.01	09.12.01
Prep Time		16:35	16:35	16:35	16:35	16:35
Analysis Date		09.14.01	09.14.01	09.14.01	09.14.01	09.14.01
Analysis Time		21:33	21:38	21:44	21:49	34:13
Batch ID		PS203	PS203	PS203	PS203	PS203
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		96	95	95	96	94

009

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-1	027-43SO12-S-14-0910-01	09-10-01/13:04
PARAMETER		10008-1
Copper (6010B), mg/kg dw		1.3
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:04
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Antimony (6010B), mg/kg dw		0.66 <i>u</i> 5.04
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:04
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Iron (6010B), mg/kg dw		160
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:04
Batch ID		PS217
Prep Method		3050B
Analyst		CH

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-1	027-43SO12-S-14-0910-01	09-10-01/13:04
PARAMETER		10008-1
Lead (6010B), mg/kg dw		1.6
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:04
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Nickel (6010B), mg/kg dw		0.238 ¹⁵
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:04
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Percent Solids		76

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-2	027-43SO10-S-13-0910-01	09-10-01/04:41
10008-3	027-43SO14-S-13-0910-01	09-10-01/14:13

PARAMETER	10008-2	10008-3
Copper (6010B), mg/kg dw	0.378 ¹⁵	0.518 ¹⁵
Dilution Factor	1	1
Prep Date	10.02.01	10.02.01
Prep Time	03:58	03:58
Analysis Date	10.03.01	10.03.01
Analysis Time	12:09	12:15
Batch ID	PS217	PS217
Prep Method	3050B	3050B
Analyst	CH	CH
Antimony (6010B), mg/kg dw	5.20 1.075 ^u	0.688 u ^u 5.04
Dilution Factor	1	1
Prep Date	10.02.01	10.02.01
Prep Time	03:58	03:58
Analysis Date	10.03.01	10.03.01
Analysis Time	12:09	12:15
Batch ID	PS217	PS217
Prep Method	3050B	3050B
Analyst	CH	CH

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

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Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
10008-2	027-43SO10-S-13-0910-01	09-10-01/04:41	
10008-3	027-43SO14-S-13-0910-01	09-10-01/14:13	
PARAMETER		10008-2	10008-3
Lead (6010B), mg/kg dw		1.1	5.0
Dilution Factor		1	1
Prep Date		10.02.01	10.02.01
Prep Time		03:58	03:58
Analysis Date		10.03.01	10.03.01
Analysis Time		12:09	12:15
Batch ID		PS217	PS217
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		95	89

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-4	027-43SO07-S-13-0910-01	09-10-01/15:50
PARAMETER	10008-4	
Metals (6010B)		
Antimony, mg/kg dw	0.46U	5.0
Arsenic, mg/kg dw	0.46U	
Barium, mg/kg dw	0.50U	
Copper, mg/kg dw	0.91U	
Iron, mg/kg dw	97	
Lead, mg/kg dw	0.63	
Nickel, mg/kg dw	0.46U	
Vanadium, mg/kg dw	0.19U	
Zinc, mg/kg dw	1.0U	
Dilution Factor	1	
Prep Date	10.02.01	
Prep Time	03:58	
Analysis Date	10.03.01	
Analysis Time	11:24	
Batch ID	PS217	
Prep Method	3050B	
Analyst	CH	
Percent Solids	97	

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-5	027-43SO05-S-13-0911-01	09-11-01/08:46
PARAMETER		10008-5
Copper (6010B), mg/kg dw		0.84U
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:21
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Antimony (6010B), mg/kg dw		0.59 4.21 u
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:21
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Lead (6010B), mg/kg dw		0.46
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:21
Batch ID		PS217
Prep Method		3050B
Analyst		CH

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 7

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008-5	027-43SO05-S-13-0911-01	09-11-01/08:46
PARAMETER		10008-5
Iron (6010B), mg/kg dw		200
Dilution Factor		1
Prep Date		10.02.01
Prep Time		03:58
Analysis Date		10.03.01
Analysis Time		12:21
Batch ID		PS217
Prep Method		3050B
Analyst		CH
Percent Solids		95

STL Pensacola

LOG NO: C1-10008
Received: 01 OCT 01
Reported: 08 OCT 01

Ms. Tatiana Romanova
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Atlanta, GA 30346

Client PO. No.: 2082
C1 Project No: 154039
Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
Sampled By: Client
Code: 161111019

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED			
10008-6	Method Blank				
10008-7	LCS True Value				
10008-8	Lab Control Standard Result				
10008-9	Lab Control Standard % Recovery				
10008-10	LCS Accuracy Control Limit (%R)				
PARAMETER		10008-6	10008-7	10008-8	10008-9 10008-10
Metals (6010B)					
Antimony, mg/kg dw		0.36 B	62.7	41.2	66 % 17.1-141.0
Arsenic, mg/kg dw		0.50U	47.5	46.9	99 % 34.4-60.6
Barium, mg/kg dw		1.00U	509.0	513.6	101 % 392-626
Copper, mg/kg dw		1.00U	69.5	72.1	104 % 56.9-82.0
Iron, mg/kg dw		1.8 B	13700.0	14582.8	106 % 8350-19100
Lead, mg/kg dw		0.50U	186.0	173.5	93 % 139-233
Nickel, mg/kg dw		0.50U	112.0	108.2	97 % 87.6-137.0
Vanadium, mg/kg dw		1.00 B	136.0	138.6	102 % 92.6-179.0
Zinc, mg/kg dw		2.00U	289.0	264.4	92 % 224-356
Dilution Factor		1	---	1	---
Prep Date		10.02.01	---	10.02.01	---
Prep Time		03:58	---	03:58	---
Analysis Date		10.03.01	---	10.03.01	---
Analysis Time		11:13	---	11:19	---
Batch ID		PS217	PS217	PS217	PS217
Prep Method		3050B	---	3050B	---
Analyst		CH	---	CH	---

Fe - Noqual.

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED				
10008-11	Matrix Spike True Value					
10008-12	Matrix Spike Result					
10008-13	Matrix Spike % Recovery					
10008-14	Matrix Spike Duplicate True Value					
10008-15	Matrix Spike Duplicate Result					
PARAMETER		10008-11	10008-12	10008-13	10008-14	10008-15
Metals (6010B)						
Antimony, mg/kg dw		98.2	97.08	99 %	99.1	98.97
Arsenic, mg/kg dw		98.2	98.21	100 %	99.1	100.36
Barium, mg/kg dw		98.2	100.26	102 %	99.1	101.48
Copper, mg/kg dw		98.2	103.88	106 %	99.1	104.63
Iron, mg/kg dw		981.8	1116.7	104 %	991.3	1134.4
Lead, mg/kg dw		98.2	100.58	102 %	99.1	102.52
Nickel, mg/kg dw		98.2	101.02	103 %	99.1	102.91
Vanadium, mg/kg dw		98.2	100.78	103 %	99.1	102.18
Zinc, mg/kg dw		98.2	100.31	102 %	99.1	102.45
Dilution Factor		---	1	---	---	1
Prep Date		---	10.02.01	---	---	10.02.01
Prep Time		---	03:58	---	---	03:58
Analysis Date		---	10.03.01	---	---	10.03.01
Analysis Time		---	11:36	---	---	11:41
Batch ID		PS217	PS217	PS217	PS217	PS217
Prep Method		---	3050B	---	---	3050B
Analyst		---	CH	---	---	CH

STL Pensacola

LOG NO: C1-10008
 Received: 01 OCT 01
 Reported: 08 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: 154039
 Requisition: CTO-0027

Project: CTO-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 161111019
 Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED
10008-16	Matrix Spike Duplicate % Recovery	
10008-17	MS Accuracy Advisory Limit (%R)	
10008-18	Precision (%RPD) MS/MSD	
10008-19	MS Precision Advisory Limit (%RPD)	

PARAMETER	10008-16	10008-17	10008-18	10008-19
Metals (6010B)	✓	✓		✓
Antimony, mg/kg dw	100 %	75-125	1.9	20
Arsenic, mg/kg dw	101 %	75-125	2.2	20
Barium, mg/kg dw	102 %	75-125	1.2	20
Copper, mg/kg dw	106 %	75-125	0.7	20
Iron, mg/kg dw	105 %	75-125	1.6	20
Lead, mg/kg dw	103 %	75-125	1.9	20
Nickel, mg/kg dw	104 %	75-125	1.9	20
Vanadium, mg/kg dw	103 %	75-125	1.4	20
Zinc, mg/kg dw	102 %	75-125	2.1	20
Batch ID	PS217	PS217	PS217	PS217

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report. See the Project Sample Inspection Form (PSIF) to determine if a sample was received that did not meet EPA requirements for sample collection, preservation, or holding time.


 Rick Hayes, Project Manager

STL Pensacola

LOG NO: C1-10008A
 Received: 01 OCT 01
 Reported: 30 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 162385

Project: CT0-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 155211030

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
10008A-1	027-43SO12-S-14-0910-01	09-10-01/13:04		
10008A-2	027-43SO07-S-13-0910-01	09-10-01/09:10		
10008A-3	027-43SO05-S-13-0911-01	09-10-01/09:11		
PARAMETER		10008A-1	10008A-2	10008A-3
Copper (SPLP) (6010B), ug/l		84	44 B ^J	24 B ^J
Dilution Factor		5	5	5
Prep Date		10.23.01	10.23.01	10.23.01
Prep Time		17:47	17:47	17:47
Analysis Date		10.24.01	10.24.01	10.24.01
Analysis Time		11:20	11:48	11:54
Batch ID		PT223	PT223	PT223
Prep Method		3010A	3010A	3010A
Analyst		GSP	GSP	GSP
Lead (SPLP) (6010B), ug/l		70	38	25U
Dilution Factor		5	5	5
Prep Date		10.23.01	10.23.01	10.23.01
Prep Time		17:47	17:47	17:47
Analysis Date		10.24.01	10.24.01	10.24.01
Analysis Time		11:20	11:48	11:54
Batch ID		PT223	PT223	PT223
Prep Method		3010A	3010A	3010A
Analyst		GSP	GSP	GSP

003

STL Pensacola

LOG NO: C1-10008A
 Received: 01 OCT 01
 Reported: 30 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 162385

Project: CT0-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 155211030

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
10008A-1	027-43SO12-S-14-0910-01	09-10-01/13:04		
10008A-2	027-43SO07-S-13-0910-01	09-10-01/09:10		
10008A-3	027-43SO05-S-13-0911-01	09-10-01/09:11		
PARAMETER		10008A-1	10008A-2	10008A-3
Copper (SPLP) (6010B), ug/l		84	44B	24B
Dilution Factor		5	5	5
Prep Date		10.23.01	10.23.01	10.23.01
Prep Time		17:47	17:47	17:47
Analysis Date		10.24.01	10.24.01	10.24.01
Analysis Time		11:20	11:48	11:54
Batch ID		PT223	PT223	PT223
Prep Method		3010A	3010A	3010A
Analyst		GSP	GSP	GSP
Lead (SPLP) (6010B), ug/l		70	38	25U
Dilution Factor		5	5	5
Prep Date		10.23.01	10.23.01	10.23.01
Prep Time		17:47	17:47	17:47
Analysis Date		10.24.01	10.24.01	10.24.01
Analysis Time		11:20	11:48	11:54
Batch ID		PT223	PT223	PT223
Prep Method		3010A	3010A	3010A
Analyst		GSP	GSP	GSP

003

STL Pensacola

LOG NO: C1-10008A
 Received: 01 OCT 01
 Reported: 30 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 162385

Project: CT0-0027, NAS PENSACOLA
 Sampled By: Client
 Code: 155211030

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
10008A-1	027-43SO12-S-14-0910-01	09-10-01/13:04		
10008A-2	027-43SO07-S-13-0910-01	09-10-01/09:10		
10008A-3	027-43SO05-S-13-0911-01	09-10-01/09:11		
PARAMETER		10008A-1	10008A-2	10008A-3
Iron (SPLP) (6010B), ug/l		1300 <i>J</i>	900 ⁵⁰⁰ <i>u3</i>	850 <i>Σ</i>
Dilution Factor		5	5	5
Prep Date		10.23.01	10.23.01	10.23.01
Prep Time		17:47	17:47	17:47
Analysis Date		10.24.01	10.24.01	10.24.01
Analysis Time		11:20	11:48	11:54
Batch ID		PT223	PT223	PT223
Prep Method		3010A	3010A	3010A
Analyst		GSP	GSP	GSP

004

STL Pensacola

LOG NO: C1-10008A
 Received: 01 OCT 01
 Reported: 30 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 162385

Project: CT0-0027, NAS PENSACOLA

Sampled By: Client

Code: 155211030

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
10008A-4	027-43SO10-S-13-0910-01	09-10-01/14:41
10008A-5	027-43SO14-S-13-0910-01	09-10-01/14:13

PARAMETER	10008A-4	10008A-5
Copper (SPLP) (6010B), ug/l	278 ^{JS}	188 ^{JS}
Dilution Factor	5	5
Prep Date	10.23.01	10.23.01
Prep Time	17:47	17:47
Analysis Date	10.24.01	10.24.01
Analysis Time	11:59	12:16
Batch ID	PT223	PT223
Prep Method	3010A	3010A
Analyst	GSP	GSP
Lead (SPLP) (6010B), ug/l	25U	148 ^{JS}
Dilution Factor	5	5
Prep Date	10.23.01	10.23.01
Prep Time	17:47	17:47
Analysis Date	10.24.01	10.24.01
Analysis Time	11:59	12:16
Batch ID	PT223	PT223
Prep Method	3010A	3010A
Analyst	GSP	GSP

005

STL Pensacola

LOG NO: C1-09562
Received: 24 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 183010928

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09562-1	027-43SS60-S-02	09-24-01/12:00				
09562-2	027-43SS61-S-02	09-24-01/12:02				
09562-3	027-43SS62-S-02	09-24-01/12:09				
09562-4	027-43SS64-S-02	09-24-01/12:29				
09562-5	027-43SS66-S-02	09-24-01/12:37				
PARAMETER		09562-1	09562-2	09562-3	09562-4	09562-5
Antimony (6010B), mg/kg dw		4.2 24 ^u	4.37 8 ^u	4.8 0.41B ^u	4.32 u	4.9 50 ^u
Dilution Factor		1	1	1	1	1
Prep Date		09.25.01	09.25.01	09.25.01	09.25.01	09.25.01
Prep Time		15:30	15:30	15:30	15:30	15:30
Analysis Date		09.25.01	09.25.01	09.25.01	09.25.01	09.25.01
Analysis Time		21:21	21:27	21:44	21:49	21:55
Batch ID		PS213	PS213	PS213	PS213	PS213
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		92	95	93	93	94



001

STL Pensacola

LOG NO: C1-09562
 Received: 24 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 183010928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
09562-6	027-43SS69-S-02	09-24-01/13:04	
09562-7	027-43SS70-S-02	09-24-01/13:05	
PARAMETER		09562-6	09562-7
Antimony (6010B), mg/kg dw		4.1 <i>25 u</i>	4.4 <i>25 u</i>
Dilution Factor		1	1
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:01	22:06
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		94	95

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

STL Pensacola

LOG NO: C1-09562
Received: 24 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 183010928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
09562-8	027-43SS63-S-02	09-24-01/12:14	
09562-9	027-43SS71-S-02	09-24-01/12:14	
<hr/>			
PARAMETER		09562-8	09562-9
<hr/>			
Antimony (6010B), mg/kg dw		4520 u	3.8 u
Dilution Factor		1	1
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:12	22:17
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH
<hr/>			
Iron (6010B), mg/kg dw		35000 J	21000 J
Dilution Factor		1	1
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:12	22:17
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH

STL Pensacola

LOG NO: C1-09562
 Received: 24 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 183010928

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
09562-8	027-43SS63-S-02	09-24-01/12:14	
09562-9	027-43SS71-S-02	09-24-01/12:14	
PARAMETER		09562-8	09562-9
Nickel (6010B), mg/kg dw		70	26
Dilution Factor		1	1
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:12	22:17
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		92	92

STL Pensacola

LOG NO: C1-09562
Received: 24 SEP 01
Reported: 28 SEP 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 183010928

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09562-10	027-43SS65-S-02	09-24-01/12:33
PARAMETER		09562-10
Antimony (6010B), mg/kg dw		4.8 15 u
Dilution Factor		1
Prep Date		09.25.01
Prep Time		15:30
Analysis Date		09.25.01
Analysis Time		22:23
Batch ID		PS213
Prep Method		3050B
Analyst		CH
Nickel (6010B), mg/kg dw		80
Dilution Factor		1
Prep Date		09.25.01
Prep Time		15:30
Analysis Date		09.25.01
Analysis Time		22:23
Batch ID		PS213
Prep Method		3050B
Analyst		CH
Percent Solids		92

STL Pensacola

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

LOG NO: C1-09562
 Received: 24 SEP 01
 Reported: 28 SEP 01

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165811221

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
09562-11	027-43SS67-S-02	09-24-01/12:48	C109562
09562-12	027-43SS68-S-02	09-24-01/12:50	C109562
PARAMETER		09562-11	09562-12
Antimony (6010B), mg/kg dw		3.95 <i>UJ</i>	3.3 <i>UJ</i>
Dilution Factor		1	1
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:29	20:53
Batch ID		PS213	PS213
Prep Method		3050B	3050B <i>OC</i>
Analyst		CH	CH
Iron (6010B), mg/kg dw		51000 <i>J</i>	110000 <i>J</i>
Dilution Factor		1,20	1,10
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:29	20:53
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH

006

STL Pensacola

LOG NO: C1-09562
 Received: 24 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 183010928

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
09562-11	027-43SS67-S-02	09-24-01/12:48	
09562-12	027-43SS68-S-02	09-24-01/12:50	
PARAMETER		09562-11	09562-12
Lead (6010B), mg/kg dw		3700B3	9300B3
Dilution Factor		1	1,10
Prep Date		09.25.01	09.25.01
Prep Time		15:30	15:30
Analysis Date		09.25.01	09.25.01
Analysis Time		22:29	20:53
Batch ID		PS213	PS213
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		94	86

Ni 2.

007

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-1	027-43S015-S-03-0823-01	08-23-01/10:47
PARAMETER		08606-1
Antimony (6010B), mg/kg dw		4.0U
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		12:21
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Antimony (SPLP) (6010B), ug/l		250U
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:21
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Percent Solids		94

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

CP

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-2	027-43SS18-S-02-0823-01	08-23-01/11:15			
08606-3	027-43SS19-S-02-0823-01	08-23-01/11:29			
08606-4	027-43SS20-S-02-0823-01	08-23-01/11:06			
08606-5	027-43SS21-S-02-0823-01	08-23-01/10:57			
PARAMETER	08606-2	08606-3	08606-4	08606-5	
Antimony (6010B), mg/kg dw	4.9U	0.318 5.3U	0.265 4.0U	5.3U	
Dilution Factor	1	1	1	1	
Prep Date	08.24.01	08.24.01	08.24.01	08.24.01	
Prep Time	17:00	17:00	17:00	17:00	
Analysis Date	08.26.01	08.26.01	08.26.01	08.26.01	
Analysis Time	12:27	12:33	12:49	12:55	
Batch ID	PS180	PS180	PS180	PS180	
Prep Method	3050B	3050B	3050B	3050B	
Analyst	GSP	GSP	GSP	GSP	
Percent Solids	94	90	96	93	

or

003

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-6	027-43SO12-S-06-0823-01	08-23-01/10:49
PARAMETER		08606-6
Antimony (6010B), mg/kg dw		4.7U
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:01
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Copper (6010), mg/kg dw		7.1 .93UJ
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:01
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Lead (6010B), mg/kg dw		35
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:01
Batch ID		PS180
Prep Method		3050B
Analyst		GSP

or

004

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-6	027-43SO12-S-06-0823-01	08-23-01/10:49
PARAMETER		08606-6
Nickel (6010B), mg/kg dw		0.47 0.65 u
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:01
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Iron (6010B), mg/kg dw		1500 <i>u</i>
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:01
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Antimony (SPLP) (6010B), ug/l		250U
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:26
Batch ID		PT198
Prep Method		3010B
Analyst		GSP

CV

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-6	027-43SO12-S-06-0823-01	08-23-01/10:49
PARAMETER		08606-6
Copper (SPLP) (6010B), ug/l		310 <i>TS</i>
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:26
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Lead (SPLP) (6010B), ug/l		760
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:26
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Nickel (SPLP) (6010B), ug/l		250 <i>TS</i>
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:26
Batch ID		PT198
Prep Method		3010B
Analyst		GSP

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006

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-6	027-43SO12-S-06-0823-01	08-23-01/10:49
PARAMETER		08606-6
Iron (SPLP) (6010B), ug/l		12000
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:26
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Percent Solids		94

007

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
08606-7	027-43SS10-S-03-0823-01	08-23-01/11:41	
08606-8	027-43SS14-S-03-0823-01	08-23-01/11:12	
PARAMETER		08606-7	08606-8
Antimony (6010B), mg/kg dw		30	8.8 4.84
Dilution Factor		1	1
Prep Date		08.24.01	08.24.01
Prep Time		17:00	17:00
Analysis Date		08.26.01	08.26.01
Analysis Time		13:06	13:17
Batch ID		PS180	PS180
Prep Method		3050B	3050B
Analyst		GSP	GSP
Copper (6010), mg/kg dw		6500	1700
Dilution Factor		1	1
Prep Date		08.24.01	08.24.01
Prep Time		17:00	17:00
Analysis Date		08.26.01	08.26.01
Analysis Time		13:06	13:17
Batch ID		PS180	PS180
Prep Method		3050B	3050B
Analyst		GSP	GSP

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
		08606-7	08606-8
08606-7	027-43SS10-S-03-0823-01	08-23-01/11:41	
08606-8	027-43SS14-S-03-0823-01	08-23-01/11:12	
PARAMETER		08606-7	08606-8
Lead (6010B), mg/kg dw		8200	3300
Dilution Factor		1	1
Prep Date		08.24.01	08.24.01
Prep Time		17:00	17:00
Analysis Date		08.26.01	08.26.01
Analysis Time		13:06	13:17
Batch ID		PS180	PS180
Prep Method		3050B	3050B
Analyst		GSP	GSP
Antimony (SPLP) (6010B), ug/l		250U	117.5
Dilution Factor		5	5
Prep Date		08.25.01	08.25.01
Prep Time		15:15	15:15
Analysis Date		08.27.01	08.27.01
Analysis Time		00:32	00:37
Batch ID		PT198	PT198
Prep Method		3010B	3010B
Analyst		GSP	GSP

009

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

Page 9

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
08606-7	027-43SS10-S-03-0823-01	08-23-01/11:41	
08606-8	027-43SS14-S-03-0823-01	08-23-01/11:12	
PARAMETER		08606-7	08606-8
Copper (SPLP) (6010B), ug/l		195 195	45 45
Dilution Factor		5	5
Prep Date		08.25.01	08.25.01
Prep Time		15:15	15:15
Analysis Date		08.27.01	08.27.01
Analysis Time		00:32	00:37
Batch ID		PT198	PT198
Prep Method		3010B	3010B
Analyst		GSP	GSP
Lead (SPLP) (6010B), ug/l		47	160
Dilution Factor		5	5
Prep Date		08.25.01	08.25.01
Prep Time		15:15	15:15
Analysis Date		08.27.01	08.27.01
Analysis Time		00:32	00:37
Batch ID		PT198	PT198
Prep Method		3010B	3010B
Analyst		GSP	GSP
Percent Solids		82	92

010

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-9	027-43SS25-S-02-0823-01	08-23-01/11:04			
08606-10	027-43SS26-S-02-0823-01	08-23-01/11:31			
08606-11	027-43SS27-S-02-0823-01	08-23-01/11:45			
08606-12	027-43SS28-S-02-0823-01	08-23-01/11:51			
PARAMETER		08606-9	08606-10	08606-11	08606-12
Antimony (6010B), mg/kg dw		4.4U	25	23	4.8U
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		13:23	13:29	13:34	13:40
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Copper (6010), mg/kg dw		1.0 12 ug	2300 2	1100 3	6.0 3
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		13:23	13:29	13:34	13:40
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP

011

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
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 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-9	027-43SS25-S-02-0823-01	08-23-01/11:04			
08606-10	027-43SS26-S-02-0823-01	08-23-01/11:31			
08606-11	027-43SS27-S-02-0823-01	08-23-01/11:45			
08606-12	027-43SS28-S-02-0823-01	08-23-01/11:51			
PARAMETER		08606-9	08606-10	08606-11	08606-12
Lead (6010B), mg/kg dw		48	9800	4000	20
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		13:23	13:29	13:34	13:40
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Percent Solids		94	83	92	95

STL Pensacola

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 Received: 27 AUG 01
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Ms. Tatiana Romanova
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 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-13	027-43SO05-S-03-0823-01	08-23-01/11:52
PARAMETER		08606-13
Antimony (6010B), mg/kg dw		58
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:57
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Copper (6010), mg/kg dw		6900
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:57
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Iron (6010B), mg/kg dw		66000
Dilution Factor		5
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		15:12
Batch ID		PS180
Prep Method		3050B
Analyst		GSP

013

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-13	027-43S005-S-03-0823-01	08-23-01/11:52
PARAMETER		08606-13
Lead (6010B), mg/kg dw		5200
Dilution Factor		1
Prep Date		08.24.01
Prep Time		17:00
Analysis Date		08.26.01
Analysis Time		13:57
Batch ID		PS180
Prep Method		3050B
Analyst		GSP
Antimony (SPLP) (6010B), ug/l		17 5 J
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:43
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Copper (SPLP) (6010B), ug/l		59
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:43
Batch ID		PT198
Prep Method		3010B
Analyst		GSP

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
08606-13	027-43SO05-S-03-0823-01	08-23-01/11:52
PARAMETER		08606-13
Iron (SPLP) (6010B), ug/l		560
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:43
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Lead (SPLP) (6010B), ug/l		560
Dilution Factor		5
Prep Date		08.25.01
Prep Time		15:15
Analysis Date		08.27.01
Analysis Time		00:43
Batch ID		PT198
Prep Method		3010B
Analyst		GSP
Percent Solids		90

015

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Antimony (6010B), mg/kg dw		4.8 - 0.85P/4 U	44	30
Dilution Factor		1	1	1
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:02	14:14
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Arsenic (6010B), mg/kg dw		1.0	52	35
Dilution Factor		1	1	1
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:02	14:14
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP

SEVERN

T R E N T

SERVICES

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Barium (6010B), mg/kg dw		56	2300	1900
Dilution Factor		1	5	1
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:08	14:14
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Copper (6010), mg/kg dw		120N*	4500	40000
Dilution Factor		1	1	20
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:02	15:18
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP

017

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Iron (6010B), mg/kg dw		3200 <i>✓ J</i>	15000	69000
Dilution Factor		1	5	20
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:08	15:18
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Lead (6010B), mg/kg dw		450 <i>✓ J</i>	12000	16000
Dilution Factor		1	5	20
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:08	15:18
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP

018

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-15
Nickel (6010B), mg/kg dw		3.2	160	400
Dilution Factor		1	1	1
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:02	14:14
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Vanadium (6010B), mg/kg dw		32	40	870
Dilution Factor		1	1	1
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:02	14:14
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Zinc (6010), ug/l		13000 ⁵	1200	27000
Dilution Factor		5	5	20
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP
Antimony (SPLP) (6010B), ug/l		14B ⁵	250U	24B
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:49
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Arsenic (SPLP) (6010B), ug/l		25U	25U	25U
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP
Barium (SPLP) (6010B), ug/l		520	770	320
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP

021

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Copper (SPLP) (6010B), ug/l		8900 N ^J	57	550
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP
Iron (SPLP) (6010B), ug/l		1000	190 B ^J	1500
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP

022

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Lead (SPLP) (6010B), ug/l		4800	630	1300
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP
Nickel (SPLP) (6010B), ug/l		71	25U	310
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP

STL Pensacola

LOG NO: C1-08606
Received: 27 AUG 01
Reported: 28 AUG 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
08606-14	027-43SO07-S-06-0823-01	08-23-01/12:39		
08606-15	027-43SS34-S-02-0823-01	08-23-01/13:00		
08606-16	027-43SO36-S-06-0823-01	08-23-01/12:50		
PARAMETER		08606-14	08606-15	08606-16
Vanadium (SPLP) (6010B), ug/l		42 5 ⁵	50U	56
Dilution Factor		5	5	5
Prep Date		08.25.01	08.25.01	08.25.01
Prep Time		15:15	15:15	15:15
Analysis Date		08.26.01	08.27.01	08.27.01
Analysis Time		23:41	00:49	00:54
Batch ID		PT198	PT198	PT198
Prep Method		3010B	3010B	3010B
Analyst		GSP	GSP	GSP
Zinc (SPLP), mg/kg dw		290 5 ⁵	11000	13000
Dilution Factor		1	5	20
Prep Date		08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01
Analysis Time		11:53	14:08	15:18
Batch ID		PS180	PS180	PS180
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Percent Solids		96	85	85

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-17	027-43SS31-S-02-0823-01	08-23-01/12:15			
08606-18	027-43SS32-S-02-0823-01	08-23-01/12:50			
08606-19	027-43SS33-S-02-0823-01	08-23-01/13:05			
08606-20	027-43SS35-S-02-0823-01	08-23-01/13:00			
PARAMETER		08606-17	08606-18	08606-19	08606-20
Antimony (6010B), mg/kg dw		31	60	54	20
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	14:36	14:59
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Arsenic (6010B), mg/kg dw		30	18	32	28
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	14:36	14:59
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP

025

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-17	027-43SS31-S-02-0823-01	08-23-01/12:15			
08606-18	027-43SS32-S-02-0823-01	08-23-01/12:50			
08606-19	027-43SS33-S-02-0823-01	08-23-01/13:05			
08606-20	027-43SS35-S-02-0823-01	08-23-01/13:00			
PARAMETER		08606-17	08606-18	08606-19	08606-20
Barium (6010B), mg/kg dw		2300	2200	2000	2400
Dilution Factor		1	1	1	5
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	14:36	15:04
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Copper (6010), mg/kg dw		2900	5800	54000	3500
Dilution Factor		1	1	50	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	15:29	14:59
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-17	027-43SS31-S-02-0823-01	08-23-01/12:15			
08606-18	027-43SS32-S-02-0823-01	08-23-01/12:50			
08606-19	027-43SS33-S-02-0823-01	08-23-01/13:05			
08606-20	027-43SS35-S-02-0823-01	08-23-01/13:00			
PARAMETER		08606-17	08606-18	08606-19	08606-20
Iron (6010B), mg/kg dw		98000	59000	120000	53000
Dilution Factor		10	5	5	5
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		15:23	14:30	14:42	15:04
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Lead (6010B), mg/kg dw		9900	10000	9800	23000
Dilution Factor		1	5	5	5
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:30	14:42	15:04
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP

027

STL Pensacola

LOG NO: C1-08606
 Received: 27 AUG 01
 Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 095110830

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-17	027-43SS31-S-02-0823-01	08-23-01/12:15			
08606-18	027-43SS32-S-02-0823-01	08-23-01/12:50			
08606-19	027-43SS33-S-02-0823-01	08-23-01/13:05			
08606-20	027-43SS35-S-02-0823-01	08-23-01/13:00			
PARAMETER		08606-17	08606-18	08606-19	08606-20
Nickel (6010B), mg/kg dw		110	410	60	62
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	14:36	14:59
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Vanadium (6010B), mg/kg dw		130	670	31	34
Dilution Factor		1	1	1	1
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		14:19	14:25	14:36	14:59
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP

028

STL Pensacola

LOG NO: C1-08606

Received: 27 AUG 01

Reported: 28 AUG 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 095110830

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
08606-17	027-43SS31-S-02-0823-01	08-23-01/12:15			
08606-18	027-43SS32-S-02-0823-01	08-23-01/12:50			
08606-19	027-43SS33-S-02-0823-01	08-23-01/13:05			
08606-20	027-43SS35-S-02-0823-01	08-23-01/13:00			
PARAMETER		08606-17	08606-18	08606-19	08606-20
Zinc (6010), mg/kg dw		10000	9100	34000	15000
Dilution Factor		10	5	50	5
Prep Date		08.24.01	08.24.01	08.24.01	08.24.01
Prep Time		17:00	17:00	17:00	17:00
Analysis Date		08.26.01	08.26.01	08.26.01	08.26.01
Analysis Time		15:23	14:30	15:29	15:04
Batch ID		PS180	PS180	PS180	PS180
Prep Method		3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP
Percent Solids		85	87	88	90

STL Pensacola

LOG NO: C1-09562A
 Received: 24 SEP 01
 Reported: 19 NOV 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite
 Atlanta, GA 30346

Client PO. No.: 2082
 C1 Project No: SITE
 Requisition: 154039

Project: CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 153111126

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09562A-1	027-43SS60-S-02	09-24-01/12:00
PARAMETER		09562A-1
Nickel (SPLP) (SW6010B), ug/l		210
Dilution Factor		5
Prep Date		11.08.01
Prep Time		15:17
Analysis Date		11.09.01
Analysis Time		12:45
Batch ID		PT231
Prep Method		3010A
Analyst		GSP
Percent Solids		F78

02

001

STL Pensacola

LOG NO: C1-11480
Received: 20 NOV 01
Reported: 03 DEC 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 17201123

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11480-1	027-15SS320-S-7	11-20-01/08:00				
11480-2	027-15SS321-S-7	11-20-01/08:00				
11480-3	027-15SS322-S-7	11-20-01/08:15				
11480-4	027-15SS323-S-7	11-20-01/08:16				
11480-5	027-15SS324-S-7	11-20-01/08:26				
PARAMETER		11480-1	11480-2	11480-3	11480-4	11480-5
Arsenic (SW6010B), mg/kg dw		60	17 5.0U	30	24	5.7 5.0U
Dilution Factor		1	1	1	1	1
Prep Date		11.21.01	11.21.01	11.21.01	11.21.01	11.21.01
Prep Time		14:30	14:30	14:30	14:30	14:30
Analysis Date		11.29.01	11.29.01	11.29.01	11.29.01	11.29.01
Analysis Time		21:20	22:03	22:09	22:15	22:21
Batch ID		PS271	PS271	PS271	PS271	PS271
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP	GSP
Percent Solids		95	97	98	97	97

CN

STL Pensacola

LOG NO: C1-11480
Received: 20 NOV 01
Reported: 03 DEC 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 15, CTO-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 17201123

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11480-6	027-15SS325-S-7	11-20-01/08:27				
11480-7	027-15SS326-S-7	11-20-01/08:37				
11480-8	027-15SS327-S-7	11-20-01/08:40				
11480-9	027-15SS328-S-7	11-20-01/08:48				
11480-10	027-15SS329-S-7	11-20-01/08:50				
PARAMETER		11480-6	11480-7	11480-8	11480-9	11480-10
Arsenic (SW6010B), mg/kg dw		10 5.04	25	17	4.8 5.04	5.4 5.04
Dilution Factor		1	1	1	1	1
Prep Date		11.21.01	11.21.01	11.21.01	11.21.01	11.21.01
Prep Time		14:30	14:30	14:30	14:30	14:30
Analysis Date		11.29.01	11.29.01	11.29.01	11.29.01	11.29.01
Analysis Time		22:27	22:33	22:39	22:58	23:04
Batch ID		PS271	PS271	PS271	PS271	PS271
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP	GSP
Percent Solids		95	98	97	93	97

02

STL Pensacola

LOG NO: C1-11480
Received: 20 NOV 01
Reported: 03 DEC 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 17201123

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11480-11	027-15SS330-S-7	11-20-01/09:00				
11480-12	027-15SS331-S-7	11-20-01/09:00				
11480-13	027-15SS332-S-7	11-20-01/09:12				
11480-14	027-15SS333-S-7	11-20-01/09:13				
11480-15	027-15SS334-S-7	11-20-01/09:24				
PARAMETER		11480-11	11480-12	11480-13	11480-14	11480-15
Arsenic (SW6010B), mg/kg dw		42	31	41	28	8.9 5.04
Dilution Factor		1	1	1	1	1
Prep Date		11.21.01	11.21.01	11.21.01	11.21.01	11.21.01
Prep Time		14:30	14:30	14:30	14:30	14:30
Analysis Date		11.29.01	11.29.01	11.29.01	11.29.01	11.29.01
Analysis Time		23:10	23:16	23:22	23:28	23:34
Batch ID		PS271	PS271	PS271	PS271	PS271
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		GSP	GSP	GSP	GSP	GSP
Percent Solids		98	97	96	97	98

STL

STL Pensacola

LOG NO: C1-11480
 Received: 20 NOV 01
 Reported: 03 DEC 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 3263
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 17201123

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
11480-16	027-15SS335-S-7	11-20-01/08:13	
11480-17	027-15SS336-S-7	11-20-01/09:02	
PARAMETER		11480-16	11480-17
Arsenic (SW6010B), mg/kg dw		32	31
Dilution Factor		1	1
Prep Date		11.21.01	11.21.01
Prep Time		14:30	14:30
Analysis Date		11.29.01	11.29.01
Analysis Time		23:40	23:46
Batch ID		PS271	PS271
Prep Method		3050B	3050B
Analyst		GSP	GSP
Percent Solids		95	97

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.



STL Pensacola

LOG NO: C1-12154
 Received: 06 DEC 01
 Reported: 11 DEC 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 3263
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 184011211

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
12154-1	027-43SS110-S-2	12-06-01/15:42		
12154-2	027-43SS111-S-2	12-06-01/15:30		
12154-3	027-43SS112-S-2	12-06-01/15:35		
<hr/>				
PARAMETER		12154-1	12154-2	12154-3
Antimony (6010B), mg/kg dw		5.0 7.0 u	5.0 7.0 u	5.0 7.0 u
Dilution Factor		1	1	1
Prep Date		12.07.01	12.07.01	12.07.01
Prep Time		16:02	16:02	16:02
Analysis Date		12.10.01	12.10.01	12.10.01
Analysis Time		00:43	00:49	00:54
Batch ID		PS291	PS291	PS291
Prep Method		3050B	3050B	3050B
Analyst		GSP	GSP	GSP
Percent Solids		95	94	98

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

ON

STL Pensacola

LOG NO: C1-09227
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

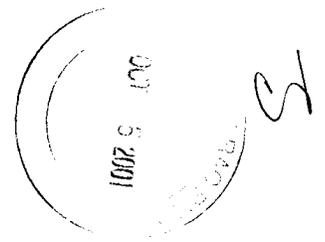
Client PO. No.: 2082
 Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 16301102

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
09227-1	027-43SS54-S-02-0911-01	09-11-01/10:10				
09227-2	027-43SS55-S-02-0911-01	09-11-01/09:35				
09227-3	027-43SS56-S-02-0911-01	09-11-01/09:32				
09227-4	027-43SS57-S-02-0911-01	09-11-01/09:18				
09227-5	027-43SS58-S-02-0911-01	09-11-01/09:18				
PARAMETER	09227-1	09227-2	09227-3	09227-4	09227-5	
Metals (6010B)						
Antimony, mg/kg dw	5.35 49 u	5.56 26 u	5.02 16 u	5.11 15 u	4.76 23 u	
Copper, mg/kg dw	8000	4800	6400	1500	1700	
Iron, mg/kg dw	150000	180000	62000	45000	77000	
Lead, mg/kg dw	26000	13000	5700	4400	5300	
Dilution Factor	1,10	1,50	1,10	1	1,10	
Prep Date	09.12.01	09.12.01	09.12.01	09.12.01	09.12.01	
Prep Time	16:35	16:35	16:35	16:35	16:35	
Analysis Date	09.14.01	09.14.01	09.14.01	09.14.01	09.14.01	
Analysis Time	22:46	22:51	22:57	22:06	23:02	
Batch ID	PS203	PS203	PS203	PS203	PS203	
Prep Method	3050B	3050B	3050B	3050B	3050B	
Analyst	CH	CH	CH	CH	CH	
Percent Solids	82	84	89	89	93	



STL Pensacola

LOG NO: C1-09227
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 16301102
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09227-6	027-43SO05-S-8-0911-01	09-11-01/08:40
PARAMETER	09227-6	
Metals (6010B)		
Antimony, mg/kg dw		5.0 0.48 ✓
Copper, mg/kg dw		1.0
Iron, mg/kg dw		1400
Lead, mg/kg dw		2.3
Dilution Factor		1
Prep Date	09.12.01	
Prep Time		16:35
Analysis Date	09.14.01	
Analysis Time		23:08
Batch ID		PS203
Prep Method		3050B
Analyst		CH
Percent Solids		96

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.



CH
026

STL Pensacola

LOG NO: C1-09227
 Received: 11 SEP 01
 Reported: 28 SEP 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 16301102
 Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
09227-7	027-43SO33-S-6-0911-01	09-11-01/10:00
PARAMETER	09227-7	
Metals (6010)	4.82	
Antimony, mg/kg dw	0.298 u	
Arsenic, mg/kg dw	0.378	
Barium, mg/kg dw	5.8	
Copper, mg/kg dw	1.4	
Iron, mg/kg dw	1500	
Lead, mg/kg dw	7.5	
Nickel, mg/kg dw	0.66	
Vanadium, mg/kg dw	3.2	
Zinc, mg/kg dw	10	
Dilution Factor	1	
Prep Date	09.12.01	
Prep Time	16:35	
Analysis Date	09.14.01	
Analysis Time	23:14	
Batch ID	PS203	
Prep Method	5030B	
Analyst	CH	
Percent Solids	96	

CH

027

STL Pensacola

LOG NO: C1-10090
Received: 03 OCT 01
Reported: 16 OCT 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 165211024

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-1	027-15SS250-S-2	10-03-01/12:20				
10090-2	027-15SS251-S-2	10-03-01/12:21				
10090-3	027-15SS282-S-2	10-03-01/12:21				
10090-4	027-15SS252-S-2	10-03-01/12:29				
10090-5	027-15SS253-S-2	10-03-01/12:29				
PARAMETER	10090-1	10090-2	10090-3	10090-4	10090-5	
Arsenic (6010B), mg/kg dw	8.0	62	64	5.4	10	
Dilution Factor	1	1	1	1	1	
Prep Date	10.04.01	10.04.01	10.04.01	10.04.01	10.04.01	
Prep Time	05:13	05:13	05:13	05:13	05:13	
Analysis Date	10.05.01	10.05.01	10.05.01	10.05.01	10.05.01	
Analysis Time	21:51	22:19	22:25	22:30	22:36	
Batch ID	PS220	PS220	PS220	PS220	PS220	
Prep Method	3050B	3050B	3050B	3050B	3050B	
Analyst	CH	CH	CH	CH	CH	
Percent Solids	94	96	94	97	96	



CH

002

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-6	027-15SS254-S-2	10-03-01/12:38				
10090-7	027-15SS256-S-2	10-03-01/12:45				
10090-8	027-15SS257-S-2	10-03-01/12:47				
10090-9	027-15SS258-S-2	10-03-01/12:53				
10090-10	027-15SS260-S-2	10-03-01/13:01				
PARAMETER		10090-6	10090-7	10090-8	10090-9	10090-10
Arsenic (6010B), mg/kg dw		10	1.1	1.5	1.6	17
Dilution Factor		1	1	1	1	1
Prep Date		10.04.01	10.04.01	10.04.01	10.04.01	10.04.01
Prep Time		05:13	05:13	05:13	05:13	05:13
Analysis Date		10.05.01	10.05.01	10.05.01	10.05.01	10.05.01
Analysis Time		22:42	22:59	23:04	23:10	23:15
Batch ID		PS220	PS220	PS220	PS220	PS220
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		98	95	94	98	96

CH

STL Pensacola

LOG NO: C1-10090
Received: 03 OCT 01
Reported: 16 OCT 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 165211024

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-11	027-15SS261-S-2	10-03-01/13:08				
10090-12	027-15SS262-S-2	10-03-01/13:09				
10090-13	027-15SS263-S-2	10-03-01/13:17				
10090-14	027-15SS264-S-2	10-03-01/13:17				
10090-15	027-15SS265-S-2	10-03-01/13:24				
PARAMETER		10090-11	10090-12	10090-13	10090-14	10090-15
Arsenic (6010B), mg/kg dw		1.6	4.1	2.7	8.2	28
Dilution Factor		1	1	1	1	1
Prep Date		10.04.01	10.04.01	10.04.01	10.04.01	10.04.01
Prep Time		05:13	05:13	05:13	05:13	05:13
Analysis Date		10.05.01	10.05.01	10.05.01	10.05.01	10.05.01
Analysis Time		23:21	23:27	23:32	23:38	23:44
Batch ID		PS220	PS220	PS220	PS220	PS220
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		98	96	97	99	96

CH

004

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-16	027-15SS266-S-2	10-03-01/13:26				
10090-17	027-15SS267-S-2	10-03-01/13:32				
10090-18	027-15SS268-S-2	10-03-01/13:34				
10090-19	027-15SS269-S-2	10-03-01/13:41				
10090-20	027-15SS270-S-2	10-03-01/13:42				
PARAMETER		10090-16	10090-17	10090-18	10090-19	10090-20
Arsenic (6010B), mg/kg dw		30	3.3	4.2	3.0	11
Dilution Factor		1	1	1	1	1
Prep Date		10.04.01	10.04.01	10.04.01	10.04.01	10.04.01
Prep Time		05:13	05:13	05:13	05:13	05:13
Analysis Date		10.05.01	10.05.01	10.05.01	10.05.01	10.05.01
Analysis Time		23:49	00:06	00:12	00:18	00:23
Batch ID		PS220	PS220	PS220	PS220	PS220
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		95	93	95	96	95

005

STL Pensacola

LOG NO: C1-10090
Received: 03 OCT 01
Reported: 16 OCT 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 165211024

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-21	027-15SS271-S-2	10-03-01/13:57				
10090-22	027-15SS272-S-2	10-03-01/13:52				
10090-23	027-15SS273-S-2	10-03-01/14:08				
10090-24	027-15SS274-S-2	10-03-01/14:08				
10090-25	027-15SS275-S-2	10-03-01/14:25				
PARAMETER		10090-21	10090-22	10090-23	10090-24	10090-25
Arsenic (6010B), mg/kg dw		5.2	3.9	4.0	3.4	2.0
Dilution Factor		1	1	1	1	1
Prep Date		10.04.01	10.04.01	10.04.01	10.04.01	10.04.01
Prep Time		05:35	05:35	05:35	05:35	05:35
Analysis Date		10.06.01	10.06.01	10.06.01	10.06.01	10.06.01
Analysis Time		15:08	15:13	15:19	15:36	15:41
Batch ID		PS221	PS221	PS221	PS221	PS221
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		99	94	89	94	97

CH

006

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
10090-26	027-15SS276-S-2	10-03-01/14:25	
10090-27	027-15SS277-S-2	10-03-01/14:37	
PARAMETER		10090-26	10090-27
Arsenic (6010B), mg/kg dw		9.4	5.8
Dilution Factor		1	1
Prep Date		10.04.01	10.04.01
Prep Time		05:35	05:35
Analysis Date		10.06.01	10.06.01
Analysis Time		15:47	15:53
Batch ID		PS221	PS221
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		98	96

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

007

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
10090-28	027-15SS255-S-2	10-03-01/12:39		
10090-29	027-15SS259-S-2	10-03-01/12:58		
10090-30	027-15SS283-S-2	10-03-01/12:58		
PARAMETER		10090-28	10090-29	10090-30
Arsenic (6010B), mg/kg dw				
		40	42	29
Dilution Factor		1	1	1
Prep Date		10.04.01	10.04.01	10.04.01
Prep Time		05:35	05:35	05:35
Analysis Date		10.06.01	10.06.01	10.06.01
Analysis Time		15:58	14:39	16:04
Batch ID		PS221	PS221	PS221
Prep Method		3050B	3050B	3050B
Analyst		CH	CH	CH
Chlorinated Pesticides (8081A)				
Dieldrin, ug/kg dw		250	110	120
Surrogate - DCB		105 %	114 %	101 %
Surrogate - TCX		112 %	112 %	109 %
Dilution Factor		5	4	2
Prep Date		10.05.01	10.05.01	10.05.01
Prep Time		14:00	14:00	14:00
Analysis Date		10.10.01	10.10.01	10.10.01
Analysis Time		01:58	01:37	02:18
Batch ID		PSS004	PSS004	PSS004
Prep Method		3550B	3550B	3550B
Analyst		RP	RP	RP
Percent Solids		97	99	100

CH

008

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL

Sampled By: Client

Code: 165211024

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
10090-31	027-15SO278-S-3	10-03-01/14:42				
10090-32	027-15SO279-S-3	10-03-01/14:50				
10090-33	027-15SO280-S-3	10-03-01/14:57				
10090-34	027-15SO281-S-3	10-03-01/15:00				
10090-35	027-15SO284-S-3	10-03-01/14:42				
PARAMETER		10090-31	10090-32	10090-33	10090-34	10090-35
Chlorinated Pesticides (8081A)						
Dieldrin, ug/kg dw		1.7U	5.0	1.8U	0.5J P	1.7U
Surrogate - DCB		97 %	98 %	97 %	93 %	88 %
Surrogate - TCX		99 %	102 %	105 %	105 %	101 %
Dilution Factor		1	1	1	1	1
Prep Date		10.05.01	10.05.01	10.05.01	10.05.01	10.05.01
Prep Time		14:00	14:00	14:00	14:00	14:00
Analysis Date		10.10.01	10.10.01	10.10.01	10.10.01	10.10.01
Analysis Time		02:38	02:58	03:19	03:39	03:59
Batch ID		PSS004	PSS004	PSS004	PSS004	PSS004
Prep Method		3550B	3550B	3550B	3550B	3550B
Analyst		RP	RP	RP	RP	RP
Percent Solids		98	96	96	95	98

Handwritten mark

009

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024

REPORT OF RESULTS

Page 11

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED				
10090-43	Matrix Spike True Value					
10090-44	Matrix Spike Result					
10090-45	Matrix Spike % Recovery					
10090-46	Matrix Spike Duplicate True Value					
10090-47	Matrix Spike Duplicate Result					
PARAMETER		10090-43	10090-44	10090-45	10090-46	10090-47
Arsenic (6010B), mg/kg dw		100.4	110.10	102 %	100.4	109.75
Dilution Factor		---	1	---	---	1
Prep Date		---	10.04.01	---	---	10.04.01
Prep Time		---	05:13	---	---	05:13
Analysis Date		---	10.05.01	---	---	10.05.01
Analysis Time		---	22:02	---	---	22:08
Batch ID		PS220	PS220	PS220	PS220	PS220
Prep Method		---	3050B	---	---	3050B
Analyst		---	CH	---	---	CH
Chlorinated Pesticides (8081A)						
Dieldrin, ug/kg dw		33.3	120	24 %	33.1	110
Surrogate - DCB		33.3	32.4	97 %	33.1	31.6
Surrogate - TCX		33.3	31.6	95 %	33.1	31.3
Dilution Factor		---	4	---	---	4
Prep Date		---	10.05.01	---	---	10.05.01
Prep Time		---	14:00	---	---	14:00
Analysis Date		---	10.10.01	---	---	10.10.01
Analysis Time		---	00:57	---	---	01:17
Batch ID		PSS004	PSS004	PSS004	PSS004	PSS004
Prep Method		---	3550B	---	---	3550B
Analyst		---	RP	---	---	RP

012

STL Pensacola

LOG NO: C1-10090
 Received: 03 OCT 01
 Reported: 16 OCT 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 165211024
 Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	DATE/ TIME SAMPLED			
10090-48	Matrix Spike Duplicate % Recovery				
10090-49	MS Accuracy Advisory Limit (%R)				
10090-50	Precision (%RPD) MS/MSD				
10090-51	MS Precision Advisory Limit (%RPD)				
PARAMETER		10090-48	10090-49	10090-50	10090-51
Arsenic (6010B), mg/kg dw		101 %	75-125	0.3	20
Batch ID		PS220	PS220	PS220	PS220
Chlorinated Pesticides (8081A)					
Dieldrin, ug/kg dw		0 %	44-129 ✓	7	28
Surrogate - DCB		95 %	57-131	---	---
Surrogate - TCX		94 %	53-123	---	---
Batch ID		PSS004	PSS004	PSS004	PSS004

Handwritten initials

STL Pensacola

LOG NO: C1-11086
 Received: 02 NOV 01
 Reported: 08 NOV 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 20231118

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
11086-1	027-15SO115-S-4	11-02-01/13:20			
11086-2	027-15SO240-S-4	11-02-01/13:47			
11086-3	027-15SS310-S-2	11-02-01/13:42			
11086-4	027-15SS311-S-2	11-02-01/13:45			
PARAMETER		11086-1	11086-2	11086-3	11086-4
Chlorinated Pesticides (8081A)					
Dieldrin, ug/kg dw		8.7 5	2.9 5 u	32 5	32 5
Surrogate - DCB		84 %	86 %	97 %	89 %
Surrogate - TCX		80 %	80 %	86 %	84 %
Dilution Factor		1	1	1	1
Prep Date		11.03.01	11.03.01	11.03.01	11.03.01
Prep Time		09:30	09:30	09:30	09:30
Analysis Date		11.05.01	11.05.01	11.05.01	11.05.01
Analysis Time		16:11	16:31	16:51	17:11
Batch ID		PSS020	PSS020	PSS020	PSS020
Prep Method		3550B	3550B	3550B	3550B
Analyst		RP	RP	RP	RP
Percent Solids		97	95	97	97

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

ON
001

STL Pensacola

LOG NO: C1-11086
 Received: 02 NOV 01
 Reported: 08 NOV 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 20231118

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
11086-5	027-15SS301-S-2	11-02-01/13:55				
11086-6	027-15SS302-S-2	11-02-01/14:00				
11086-7	027-15SS303-S-2	11-02-01/14:14				
11086-8	027-15SS304-S-2	11-02-01/14:15				
11086-9	027-15SS305-S-2	11-02-01/14:25				
PARAMETER		11086-5	11086-6	11086-7	11086-8	11086-9
Arsenic (6010B), mg/kg dw		100	8.2	21	16	480
Dilution Factor		1	1	1	1	1
Prep Date		11.05.01	11.05.01	11.05.01	11.05.01	11.05.01
Prep Time		16:26	16:26	16:26	16:26	16:26
Analysis Date		11.06.01	11.06.01	11.06.01	11.06.01	11.06.01
Analysis Time		12:10	12:16	12:21	12:38	12:44
Batch ID		PS258	PS258	PS258	PS258	PS258
Prep Method		3050B	3050B	3050B	3050B	3050B
Analyst		CH	CH	CH	CH	CH
Percent Solids		95	94	97	96	92

Handwritten signature

002

STL Pensacola

LOG NO: C1-11086
 Received: 02 NOV 01
 Reported: 08 NOV 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 2082
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 20231118

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
11086-10	027-15SS306-S-2	11-02-01/14:27	
11086-11	027-15SS307-S-2	11-02-01/13:57	
PARAMETER		11086-10	11086-11
Arsenic (6010B), mg/kg dw		46	110
Dilution Factor		1	1
Prep Date		11.05.01	11.05.01
Prep Time		16:26	16:26
Analysis Date		11.06.01	11.06.01
Analysis Time		11:42	12:49
Batch ID		PS258	PS258
Prep Method		3050B	3050B
Analyst		CH	CH
Percent Solids		97	96

CH

003

STL Pensacola
LOG NO: C1-11469
Received: 19 NOV 01
Reported: 30 NOV 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 160911213

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		SDG#	
11469-1	027-43SS80-S-2	11-19-01/10:40		C111469	
11469-2	027-43SS81-S-2	11-19-01/10:42		C111469	
11469-3	027-43SS86-S-2	11-19-01/11:28		C111469	
11469-4	027-43SS89-S-2	11-19-01/12:03		C111469	
11469-5	027-43SS90-S-2	11-19-01/11:57		C111469	
PARAMETER	11469-1	11469-2	11469-3	11469-4	11469-5
Metals (6010B)					
Antimony, mg/kg dw	0.78B 4.8u	8.3 5.1u	0.55B 4.8u	8.8 4.9u	4.4 4.8u
Dilution Factor	1	1	1	1	1
Prep Date	11.21.01	11.21.01	11.21.01	11.21.01	11.21.01
Prep Time	11:49	11:49	11:49	11:49	11:49
Analysis Date	11.25.01	11.25.01	11.25.01	11.25.01	11.25.01
Analysis Time	11:13	11:20	11:43	11:51	11:59
Batch ID	PS270	PS270	PS270	PS270	PS270
Prep Method	SW3050B	SW3050B	SW3050B	SW3050B	SW3050B
Analyst	GSP	GSP	GSP	GSP	GSP
Percent Solids	97	96	98	97	97

STL Pensacola

LOG NO: C1-11469
Received: 19 NOV 01
Reported: 30 NOV 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 160911213

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		SDG#
11469-6	027-43SS91-S-2	11-19-01/12:13		C111469
11469-7	027-43SS94-S-2	11-19-01/12:21		C111469
11469-8	027-43SS95-S-2	11-19-01/12:40		C111469
11469-9	027-43SS96-S-2	11-19-01/12:37		C111469
11469-10	027-43SS97-S-2	11-19-01/13:00		C111469

PARAMETER	11469-6	11469-7	11469-8	11469-9	11469-10
Metals (6010B)					
Antimony, mg/kg dw	4.8U ✓	4.9U 0.43B 5.1U	4.8U 31	4.7U 53	4.6U 24
Dilution Factor	1	1	1	1	1
Prep Date	11.21.01	11.21.01	11.21.01	11.21.01	11.21.01
Prep Time	11:49	11:49	11:49	11:49	11:49
Analysis Date	11.25.01	11.25.01	11.25.01	11.25.01	11.25.01
Analysis Time	12:06	12:14	12:22	12:29	12:37
Batch ID	PS270	PS270	PS270	PS270	PS270
Prep Method	SW3050B	SW3050B	SW3050B	SW3050B	SW3050B
Analyst	GSP	GSP	GSP	GSP	GSP
Percent Solids	98	98	96	94	92

02

STL Pensacola

LOG NO: C1-11469
Received: 19 NOV 01
Reported: 30 NOV 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 160911213

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#	
11469-11	027-43SS98-S-2	11-19-01/13:05	C111469	
11469-12	027-43SS99-S-2	11-19-01/13:30	C111469	
11469-13	027-43SS102-S-2	11-19-01/10:42	C111469	
PARAMETER		11469-11	11469-12	11469-13
Metals (6010B)		4.8u	5.2	
Antimony, mg/kg dw		13	25 4.7u	0.47B 4.9u
Dilution Factor		1	1	1
Prep Date		11.21.01	11.21.01	11.21.01
Prep Time		11:49	11:49	11:49
Analysis Date		11.25.01	11.25.01	11.25.01
Analysis Time		12:45	12:53	13:16
Batch ID		PS270	PS270	PS270
Prep Method		SW3050B	SW3050B	SW3050B
Analyst		GSP	GSP	GSP
Percent Solids		97	95	98

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Handwritten signature

STL Pensacola

LOG NO: C1-11469
 Received: 19 NOV 01
 Reported: 30 NOV 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 3263

Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 160911213

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
11469-14	027-43SS87-S-2	11-19-01/11:40	C111469
11469-15	027-43SS88-S-2	11-19-01/11:42	C111469

PARAMETER		11469-14	11469-15

Metals (6010B)			
Antimony, mg/kg dw		18 4.94	78 4.84
Lead, mg/kg dw		610	1200
Dilution Factor		1	1
Prep Date		11.21.01	11.21.01
Prep Time		11:49	11:49
Analysis Date		11.25.01	11.25.01
Analysis Time		17:54	18:02
Batch ID		PS270	PS270
Prep Method		SW3050B	SW3050B
Analyst		GSP	GSP
Percent Solids		98	96

OK

STL Pensacola

LOG NO: C1-11469
Received: 19 NOV 01
Reported: 30 NOV 01

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 3263
Requisition: 154039

Project: SITE 43, CT0-0027, NAS PENSACOLA, FL
Sampled By: Client
Code: 160911213

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
11469-16	027-43SS100-S-2	11-19-01/13:27	C111469
11469-17	027-43SS101-S-2	11-19-01/13:27	C111469
<hr/>			
PARAMETER	11469-16	11469-17	
<hr/>			
Metals (6010B)			
Antimony, mg/kg dw	<i>4.8u</i> 3.2B	<i>4.8u</i> 4.2	
Iron, mg/kg dw	56000 <i>EN* J</i>	12000 <i>J</i>	
Dilution Factor	1	1	
Prep Date	11.21.01	11.21.01	
Prep Time	11:49	11:49	
Analysis Date	11.25.01	11.25.01	
Analysis Time	10:34	18:10	
Batch ID	PS270	PS270	
Prep Method	SW3050B	SW3050B	
Analyst	GSP	GSP	
Percent Solids	97	97	

ON

STL Pensacola

LOG NO: C1-12155
 Received: 06 DEC 01
 Reported: 11 DEC 01

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 3263
 Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 160911212

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
12155-1	027-15SS340-S-2	12-06-01/12:35				
12155-2	027-15SS341-S-2	12-06-01/12:45				
12155-3	027-15SS344-S-2	12-06-01/13:05				
12155-4	027-15SS346-S-2	12-06-01/13:15				
12155-5	027-15SS348-S-2	12-06-01/13:25				
PARAMETER	12155-1	12155-2	12155-3	12155-4	12155-5	
Arsenic (SW6010B), mg/kg dw	5.8	40	3.7	11	7.8	
Dilution Factor	1	1	1	1	1	
Prep Date	12.07.01	12.07.01	12.07.01	12.07.01	12.07.01	
Prep Time	16:02	16:02	16:02	16:02	16:02	
Analysis Date	12.09.01	12.09.01	12.10.01	12.10.01	12.10.01	
Analysis Time	23:31	23:59	00:05	00:10	00:27	
Batch ID	PS291	PS291	PS291	PS291	PS291	
Prep Method	3050B	3050B	3050B	3050B	3050B	
Analyst	GSP	GSP	GSP	GSP	GSP	
Percent Solids	94	92	94	94	93	

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

STL Pensacola

LOG NO: C1-12155A
 Received: 31 DEC 01
 Reported: 04 JAN 02

Ms. Tatiana Romanova
 CH2M Hill Constructors, Inc. (CCI)
 115 Perimeter Center Place, NE Suite 700
 Atlanta, GA 30346

Client PO. No.: 3263

Requisition: 154039

Project: SITE 15, CT0-0027, NAS PENSACOLA, FL
 Sampled By: Client
 Code: 17442014

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
12155A-1	027-15SS342-S-2	12-06-01/12:50	
12155A-2	027-15SS343-S-2	12-06-01/13:00	
PARAMETER		12155A-1	12155A-2
Arsenic (SW6010B), mg/kg dw		4.8	7.1
Dilution Factor		1	1
Prep Date		01.02.02	01.02.02
Prep Time		12:20	12:20
Analysis Date		01.03.02	01.03.02
Analysis Time		11:07	11:35
Batch ID		PS001	PS001
Prep Method		3050B	3050B
Analyst		CH	CH

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

e*data, inc.

Environmental Data Management
& Chemistry Consulting Services

981001

August 26, 2002

Christelle Newsome
CH2M HILL Constructors, Inc.
115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346-1278

Data Validation Services for the NAS Pensacola – Sites 15 and 43, Pensacola, Florida. Remedial Action
Contract, SoDiv; Contract No. N62467-98-D-0995. CTO #0027.

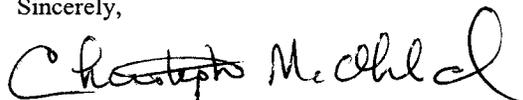
Dear Ms. Newsome,

Enclosed please find the data validation package for CTO #0027 - NAS Pensacola – Sites 15 and 43,
Pensacola, Florida. A copy of the validated database file in comma-delimited variable (csv) file format has
been emailed to your attention. Three additional fields were added for the validated results, validated
qualifiers, and qualifier codes.

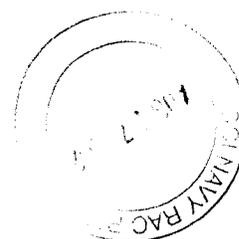
This report addresses three sample deliver groups (SDG) for the sampling effort. The SDGs are
202012901, C111651, and C111648, which include data from Gulf Coast Analytical Laboratory work order
numbers 20201290, 20203110, and 20203220; PTL work order numbers C111648, C111651, C112046,
C112283, C203721, C206324, C206329, and C206729; and Kemron work order number L0203446,
L0204001, and L0205169. Mr. Chris Ohland, a senior data validator, conducted the data validation effort.

Please call me at (414) 475-5503 if you have any questions or need additional information.

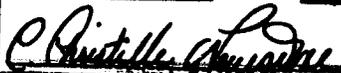
Sincerely,



Christopher Ohland
Senior Environmental Chemist



Enclosures
CMO/jo
edata:020825LTR.doc

Approved for Quality Assurance Release by:	
Rev. 0	Date 9/1/02
	

Data Validation Reference Package

Acronyms and Abbreviations

CCI	CH2MHILL Constructors, Inc.
COC	Chain-of-Custody
CTO	Contract Task Order
%D	Percent Difference
DUP	Duplicate
EDD	Electronic Data Deliverable
GC	Gas Chromatography
GS/MS	Gas Chromatography/Mass Spectroscopy
IDL	Instrument Detection Limit
IS	Internal Standard
LCS	Laboratory Control Sample
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NFG	Nation Functional Guidelines
%REC	Percent Recovery
QA	Quality Assurance
QC	Quality Control
RL	Reporting Limits
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

Data Qualifier Reference Table

Final validated data were assigned qualifiers per USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (NFG). Table 1 presents all data qualifiers used in data validation for the NAS Pensacola – Sites 15 and 43, Pensacola, Florida - CTO#0027.

TABLE 1
EXAMPLE DATA QUALIFIER REFERENCE
(CTO#0027-NAS Pensacola – Sites 15 and 46)

Qualifier	Inorganic	Organic
=	The parameter was detected at the reported concentration.	The parameter was detected at the reported concentration.
>	The test passed the minimum threshold for ignitability	This qualifier is not used for the organic analyses
J	The analyte was qualitatively identified and reported as an estimated concentration. The concentration is an estimate because the measurement is less than the laboratory reporting limit or presumed biased because the analysis is associated with quality control samples exhibiting a bias.	The analyte was qualitatively identified and reported as an estimated concentration. The concentration is an estimate because the measurement is less than the laboratory reporting limit or presumed biased because the analysis is associated with quality control samples exhibiting a bias.
R	This qualifier was not used for the inorganic analyses	The result was rejected in preference of another test result from a dilution analysis.
U	The parameter was analyzed for, but was not detected at a concentration greater than the laboratory report limit. For metals the IDL is used.	The parameter was analyzed for, but was not detected at a concentration greater than the laboratory reporting limit.
UJ	This qualifier was not used for the inorganic analyses	The parameter was analyzed for, but was not detected at a concentration greater than the estimated laboratory reporting limit.

Qualification Code Reference Table

Qualification codes explain why data qualifiers have been applied and identify possible limitations of data use. Table 2 presents all data qualifier codes used in data validation for the CTO#0027-NAS Pensacola – Sites 15 and 46, Pensacola, Florida - CTO#0027.

TABLE 2
EXAMPLE DATA QUALIFIER CODE REFERENCE
(CTO#0027-NAS Pensacola – Sites 15 and 46)

Code	Inorganic	Organic
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
<	Concentration measurement is less than the laboratory limit of reporting, but greater than the method detection limit.	Concentration measurement is less than the laboratory limit of reporting, but greater than the method detection limit.
B	Parameter detected in the associated laboratory method or preparation blank. Presumed contamination.	Parameter detected in the associated laboratory method or preparation blank. Presumed contamination.
D	The “D” code was not used for inorganic tests	Multiple analyses from dilutions were reported by the laboratory.
L	The “L” code was not used for inorganic tests	The laboratory control sample (LCS) indicates the data may be biased and the result is an estimate
M	The “M” code was not used for inorganic tests	The matrix spike or matrix spike duplicate (MS/MSD) analyses indicates the data may be biased and the result is an estimate
S	The “S” code was not used for inorganic tests	The surrogate spike recovery data indicate the data may be biased and the result is an estimate

Data Validation Report

Introduction

The Navy issued a task order to CH2M HILL Constructors, Inc. (CCI) to conduct multimedia sampling activities at the NAS Pensacola – Sites 15 and 46 under Navy Remedial Action Contract, SoDiv; Contract No. N62467-98-D-0995, CTO #0027. This report describes the data validation services provided by E-Data Inc., in support of CCI project number 154039.

CCI collected multimedia environmental samples and associated field quality control samples during several events occurring between November 28, 2001 and June 27, 2002. Samples were taken at 36 sampling locations. Field quality control samples include 5 field duplicate, 9 equipment rinse, and 3 trip blank samples. The laboratory prepared project-specific samples for MS/MSD pair analyses where applicable for all organic and wet chemistry analyses.

A summary of the samples and required analyses is shown in Table 3.

Samples were submitted to either Gulf Coast Analytical Laboratory located in Baton Rouge, Louisiana, STL-Pensacola located in Pensacola, Florida, or Kemron Environmental Services located in Marietta, Ohio.

Laboratory data were validated using CCI-approved checklists based on the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. A copy of the laboratory reports with data qualifiers applied during the data validation and chain-of-custody forms are provided in Appendix A. Appendix B contains copies of the completed data validation checklists.

At least 50 percent of the sample results from the final validated-laboratory reports were compared to the electronic data deliverable (EDD). Table C-1 (Appendix C) summarizes the sample results that were verified. The database contains 1069 results from regular, field duplicate, equipment blank, and trip blank samples. E-Data reports the following issues identified during the review of the EDD.

- Kemron incorrectly referenced method SW4020 for the analysis of reactive sulfide and reactive cyanide. These records were updated to SW9034 for reactive sulfide and SW9012 for reactive cyanide;
- The database used method codes “SW8015” and “FL-PRO” as entries for the petroleum hydrocarbon analyses using the Florida PRO methodology. The [analysismethod] field for SW8015 was update to FL-PRO. Additionally, the database used both FLPRO and petroleum hydrocarbons as entries for the [analyte] of the FL-PRO method. The [analyte] field was updated to petroleum hydrocarbons to be consistent;
- Laboratories used different units of measure for reporting data from the same analysis method and matrix. The database records were updated so that organic analyses

were reported in parts per billion ($\mu\text{g}/\text{L}$ or $\mu\text{g}/\text{Kg}$) and metals analyses were reported in parts per million (mg/L or mg/Kg). This involved updating re-entering the [units] field and [valid_result] field for the affected records. The original [results] field was not changed;

- The pH [units] field was updated from "pH units" and "std units" to "Units;"
- Multiple descriptions for cyanide and sulfide were used. These have been updated to reactivity cyanide and reactivity sulfide;
- Multiple descriptions for the PCB fractions were used. They were updated to Aroclor-####, where #### is the fraction percent (i.e., Aroclor-1016);
- The database file contained tentatively identified compounds (TICs) from the volatile organic analyses. The records for VOC TICs including 2-nonanone, isopropyl alcohol, unknown, and pentanal have been deleted from the database file;
- The three laboratories used different [ParamID] and [Analyte] codes for the same chemical parameter reported in the VOC, SVOC, pesticide, PCB, and herbicide analyses. These records have been updated to use a consistent nomenclature across the labs, methods, and matrices;
- Kemron reported the EDD results for non-detected compounds down to the method detection limits; whereas GCAL and STL reported non-detected compounds down to the reporting limits. The EDD and hardcopy reports match, thus E-Data did not change these results;
- A single instance of a hard copy result that did not match the EDD result was found for lab sample ID L0204001-01; SVOC Method 8270; Chrysene (44.8 U). The correct result should have been 44.7 U. E-Data updated the result value; and
- The [QAQCType] did not have the correct codes for some trip blank and field duplicate samples. These records were updated with the correct information.

This report addresses three sample deliver groups (SDG) for the sampling effort. The SDGs are 202012901, C111651, and C111648, which include data from Gulf Coast Analytical Laboratory work order numbers 20201290, 20203110, and 20203220; PTL work order numbers C111648, C111651, C112046, C112283, C203721, C206324, C206329, and C206729; and Kemron work order number L0203446, L0204001, and L0205169. Mr. Chris Ohland, a senior data validator, conducted the data validation effort.

Data Validation Findings Summary

This section presents a summary of the data validation findings of the data reviewer.

General Findings

Multiple laboratories provided chemical testing services during the scope of the sampling and analysis program. Each laboratory reported a slightly different list of parameters and may have had different method detection and reporting limits for the required tests.

Many of the samples collected during the scope of the sampling and analysis program were intended for waste characterization. As such, the field team did not always collect field blank or field duplicate samples nor did they specify requirements for matrix spike and matrix spike duplicate analyses. An assessment of accuracy and precision using these quality control audits could not be completed by E-Data.

Chain-of-Custody Documentation

The trip blank sample submitted to Kemron with chain-of-custody (COC) No. 157338-020329-02 was not listed in the form.

The request for iron analysis was not shown on the bottle label for field sample Well PEN-43-02S submitted under COC No. 154039-020627-01.

Volatile Organic Analyses

Methylene chloride was measured in sample L0204001-02 at a level (0.39 µg/L) greater than the MDL but was not listed on the hardcopy report or EDD. The form and EDD were edited with the correct information.

Sample L0205169-01 contains analytically significant non-target analytes, which were not identified or reported.

The matrix spike and matrix spike duplicate (MS/MSD) percent relative standard deviation (%RSD) for methylene chloride and acetone exceed the control limits. Methylene chloride was not detected in the associated samples and no action was taken to qualify these results. Acetone results are qualified as estimates and flagged "J," if detected.

The laboratory control sample (LCS) was marginally outside criterion for bromomethane, 2-hexanone, methylene chloride, m,p-xylenes, and ethylbenzene. These compounds were not detected in the associated field samples. No action was taken to qualify the sample results.

Methylene chloride was measured in one of the trip blank analyses; however, it is not detected in any of the samples. No action was taken to qualify the sample results.

Minor calibration deficiencies were noted in the review. None of the compounds associated with calibration accuracy or precision bias were present in the field samples, except acetone, which was previously qualified for MS/MSD deficiencies. In some instances a low RRF (<0.05) was observed; however, no action was taken to qualify the sample results because the lowest level standard used in the initial calibration was prepared at a concentration less

than or equal to the laboratory report limit, which justifies the laboratory report limit for non-detects.

One of four surrogates used in the volatile organic analysis of sample L0205169-01 was below the lower control limit. No action was taken to qualify the sample result.

Semivolatile Organic Analyses

Sample L0205169-01 contains analytically significant non-target analytes, which were not identified or reported.

Numerous percent RSD and some percent recovery results from the soil LCS and LCS duplicate analyses failed to meet criterion. Samples associated with the LCS analyses did not contain reportable concentrations of target analytes and no action was taken to qualify the sample results.

Minor calibration deficiencies were noted in the review. None of the compounds associated with calibration accuracy or precision bias were present in the field samples. No action was taken to qualify the sample results.

TPH (Florida PRO) Analyses

No deficiencies were noted except as noted in the general discussion.

Organochlorine Pesticide Analyses

A trace concentration level of 4,4'-DDT was measured in the filter blank associated with sample L0205169-01. Action levels were calculated using the 5X Rule. The 4,4'-DDT a result was qualified as non-detected and flagged "U."

The MS/MSD recover for methoxychlor is above the upper control limit. The LCS recovery or percent RPD was above the upper control limit for methoxychlor, 4,4'-DDT, endosulfane sulfate, and endrin aldehyde. These compounds were not detected in the samples. No action was taken to qualify the sample results.

Minor calibration deficiencies were noted in the review. None of the compounds associated with calibration accuracy or precision bias were present in the field samples. No action was taken to qualify the sample results.

Organochlorine Herbicide Analyses

The surrogate recovery (14%) for sample 20201290102 was below the lower control limit. All of the surrogate recoveries for method 8151 analyses conducted by GCAL work order number 202012901 were improperly integrated. The analyst used an improper technique that included peak area from the baseline drift. Surrogate recoveries for samples 20201290101, -03, and -04 are biased high. All samples are non-detected. The results are qualified as estimated and flagged "UJ."

The MS/MSD percent RSD for 2,4-D is outside criterion. The LCS recovery or percent RPD was above the upper control limit for 2,4-D, 2,4,5-TP, dalapon, and pentachlorophenol. These compounds were not detected in the samples. No action was taken to qualify the sample results.

Minor calibration deficiencies were noted in the review. None of the compounds associated with calibration accuracy or precision bias were present in the field samples. No action was taken to qualify the sample results.

Polychlorinated Biphenyls Analyses

No deficiencies were noted except as noted in the general discussion.

Metal Analyses

Trace levels of selected metals were measured in the preparation blank, initial calibration blank, and continuing calibration blank analyses. Action levels were determined using the 5X Rule. Sample results less than the action levels are qualified as non-detected and flagged "U."

The arsenic analysis of sample L0205169-01 was diluted 1:5 due to the presence of interference causing an excessive negative response. Nominal reporting limits were not achieved for arsenic, which is not detected in this sample.

The MS and post-digestion spike recoveries were above the upper control limit for TCLP extract of sample 202012901-01. Arsenic was not detected in the sample. No action was taken to qualify the sample result.

Wet Chemistry Analyses

Raw data for the ignitability test for samples 20203220101 and -02 were not provided by the laboratory and was not reviewed by E-Data.

The reactive cyanide LCS recovery (39%) was below the lower control limit. Samples are non-detected for reactive cyanide. The sample results for work order 202012901 are qualified as estimates and flagged "UJ."

Technical Validity and Usability

The analytical performance of this data set is very strong. The analytical results meet the data quality objectives defined by the applicable method and NFG, except as noted in the data validation findings. Data completeness is calculated at 100 percent valid data.

Summary of Qualified Data

A summary of the data qualified during the data validation exercise is summarized in Table 4.

Table 3

SUMMARY OF PROJECT SAMPLES AND REQUESTED ANALYSES
 (CTO#0027-NAS Pensacola – Sites 15 and 46)

LabSampleID	FieldID	Sample Date	Received Date	Matrix	QAQC Type	PARAMETER COUNT										
						VOCs	SVOCs	FL-PRO	PESTICIDE	PCB	HERBICIDE	METALS	IGNITABILITY	pH	REACTIVE CYANIDE	REACTIVE SULFIDE
20201290101	027-15-DP01-S-10	01/28/02	01/29/02	SOIL	N	10	13		7	7	2	8	1	1	1	1
20201290102	027-15-DP02-S-02	01/28/02	01/29/02	SOIL	N	10	13		7	7	2	8	1	1	1	1
20201290103	027-43-DP01-S-02	01/28/02	01/29/02	SOIL	N	10	13		7	7	2	8	1	1	1	1
20201290104	027-43-DP02-S-02	01/28/02	01/29/02	SOIL	N	10	13		7	7	2	8	1	1	1	1
20201290105	027-43-TB-012802	01/28/02	01/29/02	WATER	TB	10										
C111648*1	027-15GS68-W-S1	11/29/01	11/29/01	WATER	N							1				
C111648*2	027-15GR03-W-S1	11/29/01	11/29/01	WATER	N							1				
C111648*3	027-15GR65-W-S1	11/29/01	11/29/01	WATER	N							1				
C111648*4	027-15GS99-W-S1	11/29/01	11/29/01	WATER	N							1				
C111648*5	027-15PREEB-W-S1	11/29/01	11/29/01	WATER	EB							1				
C111651*1	027-43-01S-W-S1	11/28/01	11/29/01	WATER	N							1				
C111651*2	027-43-04S-W-S1	11/28/01	11/29/01	WATER	N							1				
C111651*3	027-43-06S-W-S1	11/28/01	11/29/01	WATER	FD							1				
C111651*4	027-43PREEB-W-S1	11/28/01	11/29/01	WATER	EB							1				
C112046*1	027-15GS71-W-S1	12/03/01	12/03/01	WATER	N							1				
C112046*2	027-15GR36-W-S1	12/03/01	12/03/01	WATER	N							1				
C112283*1	027-PEN-43-02S-W-S1	12/12/01	12/12/01	WATER	N							1				
C112283*2	027-PEN-43-03S-W-S1	12/12/01	12/12/01	WATER	N							1				
C112283*3	027-PEN-43-5S-W-S1	12/12/01	12/12/01	WATER	N							1				
C112283*4	027-PEN-43-07S-W-S1	12/12/01	12/12/01	WATER	FD							1				
C112283*5	027-PEN-43PREEB2-W-S	12/12/01	12/12/01	WATER	EB							1				
20203110801	027-15PREEB-W-9	03/06/02	03/07/02	WATER	EB	48		1								
20203110802	027-15POSTEB-W-9	03/06/02	03/07/02	WATER	EB	48		1								
20203110803	027-15TB-020307	03/07/02	03/07/02	WATER	TB	48										
20203110804	027-15-DP02-06-S-02	03/06/02	03/07/02	SOIL	N	48		1								
20203110807	027-15-DP02-FD-S-02	03/06/02	03/07/02	SOIL	FD	48		1								
20203110808	027-15-DP02-11-S-02	03/06/02	03/07/02	SOIL	N	48		1								

Table 4

SUMMARY OF QUALIFIED RESULTS
(CTO#0027-NAS Pensacola – Sites 15 and 46)

Lab Sample ID	FieldID	Analysis Method	Analyte	Result	Lab Qual	Valid Result	Valid Qual	Qual Code
20201290101	027-15-DP01-S-10	SW8151A	2,4,5-TP (SILVEX)	0.005 U		5 UJ		S
20201290101	027-15-DP01-S-10	SW8151A	2,4'-D	0.05 U		50 UJ		S
20201290101	027-15-DP01-S-10	SW6010B	BARIUM	0.6611 J		0.6611 J		<
20201290101	027-15-DP01-S-10	SW1010	IGNITABILITY	>212 U		212 >		\$
20201290101	027-15-DP01-S-10	SW9012	REACTIVITY CYANIDE	264 U		264 UJ		L
20201290102	027-15-DP02-S-02	SW8151A	2,4,5-TP (SILVEX)	0.005 U		5 UJ		S
20201290102	027-15-DP02-S-02	SW8151A	2,4'-D	0.05 U		50 UJ		S
20201290102	027-15-DP02-S-02	SW6010B	ARSENIC	0.0481 J		0.0481 J		<
20201290102	027-15-DP02-S-02	SW6010B	BARIUM	0.219 J		0.219 J		<
20201290102	027-15-DP02-S-02	SW6010B	CADMIUM	0.0007 J		0.0007 J		<
20201290102	027-15-DP02-S-02	SW6010B	CHROMIUM	0.0016 J		0.0016 J		<
20201290102	027-15-DP02-S-02	SW9012	REACTIVITY CYANIDE	270 U		270 UJ		L
20201290102	027-15-DP02-S-02	SW6010B	SELENIUM	0.0304 J		0.0304 U		B
20201290102	027-15-DP02-S-02	SW6010B	SILVER	0.0088 J		0.0088 J		<
20201290103	027-43-DP01-S-02	SW8151A	2,4,5-TP (SILVEX)	0.005 U		5 UJ		S
20201290103	027-43-DP01-S-02	SW8151A	2,4'-D	0.05 U		50 UJ		S
20201290103	027-43-DP01-S-02	SW1010	IGNITABILITY	>212 U		212 >		\$
20201290103	027-43-DP01-S-02	SW9012	REACTIVITY CYANIDE	280 U		280 UJ		L
20201290103	027-43-DP01-S-02	SW6010B	SELENIUM	0.028 J		0.028 U		B
20201290103	027-43-DP01-S-02	SW6010B	SILVER	0.0053 J		0.0053 J		<
20201290104	027-43-DP02-S-02	SW8151A	2,4,5-TP (SILVEX)	0.005 U		5 UJ		S
20201290104	027-43-DP02-S-02	SW8151A	2,4'-D	0.05 U		50 UJ		S
20201290104	027-43-DP02-S-02	SW1010	IGNITABILITY	>212 U		212 >		\$
20201290104	027-43-DP02-S-02	SW9012	REACTIVITY CYANIDE	276 U		276 UJ		L
20201290104	027-43-DP02-S-02	SW6010B	SELENIUM	0.022 J		0.022 U		B
20201290104	027-43-DP02-S-02	SW6010B	SILVER	0.0006 J		0.0006 U		B
20203110804	027-15-DP02-06-S-02	SW8260B	ACETONE	51.4 =		51.4 J		M
20203110807	027-15-DP02-FD-S-02	SW8260B	ACETONE	93.3 =		93.3 J		M
20203110808	027-15-DP02-11-S-02	SW8260B	ACETONE	93.2 =		93.2 J		M
20203220101	027-15-DP02-S-06	SW1010	IGNITABILITY	>212 U		212 >		\$
20203220102	027-15-DP02-S-11	SW1010	IGNITABILITY	>212 U		212 >		\$
C111651*2	027-43-04S-W-S1	SW6010B	IRON	91 J		0.091 U		B
C111651*3	027-43-06S-W-S1	SW6010B	IRON	110 =		0.11 U		B
C112283*1	027-PEN-43-02S-W-S1	SW6010B	IRON	140 =		0.14 U		B
C112283*2	027-PEN-43-03S-W-S1	SW6010B	IRON	64 J		0.064 U		B
C112283*3	027-PEN-43-5S-W-S1	SW6010B	IRON	130 =		0.13 U		B
C112283*4	027-PEN-43-07S-W-S1	SW6010B	IRON	130 =		0.13 U		B
L0203446-01	027-15-DP02-S-06	SW1010	IGNITABILITY	95 =		95 >		\$
L0203446-02	027-15-DP02-S-11	SW1010	IGNITABILITY	95 =		95 >		\$
L0204001-01	027-EQBFS-01	SW6010B	BARIUM	8.96 =		8.96 U		B
L0204001-01	027-EQBFS-01	SW6010B	CALCIUM	103 =		103 U		B
L0204001-01	027-EQBFS-01	SW8270C	CHRYSENE	44.8 U		44.7 U		\$
L0204001-01	027-EQBFS-01	SW6010B	COPPER	3.7 =		3.7 U		B
L0204001-01	027-EQBFS-01	SW6010B	MAGNESIUM	150 =		150 U		B
L0204001-01	027-EQBFS-01	SW6010B	NICKEL	2.4 =		2.4 U		B
L0204001-01	027-EQBFS-01	SW6010B	POTASSIUM	112 =		112 U		B
L0204001-01	027-EQBFS-01	SW6010B	VANADIUM	13.8 =		13.8 U		B
L0204001-01	027-EQBFS-01	SW6010B	ZINC	5.02 =		5.02 U		B
L0204001-02	TRIP BLANK	SW8260B	METHYLENE CHLORIDE	0.25 U		0.39 J		\$
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1,1,2-TETRACHLOROETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1,1-TRICHLOROETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1,2,2-TETRACHLOROETHANE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1,2-TRICHLOROETHANE	250 U		250 R		D

Table 4
SUMMARY OF QUALIFIED RESULTS
 (CTO#0027-NAS Pensacola – Sites 15 and 46)

Lab Sample ID	FieldID	Analysis Method	Analyte	Result	Lab Qual	Valid Result	Valid Qual	Qual Code
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1-DICHLOROETHANE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1-DICHLOROETHENE	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,1-DICHLOROPROPENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2,3-TRICHLOROBENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2,3-TRICHLOROPROPANE	750 U		750 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2,4-TRICHLOROBENZENE	200 U		200 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2,4-TRIMETHYLBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2-DIBROMO-3-CHLOROPROPANE	1000 U		1000 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2-DIBROMOETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2-DICHLOROETHANE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2-DICHLOROETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,2-DICHLOROPROPANE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,3,5-TRIMETHYLBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,3-DICHLOROBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,3-DICHLOROPROPANE	200 U		200 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	1,4-DICHLOROBENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	2,2-DICHLOROPROPANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	2-BUTANONE	2500 U		2500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	2-CHLOROETHYL VINYL ETHER	10000 U		10000 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	2-CHLOROTOLUENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	2-HEXANONE	2500 U		2500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	4-CHLOROTOLUENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	4-METHYL-2-PENTANONE	2500 U		2500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BROMOBENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BROMOCHLOROMETHANE	200 U		200 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BROMODICHLOROMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BROMOFORM	540 U		540 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	BROMOMETHANE	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CARBON DISULFIDE	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CARBON TETRACHLORIDE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CHLOROBENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CHLOROETHANE	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CHLOROFORM	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CHLOROMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CIS-1,2-DICHLOROETHENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	CIS-1,3-DICHLOROPROPENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	DIBROMOCHLOROMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	DIBROMOMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	DICHLORODIFLUOROMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	ETHYLBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	HEXACHLOROBUTADIENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	ISOPROPYLBENZENE (CUMENE)	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	M,P-XYLENE	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	METHYLENE CHLORIDE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	NAPHTHALENE	200 U		200 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	N-BUTYLBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	N-PROPYLBENZENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	O-XYLENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	P-CYMENE (P-ISOPROPYLTOLUENE)	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	SEC-BUTYLBENZENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	STYRENE	125 U		125 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	T-BUTYLBENZENE	250 U		250 R		D

Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0027-NAS Pensacola – Sites 15 and 46)

Lab Sample ID	FieldID	Analysis Method	Analyte	Result	Lab Qual	Valid Result	Valid Qual	Qual Code
L0205169-01	027-15&43-NW-01DL1	SW8260B	TETRACHLOROETHENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	TOLUENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	TRANS-1,2-DICHLOROETHENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	TRANS-1,3-DICHLOROPROPENI	500 U		500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	TRICHLOROETHENE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	TRICHLOROFLUOROMETHANE	250 U		250 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	VINYL ACETATE	2500 U		2500 R		D
L0205169-01	027-15&43-NW-01DL1	SW8260B	VINYL CHLORIDE	250 U		250 R		D
L0205169-01	027-15&43-NW-01	SW8260B	ACETONE	42000 =		42000 R		D
L0205169-01	027-15&43-NW-01	SW8081A	P,P'-DDT	0.099 J		0.099 U		B

Appendix A
Validated Reports of Analysis

Volatile Organic Analyses

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

JW-846 8260B, TCLP Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			40	1/31/02 11:48	RSP	61464

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
75-35-4	1,1-Dichloroethene	ND	0.200	0.019	mg/L
107-06-2	1,2-Dichloroethane	ND	0.200	0.017	mg/L
78-93-3	2-Butanone	ND	1.00	0.022	mg/L
71-43-2	Benzene	ND	0.200	0.017	mg/L
56-23-5	Carbon tetrachloride	ND	0.200	0.014	mg/L
108-90-7	Chlorobenzene	ND	0.200	0.018	mg/L
67-66-3	Chloroform	ND	0.200	0.018	mg/L
127-18-4	Tetrachloroethene	ND	0.200	0.016	mg/L
79-01-6	Trichloroethene	ND	0.200	0.017	mg/L
75-01-4	Vinyl chloride	ND	0.200	0.020	mg/L

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↓

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	2000	1810 ug/L	91	78 - 115
1868-53-7	Dibromofluoromethane	2000	2050 ug/L	103	70 - 130
2037-26-5	Toluene d8	2000	2050 ug/L	103	83 - 112
17060-07-0	1,2-Dichloroethane-d4	2000	1930 ug/L	97	76 - 128

RESULTS REPORTED ON A DRY WEIGHT BASIS

omw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

3W-846 8260B, TCLP Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			40	1/31/02 13:10	HJL	61464

CAS #	PARAMETER	RESULT	Q	PQL	MDL	UNITS
75-35-4	1,1-Dichloroethene	ND	u	0.200	0.019	mg/L
107-06-2	1,2-Dichloroethane	ND	↓	0.200	0.017	mg/L
78-93-3	2-Butanone	ND		1.00	0.022	mg/L
71-43-2	Benzene	ND		0.200	0.017	mg/L
56-23-5	Carbon tetrachloride	ND		0.200	0.014	mg/L
108-90-7	Chlorobenzene	ND		0.200	0.018	mg/L
67-66-3	Chloroform	ND		0.200	0.018	mg/L
127-18-4	Tetrachloroethene	ND		0.200	0.016	mg/L
79-01-6	Trichloroethene	ND		0.200	0.017	mg/L
75-01-4	Vinyl chloride	ND		0.200	0.020	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	2000	1870 ug/L	94	78 - 115
1868-53-7	Dibromofluoromethane	2000	1990 ug/L	100	70 - 130
2037-26-5	Toluene d8	2000	2080 ug/L	104	83 - 112
17060-07-0	1,2-Dichloroethane-d4	2000	1880 ug/L	94	76 - 128

RESULTS REPORTED ON A DRY WEIGHT BASIS

one data

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

JW-846 8260B, TCLP Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			40	1/31/02 14:03	HJL	61464

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
75-35-4	1,1-Dichloroethene	ND	u	0.200	0.019	mg/L
107-06-2	1,2-Dichloroethane	ND		0.200	0.017	mg/L
78-93-3	2-Butanone	ND		1.00	0.022	mg/L
71-43-2	Benzene	ND		0.200	0.017	mg/L
56-23-5	Carbon tetrachloride	ND		0.200	0.014	mg/L
108-90-7	Chlorobenzene	ND		0.200	0.018	mg/L
67-66-3	Chloroform	ND		0.200	0.018	mg/L
127-18-4	Tetrachloroethene	ND		0.200	0.016	mg/L
79-01-6	Trichloroethene	ND		0.200	0.017	mg/L
75-01-4	Vinyl chloride	ND		0.200	0.020	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	2000	1840 ug/L	92	78 - 115
1868-53-7	Dibromofluoromethane	2000	1990 ug/L	100	70 - 130
2037-26-5	Toluene d8	2000	2080 ug/L	104	83 - 112
17060-07-0	1,2-Dichloroethane-d4	2000	1860 ug/L	93	76 - 128

RESULTS REPORTED ON A DRY WEIGHT BASIS

mw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

JW-846 8260B, TCLP Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			40	1/31/02 13:37	HJL	61464

CAS #	PARAMETER	RESULT	<u>G</u>	PQL	MDL	UNITS
75-35-4	1,1-Dichloroethene	ND	u	0.200	0.019	mg/L
107-06-2	1,2-Dichloroethane	ND	↓	0.200	0.017	mg/L
78-93-3	2-Butanone	ND		1.00	0.022	mg/L
71-43-2	Benzene	ND		0.200	0.017	mg/L
56-23-5	Carbon tetrachloride	ND		0.200	0.014	mg/L
108-90-7	Chlorobenzene	ND		0.200	0.018	mg/L
67-66-3	Chloroform	ND		0.200	0.018	mg/L
127-18-4	Tetrachloroethene	ND		0.200	0.016	mg/L
79-01-6	Trichloroethene	ND		0.200	0.017	mg/L
75-01-4	Vinyl chloride	ND		0.200	0.020	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	2000	1810 ug/L	91	78 - 115
1868-53-7	Dibromofluoromethane	2000	2030 ug/L	102	70 - 130
2037-26-5	Toluene d8	2000	2060 ug/L	103	83 - 112
17060-07-0	1,2-Dichloroethane-d4	2000	1920 ug/L	96	76 - 128

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290105	027-43-TB-012802	Water	1/28/02 11:00	1/29/02 09:20	2/13/02 11:08

W-846 8260B, TCLP Volatiles

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			40	1/31/02 14:31	HJL	61464

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
75-35-4	1,1-Dichloroethene	ND	u	0.200	0.019	mg/L
107-06-2	1,2-Dichloroethane	ND	↓	0.200	0.017	mg/L
78-93-3	2-Butanone	ND		1.00	0.022	mg/L
71-43-2	Benzene	ND		0.200	0.017	mg/L
56-23-5	Carbon tetrachloride	ND		0.200	0.014	mg/L
108-90-7	Chlorobenzene	ND		0.200	0.018	mg/L
67-66-3	Chloroform	ND		0.200	0.018	mg/L
127-18-4	Tetrachloroethene	ND		0.200	0.016	mg/L
79-01-6	Trichloroethene	ND		0.200	0.017	mg/L
75-01-4	Vinyl chloride	ND		0.200	0.020	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	2000	1810 ug/L	91	78 - 115
1868-53-7	Dibromofluoromethane	2000	2030 ug/L	102	70 - 130
2037-26-5	Toluene d8	2000	2040 ug/L	102	83 - 112
17060-07-0	1,2-Dichloroethane-d4	2000	1980 ug/L	99	76 - 128

RESULTS REPORTED ON A WET WEIGHT BASIS

AMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110801	027-15PREEB-W-9	Water	3/6/02 14:48	3/7/02 09:10	3/18/02 18:02

260B, VOA , Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/12/02 13:54	RSP	102478

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane	ND	5.00	0.430	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	0.200	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	0.320	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	0.240	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	0.360	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	1.40	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	0.200	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	0.200	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	0.470	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	0.360	ug/L
78-87-5	1,2-Dichloropropane	ND	5.00	0.290	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	0.490	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	0.370	ug/L
78-93-3	2-Butanone	ND	25.0	0.920	ug/L
591-78-6	2-Hexanone	ND	5.00	0.610	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	0.420	ug/L
67-64-1	Acetone	ND	25.0	2.21	ug/L
71-43-2	Benzene	ND	5.00	0.410	ug/L
75-27-4	Bromodichloromethane	ND	5.00	0.360	ug/L
75-25-2	Bromoform	ND	5.00	0.430	ug/L
74-83-9	Bromomethane	ND	5.00	0.500	ug/L
75-15-0	Carbon disulfide	ND	5.00	0.540	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	0.620	ug/L
108-90-7	Chlorobenzene	ND	5.00	0.370	ug/L
75-00-3	Chloroethane	ND	5.00	0.400	ug/L
67-66-3	Chloroform	ND	5.00	0.400	ug/L
74-87-3	Chloromethane	ND	5.00	0.380	ug/L
110-82-7	Cyclohexane	ND	100	1.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	0.290	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	0.490	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	0.360	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	0.340	ug/L
100-41-4	Ethylbenzene	ND	5.00	0.410	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	0.490	ug/L
79-20-9	Methyl Acetate	ND	5.00	1.00	ug/L
108-87-2	Methylcyclohexane	ND	5.00	1.00	ug/L
75-09-2	Methylene chloride	ND	10.0	0.370	ug/L

GCAL REPORT: 202031108

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LAB ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110801	027-15PREEB-W-9	Water	3/6/02 14:48	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/12/02 13:54	RSP	102478

CAS #	PARAMETER	RESULT	<i>u</i>	PQL	MDL	UNITS
100-42-5	Styrene	ND	<i>u</i>	5.00	0.470	ug/L
127-18-4	Tetrachloroethene	ND	↓	5.00	0.500	ug/L
108-88-3	Toluene	ND		5.00	0.370	ug/L
79-01-6	Trichloroethene	ND		5.00	0.320	ug/L
75-69-4	Trichlorofluoromethane	ND		5.00	0.630	ug/L
76-13-1	Trichlorotrifluoroethane	ND		5.00	0.480	ug/L
75-01-4	Vinyl chloride	ND		5.00	0.530	ug/L
1330-20-7	Xylene (total)	ND		10.0	1.37	ug/L
156-59-2	cis-1,2-Dichloroethene	ND		5.00	0.430	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND		5.00	0.380	ug/L
156-60-5	trans-1,2-Dichloroethene	ND		5.00	0.410	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	50	48.4 ug/L	97	78 - 115
1868-53-7	Dibromofluoromethane	50	50.4 ug/L	101	70 - 130
2037-26-5	Toluene d8	50	50 ug/L	100	83 - 112
17060-07-0	1,2-Dichloroethane-d4	50	53.1 ug/L	106	76 - 128

RESULTS REPORTED ON A WET WEIGHT BASIS

amw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110802	027-15POSTEB-W-9	Water	3/6/02 16:22	3/7/02 09:10	3/18/02 18:02

3260B, VOA , Water

PREP NAME	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/12/02 14:16	RSP	102478

CAS #	PARAMETER	RESULT	α u	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane	ND	↓	5.00	0.430	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND		5.00	0.200	ug/L
79-00-5	1,1,2-Trichloroethane	ND		5.00	0.320	ug/L
75-34-3	1,1-Dichloroethane	ND		5.00	0.240	ug/L
75-35-4	1,1-Dichloroethene	ND		5.00	0.360	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND		5.00	1.40	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND		5.00	0.200	ug/L
106-93-4	1,2-Dibromoethane	ND		5.00	0.200	ug/L
95-50-1	1,2-Dichlorobenzene	ND		5.00	0.470	ug/L
107-06-2	1,2-Dichloroethane	ND		5.00	0.360	ug/L
78-87-5	1,2-Dichloropropane	ND		5.00	0.290	ug/L
541-73-1	1,3-Dichlorobenzene	ND		5.00	0.490	ug/L
106-46-7	1,4-Dichlorobenzene	ND		5.00	0.370	ug/L
78-93-3	2-Butanone	ND		25.0	0.920	ug/L
591-78-6	2-Hexanone	ND		5.00	0.610	ug/L
108-10-1	4-Methyl-2-pentanone	ND		5.00	0.420	ug/L
67-64-1	Acetone	ND		25.0	2.21	ug/L
71-43-2	Benzene	ND		5.00	0.410	ug/L
75-27-4	Bromodichloromethane	ND		5.00	0.360	ug/L
75-25-2	Bromoform	ND		5.00	0.430	ug/L
74-83-9	Bromomethane	ND		5.00	0.500	ug/L
75-15-0	Carbon disulfide	ND		5.00	0.540	ug/L
56-23-5	Carbon tetrachloride	ND		5.00	0.620	ug/L
108-90-7	Chlorobenzene	ND		5.00	0.370	ug/L
75-00-3	Chloroethane	ND		5.00	0.400	ug/L
67-66-3	Chloroform	ND		5.00	0.400	ug/L
74-87-3	Chloromethane	ND		5.00	0.380	ug/L
110-82-7	Cyclohexane	ND		100	1.00	ug/L
124-48-1	Dibromochloromethane	ND		5.00	0.290	ug/L
75-71-8	Dichlorodifluoromethane	ND		5.00	0.490	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND		5.00	0.360	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND		5.00	0.340	ug/L
100-41-4	Ethylbenzene	ND		5.00	0.410	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND		5.00	0.490	ug/L
79-20-9	Methyl Acetate	ND		5.00	1.00	ug/L
108-87-2	Methylcyclohexane	ND		5.00	1.00	ug/L
75-09-2	Methylene chloride	ND		10.0	0.370	ug/L

GCAL REPORT: 202031108

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GCAL ID#	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110802	027-15POSTEB-W-9	Water	3/6/02 16:22	3/7/02 09:10	3/18/02 18:02

8260B, VOA , Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/12/02 14:16	RSP	102478

CAS #	PARAMETER	RESULT	Q	PQL	MDL	UNITS
100-42-5	Styrene	ND	u	5.00	0.470	ug/L
127-18-4	Tetrachloroethene	ND	↓	5.00	0.500	ug/L
108-88-3	Toluene	ND		5.00	0.370	ug/L
79-01-6	Trichloroethene	ND		5.00	0.320	ug/L
75-69-4	Trichlorofluoromethane	ND		5.00	0.630	ug/L
76-13-1	Trichlorotrifluoroethane	ND		5.00	0.480	ug/L
75-01-4	Vinyl chloride	ND		5.00	0.530	ug/L
1330-20-7	Xylene (total)	ND		10.0	1.37	ug/L
156-59-2	cis-1,2-Dichloroethene	ND		5.00	0.430	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND		5.00	0.380	ug/L
156-60-5	trans-1,2-Dichloroethene	ND		5.00	0.410	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	50	49.9 ug/L	100	78 - 115
1868-53-7	Dibromofluoromethane	50	52.5 ug/L	105	70 - 130
2037-26-5	Toluene d8	50	50.4 ug/L	101	83 - 112
17060-07-0	1,2-Dichloroethane-d4	50	52.2 ug/L	104	76 - 128

RESULTS REPORTED ON A WET WEIGHT BASIS

mmw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110803	027-15TB-020307	Water	3/6/02 00:00	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED BY	ANALYSIS NO
			1	3/12/02 14:39 RSP	102478

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane	ND	u	5.00	0.430	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	↓	5.00	0.200	ug/L
79-00-5	1,1,2-Trichloroethane	ND		5.00	0.320	ug/L
75-34-3	1,1-Dichloroethane	ND		5.00	0.240	ug/L
75-35-4	1,1-Dichloroethene	ND		5.00	0.360	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND		5.00	1.40	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND		5.00	0.200	ug/L
106-93-4	1,2-Dibromoethane	ND		5.00	0.200	ug/L
95-50-1	1,2-Dichlorobenzene	ND		5.00	0.470	ug/L
107-06-2	1,2-Dichloroethane	ND		5.00	0.360	ug/L
78-87-5	1,2-Dichloropropane	ND		5.00	0.290	ug/L
541-73-1	1,3-Dichlorobenzene	ND		5.00	0.490	ug/L
106-46-7	1,4-Dichlorobenzene	ND		5.00	0.370	ug/L
78-93-3	2-Butanone	ND		25.0	0.920	ug/L
591-78-6	2-Hexanone	ND		5.00	0.610	ug/L
108-10-1	4-Methyl-2-pentanone	ND		5.00	0.420	ug/L
67-64-1	Acetone	ND		25.0	2.21	ug/L
71-43-2	Benzene	ND		5.00	0.410	ug/L
75-27-4	Bromodichloromethane	ND		5.00	0.360	ug/L
75-25-2	Bromoform	ND		5.00	0.430	ug/L
74-83-9	Bromomethane	ND		5.00	0.500	ug/L
75-15-0	Carbon disulfide	ND		5.00	0.540	ug/L
56-23-5	Carbon tetrachloride	ND		5.00	0.620	ug/L
108-90-7	Chlorobenzene	ND		5.00	0.370	ug/L
75-00-3	Chloroethane	ND		5.00	0.400	ug/L
67-66-3	Chloroform	ND		5.00	0.400	ug/L
74-87-3	Chloromethane	ND		5.00	0.380	ug/L
110-82-7	Cyclohexane	ND		100	1.00	ug/L
124-48-1	Dibromochloromethane	ND		5.00	0.290	ug/L
75-71-8	Dichlorodifluoromethane	ND		5.00	0.490	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND		5.00	0.360	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	0.340	ug/L	
100-41-4	Ethylbenzene	ND	5.00	0.410	ug/L	
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	0.490	ug/L	
79-20-9	Methyl Acetate	ND	5.00	1.00	ug/L	
108-87-2	Methylcyclohexane	ND	5.00	1.00	ug/L	
75-09-2	Methylene chloride	ND	↓	10.0	0.370	ug/L

GCAL REPORT: 202031108

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GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110803	027-15TB-020307	Water	3/6/02 00:00	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Water

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/12/02 14:39	RSP	102478

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
100-42-5	Styrene	ND	5.00	0.470	ug/L
127-18-4	Tetrachloroethene	ND	5.00	0.500	ug/L
108-88-3	Toluene	ND	5.00	0.370	ug/L
79-01-6	Trichloroethene	ND	5.00	0.320	ug/L
75-69-4	Trichlorofluoromethane	ND	5.00	0.630	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	0.480	ug/L
75-01-4	Vinyl chloride	ND	5.00	0.530	ug/L
1330-20-7	Xylene (total)	ND	10.0	1.37	ug/L
156-59-2	cis-1,2-Dichloroethene	ND	5.00	0.430	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	0.380	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	0.410	ug/L

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CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	50	48.1 ug/L	96	78 - 115
1868-53-7	Dibromofluoromethane	50	53.7 ug/L	107	70 - 130
2037-26-5	Toluene d8	50	51 ug/L	102	83 - 112
17060-07-0	1,2-Dichloroethane-d4	50	54.7 ug/L	109	76 - 128

RESULTS REPORTED ON A WET WEIGHT BASIS

CMW 8/24/02

CLIENT ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110804	027-15-DP02-06-S-02	Solid	3/6/02 15:50	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/11/02 16:53	KRV	100387

CAS #	PARAMETER	RESULT	Q	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane	ND	u	5.32	0.277	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	ND		5.32	0.298	ug/Kg
79-00-5	1,1,2-Trichloroethane	ND		5.32	0.223	ug/Kg
75-34-3	1,1-Dichloroethane	ND		5.32	0.266	ug/Kg
75-35-4	1,1-Dichloroethene	ND		5.32	0.287	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	ND		5.32	0.372	ug/Kg
96-12-8	1,2-Dibromo-3-chloropropane	ND		5.32	0.404	ug/Kg
106-93-4	1,2-Dibromoethane	ND		5.32	0.170	ug/Kg
95-50-1	1,2-Dichlorobenzene	ND		5.32	0.606	ug/Kg
107-06-2	1,2-Dichloroethane	ND		5.32	0.223	ug/Kg
78-87-5	1,2-Dichloropropane	ND		5.32	0.245	ug/Kg
541-73-1	1,3-Dichlorobenzene	ND		5.32	0.436	ug/Kg
106-46-7	1,4-Dichlorobenzene	ND		5.32	0.223	ug/Kg
78-93-3	2-Butanone	ND		26.6	0.606	ug/Kg
591-78-6	2-Hexanone	ND		5.32	0.628	ug/Kg
108-10-1	4-Methyl-2-pentanone	ND		5.32	0.213	ug/Kg
67-64-1	Acetone	51.4	J	26.6	1.27	ug/Kg
71-43-2	Benzene	ND	u	5.32	0.234	ug/Kg
75-27-4	Bromodichloromethane	ND		5.32	0.181	ug/Kg
75-25-2	Bromoform	ND		5.32	0.223	ug/Kg
74-83-9	Bromomethane	ND		5.32	0.404	ug/Kg
75-15-0	Carbon disulfide	ND		5.32	0.202	ug/Kg
56-23-5	Carbon tetrachloride	ND		5.32	0.255	ug/Kg
108-90-7	Chlorobenzene	ND		5.32	0.245	ug/Kg
75-00-3	Chloroethane	ND		5.32	0.298	ug/Kg
67-66-3	Chloroform	ND		5.32	0.202	ug/Kg
74-87-3	Chloromethane	ND		5.32	0.213	ug/Kg
110-82-7	Cyclohexane	ND		5.32	1.06	ug/Kg
124-48-1	Dibromochloromethane	ND		5.32	0.223	ug/Kg
75-71-8	Dichlorodifluoromethane	ND		5.32	0.213	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	ND		5.32	0.170	ug/Kg
10061-02-6	trans-1,3-Dichloropropene	ND		5.32	0.149	ug/Kg
100-41-4	Ethylbenzene	ND		5.32	0.255	ug/Kg
98-82-8	Isopropylbenzene (Cumene)	ND		5.32	1.06	ug/Kg
79-20-9	Methyl Acetate	ND		5320	1.06	ug/Kg
108-87-2	Methylcyclohexane	ND		5320	1.06	ug/Kg
75-09-2	Methylene chloride	ND		10.6	3.51	ug/Kg

GCAL REPORT: 202031108

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GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110804	027-15-DP02-06-S-02	Solid	3/6/02 15:50	3/7/02 09:10	3/18/02 18:02

1260B, VOA , Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/11/02 16:53	KRV	100387

CAS #	PARAMETER	RESULT	<u>G</u>	PQL	MDL	UNITS
100-42-5	Styrene	ND	u	5.32	0.255	ug/Kg
127-18-4	Tetrachloroethene	ND	↓	5.32	0.372	ug/Kg
108-88-3	Toluene	ND		5.32	0.149	ug/Kg
79-01-6	Trichloroethene	ND		5.32	0.319	ug/Kg
75-69-4	Trichlorofluoromethane	ND		5.32	0.181	ug/Kg
76-13-1	Trichlorotrifluoroethane	ND		5.32	1.06	ug/Kg
75-01-4	Vinyl chloride	ND		5.32	0.266	ug/Kg
1330-20-7	Xylene (total)	ND		10.6	0.692	ug/Kg
156-59-2	cis-1,2-Dichloroethene	ND		5.32	0.277	ug/Kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND		5.32	0.170	ug/Kg
156-60-5	trans-1,2-Dichloroethene	ND		5.32	0.245	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	53.5	45.4 ug/Kg	85	73 - 138
1868-53-7	Dibromofluoromethane	53.5	55.5 ug/Kg	104	70 - 130
2037-26-5	Toluene d8	53.5	49.4 ug/Kg	92	65 - 128
17060-07-0	1,2-Dichloroethane-d4	53.5	58.1 ug/Kg	109	60 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110807	027-15-DP02-FD-S-02	Solid	3/6/02 00:00	3/7/02 09:10	3/18/02 18:02

2260B, VOA , Solid

PREP/BATCH	PREP METHOD	DILUTION	ANALYZED BY	ANALYTICAL BATCH
		1	3/11/02 20:09 DLB	100387

CAS #	PARAMETER	Code	RESULT	Q	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane		ND	u	5.36	0.279	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane		ND		5.36	0.300	ug/Kg
79-00-5	1,1,2-Trichloroethane		ND		5.36	0.225	ug/Kg
75-34-3	1,1-Dichloroethane		ND		5.36	0.268	ug/Kg
75-35-4	1,1-Dichloroethene		ND		5.36	0.289	ug/Kg
120-82-1	1,2,4-Trichlorobenzene		ND		5.36	0.375	ug/Kg
96-12-8	1,2-Dibromo-3-chloropropane		ND		5.36	0.407	ug/Kg
106-93-4	1,2-Dibromoethane		ND		5.36	0.172	ug/Kg
95-50-1	1,2-Dichlorobenzene		ND		5.36	0.611	ug/Kg
107-06-2	1,2-Dichloroethane		ND		5.36	0.225	ug/Kg
78-87-5	1,2-Dichloropropane		ND		5.36	0.247	ug/Kg
541-73-1	1,3-Dichlorobenzene		ND		5.36	0.440	ug/Kg
106-46-7	1,4-Dichlorobenzene		ND		5.36	0.225	ug/Kg
78-93-3	2-Butanone		ND		26.8	0.611	ug/Kg
591-78-6	2-Hexanone		ND		5.36	0.633	ug/Kg
108-10-1	4-Methyl-2-pentanone		ND		5.36	0.214	ug/Kg
67-64-1	Acetone	M	93.3	J	26.8	1.28	ug/Kg
71-43-2	Benzene		ND	u	5.36	0.236	ug/Kg
75-27-4	Bromodichloromethane		ND		5.36	0.182	ug/Kg
75-25-2	Bromoform		ND		5.36	0.225	ug/Kg
74-83-9	Bromomethane		ND		5.36	0.407	ug/Kg
75-15-0	Carbon disulfide		ND		5.36	0.204	ug/Kg
56-23-5	Carbon tetrachloride		ND		5.36	0.257	ug/Kg
108-90-7	Chlorobenzene		ND		5.36	0.247	ug/Kg
75-00-3	Chloroethane		ND		5.36	0.300	ug/Kg
67-66-3	Chloroform		ND		5.36	0.204	ug/Kg
74-87-3	Chloromethane		ND		5.36	0.214	ug/Kg
110-82-7	Cyclohexane		ND		5.36	1.07	ug/Kg
124-48-1	Dibromochloromethane		ND		5.36	0.225	ug/Kg
75-71-8	Dichlorodifluoromethane		ND		5.36	0.214	ug/Kg
10061-02-6	trans-1,3-Dichloropropene		ND		5.36	0.150	ug/Kg
10061-01-5	cis-1,3-Dichloropropene		ND		5.36	0.172	ug/Kg
100-41-4	Ethylbenzene		ND		5.36	0.257	ug/Kg
98-82-8	Isopropylbenzene (Cumene)		ND		5.36	1.07	ug/Kg
79-20-9	Methyl Acetate		ND		5360	1.07	ug/Kg
108-87-2	Methylcyclohexane		ND		5360	1.07	ug/Kg
75-09-2	Methylene chloride		ND		10.7	3.54	ug/Kg

GCAL REPORT: 202031108

MMW 8/24/02

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GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110807	027-15-DP02-FD-S-02	Solid	3/6/02 00:00	3/7/02 09:10	3/18/02 18:02

260B, VOA , Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/11/02 20:09	DLB	100387

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
100-42-5	Styrene	ND	5.36	0.257	ug/Kg
127-18-4	Tetrachloroethene	ND	5.36	0.375	ug/Kg
108-88-3	Toluene	ND	5.36	0.150	ug/Kg
79-01-6	Trichloroethene	ND	5.36	0.322	ug/Kg
75-69-4	Trichlorofluoromethane	ND	5.36	0.182	ug/Kg
76-13-1	Trichlorotrifluoroethane	ND	5.36	1.07	ug/Kg
75-01-4	Vinyl chloride	ND	5.36	0.268	ug/Kg
1330-20-7	Xylene (total)	ND	10.7	0.697	ug/Kg
156-59-2	cis-1,2-Dichloroethene	ND	5.36	0.279	ug/Kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.36	0.172	ug/Kg
156-60-5	trans-1,2-Dichloroethene	ND	5.36	0.247	ug/Kg

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CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	51.5	42 ug/Kg	82	73 - 138
1868-53-7	Dibromofluoromethane	51.5	53.9 ug/Kg	105	70 - 130
2037-26-5	Toluene d8	51.5	52.2 ug/Kg	101	65 - 128
17060-07-0	1,2-Dichloroethane-d4	51.5	55.2 ug/Kg	107	60 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

DLB 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110808	027-15-DP02-11-S-02	Solid	3/6/02 15:10	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/11/02 20:33	DLB	100387

CAS #	PARAMETER	<i>Q code</i>	RESULT	<i>Q</i>	PQL	MDL	UNITS
71-55-6	1,1,1-Trichloroethane		ND	u	5.35	0.278	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane		ND		5.35	0.300	ug/Kg
79-00-5	1,1,2-Trichloroethane		ND		5.35	0.225	ug/Kg
75-34-3	1,1-Dichloroethane		ND		5.35	0.268	ug/Kg
75-35-4	1,1-Dichloroethene		ND		5.35	0.289	ug/Kg
120-82-1	1,2,4-Trichlorobenzene		ND		5.35	0.375	ug/Kg
96-12-8	1,2-Dibromo-3-chloropropane		ND		5.35	0.407	ug/Kg
106-93-4	1,2-Dibromoethane		ND		5.35	0.171	ug/Kg
95-50-1	1,2-Dichlorobenzene		ND		5.35	0.610	ug/Kg
107-06-2	1,2-Dichloroethane		ND		5.35	0.225	ug/Kg
78-87-5	1,2-Dichloropropane		ND		5.35	0.246	ug/Kg
541-73-1	1,3-Dichlorobenzene		ND		5.35	0.439	ug/Kg
106-46-7	1,4-Dichlorobenzene		ND		5.35	0.225	ug/Kg
78-93-3	2-Butanone		ND		26.8	0.610	ug/Kg
591-78-6	2-Hexanone		ND		5.35	0.631	ug/Kg
108-10-1	4-Methyl-2-pentanone		ND		5.35	0.214	ug/Kg
67-64-1	Acetone	<i>M</i>	93.2	J	26.8	1.27	ug/Kg
71-43-2	Benzene		ND	u	5.35	0.235	ug/Kg
75-27-4	Bromodichloromethane		ND		5.35	0.182	ug/Kg
75-25-2	Bromoform		ND		5.35	0.225	ug/Kg
74-83-9	Bromomethane		ND		5.35	0.407	ug/Kg
75-15-0	Carbon disulfide		ND		5.35	0.203	ug/Kg
56-23-5	Carbon tetrachloride		ND		5.35	0.257	ug/Kg
108-90-7	Chlorobenzene		ND		5.35	0.246	ug/Kg
75-00-3	Chloroethane		ND		5.35	0.300	ug/Kg
67-66-3	Chloroform		ND		5.35	0.203	ug/Kg
74-87-3	Chloromethane		ND		5.35	0.214	ug/Kg
110-82-7	Cyclohexane		ND		5.35	1.07	ug/Kg
124-48-1	Dibromochloromethane		ND		5.35	0.225	ug/Kg
75-71-8	Dichlorodifluoromethane		ND		5.35	0.214	ug/Kg
10061-01-5	cis-1,3-Dichloropropene		ND		5.35	0.171	ug/Kg
10061-02-6	trans-1,3-Dichloropropene		ND		5.35	0.150	ug/Kg
100-41-4	Ethylbenzene		ND		5.35	0.257	ug/Kg
98-82-8	Isopropylbenzene (Cumene)		ND		5.35	1.07	ug/Kg
79-20-9	Methyl Acetate		ND		5350	1.07	ug/Kg
108-87-2	Methylcyclohexane		ND		5350	1.07	ug/Kg
75-09-2	Methylene chloride		ND		10.7	3.53	ug/Kg

GCAL REPORT: 202031108

DLB 8/24/02

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GCAL ID	CLIENT	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110808	027-15-DP02-11-S-02	Solid	3/6/02 15:10	3/7/02 09:10	3/18/02 18:02

J260B, VOA , Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/11/02 20:33	DLB	100387

CAS #	PARAMETER	RESULT	α	PQL	MDL	UNITS
100-42-5	Styrene	ND	u	5.35	0.257	ug/Kg
127-18-4	Tetrachloroethene	ND		5.35	0.375	ug/Kg
108-88-3	Toluene	ND		5.35	0.150	ug/Kg
79-01-6	Trichloroethene	ND		5.35	0.321	ug/Kg
75-69-4	Trichlorofluoromethane	ND		5.35	0.182	ug/Kg
76-13-1	Trichlorotrifluoroethane	ND		5.35	1.07	ug/Kg
75-01-4	Vinyl chloride	ND		5.35	0.268	ug/Kg
1330-20-7	Xylene (total)	ND		10.7	0.696	ug/Kg
156-59-2	cis-1,2-Dichloroethene	ND		5.35	0.278	ug/Kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND		5.35	0.171	ug/Kg
156-60-5	trans-1,2-Dichloroethene	ND	✓	5.35	0.246	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
460-00-4	4-Bromofluorobenzene	52	43.2 ug/Kg	83	73 - 138
1868-53-7	Dibromofluoromethane	52	54.8 ug/Kg	105	70 - 130
2037-26-5	Toluene d8	52	53.4 ug/Kg	103	65 - 128
17060-07-0	1,2-Dichloroethane-d4	52	56.5 ug/Kg	109	60 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMC 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5035 AAB # : WG115463
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-BOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPM89 05-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 02-APR-02 11:27
 Concentration Units: ug/kg File ID: 9M19484

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1-Trichloroethane	0.503	5.0	0.503	.91	ND
1,1,2,2-Tetrachloroethane	0.503	5.0	0.503	.91	ND
1,1,2-Trichloroethane	0.503	5.0	0.503	.91	ND
1,1-Dichloroethane	1.01	5.0	1.01	.91	ND
1,1-Dichloroethene	0.503	5.0	0.503	.91	ND
1,2-Dichloroethane	0.503	5.0	0.503	.91	ND
1,2-Dichloroethene (Total)	0.553	5.5	0.553	1	ND
1,2-Dichloropropane	0.503	5.0	0.503	.91	ND
2-Butanone	2.52	10	2.52	.91	ND
2-Hexanone	2.52	10	2.52	.91	ND
4-Methyl-2-pentanone	2.52	10	2.52	.91	ND
Acetone	2.52	10	2.52	.91	ND
Benzene	0.503	5.0	0.503	.91	ND
Bromodichloromethane	0.503	5.0	0.503	.91	ND
Bromoform	0.503	5.0	0.503	.91	ND
Bromomethane	1.01	10	1.01	.91	ND
Carbon disulfide	0.503	5.0	0.503	.91	ND
Carbon tetrachloride	0.503	5.0	0.503	.91	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

amo 02/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5035 AAB # : WG115463
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS9 05-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 02-APR-02 11:27
 Concentration Units: ug/kg File ID: 9M19484

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.503	5.0	0.503	.91	ND ^Q
Chloroethane	1.01	10	1.01	.91	ND
Chloroform	0.503	5.0	0.503	.91	ND
Chloromethane	2.01	10	2.01	.91	ND
Dibromochloromethane	0.503	5.0	0.503	.91	ND
Ethyl benzene	0.503	5.0	0.503	.91	ND
Methylene chloride	1.01	5.0	1.01	.91	ND
Styrene	0.503	5.0	0.503	.91	ND
Tetrachloroethene	0.503	5.0	0.503	.91	ND
Toluene	0.503	5.0	0.503	.91	ND
Trichloroethene	0.503	5.0	0.503	.91	ND
Vinyl chloride	1.01	10	1.01	.91	ND
Xylenes, Total	0.503	5.0	0.503	.91	ND
cis-1,3-Dichloropropene	0.503	5.0	0.503	.91	ND
trans-1,3-Dichloropropene	0.503	5.0	0.503	.91	ND

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	106	80 - 120	
Dibromofluoromethane	109	80 - 120	
Toluene-d8	102	81 - 117	
p-Bromofluorobenzene	97.5	74 - 121	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

Ans 8/24/02

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5030B AAB # : WG115698
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TRIP BLANK Lab Sample ID: L0204001-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 22-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 04-APR-02 22:12
 Concentration Units: ug/L File ID: 6M29956

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1-Trichloroethane	0.250	5.0	0.250	1	ND ^g _u
1,1,2,2-Tetrachloroethane	0.125	5.0	0.125	1	ND
1,1,2-Trichloroethane	0.250	5.0	0.250	1	ND
1,1-Dichloroethane	0.125	5.0	0.125	1	ND
1,1-Dichloroethene	0.500	5.0	0.500	1	ND
1,2-Dichloroethane	0.250	5.0	0.250	1	ND
1,2-Dichloroethene (Total)	0.250	5.0	0.250	1	ND
1,2-Dichloropropane	0.125	5.0	0.125	1	ND
2-Butanone	2.50	10	2.50	1	ND
2-Hexanone	2.50	10	2.50	1	ND
4-Methyl-2-pentanone	2.50	10	2.50	1	ND
Acetone	2.50	10	2.50	1	ND
Benzene	0.125	5.0	0.125	1	ND
Bromodichloromethane	0.250	5.0	0.250	1	ND
Bromoform	0.540	5.0	0.540	1	ND
Bromomethane	0.500	10	0.500	1	ND
Carbon disulfide	0.500	5.0	0.500	1	ND
Carbon tetrachloride	0.250	5.0	0.250	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

oms 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5030B AAB # : WG115698
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TRIP BLANK Lab Sample ID: L0204001-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 22-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 04-APR-02 22:12
 Concentration Units: ug/L File ID: 6M29956

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.125	5.0	0.125	1	NR U <i>W 2002</i>
Chloroethane	0.500	10	0.500	1	ND
Chloroform	0.125	5.0	0.125	1	ND
Chloromethane	0.250	10	0.250	1	ND
Dibromochloromethane	0.250	5.0	0.250	1	ND
Ethyl benzene	0.250	5.0	0.250	1	ND ↓
Methylene chloride	0.250	5.0	0.250 0.39	1	ND J \$
Styrene	0.125	5.0	0.125	1	NR U
Tetrachloroethene	0.250	5.0	0.250	1	ND
Toluene	0.250	5.0	0.250	1	ND
Trichloroethene	0.250	5.0	0.250	1	ND
Vinyl chloride	0.250	10	0.250	1	ND
Xylenes, Total	0.500	5.0	0.500	1	ND
cis-1,3-Dichloropropene	0.250	5.0	0.250	1	ND
trans-1,3-Dichloropropene	0.500	5.0	0.500	1	ND ↓

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	105	80 - 120	
Dibromofluoromethane	102	86 - 118	
Toluene-d8	106	88 - 110	
p-Bromofluorobenzene	112	86 - 115	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

OMO 8/24/02

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 09-MAY-02 01:19
 Concentration Units: ug/L File ID: 6M30711

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1,2-Tetrachloroethane	0.250	5.0	0.250	1	ND U
1,1,1-Trichloroethane	0.250	5.0	0.250	1	ND
1,1,2,2-Tetrachloroethane	0.125	5.0	0.125	1	ND
1,1,2-Trichloroethane	0.250	5.0	0.250	1	ND
1,1-Dichloroethane	0.125	5.0	0.125	1	ND
1,1-Dichloroethene	0.500	5.0	0.500	1	ND
1,1-Dichloropropene	0.250	5.0	0.250	1	ND
1,2,3-Trichlorobenzene	0.125	5.0	0.125	1	ND
1,2,3-Trichloropropane	0.750	5.0	0.750	1	ND
1,2,4-Trichlorobenzene	0.200	5.0	0.200	1	ND
1,2,4-Trimethylbenzene	0.250	5.0	0.250	1	ND
1,2-Dibromo-3-chloropropane	1.00	5.0	1.00	1	ND
1,2-Dibromoethane	0.250	5.0	0.250	1	ND
1,2-Dichlorobenzene	0.125	5.0	0.125	1	ND
1,2-Dichloroethane	0.250	5.0	0.250	1	ND
1,2-Dichloropropane	0.125	5.0	0.125	1	ND
1,3,5-Trimethylbenzene	0.250	5.0	0.250	1	ND
1,3-Dichlorobenzene	0.250	5.0	0.250	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

OMW 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WQ117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 09-MAY-02 01:19
 Concentration Units: ug/L File ID: 6M30711

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,3-Dichloropropane	0.200	5.0	0.200	1	ND U <i>W Code</i>
1,4-Dichlorobenzene	0.125	5.0	0.125	1	ND
2,2-Dichloropropane	0.250	5.0	0.250	1	ND
2-Butanone	2.50	100	2.50	1	ND
2-Chloroethyl vinyl ether	10.0	10	10.0	1	ND
2-Chlorotoluene	0.125	5.0	0.125	1	ND
2-Hexanone	2.50	10	2.50	1	ND
4-Chlorotoluene	0.250	5.0	0.250	1	ND
4-Methyl-2-pentanone	2.50	10	2.50	1	ND ↓
Acetone	2.50	100	42000	1	I R D
Benzene	0.125	5.0	0.125	1	ND U
Bromobenzene	0.125	5.0	0.125	1	ND
Bromochloromethane	0.200	5.0	0.200	1	ND
Bromodichloromethane	0.250	5.0	0.250	1	ND
Bromoform	0.540	5.0	0.540	1	ND
Bromomethane	0.500	10	0.500	1	ND
Carbon disulfide	0.500	5.0	0.500	1	ND ↓
Carbon tetrachloride	0.250	5.0	0.250	1	ND ↓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

omo 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 09-MAY-02 01:19
 Concentration Units: ug/L File ID: 6M30711

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.125	5.0	0.125	1	ND ^Q _U
Chlorodibromomethane	0.250	5.0	0.250	1	ND
Chloroethane	0.500	10	0.500	1	ND
Chloroform	0.125	5.0	0.125	1	ND
Chloromethane	0.250	10	0.250	1	ND
Dibromomethane	0.250	5.0	0.250	1	ND
Dichlorodifluoromethane	0.250	10	0.250	1	ND
Ethylbenzene	0.250	5.0	0.250	1	ND
Hexachlorobutadiene	0.250	5.0	0.250	1	ND
Isopropylbenzene	0.250	5.0	0.250	1	ND
Methylene chloride	0.250	5.0	0.250	1	ND
Naphthalene	0.200	10	0.200	1	ND
Styrene	0.125	5.0	0.125	1	ND
Tetrachloroethene	0.250	5.0	0.250	1	ND
Toluene	0.250	5.0	0.250	1	ND
Trichloroethene	0.250	5.0	0.250	1	ND
Trichlorofluoromethane	0.250	10	0.250	1	ND
Vinyl acetate	2.50	10	2.50	1	ND _✓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

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KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WQ117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPM96 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 09-MAY-02 01:19
 Concentration Units: ug/L File ID: 6M30711

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Vinyl chloride	0.250	10	0.250	1	ND ^u
cis-1,2-Dichloroethene	0.250	5.0	0.250	1	ND
cis-1,3-Dichloropropene	0.250	5.0	0.250	1	ND
m-,p-Xylene	0.500	5.0	0.500	1	ND
n-Butylbenzene	0.250	5.0	0.250	1	ND
n-Propylbenzene	0.125	5.0	0.125	1	ND
o-Xylene	0.250	5.0	0.250	1	ND
p-Isopropyltoluene	0.250	5.0	0.250	1	ND
sec-Butylbenzene	0.250	5.0	0.250	1	ND
tert-Butylbenzene	0.250	5.0	0.250	1	ND
trans-1,2-Dichloroethene	0.250	5.0	0.250	1	ND
trans-1,3-Dichloropropene	0.500	5.0	0.500	1	ND ^u

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	80.7	80 - 120	
4-Bromofluorobenzene	111	86 - 115	
Dibromofluoromethane	77.6	86 - 118	*
Toluene-d8	102	88 - 110	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

anna 8/24/02

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : NG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TR-027-15&43-NW-01 Lab Sample ID: L0205169-02 Matrix: Water
 * Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 08-MAY-02 22:03
 Concentration Units: ug/L File ID: 6M30705

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1,2-Tetrachloroethane	0.250	5.0	0.250	1	ND ^Q
1,1,1-Trichloroethane	0.250	5.0	0.250	1	ND
1,1,2,2-Tetrachloroethane	0.125	5.0	0.125	1	ND
1,1,2-Trichloroethane	0.250	5.0	0.250	1	ND
1,1-Dichloroethane	0.125	5.0	0.125	1	ND
1,1-Dichloroethene	0.500	5.0	0.500	1	ND
1,1-Dichloropropene	0.250	5.0	0.250	1	ND
1,2,3-Trichlorobenzene	0.125	5.0	0.125	1	ND
1,2,3-Trichloropropane	0.750	5.0	0.750	1	ND
1,2,4-Trichlorobenzene	0.200	5.0	0.200	1	ND
1,2,4-Trimethylbenzene	0.250	5.0	0.250	1	ND
1,2-Dibromo-3-chloropropane	1.00	5.0	1.00	1	ND
1,2-Dibromoethane	0.250	5.0	0.250	1	ND
1,2-Dichlorobenzene	0.125	5.0	0.125	1	ND
1,2-Dichloroethane	0.250	5.0	0.250	1	ND
1,2-Dichloropropane	0.125	5.0	0.125	1	ND
1,3,5-Trimethylbenzene	0.250	5.0	0.250	1	ND
1,3-Dichlorobenzene	0.250	5.0	0.250	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

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KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TB-027-15&43-NW-01 Lab Sample ID: L0205169-02 Matrix: Water
 # Solids: 0 Initial Calibration ID: HPM86 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 08-MAY-02 22:03
 Concentration Units: ug/L File ID: 6M30705

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,3-Dichloropropane	0.200	5.0	0.200	1	ND ^Q U
1,4-Dichlorobenzene	0.125	5.0	0.125	1	ND
2,2-Dichloropropane	0.250	5.0	0.250	1	ND
2-Butanone	2.50	100	2.50	1	ND
2-Chloroethyl vinyl ether	10.0	10	10.0	1	ND
2-Chlorotoluene	0.125	5.0	0.125	1	ND
2-Hexanone	2.50	10	2.50	1	ND
4-Chlorotoluene	0.250	5.0	0.250	1	ND
4-Methyl-2-pentanone	2.50	10	2.50	1	ND
Acetone	2.50	100	2.50	1	ND
Benzene	0.125	5.0	0.125	1	ND
Bromobenzene	0.125	5.0	0.125	1	ND
Bromochloromethane	0.200	5.0	0.200	1	ND
Bromodichloromethane	0.250	5.0	0.250	1	ND
Bromoform	0.540	5.0	0.540	1	ND
Bromomethane	0.500	10	0.500	1	ND
Carbon disulfide	0.500	5.0	0.500	1	ND
Carbon tetrachloride	0.250	5.0	0.250	1	ND ↓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

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KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TB-027-15643-NW-01 Lab Sample ID: L0205169-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 08-MAY-02 22:03
 Concentration Units: ug/L File ID: 6M30705

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.125	5.0	0.125	1	ND ^u
Chlorodibromomethane	0.250	5.0	0.250	1	ND
Chloroethane	0.500	10	0.500	1	ND
Chloroform	0.125	5.0	0.125	1	ND
Chloromethane	0.250	10	0.250	1	ND
Dibromomethane	0.250	5.0	0.250	1	ND
Dichlorodifluoromethane	0.250	10	0.250	1	ND
Ethylbenzene	0.250	5.0	0.250	1	ND
Hexachlorobutadiene	0.250	5.0	0.250	1	ND
Isopropylbenzene	0.250	5.0	0.250	1	ND
Methylene chloride	0.250	5.0	0.250	1	ND
Naphthalene	0.200	10	0.200	1	ND
Styrene	0.125	5.0	0.125	1	ND
Tetrachloroethene	0.250	5.0	0.250	1	ND
Toluene	0.250	5.0	0.250	1	ND
Trichloroethene	0.250	5.0	0.250	1	ND
Trichlorofluoromethane	0.250	10	0.250	1	ND
Vinyl acetate	2.50	10	2.50	1	ND ^v

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

CMO 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117470
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TR-027-15643-NW-01 Lab Sample ID: L0205169-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPM86 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 08-MAY-02 22:03
 Concentration Units: ug/L File ID: 6M30705

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Vinyl chloride	0.250	10	0.250	1	ND <i>u</i>
cis-1,2-Dichloroethene	0.250	5.0	0.250	1	ND
cis-1,3-Dichloropropene	0.250	5.0	0.250	1	ND
m-,p-Xylene	0.500	5.0	0.500	1	ND
n-Butylbenzene	0.250	5.0	0.250	1	ND
n-Propylbenzene	0.125	5.0	0.125	1	ND
o-Xylene	0.250	5.0	0.250	1	ND
p-Isopropyltoluene	0.250	5.0	0.250	1	ND
sec-Butylbenzene	0.250	5.0	0.250	1	ND
tert-Butylbenzene	0.250	5.0	0.250	1	ND
trans-1,2-Dichloroethene	0.250	5.0	0.250	1	ND
trans-1,3-Dichloropropene	0.500	5.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	93.8	80 - 120	
4-Bromofluorobenzene	110	86 - 115	
Dibromofluoromethane	91.7	86 - 118	
Toluene-d8	105	88 - 110	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

Chris Stutzler

Comments:

 All results, MDLs, and RLs have been corrected to dry weight, where applicable.

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117558
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 * Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 10-MAY-02 09:39
 Concentration Units: ug/L File ID: 6M30754

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1,2-Tetrachloroethane	250	5000	250	1000	ND R D
1,1,1-Trichloroethane	250	5000	250	1000	ND
1,1,2,2-Tetrachloroethane	125	5000	125	1000	ND
1,1,2-Trichloroethane	250	5000	250	1000	ND
1,1-Dichloroethane	125	5000	125	1000	ND
1,1-Dichloroethene	500	5000	500	1000	ND
1,1-Dichloropropene	250	5000	250	1000	ND
1,2,3-Trichlorobenzene	125	5000	125	1000	ND
1,2,3-Trichloropropane	750	5000	750	1000	ND
1,2,4-Trichlorobenzene	200	5000	200	1000	ND
1,2,4-Trimethylbenzene	250	5000	250	1000	ND
1,2-Dibromo-3-chloropropane	1000	5000	1000	1000	ND
1,2-Dibromoethane	250	5000	250	1000	ND
1,2-Dichlorobenzene	125	5000	125	1000	ND
1,2-Dichloroethane	250	5000	250	1000	ND
1,2-Dichloropropane	125	5000	125	1000	ND
1,3,5-Trimethylbenzene	250	5000	250	1000	ND
1,3-Dichlorobenzene	250	5000	250	1000	ND ↓ ↓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

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KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117558
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 10-MAY-02 09:39
 Concentration Units: ug/L File ID: 6M30754

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,3-Dichloropropane	200	5000	200	1000	ND <i>R D</i>
1,4-Dichlorobenzene	125	5000	125	1000	ND
2,2-Dichloropropane	250	5000	250	1000	ND
2-Butanone	2500	100000	2500	1000	ND
2-Chloroethyl vinyl ether	10000	10000	10000	1000	ND
2-Chlorotoluene	125	5000	125	1000	ND
2-Hexanone	2500	10000	2500	1000	ND
4-Chlorotoluene	250	5000	250	1000	ND
4-Methyl-2-pentanone	2500	10000	2500	1000	ND <i>↓ ↓</i>
Acetone	2500	100000	100000	1000	
Benzene	125	5000	125	1000	ND <i>R D</i>
Bromobenzene	125	5000	125	1000	ND
Bromochloromethane	200	5000	200	1000	ND
Bromodichloromethane	250	5000	250	1000	ND
Bromoform	540	5000	540	1000	ND
Bromomethane	500	10000	500	1000	ND
Carbon disulfide	500	5000	500	1000	ND
Carbon tetrachloride	250	5000	250	1000	ND <i>↓ ↓</i>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

mm 5/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117558
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 10-MAY-02 09:39
 Concentration Units: ug/L File ID: 6M30754

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	125	5000	125	1000	ND <i>W W code</i>
Chlorodibromomethane	250	5000	250	1000	ND
Chloroethane	500	10000	500	1000	ND
Chloroform	125	5000	125	1000	ND
Chloromethane	250	10000	250	1000	ND
Dibromomethane	250	5000	250	1000	ND
Dichlorodifluoromethane	250	10000	250	1000	ND
Ethylbenzene	250	5000	250	1000	ND
Hexachlorobutadiene	250	5000	250	1000	ND
Isopropylbenzene	250	5000	250	1000	ND
Methylene chloride	250	5000	250	1000	ND
Naphthalene	200	10000	200	1000	ND
Styrene	125	5000	125	1000	ND
Tetrachloroethene	250	5000	250	1000	ND
Toluene	250	5000	250	1000	ND
Trichloroethene	250	5000	250	1000	ND
Trichlorofluoromethane	250	10000	250	1000	ND
Vinyl acetate	2500	10000	2500	1000	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

mw 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260B Preparatory Method: 8260B\5030B AAB # : WG117558
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 * Solids: 0 Initial Calibration ID: HPMS6 06-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 10-MAY-02 09:39
 Concentration Units: ug/L File ID: 6M30754

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Vinyl chloride	250	10000	250	1000	ND <i>W W Code</i> R D
cis-1,2-Dichloroethene	250	5000	250	1000	ND
cis-1,3-Dichloropropene	250	5000	250	1000	ND
m-,p-Xylene	500	5000	500	1000	ND
n-Butylbenzene	250	5000	250	1000	ND
n-Propylbenzene	125	5000	125	1000	ND
o-Xylene	250	5000	250	1000	ND
p-Isopropyltoluene	250	5000	250	1000	ND
sec-Butylbenzene	250	5000	250	1000	ND
tert-Butylbenzene	250	5000	250	1000	ND
trans-1,2-Dichloroethene	250	5000	250	1000	ND
trans-1,3-Dichloropropene	500	5000	500	1000	ND ↓ ↓

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	92.0	80 - 120	
4-Bromofluorobenzene	109	86 - 115	
Dibromofluoromethane	92.1	86 - 118	
Toluene-d8	105	88 - 110	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

Chris Stull

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Semivolatile Organic Analyses

LAB ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

SW-846 8270C, TCLP Semi-Voa

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60964	3510C	1	1/31/02 19:44	RLW	62169

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
106-46-7	1,4-Dichlorobenzene	ND	0.050	0.0019	mg/L
95-95-4	2,4,5-Trichlorophenol	ND	0.050	0.0008	mg/L
88-06-2	2,4,6-Trichlorophenol	ND	0.050	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	ND	0.050	0.0005	mg/L
1319-77-3	Cresols	ND	0.100	0.0025	mg/L
118-74-1	Hexachlorobenzene	ND	0.050	0.0009	mg/L
87-68-3	Hexachlorobutadiene	ND	0.050	0.0019	mg/L
67-72-1	Hexachloroethane	ND	0.050	0.0021	mg/L
98-95-3	Nitrobenzene	ND	0.050	0.0029	mg/L
87-86-5	Pentachlorophenol	ND	0.100	0.0059	mg/L
110-86-1	Pyridine	ND	0.050	0.0038	mg/L
1319-77-3MP	m,p-Cresol	ND	0.050	0.0013	mg/L
95-48-7	o-Cresol	ND	0.050	0.0028	mg/L

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CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
4165-60-0	Nitrobenzene-d5	250	243 ug/L	97	43 - 116
321-60-8	2-Fluorobiphenyl	250	215 ug/L	86	16 - 116
1718-51-0	Terphenyl-d14	250	220 ug/L	88	47 - 137
4165-62-2	Phenol-d5	500	211 ug/L	42	10 - 113
367-12-4	2-Fluorophenol	500	289 ug/L	58	24 - 106
118-79-6	2,4,6-Tribromophenol	500	451 ug/L	90	19 - 120

RESULTS REPORTED ON A DRY WEIGHT BASIS

mw stella

SAMPLE ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

SW-846 8270C, TCLP Semi-Voa

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60964	3510C	1	1/31/02 20:14	RLW	62169

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
106-46-7	1,4-Dichlorobenzene	ND	0.050	0.0019	mg/L
95-95-4	2,4,5-Trichlorophenol	ND	0.050	0.0008	mg/L
88-06-2	2,4,6-Trichlorophenol	ND	0.050	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	ND	0.050	0.0005	mg/L
1319-77-3	Cresols	ND	0.100	0.0025	mg/L
118-74-1	Hexachlorobenzene	ND	0.050	0.0009	mg/L
87-68-3	Hexachlorobutadiene	ND	0.050	0.0019	mg/L
67-72-1	Hexachloroethane	ND	0.050	0.0021	mg/L
98-95-3	Nitrobenzene	ND	0.050	0.0029	mg/L
87-86-5	Pentachlorophenol	ND	0.100	0.0059	mg/L
110-86-1	Pyridine	ND	0.050	0.0038	mg/L
1319-77-3MP	m,p-Cresol	ND	0.050	0.0013	mg/L
95-48-7	o-Cresol	ND	0.050	0.0028	mg/L

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CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
4165-60-0	Nitrobenzene-d5	250	232 ug/L	93	43 - 116
321-60-8	2-Fluorobiphenyl	250	224 ug/L	90	16 - 116
1718-51-0	Terphenyl-d14	250	225 ug/L	90	47 - 137
4165-62-2	Phenol-d5	500	197 ug/L	39	10 - 113
367-12-4	2-Fluorophenol	500	257 ug/L	51	24 - 106
118-79-6	2,4,6-Tribromophenol	500	435 ug/L	87	19 - 120

RESULTS REPORTED ON A DRY WEIGHT BASIS

Case 8/24/02

CLIENT ID	CLIENT	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

SW-846 8270C, TCLP Semi-Voa

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60964	3510C	1	1/31/02 20:43	RLW	62169

CAS #	PARAMETER	RESULT	<i>u</i>	PQL	MDL	UNITS
106-46-7	1,4-Dichlorobenzene	ND	<i>u</i> ↓	0.050	0.0019	mg/L
95-95-4	2,4,5-Trichlorophenol	ND		0.050	0.0008	mg/L
88-06-2	2,4,6-Trichlorophenol	ND		0.050	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	ND		0.050	0.0005	mg/L
1319-77-3	Cresols	ND		0.100	0.0025	mg/L
118-74-1	Hexachlorobenzene	ND		0.050	0.0009	mg/L
87-68-3	Hexachlorobutadiene	ND		0.050	0.0019	mg/L
67-72-1	Hexachloroethane	ND		0.050	0.0021	mg/L
98-95-3	Nitrobenzene	ND		0.050	0.0029	mg/L
87-86-5	Pentachlorophenol	ND		0.100	0.0059	mg/L
110-86-1	Pyridine	ND		0.050	0.0038	mg/L
1319-77-3MP	m,p-Cresol	ND		0.050	0.0013	mg/L
95-48-7	o-Cresol	ND		0.050	0.0028	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
4165-60-0	Nitrobenzene-d5	250	244 ug/L	98	43 - 116
321-60-8	2-Fluorobiphenyl	250	223 ug/L	89	16 - 116
1718-51-0	Terphenyl-d14	250	222 ug/L	89	47 - 137
4165-62-2	Phenol-d5	500	208 ug/L	42	10 - 113
367-12-4	2-Fluorophenol	500	266 ug/L	53	24 - 106
118-79-6	2,4,6-Tribromophenol	500	423 ug/L	85	19 - 120

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMO 82702

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

SW-846 8270C, TCLP Semi-Voa

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60964	3510C	1	1/31/02 23:10	RLW	62169

CAS #	PARAMETER	RESULT	<u>α</u>	PQL	MDL	UNITS
106-46-7	1,4-Dichlorobenzene	ND	u	0.050	0.0019	mg/L
95-95-4	2,4,5-Trichlorophenol	ND	↓	0.050	0.0008	mg/L
88-06-2	2,4,6-Trichlorophenol	ND		0.050	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	ND		0.050	0.0005	mg/L
1319-77-3	Cresols	ND		0.100	0.0025	mg/L
118-74-1	Hexachlorobenzene	ND		0.050	0.0009	mg/L
87-68-3	Hexachlorobutadiene	ND		0.050	0.0019	mg/L
67-72-1	Hexachloroethane	ND		0.050	0.0021	mg/L
98-95-3	Nitrobenzene	ND		0.050	0.0029	mg/L
87-86-5	Pentachlorophenol	ND		0.100	0.0059	mg/L
110-86-1	Pyridine	ND		0.050	0.0038	mg/L
1319-77-3MP	m,p-Cresol	ND		0.050	0.0013	mg/L
95-48-7	o-Cresol	ND		0.050	0.0028	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
4165-60-0	Nitrobenzene-d5	250	214 ug/L	86	43 - 116
321-60-8	2-Fluorobiphenyl	250	223 ug/L	89	16 - 116
1718-51-0	Terphenyl-d14	250	239 ug/L	96	47 - 137
4165-62-2	Phenol-d5	500	205 ug/L	41	10 - 113
367-12-4	2-Fluorophenol	500	256 ug/L	51	24 - 106
118-79-6	2,4,6-Tribromophenol	500	444 ug/L	89	19 - 120

RESULTS REPORTED ON A DRY WEIGHT BASIS

OMCO 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,2,4-Trichlorobenzene	36.0	180	36.0	1	ND G
1,2-Dichlorobenzene	36.4	180	36.4	1	ND u
1,3-Dichlorobenzene	35.3	180	35.3	1	ND
1,4-Dichlorobenzene	37.4	180	37.4	1	ND
2,4,5-Trichlorophenol	51.8	910	51.8	1	ND
2,4,6-Trichlorophenol	46.9	180	46.9	1	ND
2,4-Dichlorophenol	44.9	180	44.9	1	ND
2,4-Dimethylphenol	41.1	180	41.1	1	ND
2,4-Dinitrophenol	117	910	117	1	ND
2,4-Dinitrotoluene	46.8	180	46.8	1	ND
2,6-Dinitrotoluene	44.5	180	44.5	1	ND
2-Chloronaphthalene	43.9	180	43.9	1	ND
2-Chlorophenol	37.3	180	37.3	1	ND
2-Methylnaphthalene	40.4	180	40.4	1	ND
2-Methylphenol	69.8	180	69.8	1	ND
2-Nitroaniline	51.0	910	51.0	1	ND
2-Nitrophenol	35.8	180	35.8	1	ND
3,3'-Dichlorobenzidine	169	360	169	1	ND v

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Chas 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
3-,4-Methylphenol	45.6	180	45.6	1	ND ^u
3-Nitroaniline	79.7	910	79.7	1	ND
4,6-Dinitro-2-methylphenol	39.9	910	39.9	1	ND
4-Bromophenyl-phenylether	41.8	180	41.8	1	ND
4-Chloro-3-methylphenol	50.6	180	50.6	1	ND
4-Chloroaniline	58.7	180	58.7	1	ND
4-Chlorophenyl-phenyl ether	48.6	180	48.6	1	ND
4-Nitroaniline	44.0	910	44.0	1	ND
4-Nitrophenol	62.7	910	62.7	1	ND
Acenaphthene	46.0	180	46.0	1	ND
Acenaphthylene	46.6	180	46.6	1	ND
Anthracene	38.6	180	38.6	1	ND
Benzo(a)anthracene	31.7	180	31.7	1	ND
Benzo(a)pyrene	28.6	180	28.6	1	ND
Benzo(b)fluoranthene	30.8	180	30.8	1	ND
Benzo(g,h,i)Perylene	40.6	180	40.6	1	ND
Benzo(k)fluoranthene	37.4	180	37.4	1	ND
Bis(2-Chloroethoxy)Methane	52.2	180	52.2	1	ND ^v

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

CMO 8/5/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0294001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Bis(2-Chloroethyl) ether	44.6	180	44.6	1	ND <i>u</i>
Butylbenzylphthalate	34.1	180	34.1	1	ND
Carbazole	40.2	180	40.2	1	ND
Chrysene	44.7	180	44.7	1	ND
Di-N-Butylphthalate	34.5	180	34.5	1	ND
Di-n-octylphthalate	33.8	180	33.8	1	ND
Dibenzo(a,h)Anthracene	42.8	180	42.8	1	ND
Dibenzofuran	47.6	180	47.6	1	ND
Diethylphthalate	53.8	180	53.8	1	ND
Dimethylphthalate	50.3	180	50.3	1	ND
Fluoranthene	31.2	180	31.2	1	ND
Fluorene	48.7	180	48.7	1	ND
Hexachlorobenzene	44.1	180	44.1	1	ND
Hexachlorobutadiene	40.7	180	40.7	1	ND
Hexachlorocyclopentadiene	96.3	180	96.3	1	ND
Hexachloroethane	36.0	180	36.0	1	ND
Indeno(1,2,3-cd)pyrene	39.7	180	39.7	1	ND
Isophorone	47.9	180	47.9	1	ND <i>v</i>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

MS 8/2/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBF8-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
N-Nitroso-di-n-propylamine	39.0	180	39.0	1	ND <i>u</i>
N-Nitrosodiphenylamine	52.5	180	52.5	1	ND
Naphthalene	40.2	180	40.2	1	ND
Nitrobenzene	37.9	180	37.9	1	ND
Pentachlorophenol	22.4	910	22.4	1	ND
Phenanthrene	48.0	180	48.0	1	ND
Phenol	34.8	180	34.8	1	ND
Pyrene	33.6	180	33.6	1	ND
bis(2-Chloroisopropyl) ether	45.7	180	45.7	1	ND
bis(2-Ethylhexyl) phthalate	43.6	180	43.6	1	ND <i>u</i>

Surrogate	Recovery	Control Limits	Qualifier
2,4,6-Tribromophenol	44.3	19 - 122	
2-Fluorobiphenyl	52.3	30 - 115	
2-Fluorophenol	47.2	25 - 121	
Nitrobenzene-d5	50.4	23 - 120	
P-Terphenyl-d14	53.9	18 - 137	
Phenol-d5	50.1	24 - 113	

Internal Std	Qualifier
1,4-Dichlorobenzene-d4	
Naphthalene-d8	
Acenaphthene-d10	
Phenanthrene-d10	
Chrysene-d12	
Perylene-d12	

OKO 8/24/02

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270C Preparatory Method: 8270C\3510C AAB # : WG117655
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS3 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 13-MAY-02 21:29
 Concentration Units: ug/L File ID: 3M25996

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,2,4-Trichlorobenzene	2.50	5.0	2.50	1	ND <i>u</i>
1,2-Dichlorobenzene	2.50	5.0	2.50	1	ND
1,3-Dichlorobenzene	2.50	5.0	2.50	1	ND
1,4-Dichlorobenzene	2.50	5.0	2.50	1	ND
2,4,5-Trichlorophenol	2.50	5.0	2.50	1	ND
2,4,6-Trichlorophenol	2.50	5.0	2.50	1	ND
2,4-Dichlorophenol	2.50	5.0	2.50	1	ND
2,4-Dimethylphenol	2.50	5.0	2.50	1	ND
2,4-Dinitrophenol	12.5	25	12.5	1	ND
2,4-Dinitrotoluene	2.50	5.0	2.50	1	ND
2,6-Dinitrotoluene	2.50	5.0	2.50	1	ND
2-Chloronaphthalene	2.50	5.0	2.50	1	ND
2-Chlorophenol	2.50	5.0	2.50	1	ND
2-Methylnaphthalene	2.50	5.0	2.50	1	ND
2-Methylphenol	2.50	5.0	2.50	1	ND
2-Nitroaniline	2.50	25	2.50	1	ND
2-Nitrophenol	2.50	5.0	2.50	1	ND
3,3'-Dichlorobenzidine	2.50	10	2.50	1	ND <i>✓</i>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Case 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270C Preparatory Method: 8270C\3510C AAB # : WG117655
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 ‡ Solids: 0 Initial Calibration ID: HPMS3 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 13-MAY-02 21:22
 Concentration Units: ug/L File ID: 3M25996

Analyte	MDL	RL	Concentration	Dilution	Qualifier
3-,4-Methylphenol	5.00	5.0	5.00	1	ND ^Q u
3-Nitroaniline	2.50	25	2.50	1	ND
4,6-Dinitro-2-methylphenol	12.5	25	12.5	1	ND
4-Bromophenyl-phenylether	2.50	5.0	2.50	1	ND
4-Chloro-3-methylphenol	2.50	5.0	2.50	1	ND
4-Chloroaniline	5.00	5.0	5.00	1	ND
4-Chlorophenyl-phenyl ether	2.50	5.0	2.50	1	ND
4-Nitroaniline	2.50	25	2.50	1	ND
4-Nitrophenol	2.50	25	2.50	1	ND
Acenaphthene	2.50	5.0	2.50	1	ND
Acenaphthylene	2.50	5.0	2.50	1	ND
Anthracene	2.50	5.0	2.50	1	ND
Benzo(a)anthracene	2.50	5.0	2.50	1	ND
Benzo(a)pyrene	2.50	5.0	2.50	1	ND
Benzo(b)fluoranthene	2.50	5.0	2.50	1	ND
Benzo(g,h,i)Perylene	2.50	5.0	2.50	1	ND
Benzo(k)fluoranthene	2.50	5.0	2.50	1	ND
Benzoic acid	2.50	25	2.50	1	ND ^u

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

MW 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270C Preparatory Method: 8270C\3510C AAB # : WGL17655
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS3 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 13-MAY-02 21:29
 Concentration Units: ug/L File ID: 3M25996

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzyl alcohol	2.50	5.0	2.50	1	ND <i>u</i>
Bis(2-Chloroethoxy)Methane	2.50	5.0	2.50	1	ND
Bis(2-Chloroethyl)ether	2.50	5.0	2.50	1	ND
Butylbenzylphthalate	2.50	5.0	2.50	1	ND
Chrysene	2.50	5.0	2.50	1	ND
Di-N-Butylphthalate	2.50	5.0	2.50	1	ND
Di-n-octylphthalate	2.50	5.0	2.50	1	ND
Dibenzo(a,h)Anthracene	2.50	5.0	2.50	1	ND
Dibenzofuran	2.50	5.0	2.50	1	ND
Diethylphthalate	2.50	5.0	2.50	1	ND
Dimethylphthalate	2.50	5.0	2.50	1	ND
Fluoranthene	2.50	5.0	2.50	1	ND
Fluorene	2.50	5.0	2.50	1	ND
Hexachlorobenzene	2.50	5.0	2.50	1	ND
Hexachlorobutadiene	2.50	5.0	2.50	1	ND
Hexachlorocyclopentadiene	5.00	5.0	5.00	1	ND
Hexachloroethane	2.50	5.0	2.50	1	ND
Indeno(1,2,3-cd)pyrene	2.50	5.0	2.50	1	ND <i>v</i>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Steve Grant

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270C Preparatory Method: 8270C\3510C AAB # : WG117655
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15443-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS3 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 13-MAY-02 21:29
 Concentration Units: ug/L File ID: 3M25996

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Isophorone	2.50	5.0	2.50	1	ND <i>u</i>
N-Nitroso-di-n-propylamine	2.50	5.0	2.50	1	ND
N-Nitrosodiphenylamine	2.50	5.0	2.50	1	ND
Naphthalene	2.50	5.0	2.50	1	ND
Nitrobenzene	2.50	5.0	2.50	1	ND
Pentachlorophenol	2.50	25	2.50	1	ND
Phenanthrene	2.50	5.0	2.50	1	ND
Phenol	2.50	5.0	2.50	1	ND
Pyrene	2.50	5.0	2.50	1	ND
bis(2-Chloroisopropyl)ether	2.50	5.0	2.50	1	ND
bis(2-Ethylhexyl)phthalate	2.50	5.0	2.50	1	ND <i>v</i>

Surrogate	Recovery	Control Limits	Qualifier
2,4,6-Tribromophenol	99.1	10 - 123	
2-Fluorobiphenyl	57.3	43 - 116	
2-Fluorophenol	33.9	21 - 100	
Nitrobenzene-d5	62.9	35 - 114	
Phenol-d5	29.5	10 - 94	
p-Terphenyl-d14	81.5	33 - 141	

Internal Std	Qualifier
1,4-Dichlorobenzene-d4	
Naphthalene-d8	
Acenaphthene-d10	
Phenanthrene-d10	
Chrysene-d12	
Perylene-d12	

CMC 8/21/02

Comments:

TPH (Florida PRO) Analyses

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110801	027-15PREEB-W-9	Water	3/6/02 14:48	3/7/02 09:10	3/18/02 18:02

Florida PRO

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/11/02 16:00	108883	Florida PRO	1	3/13/02 13:43	SAB	108884

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
FLPRO-01	Petroleum Hydrocarbons	ND	<u>U</u>	100	40.7	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
84-15-1	o-Terphenyl	100	92.6 ug/L	93	50 - 150
7194-86-7	Nonatriacontane	600	463 ug/L	77	50 - 150

RESULTS REPORTED ON A WET WEIGHT BASIS

msw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110802	027-15POSTEB-W-9	Water	3/6/02 16:22	3/7/02 09:10	3/18/02 18:02

Florida PRO

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/11/02 16:00	108883	Florida PRO	1	3/13/02 14:38	SAB	108884

CAS #	PARAMETER	RESULT	α	PQL	MDL	UNITS
FLPRO-01	Petroleum Hydrocarbons	ND	u	100	40.7	ug/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
84-15-1	o-Terphenyl	100	83.7 ug/L	84	50 - 150
7194-86-7	Nonatriacontane	600	457 ug/L	76	50 - 150

RESULTS REPORTED ON A WET WEIGHT BASIS

CMW 3/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110804	027-15-DP02-06-S-02	Solid	3/6/02 15:50	3/7/02 09:10	3/18/02 18:02

Florida PRO

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/11/02 16:00	108881	Florida PRO	1	3/13/02 17:21	SAB	108884

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
FLPRO-01	Petroleum Hydrocarbons	ND	4260	2940	ug/Kg

α
u

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
84-15-1	o-Terphenyl	4000	3430 ug/Kg	86	50 - 150
7194-86-7	Nonatriacontane	24000	23400 ug/Kg	97	50 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

ms 8/24/02

GC #	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110807	027-15-DP02-FD-S-02	Solid	3/6/02 00:00	3/7/02 09:10	3/18/02 18:02

Florida PRO

DATE/TIME	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/11/02 16:00	108881	Florida PRO	1	3/13/02 21:55	SAB	108884

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
FLPRO-01	Petroleum Hydrocarbons	ND	4290	2960	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
84-15-1	o-Terphenyl	4000	3580 ug/Kg	90	50 - 150
7194-86-7	Nonatriacontane	24000	24000 ug/Kg	100	50 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20203110808	027-15-DP02-11-S-02	Solid	3/6/02 15:10	3/7/02 09:10	3/18/02 18:02

Florida PRO

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/11/02 16:00	108881	Florida PRO	1	3/13/02 22:50	SAB	108884

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
FLPRO-01	Petroleum Hydrocarbons	22600	=	4280	2950	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
84-15-1	o-Terphenyl	4000	3690 ug/Kg	92	50 - 150
7194-86-7	Nonatriacontane	24000	21500 ug/Kg	90	50 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

aws 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8015 Preparatory Method: 8015 MOD\3550B AAB # : WG115499
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP2 26-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 11:06
 Concentration Units: ug/kg File ID: 2G19690

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	5520	11000	5520	1	ND <i>u</i>

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	90.5	43 - 136	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

omw @ 12/1/02

Organochlorine Pesticides

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

3W-846 8081A, TCLP Pesticides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60965	3510C	1	1/31/02 13:22	TLS	61069

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
57-74-9	Chlordane	ND	u	0.02500	0.00016	mg/L
72-20-8	Endrin	ND		0.00100	0.00013	mg/L
76-44-8	Heptachlor	ND		0.00050	0.00008	mg/L
1024-57-3	Heptachlor epoxide	ND		0.00050	0.0001	mg/L
72-43-5	Methoxychlor	ND		0.02500	0.00065	mg/L
8001-35-2	Toxaphene	ND		0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	ND		0.00050	0.00006	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	5	3.78 ug/L	76	60 - 150
2051-24-3	Decachlorobiphenyl	5	4.31 ug/L	86	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

omo 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

JW-846 8081A, TCLP Pesticides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60965	3510C	1	1/31/02 13:52	TLS	61069

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
57-74-9	Chlordane	ND	u	0.02500	0.00016	mg/L
72-20-8	Endrin	ND		0.00100	0.00013	mg/L
76-44-8	Heptachlor	ND		0.00050	0.00008	mg/L
1024-57-3	Heptachlor epoxide	ND		0.00050	0.0001	mg/L
72-43-5	Methoxychlor	ND		0.02500	0.00065	mg/L
8001-35-2	Toxaphene	ND		0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	ND	↓	0.00050	0.00006	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	5	6.8 ug/L	136	60 - 150
2051-24-3	Decachlorobiphenyl	5	7.14 ug/L	143	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

cms 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

JW-846 8081A, TCLP Pesticides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60965	3510C	1	1/30/02 20:27	TLS	61069

CAS #	PARAMETER	RESULT	<u>Cx</u>	PQL	MDL	UNITS
57-74-9	Chlordane	ND	u	0.02500	0.00016	mg/L
72-20-8	Endrin	ND	↓	0.00100	0.00013	mg/L
76-44-8	Heptachlor	ND		0.00050	0.00008	mg/L
1024-57-3	Heptachlor epoxide	ND		0.00050	0.0001	mg/L
72-43-5	Methoxychlor	ND		0.02500	0.00065	mg/L
8001-35-2	Toxaphene	ND		0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	ND		0.00050	0.00006	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	5	4.43 ug/L	89	60 - 150
2051-24-3	Decachlorobiphenyl	5	5.9 ug/L	118	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

Cmo 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

3W-846 8081A, TCLP Pesticides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60965	3510C	1	1/30/02 20:55	TLS	61069

CAS #	PARAMETER	RESULT	Q	PQL	MDL	UNITS
57-74-9	Chlordane	ND	u	0.02500	0.00016	mg/L
72-20-8	Endrin	ND	↓	0.00100	0.00013	mg/L
76-44-8	Heptachlor	ND		0.00050	0.00008	mg/L
1024-57-3	Heptachlor epoxide	ND		0.00050	0.0001	mg/L
72-43-5	Methoxychlor	ND		0.02500	0.00065	mg/L
8001-35-2	Toxaphene	ND		0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	ND		0.00050	0.00006	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	5	4.48 ug/L	90	60 - 150
2051-24-3	Decachlorobiphenyl	5	5.54 ug/L	111	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

OMO 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8081 Preparatory Method: 8081A\3550B AAB # : WG115454
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP9 27-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 01-APR-02 19:41
 Concentration Units: ug/kg File ID: 9G19330.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
4,4'-DDD	0.911	3.6	0.911	1	ND u
4,4'-DDE	0.911	3.6	0.911	1	ND
4,4'-DDT	0.911	3.6	0.911	1	ND
Aldrin	0.442	1.8	0.442	1	ND
Dieldrin	0.911	3.6	0.911	1	ND
Endosulfan I	0.442	1.8	0.442	1	ND
Endosulfan II	0.911	3.6	0.911	1	ND
Endosulfan sulfate	0.911	3.6	0.911	1	ND
Endrin	0.911	3.6	0.911	1	ND
Endrin aldehyde	0.911	3.6	0.911	1	ND
Endrin ketone	0.911	3.6	0.911	1	ND
Heptachlor	0.442	1.8	0.442	1	ND
Heptachlor epoxide	0.442	1.8	0.442	1	ND
Methoxychlor	0.911	18	0.911	1	ND
Toxaphene	18.5	37	18.5	1	ND
alpha Chlordane	0.442	1.8	0.442	1	ND
alpha-BHC	0.442	1.8	0.442	1	ND
beta-BHC	0.442	1.8	0.442	1	ND u

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Mmc 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8081 Preparatory Method: 8081A\3550B AAB # : WG115454
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-WQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP9 27-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 01-APR-02 19:41
 Concentration Units: ug/kg File ID: 9G19330.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
delta-BHC	0.442	1.8	0.442	1	ND [Ⓢ] ↓
gamma Chlordane	0.442	1.8	0.442	1	ND ↓
gamma-BHC (Lindane)	0.442	1.8	0.442	1	ND ↓

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	86.3	29 - 133	
Decachlorobiphenyl	111	30 - 173	

Internal Std	Qualifier

Comments:

EMW 8/24/02

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8081A Preparatory Method: 8081A\3510C AAB # : WQ117621
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HP9 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 10-MAY-02 Date Analyzed: 11-MAY-02 02:32
 Concentration Units: ug/L File ID: 9G19743.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
4,4'-DDD	0.0250	0.10	0.0250	1	ND U <i>Q Qcode</i>
4,4'-DDE	0.0250	0.10	0.0250	1	ND ↓
4,4'-DDT	0.0250	0.10	0.0990	1	J U B
Aldrin	0.0100	0.050	0.0100	1	ND U
Dieldrin	0.0250	0.10	0.0250	1	ND
Endosulfan I	0.0100	0.050	0.0100	1	ND
Endosulfan II	0.0250	0.10	0.0250	1	ND
Endosulfan sulfate	0.0250	0.10	0.0250	1	ND
Endrin	0.0250	0.10	0.0250	1	ND
Endrin aldehyde	0.0250	0.10	0.0250	1	ND
Endrin ketone	0.0250	0.10	0.0250	1	ND
Heptachlor	0.0100	0.050	0.0100	1	ND
Heptachlor epoxide	0.0100	0.050	0.0100	1	ND
Methoxychlor	0.0250	0.50	0.0250	1	ND
Toxaphene	0.500	1.0	0.500	1	ND
alpha Chlordane	0.0100	0.050	0.0100	1	ND
alpha-BHC	0.0100	0.050	0.0100	1	ND
beta-BHC	0.0100	0.050	0.0100	1	ND ↓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Chris Taylor

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8081A Preparatory Method: 8081A\3510C AAB # : WG117621
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HP9 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 10-MAY-02 Date Analyzed: 11-MAY-02 02:32
 Concentration Units: ug/L File ID: 9G19743.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
delta-BHC	0.0100	0.050	0.0100	1	ND ^Q d
gamma Chlordane	0.0100	0.050	0.0100	1	ND ↓
gamma-BHC (Lindane)	0.0100	0.050	0.0100	1	ND ↓

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	67.2	30 - 132	
Decachlorobiphenyl	44.3	36 - 144	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

CMO 8/24/02

Organochlorine Herbicides

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

JW-846 8151A, TCLP Herbicides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:00	62583	3510C	1	2/1/02 18:33	TNT	62584

CAS #	PARAMETER	<i>Code</i>	RESULT	<i>Q</i>	PQL	MDL	UNITS
94-75-7	2,4'-D	<i>S</i>	ND	<i>US</i>	0.050	0.002	mg/L
93-72-1	2,4,5-TP (Silvex)	<i>S</i>	ND	<i>US</i>	0.005	0.002	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
19719-28-9	DCAA	40	19.5 ug/L	49	37 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

One bottle

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

JW-846 8151A, TCLP Herbicides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:00	62583	3510C	1	2/1/02 18:53	TNT	62584

CAS #	PARAMETER	<i>Q-Code</i>	RESULT	<i>Q</i>	PQL	MDL	UNITS
94-75-7	2,4'-D	<i>S</i>	ND	<i>WJ</i>	0.050	0.002	mg/L
93-72-1	2,4,5-TP (Silvex)	<i>S</i>	ND	<i>WJ</i>	0.005	0.002	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
19719-28-9	DCAA	MI 40	0 ug/L	0 *	37 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

JW-846 8151A, TCLP Herbicides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
2/4/02 11:00	67576	3510C	1	2/5/02 18:14	TNT	67777

CAS #	PARAMETER	<i>Q-Code</i>	RESULT	<i>Q</i>	PQL	MDL	UNITS
94-75-7	2,4'-D	<i>S</i>	ND	<i>WJ</i>	0.050	0.002	mg/L
93-72-1	2,4,5-TP (Silvex)	<i>S</i>	ND	<i>WJ</i>	0.005	0.002	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
19719-28-9	DCAA	40	23.4 ug/L	59	37 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

cmo 2/14/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

3W-846 8151A, TCLP Herbicides

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:00	62583	3510C	1	2/1/02 19:32	TNT	62584

CAS #	PARAMETER	Q-Calc	RESULT	Q	PQL	MDL	UNITS
94-75-7	2,4'-D	S	ND	WJ	0.050	0.002	mg/L
93-72-1	2,4,5-TP (Silvex)		ND	WJ	0.005	0.002	mg/L

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
19719-28-9	DCAA	40	30.8 ug/L	77	37 - 140

RESULTS REPORTED ON A DRY WEIGHT BASIS

Chris Stalla

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8151 Preparatory Method: 8151A\METHOD AAB # : WG115556
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP1 26-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 14:18
 Concentration Units: ug/kg File ID: 1G4755.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
2,4,5-T	2.21	4.4	2.21	1	ND [Ⓞ] U
2,4,5-TP (Silvex)	1.66	3.3	1.66	1	ND
2,4-D	22.1	44	22.1	1	ND
2,4-DB	22.1	44	22.1	1	ND
Dalapon	55.2	110	55.2	1	ND
Dicamba	2.21	4.4	2.21	1	ND
Dichloroprop	22.1	44	22.1	1	ND
Dinoseb	11.0	22	11.0	1	ND
MCPA	2210	4400	2210	1	ND
MCPP	2210	4400	2210	1	ND
Pentachlorophenol	2.21	4.4	2.21	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4-Dichlorophenylacetic acid	86.9	51 - 146	

Internal Std	Qualifier

Comments:

CMC 8/24/02

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8151A Preparatory Method: 8151A\METHOD AAB # : WG117585
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HP1 26-MAR-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 10-MAY-02 20:36
 Concentration Units: ug/L File ID: 1G4849.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
2,4,5-T	0.100	0.20	0.100	1	ND
2,4,5-TP (Silvex)	0.100	0.20	0.100	1	ND
2,4-D	1.00	2.0	1.00	1	ND
2,4-DB	1.00	2.0	1.00	1	ND
Dalapon	2.50	5.0	2.50	1	ND
Dicamba	0.100	0.20	0.100	1	ND
Dichloroprop	1.00	2.0	1.00	1	ND
Dinoseb	0.500	1.0	0.500	1	ND
MCPA	100	250	100	1	ND
MCPP	100	250	100	1	ND
Pentachlorophenol	0.100	0.20	0.100	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4-Dichlorophenylacetic acid	75.5	20 - 144	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Handwritten signature: CW 8/24/02

Polychlorinated Biphenyls

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

3082, PCBs, Solid

REP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/29/02 15:30	60463	3540C	1	1/30/02 12:32	TLS	60863

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
12674-11-2	Aroclor-1016	ND	u	42.3	3.33	ug/Kg
11104-28-2	Aroclor-1221	ND		42.3	3.33	ug/Kg
11141-16-5	Aroclor-1232	ND		42.3	3.33	ug/Kg
53469-21-9	Aroclor-1242	ND		42.3	5.38	ug/Kg
12672-29-6	Aroclor-1248	ND		42.3	5.38	ug/Kg
11097-69-1	Aroclor-1254	ND		42.3	5.38	ug/Kg
11096-82-5	Aroclor-1260	ND		42.3	5.38	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	16.7	17.1 ug/Kg	103	60 - 150
2051-24-3	Decachlorobiphenyl	16.7	19.2 ug/Kg	115	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

OMO 8/6/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

1082, PCBs, Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/29/02 15:30	60463	3540C	1	1/30/02 13:57	TLS	60863

CAS #	PARAMETER	RESULT	<u>α</u>	PQL	MDL	UNITS
12674-11-2	Aroclor-1016	ND	u	43.2	3.41	ug/Kg
11104-28-2	Aroclor-1221	ND	↓	43.2	3.41	ug/Kg
11141-16-5	Aroclor-1232	ND		43.2	3.41	ug/Kg
53469-21-9	Aroclor-1242	ND		43.2	5.50	ug/Kg
12672-29-6	Aroclor-1248	ND		43.2	5.50	ug/Kg
11097-69-1	Aroclor-1254	ND		43.2	5.50	ug/Kg
11096-82-5	Aroclor-1260	ND		43.2	5.50	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	16.7	17.6 ug/Kg	106	60 - 150
2051-24-3	Decachlorobiphenyl	16.7	21.4 ug/Kg	128	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

omo 8/24/02

SPAL ID	ORIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

082, PCBs, Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/29/02 15:30	60463	3540C	1	1/30/02 14:26	TLS	60863

CAS #	PARAMETER	RESULT	<i>Q</i>	PQL	MDL	UNITS
12674-11-2	Aroclor-1016	ND	<i>u</i>	44.7	3.52	ug/Kg
11104-28-2	Aroclor-1221	ND		44.7	3.52	ug/Kg
11141-16-5	Aroclor-1232	ND		44.7	3.52	ug/Kg
53469-21-9	Aroclor-1242	ND		44.7	5.69	ug/Kg
12672-29-6	Aroclor-1248	ND		44.7	5.69	ug/Kg
11097-69-1	Aroclor-1254	ND		44.7	5.69	ug/Kg
11096-82-5	Aroclor-1260	ND	<i>u</i>	44.7	5.69	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	16.7	14.8 ug/Kg	89	60 - 150
2051-24-3	Decachlorobiphenyl	16.7	17.2 ug/Kg	103	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

mmo 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

J082, PCBs, Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/29/02 15:30	60463	3540C	1	1/30/02 14:54	TLS	60863

CAS #	PARAMETER	RESULT	<u>Q</u>	PQL	MDL	UNITS
12674-11-2	Aroclor-1016	ND	u	44.2	3.48	ug/Kg
11104-28-2	Aroclor-1221	ND	↓	44.2	3.48	ug/Kg
11141-16-5	Aroclor-1232	ND		44.2	3.48	ug/Kg
53469-21-9	Aroclor-1242	ND		44.2	5.63	ug/Kg
12672-29-6	Aroclor-1248	ND		44.2	5.63	ug/Kg
11097-69-1	Aroclor-1254	ND		44.2	5.63	ug/Kg
11096-82-5	Aroclor-1260	ND		44.2	5.63	ug/Kg

CAS #	SURROGATE NAME	CONC ADDED	CONC REC	% RECOVERY	REC-LIMITS
877-09-8	Tetrachloro-m-xylene	16.7	15.6 ug/Kg	94	60 - 150
2051-24-3	Decachlorobiphenyl	16.7	18.8 ug/Kg	113	60 - 150

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMO 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8082 Preparatory Method: 8082\3550B AAB # : WQ115489
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP4 19-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:26
 Concentration Units: ug/kg File ID: 4GF13838

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	9.11	18	9.11	1	ND
Aroclor-1221	9.11	18	9.11	1	ND
Aroclor-1232	9.11	18	9.11	1	ND
Aroclor-1242	9.11	18	9.11	1	ND
Aroclor-1248	9.11	18	9.11	1	ND
Aroclor-1254	9.11	18	9.11	1	ND
Aroclor-1260	9.11	18	9.11	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-M-Xylene	104	29 - 133	
Decachlorobiphenyl	109	30 - 173	

Internal Std	Qualifier

Comments:

Chris 8/24/02

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8082 Preparatory Method: 8082\3510C AAB # : WG117674
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15443-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: HP4 01-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 10-MAY-02 Date Analyzed: 13-MAY-02 10:17
 Concentration Units: ug/L File ID: 4GF14305

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	0.250	0.50	0.250	1	ND ^Q
Aroclor-1221	0.250	0.50	0.250	1	ND
Aroclor-1232	0.250	0.50	0.250	1	ND
Aroclor-1242	0.250	0.50	0.250	1	ND
Aroclor-1248	0.250	0.50	0.250	1	ND
Aroclor-1254	0.250	0.50	0.250	1	ND
Aroclor-1260	0.250	0.50	0.250	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	63.6	30 - 132	
Decachlorobiphenyl	40.1	36 - 144	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

emo 8/24/02

Metals Analyses

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C111648-1

Client ID: 027-15GS68-W-S1

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 11/29/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TDEC09A

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

CMD 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C111648-2

Client ID: 027-15GR03-W-S1

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 11/29/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	490	ug/L			P	3.0	TJA61E Trace	TDEC09A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMW 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C111648-4

Client ID: 027-15GS99-W-S1

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 11/29/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	510	ug/L			P	3.0	TJA61E Trace	TDEC09A

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

AMS 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C111648-5

Client ID: 027-15PREEB-W-S1

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 11/29/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TDEC09A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C112046-1

Client ID: 027-15GS71-W-S1

Contract: NAS Pensacola Site 15 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: WATER Date Received: 12/3/01 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TDEC09A

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

CPMS 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111648

Method Type: SW846

Sample ID: C112046-2

Client ID: 027-15GR36-W-S1

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 12/3/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	70	ug/L			P	3.0	TJA61E Trace	TDEC09A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C203721

Method Type: SW846

Sample ID: C203721-1

Client ID: 027-15SS400-S-2

Contract: NAS Pensacola Site 15 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: SOIL Date Received: 3/29/02 Level: LOW

% Solids: 93

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	9.4	mg/Kg			P	0.29	TJA61E Trace	TAPR02B

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

OMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206324

Method Type: SW846

Sample ID: C206324-1

Client ID: 027-15GR03-W-S2

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	650	ug/L			P	3.0	TJA61E Trace	TJUNE19A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206324

Method Type: SW846

Sample ID: C206324-3

Client ID: 027-15GS68-W-S2

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJUNE19A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMO 8/15/12

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206324

Method Type: SW846

Sample ID: C206324-4

Client ID: 027-15GS70-W-S2

Contract: NAS Pensacola Site 15 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: WATER Date Received: 6/13/02 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJUNE19A

Color Before: _____ Clarity Before: _____ Texture: _____
 Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

AMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206324

Method Type: SW846

Sample ID: C206324-5

Client ID: 027-15GS71-W-S2

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJUNE19A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

CMW 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206324

Method Type: SW846

Sample ID: C206324-7

Client ID: 027-15PREEB-W-S2

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJUNE19A

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

Comments 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206729

Method Type: SW846

Sample ID: C206729-3

Client ID: 027-15PREEB-W-S2B

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/27/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJULY05A
7439-89-6	Iron	100	ug/L	U		P	7.0	TJA61E Tracc	TJULY05A ①

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

① Reported under SDG # C111651

CMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111651

Method Type: SW846

Sample ID: C111651-2

Client ID: 027-43-04S-W-S1

Contract: NAS Pensacola Site 43 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: WATER Date Received: 11/29/01 Level: LOW

% Solids:

Qual Code

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	91	ug/L	B	<i>U</i>	<i>B</i>	7.0	TJA61E Trace	TDEC09A

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

CMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C111651

Method Type: SW846

Sample ID: C111651-3

Client ID: 027-43-06S-W-S1

Contract: NAS Pensacola Site 43 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: WATER Date Received: 11/29/01 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	110	ug/L	/	U	B	7.0	TJA61E Trace	TDEC09A

Qual Code

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

CMW 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C112283

Method Type: SW846

Sample ID: C112283-2

Client ID: 027-PEN-43-03S-W-S1

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 12/12/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	64	ug/L	P	U	B ^{Qual Code}	7.0	TJA61E Trace	TDEC17A

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

CMW 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C112283

Method Type: SW846

Sample ID: C112283-3

Client ID: 027-PEN-43-5S-W-S1

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 12/12/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	130	ug/L	/	U	B P	7.0	TJA61E Trace	TDEC17A

Qual Code

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

CMW 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C112283

Method Type: SW846

Sample ID: C112283-4

Client ID: 027-PEN-43-07S-W-S1

Contract: NAS Pensacola Site 43

Lab Code: STLPN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 12/12/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	130	ug/L	/	U	B	7.0	TJA61E Trace	TDEC17A

Qual Code

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

CMMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C112283

Method Type: SW846

Sample ID: C112283-5

Client ID: 027-PEN-43PREEB2-W-

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 12/12/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	100	ug/L	U		P	7.0	TJA61E Trace	TDEC17A

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

OMO 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206329

Method Type: SW846

Sample ID: C206329-3

Client ID: 027-PEN-43-04S-W-S2

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	210	ug/L			P	7.0	TJA61E Trace	TJUNE19A

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

omw 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206329

Method Type: SW846

Sample ID: C206329-5

Client ID: 027-PEN-43-06S-W-S2

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	610	ug/L			P	7.0	TJA61E Trace	TJUNE19A

Color Before: _____ **Clarity Before:** _____ **Texture:** _____
Color After: _____ **Clarity After:** _____ **Artifacts:** _____

Comments: _____

cmw 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206329

Method Type: SW846

Sample ID: C206329-6

Client ID: 027-PEN-43-PREEB-W-S2

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/13/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	100	ug/L	U		P	7.0	TJA61E Trace	TJUNE19A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

cmw 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206729

Method Type: SW846

Sample ID: C206729-2

Client ID: 027-PEN-43-02S-W-02

Contract: NAS Pensacola Site 15

Lab Code: STL PN

Case No.: N/A

SAS No.: N/A

Matrix: WATER

Date Received: 6/27/02

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	820	ug/L			P	7.0	TJA61E Trace	TJULY05A

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

cms 8/19/02

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C206729

Method Type: SW846

Sample ID: C206729-3

Client ID: 027-15PREEB-W-S2B

Contract: NAS Pensacola Site 15 Lab Code: STL PN Case No.: N/A SAS No.: N/A

Matrix: WATER Date Received: 6/27/02 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-38-2	Arsenic	5.0	ug/L	U		P	3.0	TJA61E Trace	TJULY05A (1)
7439-89-6	Iron	100	ug/L	U		P	7.0	TJA61E Trace	TJULY05A

Color Before: Clarity Before: Texture: Color After: Clarity After: Artifacts:

Comments:

Repacked under SDG C111648

CMS 8/19/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

SW-846 6010 TCLP Metals

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60983	SW-846 1311/6010B	1	1/30/02 15:38	JAC	62276

CAS #	PARAMETER	Q	Final Code	RESULT	PQL	MDL	UNITS
7440-38-2	Arsenic	u		ND	0.0500	0.0035	mg/L
7440-39-3	Barium	J	<	0.6611 5	1.00	0.0006	mg/L
7440-43-9	Cadmium	u		ND	0.0100	0.0002	mg/L
7440-47-3	Chromium			ND	0.0500	0.0005	mg/L
7439-92-1	Lead			ND	0.1000	0.0024	mg/L
7782-49-2	Selenium			ND	0.1000	0.0043	mg/L
7440-22-4	Silver			ND	0.0500	0.0004	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

mw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

SW-846 TCLP Mercury

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60984	SW-846 1311/7470A		2/1/02 8:41	JAC	62182

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
7439-97-6	Mercury	ND \bar{u}	0.00020	0.00008	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMW 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

SW-846 6010 TCLP Metals

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60983	SW-846 1311/6010B	1	1/30/02 16:04	JAC	62276

CAS #	PARAMETER	Q	Qual Code	RESULT	PQL	MDL	UNITS
7440-38-2	Arsenic	J	<	0.0481 8	0.0500	0.0035	mg/L
7440-39-3	Barium	J	<	0.2190 8	1.00	0.0006	mg/L
7440-43-9	Cadmium	J	J	0.0007 8	0.0100	0.0002	mg/L
7440-47-3	Chromium	J	J	0.0016 8	0.0500	0.0005	mg/L
7439-92-1	Lead	U		ND	0.1000	0.0024	mg/L
7782-49-2	Selenium	U	B	0.0304 8	0.1000	0.0043	mg/L
7440-22-4	Silver	J	<	0.0088 8	0.0500	0.0004	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

omw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

SW-846 TCLP Mercury

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60984	SW-846 1311/7470A		2/1/02 8:47	JAC	62182

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
7439-97-6	Mercury	ND	0.00020	0.00008	mg/L

02/08/02

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

SW-846 6010 TCLP Metals

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60983	SW-846 1311/6010B	1	1/30/02 16:09	JAC	62276

CAS #	PARAMETER	<u>Q</u>	<u>Qual Code</u>	RESULT	PQL	MDL	UNITS
7440-38-2	Arsenic	U		ND	0.0500	0.0035	mg/L
7440-39-3	Barium	=		3.16	1.00	0.0006	mg/L
7440-43-9	Cadmium	=		0.0972	0.0100	0.0002	mg/L
7440-47-3	Chromium	U		ND	0.0500	0.0005	mg/L
7439-92-1	Lead	=		24.4	* 0.1000	0.0024	mg/L
7782-49-2	Selenium	U	B	0.0280 7	0.1000	0.0043	mg/L
7440-22-4	Silver	J	<	0.0053 7	0.0500	0.0004	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

AMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

SW-846 TCLP Mercury

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60984	SW-846 1311/7470A		2/1/02 8:49	JAC	62182

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
7439-97-6	Mercury	ND <i>Q</i>	0.00020	0.00008	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

Amos 2/21/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

SW-846 6010 TCLP Metals

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60983	SW-846 1311/6010B	1	1/30/02 16:15	JAC	62276

CAS #	PARAMETER	<u>Q</u>	<u>QUAL CODE</u>	RESULT	PQL	MDL	UNITS
7440-38-2	Arsenic	U		ND	0.0500	0.0035	mg/L
7440-39-3	Barium	=		2.62	1.00	0.0006	mg/L
7440-43-9	Cadmium	=		0.0457	0.0100	0.0002	mg/L
7440-47-3	Chromium	U		ND	0.0500	0.0005	mg/L
7439-92-1	Lead	=		27.2 *	0.1000	0.0024	mg/L
7782-49-2	Selenium	U	B	0.0220 B	0.1000	0.0043	mg/L
7440-22-4	Silver	U	B	0.0006 B	0.0500	0.0004	mg/L

RESULTS REPORTED ON A DRY WEIGHT BASIS

OMO 8/24/02

CLIENT ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

SW-846 TCLP Mercury

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 10:35	60984	SW-846 1311/7470A		2/1/02 8:51	JAC	62182

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
7439-97-6	Mercury	ND	0.00020	0.00008	mg/L

omw 8/24/02

RESULTS REPORTED ON A DRY WEIGHT BASIS

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 6010 Preparatory Method: 6010B\3050B AAB # : WG115553
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: IRIS-ICP 03-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 09:37
 Concentration Units: mg/kg File ID: IR.040302.083700

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	11.1	22	12600	1	
Barium, Total	0.111	0.55	8.96	1	/ U B
Beryllium, Total	0.0133	0.55	0.0133	1	ND U
Cadmium, Total	0.0553	0.55	0.0553	1	ND U
Calcium, Total	5.53	11	103	1	/ U B
Chromium, Total	0.133	1.1	9.50	1	
Cobalt, Total	0.133	1.1	0.133	1	ND
Copper, Total	0.553	1.1	3.70	1	/ U B
Iron, Total	1.11	2.2	6000	1	
Magnesium, Total	13.3	28	150	1	/ U B
Manganese, Total	0.111	0.55	37.8	1	
Nickel, Total	0.553	2.2	2.40	1	/ U B
Potassium, Total	27.7	55	112	1	/ U B
Silver, Total	0.277	2.2	0.277	1	ND U
Sodium, Total	5.53	28	5.53	1	ND U
Vanadium, Total	0.277	0.55	13.8	1	/ U B
Zinc, Total	0.553	1.1	5.02	1	/ U B

Q.C. Code

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Ann 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 6020A Preparatory Method: 3051 AAB # : WG115563
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: ELAN-ICP 03-APR-02
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 09:03
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.111	0.22	0.111	10	ND ^u
Arsenic, Total	0.277	0.55	1.06	10	
Lead, Total	0.277	0.55	2.98	10	
Selenium, Total	0.111	0.22	0.111	10	ND ^u
Thallium, Total	0.0553	0.11	0.0553	10	ND ^u

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

APES 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 7471A Preparatory Method: METHOD AAB # : WG115530
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: P8202 02-APR-02
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 02-APR-02 16:22
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Mercury, Total	0.0199	0.28	0.0199	1	ND <i>u</i>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

omw 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 6010B Preparatory Method: 6010B\3005A AAB # : WG117594
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: PE-ICP 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 10-MAY-02 16:16
 Concentration Units: mg/L File ID: PE.051002.161609

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Total	0.0100	0.020	0.0100	5	ND ^u
Iron, Total	0.100	0.20	258	5	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

OMW 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 6010B Preparatory Method: 6010B\3005A AAB # : WG117524
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 † Solids: 0 Initial Calibration ID: PE-ICP 10-MAY-2002
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 10-MAY-02 12:12
 Concentration Units: mg/L File ID: PE.051002.121256

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.10	2.92	1	=
Barium, Total	0.00250	0.010	0.161	1	=
Beryllium, Total	0.000250	0.010	0.000250	1	ND U
Cadmium, Total	0.00250	0.010	0.00250	1	ND U
Calcium, Total	0.100	0.20	14.5	1	=
Chromium, Total	0.00250	0.020	0.00250	1	ND U
Cobalt, Total	0.00250	0.020	0.00250	1	ND U
Copper, Total	0.00500	0.020	0.199	1	=
Lead, Total	0.00250	0.0050	0.584	1	=
Magnesium, Total	0.100	0.50	4.40	1	=
Manganese, Total	0.00100	0.010	0.954	1	=
Nickel, Total	0.00500	0.040	0.00500	1	ND U
Potassium, Total	0.100	1.0	5.01	1	=
Silver, Total	0.00500	0.010	0.00500	1	ND U
Sodium, Total	0.100	0.50	72.0	1	=
Vanadium, Total	0.00500	0.010	0.0241	1	=
Zinc, Total	0.00500	0.020	1.68	1	=

Comments:

D Results >MDL but <RL are not reported

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

OMO 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 6020A Preparatory Method: 3015 AAB # : WGL17757
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 ‡ Solids: 0 Initial Calibration ID: ELAN-ICP 14-MAY-02
 Date Received: 08-MAY-02 Date Extracted: 10-MAY-02 Date Analyzed: 14-MAY-02 10:52
 Concentration Units: mg/L File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.0010	0.00551	1	✓
Selenium, Total	0.000500	0.0010	0.00590	1	
Thallium, Total	0.000100	0.00020	0.000100	1	ND ✓

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

over 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 7470A Preparatory Method: METHOD AAB # : WG117626
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: P8202 10-MAY-02
 Date Received: 08-MAY-02 Date Extracted: 09-MAY-02 Date Analyzed: 10-MAY-02 14:07
 Concentration Units: mg/L File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Mercury, Total	0.0000520	0.00020	0.000760	1	

Comments: _____

 All results, MDLs, and RLs have been corrected to dry weight, where applicable.

omw 8/24/02

Wet Chemistry Analyses

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

0045C Solid - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/30/02 11:00	OLT	60969

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	7.43	2.00		pH unit

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMMO 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

1010 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/30/02 14:32	TYJ	61570

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-3	FlashPoint	>212	50	50	Deg F

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMS 8/24/02

CAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

3012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60769	7.3.3.2	1	2/4/02 13:36	BMC	61971

CAS #	PARAMETER	<u>Q</u> <u>Code</u>	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide	<u>UJ</u> <u>L</u>	ND	264	264	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

omo 2/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290101	027-15-DP01-S-10	Solid	1/28/02 11:30	1/29/02 09:20	2/14/02 14:13

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60771	7.3.4.2	1	1/30/02 14:39	BMC	61563

CAS #	PARAMETER		RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide	4	ND	85	85	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

cmc 8/24/02

CLIENT ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

1045C Solid - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/30/02 11:00	OLT	60969

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	8.27	2.00		pH unit

RESULTS REPORTED ON A DRY WEIGHT BASIS

one 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

1010 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/31/02 10:38	TYJ	64078

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-3	FlashPoint	140	50	50	Deg F

RESULTS REPORTED ON A DRY WEIGHT BASIS

CMC 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60769	7.3.3.2	1	2/4/02 13:36	BMC	61971

CAS #	PARAMETER	<u>Q</u>	<u>Q Code</u>	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide	UJ	L	ND	270	270	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

omb 8/24/02

GCAL #	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290102	027-15-DP02-S-02	Solid	1/28/02 11:55	1/29/02 09:20	2/14/02 14:13

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60771	7.3.4.2	1	1/30/02 14:39	BMC	61563

CAS #	PARAMETER	<u>G</u> <u>u</u>	RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide		ND	86	86	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

OMW 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

9045C Solid - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/30/02 11:00	OLT	60969

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	7.22	2.00		pH unit

RESULTS REPORTED ON A DRY WEIGHT BASIS

Anna 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

1010 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/31/02 10:38	TYJ	64078

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-3	FlashPoint	>212	50	50	Deg F

RESULTS REPORTED ON A DRY WEIGHT BASIS

AMO 8/24/02

GRAN ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

J012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60769	7.3.3.2	1	2/4/02 13:36	BMC	61971

CAS #	PARAMETER	Q	Q-Code	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide	UJ	L	ND	280	280	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

ams 8/24/12

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290103	027-43-DP01-S-02	Solid	1/28/02 13:05	1/29/02 09:20	2/14/02 14:13

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DIRECTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60771	7.3.4.2		1/30/02 14:39	BMC	61563

CAS #	PARAMETER		RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide	Q L	ND	89	89	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

one 8/24/02

CAS #	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

3045C Solid - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/30/02 11:00	OLT	60969

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	7.33	2.00		pH unit

RESULTS REPORTED ON A DRY WEIGHT BASIS

amo 8/24/02

CAS #	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

010 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	1/31/02 10:38	TYJ	64078

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-3	FlashPoint	>212	50	50	Deg F

RESULTS REPORTED ON A DRY WEIGHT BASIS

amo 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

J012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60769	7.3.3.2	1	2/4/02 13:36	BMC	61971

CAS #	PARAMETER	<u>Q</u> 4J	<u>Q Code</u> L	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide			ND	276	276	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

amw 8/24/02

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20201290104	027-43-DP02-S-02	Solid	1/28/02 13:10	1/29/02 09:20	2/14/02 14:13

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
1/30/02 09:00	60771	7.3.4.2	1	1/30/02 14:39	BMC	61563

CAS #	PARAMETER		RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide	<u>Q</u> u	ND	88	88	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

amoshkula

IB ID	Sample ID	Matrix	Collected	Received	Reported
20203220101	027-15-DP02-S-06	Solid	3/21/02 14:25	3/22/02 09:45	3/26/02 09:38

1010 Flashpoint

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	ANALYTICAL BATCH #
			1	3/22/02 11:00	TYJ	112782

CAS #	Parameter	Result	RDL	REG LIMIT	Units
000000-01-3	FlashPoint	>212	50		Deg F

RESULTS REPORTED ON A WET WEIGHT BASIS

Cmw 8/24/02

Lab ID	Sample ID	Matrix	Collected	Received	Reported
20203220102	027-15-DP02-S-11	Solid	3/21/02 14:30	3/22/02 09:45	3/26/02 09:38

1010 Flashpoint

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	ANALYTICAL BATCH
			1	3/22/02	11:00 TYJ	112782

CAS #	Parameter	Result	RDL	REG LIMIT	Units
000000-01-3	FlashPoint	>212	50		Deg F

RESULTS REPORTED ON A WET WEIGHT BASIS

anal 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 1010 Preparatory Method: 1010 AAB # : WG115071
 Lab Name : Kemron Environmental Services Contract#: _____
 Field Sample ID: 027-15-DP02-S-06 Lab Sample ID: L0203446-01 Matrix: Soil
 % Solids: 0 Initial Calibration ID: PRECISION 25-MAR-02
 Date Received: 22-MAR-02 Date Extracted: _____ Date Analyzed: 25-MAR-02 13:00
 Concentration Units: Degrees C File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Ignitability			95.0	1	>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

omo 8/24/02

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 1010 Preparatory Method: 1010 AAB # : WG115071
 Lab Name : Kemron Environmental Services Contract#: _____
 Field Sample ID: 027-15-DP02-S-11 Lab Sample ID: L0203446-02 Matrix: Soil
 % Solids: 0 Initial Calibration ID: PRECISION 25-MAR-02
 Date Received: 22-MAR-02 Date Extracted: _____ Date Analyzed: 25-MAR-02 13:00
 Concentration Units: Degrees C File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Ignitability			95.0	1	>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Handwritten signature/initials

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 9045 Preparatory Method: 9045 AAB # : WG115446
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-ROBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: ORION-710A 01-APR-02
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 01-APR-02 13:00
 Concentration Units: UNITS File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
pH			4.49	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

AMS 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 1010 Preparatory Method: 1010 AAB # : WG117587
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: PRECISION 09-MAY-02
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 09-MAY-02 13:00
 Concentration Units: Degrees C File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Ignitability			95.0	1	>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

mm 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 9040 Preparatory Method: 9040 AAB # : WG117514
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: ORION-710A 08-MAY-02
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 08-MAY-02 15:30
 Concentration Units: UNITS File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Corrosivity pH			7.57	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

AMO 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : SW-846 Preparatory Method: SW-846 AAB # : WG117710
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15&43-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: BURET 13-MAY-02
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 13-MAY-02 09:00
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Reactivity, Sulfide	100	100	100	1	ND <u>u</u>

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

OMW 8/24/02

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : SW-846 Preparatory Method: SW-846 AAB # : WG117709
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-15643-NW-01 Lab Sample ID: L0205169-01 Matrix: Water
 % Solids: 0 Initial Calibration ID: UV-120-1V 13-MAY-02
 Date Received: 08-MAY-02 Date Extracted: _____ Date Analyzed: 13-MAY-02 09:00
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Reactivity, Cyanide	10.0	10	10.0	1	ND ^Q _u

Comments:

 All results, MDLs, and RLs have been corrected to dry weight, where applicable.

one 8/24/02

Chain of Custody Forms

PROJECT SAMPLE INSPECTION FORM



Lab Order #: C111648 Date Received: 11/29/01

- | | |
|--|--|
| <p>1. Was there a Chain of Custody? <input checked="" type="radio"/> Yes No⁺</p> <p>2. Was Chain of Custody properly filled out and relinquished? <input checked="" type="radio"/> Yes No⁺</p> <p>3. Were samples received cold? <input checked="" type="radio"/> Yes No⁺ N/A
(Criteria: 2° - 6°C: STL-SOP)</p> <p>4. Were all samples properly labeled and identified? <input checked="" type="radio"/> Yes No⁺</p> <p>5. Did samples require splitting or compositing*? Yes⁺ <input checked="" type="radio"/> No
Req By: PM Client Other⁺</p> <p>6. Were samples received in proper containers for analysis requested? <input checked="" type="radio"/> Yes No⁺</p> <p>7. Were all sample containers received intact? <input checked="" type="radio"/> Yes No⁺</p> | <p>8. Were samples checked for preservative? <input checked="" type="radio"/> Yes No⁺ N/A
<i>(Check pH of all H₂O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace)*</i></p> <p>9. Is there sufficient volume for analysis requested? <input checked="" type="radio"/> Yes No⁺ N/A (Can)</p> <p>10. Were samples received within Holding Time? <input checked="" type="radio"/> Yes No⁺ (REFER TO STL-SOP 1040)</p> <p>11. Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section. Yes⁺ No <input checked="" type="radio"/> N/A</p> <p>12. If sent, were matrix spike bottles returned? <input checked="" type="radio"/> Yes No⁺ <input checked="" type="radio"/> N/A</p> <p>13. Was Project Manager notified of problems? (initials: _____) Yes No⁺ <input checked="" type="radio"/> N/A</p> |
|--|--|

Airbill Number(s): Walker

Cooler Number(s): 591L

Cooler Weight(s): N/A

Shipped By: Walker

Shipping Charges: N/A

Cooler Temp(s) (°C): 4°c
CCL11
(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

Piper Bitely requested 027-156, R07-14-51 to be hold til further notice. (Piper) (RIP) 11/29-01

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: MHS Date: 11/29/01 Logged By: Piper Date: 11/29/01

- * Note all Out-of-Control and/or questionable events on Comment Section of this form. For holding times, the analytical department will flag immediate hold time samples (pH, Dissolved O₂, Residual CL) as out of hold time, therefore, these samples will not be documented on this PSIF.
- * If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"
- + All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).



115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No: (770) 604-9182
Fax No: (770) 604-9282

C112046

CHAIN-OF-CUSTODY RECORD

¹ COC NUMBER:

154039-011203-01

² PROJECT NAME: NAS Pensacola	³ PROJECT NUMBER: 154039	⁴ LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes	¹¹ FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
⁷ PROJECT PHASE/SITE/TASK: Site 15	⁶ CTO OR DO NUMBER: CTO-0027	⁹ LAB PO NUMBER: PO #3263	¹² FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.	¹⁵ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 3034 Phone=770-604-9182 Fax=770.604.9181
⁴ PROJECT CONTACT: Greg Wilfley	⁷ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: (850)474-1001	¹¹ FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁶ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 3034 Phone=770-604-9182 Fax=770.604.9181

¹⁷ ITEM	¹⁸ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (see codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (Include Method Numbers)					²⁷ COMMENTS/ SCREENING READINGS	²⁸ LAB ID (for lab's use)
								Arsenic only by 6010B						
1	027-15GS71-W-S1	Well GS68	W	12/03/01	1250	C	14	1					N	1
2	027-15GR36-W-S1	Well GR07	W	12/03/01	1328h	C	14	1					N	2
3														
4														
5														
6														
7														
8														
9														
10														

²⁹ SAMPLER(S) AND COMPANY: (please print) Scott Dunbar, CH2M Hill Constructors, Inc.	³⁰ COURIER AND SHIPPING NUMBER: Drop off	³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
--	--	---

³² RELINQUISHED BY			³³ RECEIVED BY		
Printed Name and Signature:	DATE	TIME	Printed Name and Signature:	DATE	TIME
Scott Dunbar	12-3-01	1505	Robt El	12/3/01	1505
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		



110 Perimeter Center Circle, Suite 100
 Atlanta, GA 30346-1278
 Tel No: (770) 804-9182
 Fax No: (770) 804-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER:
154039-011212-01

¹ PROJECT NAME: NAS Pensacola	² PROJECT NUMBER: 154039	³ LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes	¹¹ FAX AND MAIL, COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
⁴ PROJECT PHASE/SITE/TASK: Site 43	⁶ CTO OR DO NUMBER: CTO-0027	⁹ LAB PO NUMBER: PO #3263	¹² FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.	¹⁵ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181
⁴ PROJECT CONTACT: Greg Wilfley	⁷ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: (850)474-1001	¹¹ FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁶ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181

¹⁷ ITEM	¹⁸ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (see codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (Include Method Numbers)					²⁷ COMMENTS/ SCREENING READINGS	²⁸ LAB ID (for lab's use)
								Iron only by 6010B						
1	027-PEN-43-PREEB2-W-S1	PRE-EQUIP. RINSATE	W	12/12/01	1105	C	14	1					EB	5
2	027-PEN-43-02S-W-S1	Well PEN-43-02S	W	12/12/01	0935	C	14	1					N	1
3	027-PEN-43-03S-W-S1	Well PEN-43-03S	W	12/12/01	1055	C	14	1					N	2
4	027-PEN-43-5S-W-S1	Well PEN-43-5S	W	12/12/01	1020	C	14	1					N	3
5	027-PEN-43-07S-W-S1	Well PEN-43-07S	W	12/12/01	XXXX	C	14	1					FD	4
6														
7														
8														
9														
10														

²⁶ SAMPLER(S) AND COMPANY: (please print) Phyllis Zerangue, CH2M Hill Constructors, Inc.	³⁰ COURIER AND SHIPPING NUMBER: Drop off	³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
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²⁹ RELINQUISHED BY Printed Name and Signature: <i>[Signature]</i>	DATE 12-12-01	TIME 1505	³² RECEIVED BY Printed Name and Signature: R-ELSPERMAN, R.H. Edm	DATE 12/12/01	TIME 1505
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

NAS - Pensacola CTO-0027



115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No: (770) 604-9182
Fax No: (770) 604-9282

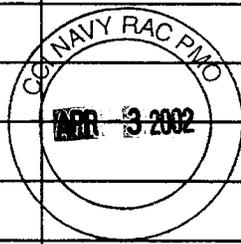
CHAIN-OF-CUSTODY RECORD

COC NUMBER:

154039-020321-01

² PROJECT NAME: NAS Pensacola	³ PROJECT NUMBER: 154039	⁸ LAB NAME AND CONTACT: Gulf Coast Analytical, 7979 GSRI, Baton Rouge, LA 70820	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
⁵ PROJECT PHASE/SITE/TASK: Site 15	⁶ CTO OR DO NUMBER: CTO-0027	⁹ LAB PO NUMBER: PO #3747	¹² FAX AND MAIL: Preliminary reports TO: RECIPIENT 2 (Name and Company): Christelle Newsome, CH2M Hill, Constructors, Inc.	¹⁵ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181
⁴ PROJECT CONTACT: Greg Wilfley	⁷ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: (225) 769-4900	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁶ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181

17 ITEM	18 SAMPLE IDENTIFIER	19 SAMPLE DESCRIPTION/LOCATION	20 MATRIX (see codes on SOP)	21 DATE COLLECTED	22 TIME COLLECTED	23 DATA PKG LEVEL (see codes on SOP)	24 TAT (calendar days)	25 ANALYSES REQUIRED (Include Method Numbers)			27 COMMENTS/ SCREENING READINGS	28 LAB ID (for lab's use)
								1030 (lgalit.)				
1	027-15-DP02-S-06	Pits 6 Surface Soil. Dis. Profile 0-2'	S	03/21/02	1425	B	1	1ea. 16 oz./glass		N	2020321-1	1
2	027-15-DP02-S-11	Pits 11 Surface Soil. Dis. Profile 0-2'	S	03/21/02	1430	B	1	1ea. 16 oz./glass		N		2
3												
4												
5												
6												
7												
8												
9												
10												



²⁹ SAMPLER(S) AND COMPANY: (please print) Scott Dunbar, CH2M Hill Constructors, Inc.	³⁰ COURIER AND SHIPPING NUMBER: FED-EX 830374779946	³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
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22 RELINQUISHED BY		DATE	TIME	23 RECEIVED BY		DATE	TIME
Printed Name and Signature: Scott Dunbar		3-21-02	1630	Printed Name and Signature:			
Printed Name and Signature: Anna Kinchen		3/22/02	0945	Printed Name and Signature: Anna Kinchen		3/22/02	0945
Printed Name and Signature: FedEx # 830374779946				Printed Name and Signature:			



115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

¹ COC NUMBER:
154039-020321-02

PROJECT NAME: AS Pensacola	⁵ PROJECT NUMBER: 154039	⁸ LAB NAME AND CONTACT: Kemron, 109 Starlite Park, Marietta, Oh. 45750	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
PROJECT PHASE/SITE/TASK: ite 15	⁶ CTO OR DO NUMBER: CTO-0027	⁹ LAB PO NUMBER:	¹² FAX AND MAIL: Preliminary reports TO: Christelle Newsome, CH2M Hill, Constructors, Inc.	¹⁵ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181
PROJECT CONTACT: reg Wilfley	⁷ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: 800-373-4071	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁶ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181

ITEM	¹⁸ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (see codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (Include Method Numbers)			²⁷ COMMENTS/ SCREENING READINGS	²⁸ LAB ID (for lab's use)
								1030 (Ignit.)				
1	027-15-DP02-S-06	Pits 6 Surface Soil. Dis. Profile 0-2'	S	03/21/02	1425	B	1	1 ea. 16 oz./glass			N	
2	027-15-DP02-S-11	Pits 11 Surface Soil. Dis. Profile 0-2'	S	03/21/02	1430	B	1	1 ea. 16 oz./glass			N	
3												
4												
5												
6												
7												
8												
9												
10												



³⁰ SAMPLER(S) AND COMPANY: (please print) Scott Dunbar, CH2M Hill Constructors, Inc.		³⁰ COURIER AND SHIPPING NUMBER: FED-EX 830374729957		³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use): Cic Deated sub intact sample	
³² RELINQUISHED BY Printed Name and Signature: Scott Dunbar		DATE 3-21-02	TIME 1630	³³ RECEIVED BY Printed Name and Signature: Brenda Gregory/Brenda Gregory	
				DATE 3/22/02	TIME 1003
Printed Name and Signature:				Printed Name and Signature:	
Printed Name and Signature:				Printed Name and Signature:	

COOLER RECEIPT FORM

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers 1

PROJECT: NAS Pensacola LIMS# L0204001

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 3/30/02 C-of-C Number: 157338-020329-02
by (print) Brenda Gregory (sign) Brenda Gregory

- 1. Did cooler come with a shipping slip (air bill, etc.)? YES NO
If YES, enter carrier name & air bill number here: Fed Ex - 7903 6262 6240
- 2. Were custody seals on outside of cooler? YES NO
How many & where? 2 front/back seal date: 3/29/02 seal name: Custody Seal
- 3. Were custody seals unbroken and intact at the data and time of arrival? YES NO
- 4. Did you screen samples for radioactivity using the Geiger Counter? YES NO
- 5. Were custody papers sealed in a plastic bag & taped inside to the lid? YES NO
- 6. Were custody papers filled out properly (ink, signed, etc.)? YES NO
- 7. Did you sign custody papers in the appropriate place? YES NO
- 8. Was project identifiable from custody papers? If yes, enter project name at the top of this form YES NO
- 9. If required, was enough ice used? Type of ice: Wet Temp 1 °C YES NO
- 10. Have designated person initial here to acknowledge receipt of cooler: Brg (date) 3/30/02

B. **LOG-IN PHASE:** Date samples were logged-in: 4-1-02
by (print) Jane K. Warden (sign) Jane K. Warden

- 11. Describe type of packing in cooler: bubble wrap
- 12. Were all bottles sealed in separate plastic bags? YES NO
- 13. Did all bottles arrive unbroken & were labels in good condition? YES NO
- 14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES NO
- 15. Did all bottle labels agree with custody papers? YES NO
Trips not on chain
- 16. Were correct containers used for the tests indicated? YES NO
- 17. Were correct preservatives added to samples? YES NO
- 18. Was a sufficient amount of sample sent for tests indicated? YES NO
- 19. Were bubbles absent in volatile samples? If NO, list by Sample # YES NO
- 20. Was the project manager called and status discussed? If YES, give details on the back of this form YES NO
- 21. Who was called? _____ By whom? _____ (date) _____

CHAIN-OF-CUSTODY RECORD

157338-020329-02

PROJECT NAME: NAS Pensacola		PROJECT NUMBER: CTO-0027	LAB NAME AND CONTACT: KEMROX Stephanie Tepe	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company): Danielle Waske EQ Industrial Services	RECIPIENT 1 (Address, Tel No., and Fax No.): 470 Great Seal Parkway, Atl, Ga. 30336 (404) 472-0410 472-0704 F
PROJECT PHASE/SITE/TASK:		CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company):	RECIPIENT 2 (Address, Tel No., and Fax No.):
PROJECT CONTACT: Steve Gantt		PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO: (740) 373-4071 P (740) 373-4835 F	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company):	RECIPIENT 3 (Address, Tel No., and Fax No.):

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)										SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								TCL 8260B	TCL 8270C	TCL 8280A	TCL 8280B	Herb 8282	PES 8283	FL-PRO-TALL 60107-171A	TAL Methods	PH 9045				
1	027-EQ-BFS-01	Backfill Source	S	3/29/02	0950	III	7	X	X	X	X	X	X	X	X					
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

SAMPLER(S) AND COMPANY: (please print) Craig Smith EnvSale		COURIER AND SHIPPING NUMBER: Exp Ex # 7903-6262-6240		SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature: Craig Smith	3/29/02	1130	Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature: Kane K. Warden Janet K. Warden	4/1/02	0800

Samples locked in walk-in over weekend.

C206324

CHAIN-OF-CUSTODY RECORD

¹ COC NUMBER:

154039-020613-01

² PROJECT NAME: NAS Pensacola	³ PROJECT NUMBER: 154039	⁴ LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
⁵ PROJECT PHASE/SITE/TASK: Site 15	⁶ CTO OR DO NUMBER: CTO-0027	⁷ LAB PO NUMBER: PO #3263	¹² FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.	¹⁵ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181
⁸ PROJECT CONTACT: Greg Wilfley	⁹ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: (850)474-1001	¹¹ FAX AND MAIL: COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁶ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181

¹⁷ ITEM	¹⁸ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (see codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (Include Method Numbers)					²⁷ COMMENTS/ SCREENING READINGS	²⁸ LAB ID (for lab's use)
								Asenic only by 6010B						
1	027-15PREEB-W-S2	PRE-EQUIP RINSATE	W	06/13/02	0937	C	14	1					EB	7
2	027-15GR03-W-S2	Well GR03	W	06/13/02	0752	C	14	1					N	1
3	027-15GR36-W-S2	Well GR36	W	06/13/02	0905	C	14	1					N	2
4	027-15GR65-W-S2	Well GR65	W	06/13/02	—	C	14	1					N	—
5	027-15GR66-W-S2	Well GR66	W	06/13/02	—	C	14	1					N	—
6	027-15GS68-W-S2	Well GS68	W	06/13/02	0720	C	14	1					N	3
7	027-15GS69-W-S2	Well GS69	W	06/13/02	—	C	14	1					N	—
8	027-15GS70-W-S2	Well GS70	W	06/13/02	0935	C	14	1					N	4
9	027-15GS71-W-S2	Well GS71	W	06/13/02	1003	C	14	1					N	5
10														

²⁹ SAMPLER(S) AND COMPANY: (please print) Phyllis Zerangue & Taj Goodpaster, CH2M Hill Constructors, Inc.	³⁰ COURIER AND SHIPPING NUMBER: Drop off	³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
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³² RELINQUISHED BY Printed Name and Signature: <i>Phyllis Zerangue</i>	DATE 6/13/02	TIME 1400	³³ RECEIVED BY Printed Name and Signature: R. ELSPERMAN/RH... STL	DATE 6/13/02	TIME 1400
Printed Name and Signature:			Printed Name and Signature:		
Printed Name and Signature:			Printed Name and Signature:		

NAS Pensacola - CTO-0027

STL Pensacola



115 Perimeter Center Place, Suite 700
 Atlanta, GA 30346-1278
 Tel No: (770) 604-9182
 Fax No: (770) 604-9282

C706324

CHAIN-OF-CUSTODY RECORD

COC NUMBER:

154039-020613-02

PROJECT NAME: NAS Pensacola		PROJECT NUMBER: 154039	LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes		FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)	
PROJECT PHASE/SITE/TASK: Site 15		CTO OR DO NUMBER: CTO-0027	LAB PO NUMBER: PO #3263		FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.	RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	
PROJECT CONTACT: Greg Wilfley		PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	LAB TEL NO AND FAX NO: (850)474-1001		FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	ANALYSES REQUIRED (Include Method Numbers)				COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
								Arsenic only by 6010B					
1	027-15GS72-W-S2	Well GS72	W	06/13/02	Dep	C	14	1				FD	6
2	027-15GS71-W-S2-MS	Well GS71	W	06/13/02	1003	C	14	1				MS	5
3	027-15GS71-W-S2-SD	Well GS71	W	06/13/02	1003	C	14	1				SD	5
4													
5													
6													
7													
8													
9													
10													

SAMPLER(S) AND COMPANY: (please print) Phyllis Zerangue & Taj Goodpaster, CH2M Hill Constructors, Inc.		COURIER AND SHIPPING NUMBER: Drop off	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):	
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RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
Printed Name and Signature: <i>Phyllis Zerangue</i>		6/13/02	1400	Printed Name and Signature: R. ELSPEE man / Rob J. [Signature], STL		6/13/02	1400
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			

NAS Pensacola - CTO-0027

STL Pensacola

206329

CHAIN-OF-CUSTODY RECORD

LAB NUMBER:

154039-020613-03

1 PROJECT NAME: NAS Pensacola		2 PROJECT NUMBER: 154039		3 LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes		11 FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.		14 RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)	
3 PROJECT PHASE/SITE/TASK: Site 43		6 CTO OR DO NUMBER: CTO-0027		9 LAB PO NUMBER: PO #3263		12 FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.		15 RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	
7 PROJECT CONTACT: Greg Wilfley		8 PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181		10 LAB TEL NO AND FAX NO: (850)474-1001		11 FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova		16 RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	

17 ITEM	18 SAMPLE IDENTIFIER	19 SAMPLE DESCRIPTION/LOCATION	20 MATRIX (see codes on SOP)	21 DATE COLLECTED	22 TIME COLLECTED	23 DATA PKG LEVEL (see codes on SOP)	24 TAT (calendar days)	25 ANALYSES REQUIRED (Include Method Numbers)				27 COMMENTS/ SCREENING READINGS	28 LAB ID (for lab's use)
								Iron only by 6010B					
1	027-PEN-43-PREB-W-S2	PRE-EQUIP RINSATE	W	06/13/02	1155	C	14	1				EB	6
2	027-PEN-43-01S-W-S2	Well PEN-43-01S	W	06/13/02	1200	C	14	1				N	1
3	027-PEN-43-02S-W-S2	Well PEN-43-02S	W	06/13/02	-	C	14	1				N	No SAMPLE -
4	027-PEN-43-03S-W-S2	Well PEN-43-03S	W	06/13/02	1210	C	14	1				N	2
5	027-PEN-43-04S-W-S2	Well PEN-43-04S	W	06/13/02	1118	C	14	1				N	3
6	027-PEN-43-05S-W-S2	Well PEN-43-05S	W	06/13/02	1132	C	14	1				N	4
7	027-PEN-43-06S-W-S2	Well PEN-43-06S	W	06/13/02	Dup	C	14	1				FD	5
8	027-PEN-43-03S-W-S2-MS	Well PEN-43-03S	W	06/13/02	1210	C	14	1				MS	2
9	027-PEN-43-03S-W-S2-SD	Well PEN-43-03S	W	06/13/02	1210	C	14	1				SD	2
10													

13 SAMPLER(S) AND COMPANY: (please print) Phyllis Zerangaue & Tag Goodpaster, CH2M Hill Constructors, Inc.		14 COURIER AND SHIPPING NUMBER: Drop off		15 SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):	
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16 RELINQUISHED BY		DATE	TIME	17 RECEIVED BY		DATE	TIME
Printed Name and Signature: <i>Phyllis Zerangaue</i>		6/13/02	1400	Printed Name and Signature: <i>R-ELS TELMONT</i>		6/13/02	1400
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			

NAS Pensacola CTO-0027

STL Pensacola PROJECT SAMPLE INSPECTION FORM



Lab Order #: C206729 Date Received: C206729

- | | |
|--|--|
| <p>1. Was there a Chain of Custody? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺</p> <p>2. Was Chain of Custody properly filled out and relinquished? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺</p> <p>3. Were samples received cold? (Criteria: 2° - 6°C: STL-SOP) <input checked="" type="radio"/> Yes <input type="radio"/> No⁺ N/A</p> <p>4. Were all samples properly labeled and identified? Yes <input checked="" type="radio"/> No⁺</p> <p>5. Did samples require splitting or compositing*? Yes⁺ <input checked="" type="radio"/> No</p> <p>6. Were samples received in proper containers for analysis requested? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺</p> <p>7. Were all sample containers received intact? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺</p> | <p>8. Were samples checked for preservative? (Check pH of all H₂O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace!*) <input checked="" type="radio"/> Yes <input type="radio"/> No⁺ N/A</p> <p>9. Is there sufficient volume for analysis requested? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺ N/A (Can)</p> <p>10. Were samples received within Holding Time? (REFER TO STL-SOP 1040) <input checked="" type="radio"/> Yes <input type="radio"/> No⁺</p> <p>11. Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section. Yes⁺ <input type="radio"/> No <input checked="" type="radio"/> N/A</p> <p>12. If sent, were matrix spike bottles returned? <input checked="" type="radio"/> Yes <input type="radio"/> No⁺ N/A</p> <p>13. Was Project Manager notified of problems? (initials: <u>MUS</u>) <input checked="" type="radio"/> Yes <input type="radio"/> No⁺ N/A</p> |
|--|--|

Airbill Number(s): walken

Cooler Number(s): Ureid

Cooler Weight(s): N/A

Shipped By: walken

Shipping Charges: N/A

Cooler Temp(s) (°C): 4°C
CCCCI

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

#4 1-16oz for Well PEN-43-025 was not labeled to Fe-I-6010.

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: MUS Date: 6/2/02 Logged By: Plaz Date: 6/2/02

+ Note all Out-of-Control and/or questionable events on Comment Section of this form. For holding times, the analytical department will flag immediate hold time samples (pH, Dissolved O₂, Residual CL) as out of hold time, therefore, these samples will not be documented on this PSIF.

+ If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"

+ All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).

* According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).



115 Perimeter Center Place, Suite 700
 Atlanta, GA 30348-1278
 Tel No: (770) 604-9182
 Fax No: (770) 604-8282

CHAIN-OF-CUSTODY RECORD

COC NUMBER:
154039-020627-01

¹ PROJECT NAME: NAS Pensacola	² PROJECT NUMBER: 154039	³ LAB NAME AND CONTACT: STL - 3355 McLemore Drive, Pensacola, FL 32514/Rick Hayes	¹¹ FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Amy Twitty, CH2M Hill, Inc.	¹⁴ RECIPIENT 1 (Address, Tel No., and Fax No.): 1766 Sea Lark Lane, Navarre, FL 32566 850-939-8300 (phone), 850-939-0035 (fax)
³ PROJECT PHASE/SITE/TASK: Site 15 and 43	⁶ CTO OR DO NUMBER: CTO-0027	⁹ LAB PO NUMBER: PO #3263	¹² FAX AND MAIL Preliminary reports TO: RECIPIENT 2 (Name and Company) Christelle Newsome, CH2M Hill, Constructors, Inc.	¹³ RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181
⁴ PROJECT CONTACT: Greg Wilfley	⁷ PROJECT TEL NO AND FAX NO: 770-604-9095 770-604-9181	¹⁰ LAB TEL NO AND FAX NO: (850)474-1001	¹¹ FAX AND MAIL; COC Reports, Preliminary Data, & EDD TO: Bonnie Hogue/Tatiana Romanova	¹⁴ RECIPIENT 3 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181

¹⁷ ITEM	¹⁴ SAMPLE IDENTIFIER	¹⁹ SAMPLE DESCRIPTION/LOCATION	²⁰ MATRIX (see codes on SOP)	²¹ DATE COLLECTED	²² TIME COLLECTED	²³ DATA PKG LEVEL (see codes on SOP)	²⁴ TAT (calendar days)	²⁵ ANALYSES REQUIRED (Include Method Numbers)				²⁷ COMMENTS/ SCREENING READINGS	²⁸ LAB ID (for lab's use)
								Arsenic only by 6010B	Iron only by 6010B				
1	027-15PREEB-W-S2B	PRE-EQUIP RINSATE	W	06/27/02	1409	C	14	1	1			EB	3
2	027-15GS69-W-S2	Well GS69	W	06/27/02	1437	C	14	1				N	1
3	027-PEN-43-02S-W-S2	Well PEN-43-02S	W	06/27/02	1530	C	14		1			N	2
4													
5													
6													
7													
8													
9													
10													

²⁹ SAMPLER(S) AND COMPANY: (please print) Phyllis Zerangue & Scott Dunbar, CH2M Hill Constructors, Inc.	³⁰ COURIER AND SHIPPING NUMBER: Drop off	³¹ SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use):
---	--	---

²⁹ RELINQUISHED BY			³¹ RECEIVED BY		
Printed Name and Signature:	DATE	TIME	Printed Name and Signature:	DATE	TIME
Phyllis Zerangue <i>[Signature]</i>	6/27/02	1700	Scott Dunbar <i>[Signature]</i>	6/27/02	1700

NAS Pensacola, CTO-0027
STL Pensacola

Appendix B
Data Validation Checklists

SDG 202012901
Volatiles Organics by GC/MS

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
Volatile Organic Analytes by GC/MS**

including TELP/OTA

Project File(s) L0205169, 202031108 Sampling Date(s) Various
202012901, L0204001
 Laboratory Kemran Environmental Services Receipt Date(s) Various
Oil Coast Analytical
 SDG Number 202012901 Matrix Water Air
 Soil/Sediment

Sample Identification Numbers:

<u>202012901-01</u>	<u>L0204001-01</u>	<u>202031108-02</u> ^{EB}	<u>202031108-07</u> ^{F04}
2	2 ^{TB}	3	202031108-08
3	<u>L0205169-4</u>	4	
4	↓ 02 ^{TB}	5 ^{MS}	
5 ^{TB}	<u>202031108-01</u> ^{EB}	6 ^{MS}	

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- USEPA SW846 (SW-846) Methods (8260) *plus 1311 preps.*
- USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other: Lab QC limits

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: *Chris Ollendick*

Date: 8/24/02

QA Concurrence by: _____

Date: _____

Validation Summary

The sample L02040A-02 (TB) was not documented on the field VOC form.

Meth₂ was measured in L0204001-02 as shown on quant report but not on the analysis sheet.
(@6.39 µg/L)

Sample L0205105-01 contains large VOC peak responses which were not identified.

The MS/MSD or RPD results for methylene chloride and acetone exceed the control limits. Methylene chloride was not detected in the associated sample. Acetone results are qualified as estimates and flagged "J" if detected.

LCS recoveries were marginally outside criteria for bromomethane, 2-heptanone, Methylene chloride, m,p-Xylene, and Ethyl Benzene. These compounds were not detected in the field samples. No action was taken to qualify the sample results.

Methylene chloride was measured in one of the trip blank analyses however it is not detected in any other sample. No action is taken to qualify the sample results.

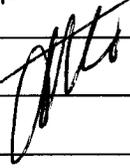
~~FD's were not~~ *AKC*

Validation Summary (cont.)

Minor calibration deficiencies were observed. (See pgs 12/13). These compounds were not detected in the associated sample, except acetone that was previously qualified for matrix bias. No action was taken to qualify the sample results.

1 of 4 surrogates was below the LCL for sample L6205169-01. No action was taken to qualify the sample results.

8/24/02



Qualifiers:

U - Not detected.

R - Unusable.

J - Approximate data due to other quality control criteria.

UJ - Not detected, limit of detection approximate.

III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

Yes No Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG.
 MS/MSD analysis was performed on sample(s) 02021290101 and can be
found in SDG # 020231108. 020231108-04
 All recoveries and relative percent differences (RPDs) were within control limits.

The following deficiencies were found:

3/108-4

Matrix	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit
Soil	Acetone	114	77	73-143	39	± 30
	MeCl ₂	68	93	61-145	31	± 30

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

Sample ID: 02021290101

020231108-04

SDG: _____ Matrix: Soil

Soil

RPD: 0 out of 10 outside limits.

2 of 45
0 of 90

Spike Recovery: 0 out of 20 outside limits.

Remarks:

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

IV. LABORATORY CONTROL SAMPLE

Yes No
 At least one LCS analysis was performed per batch of samples.
 LCS recoveries were within criteria.

The following compounds fell outside the specified QC limits:

LCS ID	Matrix	Compound	%R	Control Limits	Qualifier Flags
WG115463-02	Soil	Bromomethane	146	37-143	
WG115698-02	H2O	2-Hexanone	55.6	56-136	
WG117470-02	H2O	MeClz	76.6	8-123	
		oP-Xylene	124	80-122	
WG117558-02	H2O	MeClz	77.9	80-123	
		Ethylbenzene	123	80-122	
		mP Xylene	123	80-122	
29392	Soil	oh			
29677	H2O	oh			

LCS Summary: Unacceptable recoveries for each LCS analysis in the SDG.

LCS: _____ Matrix: _____
 Spike Recovery: _____ out of _____ outside limits.

LCS: _____ Matrix: _____
 Spike Recovery: _____ out of _____ outside limits.

Remarks:

② = L0201001-01
 ③ = L0204001-02
 ④ = L0205161-012

VI. FIELD PRECISION RESULTS

- | | | |
|--|-------------------------------------|---|
| Yes
<input checked="" type="checkbox"/> | No
<input type="checkbox"/> | Field duplicate data were included in this data package. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Qualification of field duplicate data was attempted. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Relative percent differences (RPDs) between duplicate sample results was less than <u>20</u> % for liquid (<u>35</u> % for solid samples) when both sample values were $\geq 5 \times$ MDL or the RL. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | When one or both results were $< 5 \times$ MDL or the <u>RL</u> , RPDs between duplicate sample results were less than <u>$\pm 1RL$</u> for water samples (<u>$\pm 2RL$</u> for soil samples). |

Note: In the absence of project specified criteria the following guidelines are recommended:

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | For sample results $> 5 \times$ MDL or the RL, the RPD between field duplicate samples was $< 40\%$ for water samples (70% for soil samples). |
| <input type="checkbox"/> | <input type="checkbox"/> | For sample results $< 5 \times$ MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than $2 \times$ the MDA or the RL for soil samples). |

Field Sample/Duplicate ID: 202031108-4/7 Matrix: SOIL

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:
$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

Field Precision Evaluation Deficiency Worksheet:

Analyte	MDA/ RL	5 x MDA/ 5 x RL	Sample Result	Duplicate Result	RPD	Action

Remarks: Sample were ND

VII. GC/MS TUNING - INSTRUMENT PERFORMANCE

Yes **No** All tunes were compliant.

The bromofluorobenzene (BFB) standard performance results were reviewed and the following abundances were found to fall outside the specified criteria:

m/z	Required Abundance	Actual Abundance

Remarks:

VIII. INITIAL AND CONTINUING CALIBRATIONS

- Yes No
 The average relative response factors (RRF_{avg}) met validation criteria for all initial calibrations. **> 0.05**
 The percent relative standard deviation (%RSD) of the calibration or response factors (or correlation coefficients for regression analysis of calibration curves) met validation criteria for all initial calibrations. **< 15% (RSD) or r² > 0.995**
 Continuing calibrations were performed at the frequency specified by the analytical method. **1/12 hr seq**
 The RRFs met validation criteria for all continuing calibrations. **> 0.05**
 The percentage difference (%D) from the initial calibration met validation criteria for all continuing calibrations. **± 25% 0**

The following deficiencies were found:

Instr ID	Date/Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
MSUC	1/21/02 version	Vinyl chloride (26%)	I	<input type="checkbox"/> RRF _____ <input checked="" type="checkbox"/> %RSD <u>> 15</u> % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	02021290101-05	
↓	1/31/02 @0024	oh	C	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	↓	
HPMS9	3/15/02	oh	I	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	L0204601-01	
↓	4/2/02	Bromo methane (52%)	C	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input checked="" type="checkbox"/> %D <u>> 25</u> % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	↓	
HPMS6	3/21/02	4-Methyl-2-Pentane (0.04%) (0.038) Acetone (0.04%)	I	<input checked="" type="checkbox"/> RRF <u>< 0.05</u> <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	L0204601-02	
↓	4/4/02	Bromoform (32%) 4-Meth-2-Pent (0.04)		<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input checked="" type="checkbox"/> %D <u>> 25</u> % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		

Calibration Deficiencies Table, cont.

Instr ID	Date/Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
HPMS6	5/4/02	Acetone (0.042) 2But (0.047)	I	<input checked="" type="checkbox"/> RRF < 0.05 <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r	L0205169-01,02	
	5/18/02	4M2Pent (0.04) 2But (0.04) Acetone (0.038)	C	<input checked="" type="checkbox"/> RRF < 0.05 <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r	L0205169-01,02	
	5/10/02	4M2Pent (0.04) 2But (0.04) Acetone (0.038)	C	<input checked="" type="checkbox"/> RRF < 0.05 <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r	L0205169-01,02	
MSU 2	3/11/02	Cl-meth (20.9%) PCP (15.4%) Acetone (24%) Ch2Cl2 methane (81%)	I / C	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r	20231108	
MSU 1	3/11/02	VC (23.2%) Br meth (21.5%) CS2 (16.3%) Acetone (0.046)	I	<input checked="" type="checkbox"/> RRF < 0.05 <input checked="" type="checkbox"/> %RSD 7.5 % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r		
		Vinyl Acetate (17%) 124TCB (19%) o13 DCP (17.3%) p13 DCP (19%) 2 Mex (29%)		<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency <input type="checkbox"/> r		
		Br2 Cl methane (19%) Bromoterm (18%) 123TCB (19%) 12 Br2 -> Cl prem (36%)				
MSU 1	3/12/02	Missing from Rpt.	C		All associated Samples as HP	

Remarks:

IX. INTERNAL STANDARDS



Yes

No

All internal standard areas were within control limits.

All retention times for the internal standards were within control limits.

The following deficiencies were found:

Sample ID	Internal Standard	Sample IS Area	IS Area Limits		Sample IS RT	IS RT Limit	
			Upper	Lower		Upper	Lower

Internal Standard	Name
IS1	Fluorobenzene
↓ 2	Chlorobenzene-d5
↓ 3	1,4-Dichlorobenzene-d4

Remarks:

X. QUANTITATION LIMIT RESULTS

- Yes** **No**
 No deficiencies were found.
 Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met.

The following deficiencies were found:

Sample ID	Compound(s)	RQL	CRQL	Action

Remarks:

XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

- Yes** **No**
 Calculations for all positive hits were verified. *spot checked*

The following discrepancies were found:

Analyte	Reported Value	Recalculated Value	Samples

Remarks:

SDG 202012901
Semivolatiles Organics by GC/MS

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
Semivolatile Organic Analytes by GC/MS**

including TCLP-8002

Project File(s) LO205169 Sampling Date(s) various
202012901, LO204001
 Laboratory Kemron Gulf Coast Analytical Receipt Date(s) various
 SDG Number 202012901 Matrix Water Air
 Soil/Sediment

Sample Identification Numbers:

<u>202012901 01</u>	<u>LO205169</u>	_____	_____	_____	_____
↓	<u>2</u>	_____	_____	_____	_____
↓	<u>3</u>	_____	_____	_____	_____
↓	<u>4</u>	_____	_____	_____	_____
<u>LO204001</u>	_____	_____	_____	_____	_____

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA CLP National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- USEPA SW846 (SW-846) Methods (8270, 8275)
- USEPA Drinking Water (DW) Methods (525.1, 525.2, 625, 1653)
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other: Lab QC limits

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: Chris Caldwell

Date: 8/24/02

QA Concurrence by: _____

Date: _____

Validation Summary

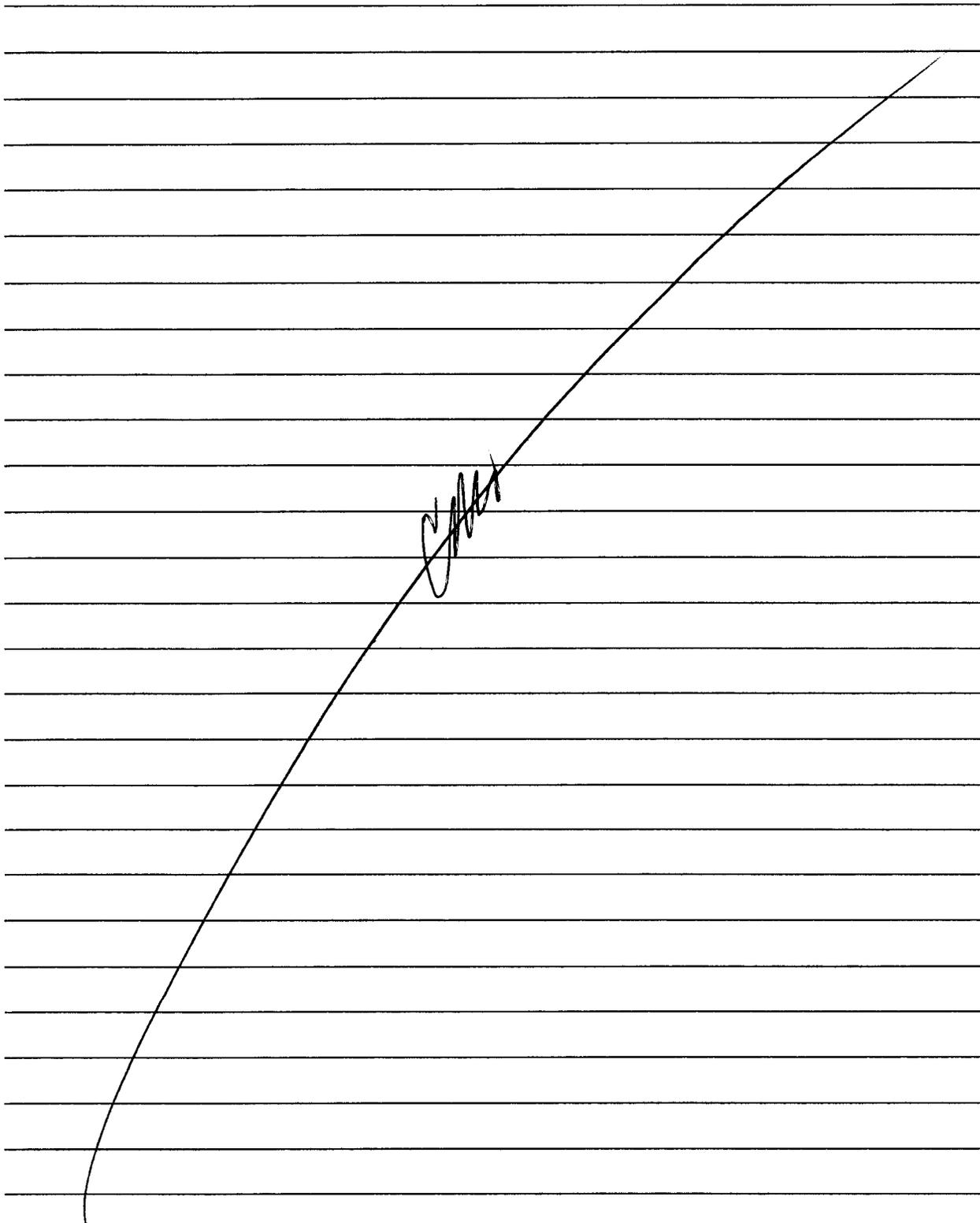
Sample L0205169-01 contain a large unidentified (non-target) peak response.

MS/D were not performed on the aqueous samples. Only TCEP extracts. An assessment could not be completed.

Numerous $\% \text{Rec}$ & $\% \text{RPD}$ results from the seed LCS / LCS P failed to meet criterion. (See pgs. 7a & 7b.) Samples associated with the LCS were non-detected for SWC. No action was taken to qualify the sample results.

FB & FD were not assigned to this SDG. An assessment of these QC types could not be completed.

Minor calibration deficiencies were reported (see p. 12). These compounds were not detected in the samples. No action was taken to qualify the results.



Qualifiers:

U - Not detected.

R - Unusable.

J - Approximate data due to other quality control criteria.

UJ - Not detected, limit of detection approximate.

**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES**

Loginnum: L0204001

Worknum: WG115546

Method: 8270C

Instrument ID: HPMS4

Cal ID: HPMS4-01-APR-2002

Matrix: Solid

Analyst: MDC

Contract #:

Units: ug/kg

Sample ID: WG115413-02 LCS File ID: 4M12771 Run Date: 04/02/2002 13:22

Sample ID: WG115413-03 LCS2 File ID: 4M12772 Run Date: 04/02/2002 13:53

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Phenol	1670	784	47.1	1660	1360	81.9	54	13 - 95	51	#
bis (2-Chloroethyl) ether	1670	751	45.1	1660	1340	80.7	56.3	10 - 93	52	#
2-Chlorophenol	1670	749	45.0	1660	1270	76.3	51.6	13 - 90	47	#
1,3-Dichlorobenzene	1670	813	48.8	1660	1280	77.1	44.7	16 - 84	42	#
1,4-Dichlorobenzene	1670	766	46.0	1660	1220	73.1	45.3	13 - 84	43	#
1,2-Dichlorobenzene	1670	825	49.6	1660	1350	81.0	47.8	16 - 85	42	#
2-Methylphenol	1670	808	48.5	1660	1370	82.2	51.3	13 - 99	52	#
bis (2-Chloroisopropyl) ether	1670	756	45.4	1660	1370	82.5	58.2	10 - 84	49	#
3-,4-Methylphenol	1670	795	47.8	1660	1440	86.6	57.6	25 - 135	52	#
n-Nitrosodipropylamine	1670	792	47.6	1660	1550	93.3	65	10 - 103	59	#
Hexachloroethane	1670	728	43.7	1660	1190	71.4	48	10 - 87	47	#
Nitrobenzene	1670	775	46.5	1660	1390	83.7	57.2	12 - 93	50	#
Isophorone	1670	871	52.3	1660	1680	101	63.5	13 - 114	62	#
2-Nitrophenol	1670	820	49.3	1660	1570	94.5	62.6	10 - 102	60	#
2,4-Dimethylphenol	1670	811	48.7	1660	1510	91.0	60.5	14 - 107	57	#
bis (2-Chloroethoxy) methane	1670	777	46.6	1660	1490	89.5	63	12 - 99	53	#
2,4-Dichlorophenol	1670	764	45.9	1660	1430	85.9	60.5	14 - 100	53	#
1,2,4-Trichlorobenzene	1670	773	46.4	1660	1360	81.8	55	13 - 88	46	#
Naphthalene	1670	830	49.8	1660	1480	88.9	56.4	10 - 95	45	#
4-Chloroaniline	1670	755	45.3	1660	1410	84.5	60.3	10 - 110	73	#
Hexachlorobutadiene	1670	856	51.4	1660	1530	92.0	56.6	15 - 100	52	#
4-Chloro-3-Methylphenol	1670	818	49.1	1660	1540	92.6	61.2	14 - 116	62	#
2-Methylnaphthalene	1670	782	47.0	1660	1470	88.7	61.3	10 - 103	49	#
Hexachlorocyclopentadiene	1670	782	46.9	1660	1530	92.2	64.9	10 - 92	60	*
2,4,6-Trichlorophenol	1670	788	47.3	1660	1530	91.9	63.8	12 - 114	63	#
2,4,5-Trichlorophenol	1670	808	48.5	1660	1570	94.4	64.1	13 - 116	63	#
2-Chloronaphthalene	1670	904	54.3	1660	1700	102	61.1	15 - 96	50	*
2-Nitroaniline	1670	881	52.9	1660	1580	95.1	57	15 - 123	67	#
Dimethylphthalate	1670	924	55.5	1660	1530	92.0	49.3	20 - 122	63	#
Acenaphthylene	1670	827	49.7	1660	1520	91.7	59.2	10 - 109	53	#
2,6-Dinitrotoluene	1670	985	59.2	1660	1720	104	54.5	14 - 126	69	#
3-Nitroaniline	1670	1050	63.2	1660	1720	104	48.2	13 - 153	86	#
Acenaphthene	1670	885	53.2	1660	1660	100	61.3	10 - 123	70	#
2,4-Dinitrophenol	1670	1150	69.0	1660	1880	113	48.3	11 - 127	72	#
4-Nitrophenol	1670	958	57.5	1660	1570	94.3	48.4	10 - 165	99	#
Dibenzofuran	1670	851	51.1	1660	1540	92.6	57.5	18 - 108	55	#
2,4-Dinitrotoluene	1670	1190	71.7	1660	1900	114	45.7	24 - 146	75	#
Diethylphthalate	1670	1090	65.4	1660	1700	102	43.8	26 - 140	70	#
Fluorene	1670	944	56.7	1660	1620	97.7	53.2	10 - 122	55	#
4-Chlorophenyl Phenyl Ether	1670	848	51.0	1660	1510	90.8	56.1	14 - 119	64	#

**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES**

Loginnum: L0204001 _____ Worknum: WG115546 _____ Method: 8270C _____
 Instrument ID: HPMS4 _____ Cal ID: _____ HPMS4 01-APR-2002 _____ Matrix: Solid _____
 Analyst: MDC _____ Contract #: _____ Units: ug/kg _____
 Sample ID: WG115413-02 LCS File ID: 4M12771 Run Date: 04/02/2002 13:22 _____
 Sample ID: WG115413-03 LCS2 File ID: 4M12772 Run Date: 04/02/2002 13:53 _____

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
4-Nitroaniline	1670	1110	66.9	1660	1870	112	50.5	14 - 169	95	
4,6-Dinitro-2-Methylphenol	1670	1300	78.3	1660	2020	121	43.1	11 - 152	86	
n-Nitrosodiphenylamine	1670	1030	61.9	1660	1650	99.0	46	21 - 127	65	
4-Bromophenyl Phenyl Ether	1670	830	49.8	1660	1380	82.9	49.9	17 - 112	58	
Hexachlorobenzene	1670	1040	62.7	1660	1660	99.6	45.4	25 - 136	68	
Pentachlorophenol	1670	1040	62.4	1660	1600	96.1	42.4	21 - 146	77	
Phenanthrene	1670	1050	63.0	1660	1570	94.6	39.9	10 - 144	70	
Anthracene	1670	1020	61.3	1660	1530	92.2	40	10 - 149	72	
Carbazole	1670	1110	66.6	1660	1600	96.1	36.2	18 - 179	99	
Di-n-Butyl Phthalate	1670	1070	64.6	1660	1630	98.0	41.1	22 - 156	82	
Fluoranthene	1670	1070	64.4	1660	1590	95.6	39	10 - 158	80	
Pyrene	1670	1130	67.8	1660	1630	97.8	36	10 - 161	89	
Butyl Benzyl Phthalate	1670	1100	66.2	1660	1610	97.1	37.7	22 - 162	86	
Benzo[a]anthracene	1670	1060	63.9	1660	1530	91.8	35.5	10 - 159	83	
3,3'-Dichlorobenzidine	1670	1180	71.0	1660	1770	107	39.8	10 - 209	135	
Chrysene	1670	1100	66.0	1660	1580	94.8	35.6	10 - 153	72	
bis(2-Ethylhexyl)phthalate	1670	1060	64.0	1660	1610	96.6	40.4	22 - 157	83	
Di-n-Octyl Phthalate	1670	1020	61.4	1660	1550	93.3	40.9	17 - 173	96	
Benzo[b]fluoranthene	1670	1020	61.2	1660	1540	92.8	41	10 - 161	76	
Benzo[k]fluoranthene	1670	1040	62.4	1660	1490	89.7	35.7	10 - 165	79	
Benzo[a]pyrene	1670	966	58.0	1660	1430	86.2	39	10 - 152	72	
Indeno[1,2,3-cd]pyrene	1670	1090	65.2	1660	1640	98.6	40.7	10 - 162	84	
Dibenz[ah]anthracene	1670	1100	65.8	1660	1650	99.2	40.4	10 - 169	88	
Benzo[ghi]perylene	1670	1150	69.3	1660	1720	104	39.6	10 - 160	85	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2-Fluorophenol	43.8	69.4	25 - 121	PASS
Phenol-d5	46.9	79.7	24 - 113	PASS
Nitrobenzene-d5	47.0	84.7	23 - 120	PASS
2-Fluorobiphenyl	48.4	88.8	30 - 115	PASS
2,4,6-Tribromophenol	55.3	90.1	19 - 122	PASS
p-Terphenyl-d14	56.6	73.5	18 - 137	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

7b

VI. FIELD PRECISION RESULTS

- | | | |
|--|---|--|
| <p>Yes</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>No</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Field duplicate data were included in this data package.</p> <p>Qualification of field duplicate data was attempted.</p> <p>Relative percent differences (RPDs) between duplicate sample results was less than _____% for liquid (_____% for solid samples) when both sample values were $\geq 5 \times$ MDL or the RL.</p> <p>When one or both results were $< 5 \times$ MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).</p> |
|--|---|--|

Note: In the absence of project specified criteria the following guidelines are recommended:

- | | | |
|---|---|--|
| <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>For sample results $> 5 \times$ MDL or the RL, the RPD between field duplicate samples was $< 40\%$ for water samples (70% for soil samples).</p> <p>For sample results $< 5 \times$ MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than $2 \times$ the MDA or the RL for soil samples).</p> |
|---|---|--|

Field Sample/Duplicate ID: _____ **Matrix:** _____

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:
$$RPD = \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

Field Precision Evaluation Deficiency Worksheet:

Analyte	MDA/ RL	5 x MDA/ 5 x RL	Sample Result	Duplicate Result	RPD	Action

Remarks:

VII. GC/MS TUNING - INSTRUMENT PERFORMANCE

~~Yes~~ **Yes** **No** All tunes were compliant.

The decafluorotriphenylphosphine (DFTPP) standard performance results were reviewed and the following abundances were found to fall outside the specified criteria:

Mass	Required Abundance	Actual Abundance

Remarks:

VIII. INITIAL AND CONTINUING CALIBRATIONS

- Yes** **No**
 The average relative response factors (RRF_{avg}) met validation criteria for all initial calibrations. > 0.05
 The percent relative standard deviation (%RSD) of the calibration or response factors [or correlation coefficients (r) for regression analysis of calibration curves] met validation criteria for all initial calibrations. $< 15\%$ RSD or $r > 0.995$
 Continuing calibrations were performed at the frequency specified by the analytical method.
 The RRFs met validation criteria for all continuing calibrations.
 The percentage difference (%D) from the initial calibration met validation criteria for all continuing calibrations. $\pm 25\% D$

The following deficiencies were found:

Instr ID	Date/Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
MSS02	1/31/02	m+p Creosol (25.7%) Pentachlorophenol (25%)	J	<input type="checkbox"/> RRF _____ <input checked="" type="checkbox"/> %RSD <u>75</u> % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	2000090101 → 04	
MAMS4	4/1/02	ok	±	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	LO204001-01	
↓	4/2/02 10 19	24DNP (28%) Benzoic Acid (33%)	C	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input checked="" type="checkbox"/> %D <u>> 25</u> % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	↓	
MAMS3	5/10/02	ok	I	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	LO205169-01	
↓	5/13/02	Benzidine (100%) (Pure - Benzidine is not a target compd.)	C	<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____	↓	
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		

Calibration Deficiencies Table, cont.

Instr ID	Date/Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input checked="" type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		
				<input type="checkbox"/> RRF _____ <input type="checkbox"/> %RSD _____ % <input type="checkbox"/> %D _____ % <input type="checkbox"/> Frequency _____ <input type="checkbox"/> r _____		

Remarks:

INTERNAL STANDARDS



- Yes** **No**
 All internal standard areas were within control limits.
 All retention times for the internal standards were within control limits.

The following deficiencies were found:

Sample ID	Internal Standard	Sample IS Area	IS Area Limits		Sample IS RT	IS RT Limit	
			Upper	Lower		Upper	Lower

Internal Standard Number	Internal Standard Name
Internal Standard 1 (DCB)	1,4-Dichlorobenzene-d4 ✓
Internal Standard 2 (NPT)	Naphthalene-d8 ✓
Internal Standard 3 (ANT)	Acenaphthene-d10 ✓
Internal Standard 4 (PHN)	Phenanthrene-d10 ✓
Internal Standard 5 (CRY)	Chrysene-d12 ✓
Internal Standard 6 (PRY)	Perylene-d12 ✓

Remarks:

IX. QUANTITATION LIMIT RESULTS

Yes **No**
 No deficiencies were found.
 Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met.

The following deficiencies were found:

Sample ID	Compound(s)	RQL	CRQL	Action

Remarks:

X. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

Yes **No**
 Calculations for all positive hits were verified or spot-checked .

The following discrepancies were found:

Analyte	Reported Value	Recalculated Value	Samples

Remarks:

SDG 202012901

TPH (Florida PRO) Analysis by GC/FID
Organochlorine Pesticide Analysis by GC/ECD
Organochlorine Herbicide Analysis by GC/ECD
Polychlorinated Biphenyl Analysis by GC/ECD

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
GC Methods**

Project File(s) W205169, 202031108 Sampling Date(s) Various
202002901, L0204001
 Laboratory Kemron Gulf Coast Analytical Receipt Date(s) Various
 SDG Number 202002901 Matrix Water Air
 Soil/Sediment CLP extracts

Sample Identification Numbers:

<u>202002901-01</u>	<u>L0205169-01</u>	<u>20203118-08</u>	_____	_____	_____
↓ 2	<u>202031108-01</u> ^{EB}	_____	_____	_____	_____
↓ 3	↓ 2 ^{EB}	_____	_____	_____	_____
↓ 4	↓ 4	_____	_____	_____	_____
<u>L0204001-01</u>	↓ 7 ^{FDH}	_____	_____	_____	_____

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- USEPA SW846 (SW-846) Methods 1311/8151, 1311/8081, 1311/8082
- USEPA Drinking Water (DW) Methods FI-Pro
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other: Labs QC Limits

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument performance, initial and continuing calibrations, compound quantification and detection limits.

Reviewed by: Chris Oehl Date: 8/24/02

QA Concurrence by: _____ Date: _____

Validation Summary

4,4'-DNT was measured in the TCLP filter blank associated w/ sample L0205169-01. Action levels were calculated using the 5x Rule. Sample results less than the action level are qualified non-detected and flagged U.

Surrogate recoveries associated w/ Method 8151 analyses of GCAL Samples 20201290102 was below the lower control limit. Analyst used improper integration techniques and include peak area from the baseline drift. Surrogate recoveries for samples 20201290101, 3, 4 are biased high. All samples are non-detected. Sample results are qualified as estimates and flagged "U".

The MS/MSP recovery for methoxychlor was above the upper control limit and the %LPP exceeds criteria for 2,4-D. These compounds were not detected. MS/MSP were not performed for all analytes in matrices. An assessment of MS/D accuracy & precision could not be completed. No action was taken to qualify the sample results.

The LCS recovery, ^{or %LPP} was above the upper control limit for 2,4-D; 2,4,5-TP; methoxychlor; 4,4'-DNT; Endosulfane sulfate; Endrin aldehyde; Daloapon; and pentachlorophenol. These compounds were not detected. No action was taken to qualify the sample results.

~~DOT was measured in the filter blank~~
~~associated w/ sample~~ ~~also~~

FB₂ and FBs were not assigned to all analyses and matrices discussed in this SDG.

Minor calibration deficiencies are noted on pgs 10, 11. Samples associated to deficient calibrations did not contain target analytes. No action was taken to qualify sample results.

Qualifiers:

U - Not detected.
R - Unusable.

J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

IV. LABORATORY CONTROL SAMPLE

Yes

No

At least one LCS analysis was performed per batch of samples.
LCS recoveries were within criteria.

The following compounds fell outside the specified QC limits:

LCS/0
↓
LCS/0

LCS ID	Matrix	Compound	%R	Control Limits	Qualifier Flags
24180		(815) 2,2-D	134	10-136	
241740/41		(815) 245TP	498 RPD	± 40	
23491		(8081) Methoxychlor	173	26-144	
23365/66		(8082) ok			
WG115410-02/03		(8081) ok			
WG115411-02/03		(8082) ok			
WG115455-02/03		(815) ok			
WG115412-02/03		(F1-Pro) ok			
WG117574-02/04		(8081) 44' DDT	134 ⁰	43-131	
		Endosulfan Sulfate	44.5% RPD	± 40	
		Endosulfan Aldehyde	55.3% RPD	± 40	
WG117575-02/03		(8082) ok			
WG117471-02/03		(8151) Dclapan	52.6 RPD	± 23	
		Pentachlorophenol	5.2 RPD	-100 EST.	
30555		(F1-Pro) ok			
30562/63		(F1-Pro)	592 RPD	± 40	

LCS Summary: Unacceptable recoveries for each LCS analysis in the SDG.

LCS: _____ Matrix: _____
Spike Recovery: _____ out of _____ outside limits.

LCS: _____ Matrix: _____
Spike Recovery: _____ out of _____ outside limits.

Remarks: 02 03
① LCS, LCS2 were both within criteria

VI. FIELD PRECISION RESULTS

- | | | |
|--|---|---|
| Yes
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> | No
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> | Field duplicates were associated with this QC batch. <i>See soil FI Pro only</i>
Qualification of field QC was attempted.
RPDs between duplicate sample results was less than ___% for liquid <u>35</u> % for solid samples) when both sample values were ≥ 5 x MDL or the RL.
When one or both results were < 5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples). |
|--|---|---|

Note: In the absence of project specified criteria the following guidelines are recommended:

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | For sample results > 5 x MDL or the RL, the RPD between field duplicate samples was $< 40\%$ for water samples (70% for soil samples). |
| <input type="checkbox"/> | <input type="checkbox"/> | For sample results < 5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDA or the RL for soil samples). |

Field Sample/Duplicate ID: 20203108-4/7 Matrix: soil

The RPD is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:
$$RPD = \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

Field Precision Evaluation Deficiency Worksheet:

Analyte	MDA/ RL	5 x MDA/ 5 x RL	Sample Result	Duplicate Result	RPD	Action

Remarks: Sample results w/ PD

VII. INSTRUMENT CALIBRATION

Select method used by laboratory for quantification:

- External Calibration Procedure
 Linear Regression Method

A. External Calibration Procedure

- Yes No For the initial calibration, the percent relative standard deviation (%RSD) for all compounds was \leq ____%. *< 20% RSD*
- The percent difference (%) for all compounds was less than or equal to \pm ____% for the continuing calibrations. *$\pm 15\%$, except #1-Pro $\pm 25\%$*

The following deficiencies were found:

Instr ID	Date/Time	Analyte	I / C	RRF Avg	% RSD	%D	Affected Samples	Action
gcs06 (815)	1/27/02	method 8151 paramet. w/m entered	I				2000B901-01-04	None
↓	2/1/02 @ 1301 @ 2051 @ 2210	↓	C				↓	↓
↓	2/5/02 @ 0820 @ 1933	↓	C				↓	↓
gcs08 (808) (8082)	1/23/02	Endrin (4.6%) TOX - Single pt.	I		>20%		202012901-01-04	↓
↓	1/31/02 1410 2220 1550 1057	Endrin (10%) Lindax (18.2%) 1016 (18.6%)	C			>15%	↓	↓
gcs04 (8081)	1/30/02 1015	ok	I C				↓	↓
HP1 (808)	3/27 4/1/02	ok 20 response ranged 11 to 35% - no detects	I C				LO20401-01	None
HP4 (808)	3/19/02 4/12/02 @ 1132 @ 1444	ok ok	I C				↓	

Calibration Deficiencies Table, cont.

E-Data, Inc.
 Volatiles by GC Data Validation Checklist
 August, 2000

Instr ID	Date/Time	Analyte	I / C	RRF Avg	% RSD	%D	Affected Samples	Action
HPI (8151)	3/26/02 4/13/02 @ 0925 @ 1604	oh	I C					
HP2 (FI-PR)	3/26/02 4/7/02 @ 1004 @ 1136		I C					
HP9 (8081)	5/10/02 5/11/02 @ 0144 @ 0010	oh Endrin (322)	I C					
HP4 (8052)	5/1/02 5/13/02 @ 0520 @ 1204	oh oh ↳ back column	I C					
HPI (8151)	3/26/02 5/10/02 @ 1112 @ 1816 @ 2111	oh	I C					
GCS02AD (FI PR)	3/15/02 3/15/02 @ 0418 @ 2101 @ 2344	oh	I C					
<i>AMC</i>								

Remarks:

Endrin = 44' DPT Break down are acceptable

X. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Abrupt baseline shift. <i>method 8151</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	High background or retention time shifts. <i>8151</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Baseline rise at high temperature.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Extraneous peaks. <i>method 8081, 8151</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Loss of peak resolution.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Peak tailing or splitting.

Remarks:

XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

Yes No Calculations for *all* positive hits were verified. *Spot check*

The following discrepancies were found:

Analyte	Reported Value	Recalculated Value	Samples

Remarks:

SDG 202012901
Metals by ICP and CVAA

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
ICP and CVAA Metals**

Project File(s) WZ05691- 202012901 WZ04001 Sampling Date(s) Various
 Laboratory Remcon Gulf Coast Analytical Receipt Date(s) Various
 SDG Number 202012901 Matrix Water Air
 Soil/Sediment TCLP Extracts

Sample Identification Numbers: *N = Normal; FL = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank*

<u>202012901/01</u>	<u>WZ05169-01</u>			
2				
↓				
3				
↓				
4				
<u>WZ04001-01</u>				

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Inorganic Data Review (EPA-540/R-94/013, February 1994)
- USEPA SW846 (SW-846) Methods (6010, 6010 Trace, 7471, 7470)
- USEPA Drinking Water (DW) Methods (200.7)
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other:

LSC & C limits

The following parameters were examined: holding time, sample preservation, initial and continuing calibrations, laboratory and field blank results, laboratory and field duplicate results, ICP interference check sample (ICS) results, matrix spike (MS) results, laboratory control sample (LCS) results, ICP serial dilution results, and detection limits.

Reviewed by: Chris DeL... Date: 8/24/02

QA Concurrence by: _____ Date: _____

Validation Summary

The arsenic analyses of sample 10205165-U1 was diluted (1:5) because of a interferent bias. Nominal PL were not achieved.

Trace levels of metals were measured in the PB, ICB, CCB analyses. Action levels were determined using the 5X Rule and corrected for soil aliquot sizes. Sample results less than the action levels are qualified non-detected and flagged "U".

FD, MS, MSN, SD, PDS, FB, and LR were not analyzed for all matrices and analyses. An assessment of these QC types could not be completed.

The MS & PDS recovery for arsenic in a TCP extract exceeds the upper control limit. Arsenic was not detected in the sample. No action was taken to qualify the results.

Qualifiers:

U - Not detected.

R - Unusable.

J - Approximate data due to other quality control criteria.

[none] - Detected at the reported concentration level.

II. INITIAL and CONTINUING CALIBRATION

A. Inductively Coupled Plasma (ICP) Analysis:

Yes No

Yes

No

- No
 The instrument was standardized with at least a blank and one traceable standard.
 The initial calibration verification (ICV) solutions were immediately analyzed after each instrument was calibrated.

B. Cold Vapor (CV) Mercury Analysis:

Yes No

Yes

No

- No
 The instrument was standardized with at least a blank and 5 traceable standards.
 The concentration for one of the calibration standards was at the CRDL.
 The ICV solutions were immediately analyzed after each instrument was calibrated.
 The calibration curves have a correlation coefficient of \geq 0.995.

C. Continuing Verifications

The continuing calibration verification (CCV) standard was traceable and analyzed at the beginning of the run and after the last analytical sample.

Yes No Yes No
 (1) ICP Analysis CV Mercury Analysis

The CCV standard was analyzed at a frequency of 10% or every _____ hours during the analytical run, whichever is more frequent.

Yes No Yes No
 ICP Analysis CV Mercury Analysis

Recoveries for initial and/or continuing calibrations were within the control limits.

Control Limits: Mercury 80 – 120 %; Other Metals 90 – 110%

Yes No Yes No
 ICP Analysis CV Mercury Analysis

The following calibration deficiencies were found:

Calibration Date	Instr ID	ICV / CCV	Analyte	%R	Affected Samples	Action

Remarks:

① some CCV were outside 90-110% but these did not bracket project samples

III. LOW-LEVEL CHECK STANDARD ANALYSIS

A. Low-level Check Standard Analysis

Yes

~~No~~

The low-level standard was analyzed at the beginning and end of each sample analysis run, or at a minimum of once per 8 hour working shift, whichever is more frequent, but not before the ICV.

The low-level standard was analyzed at a concentration less than 2 times RL.

Recoveries for the low-level standard were within acceptance limits (ICP: _____%; Mercury _____%).

The following deficiencies were found for the CRI/CRA analysis:

Calibration Date	Instr ID	Std. ID	Analyte	%R	Affected Samples

Remarks:

No Action was taken to qualify data based on CRI/CRA recoveries.

IV. BLANKS

- | | | |
|---|---|--|
| <p><input checked="" type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/> No</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> | <p>Calibration and/or preparation blanks were analyzed for each matrix.</p> <p>Blanks were reported at the MDL/IDL for all non-detects.</p> <p>The initial calibration blank (ICB) was analyzed after the analytical standards, but not before the ICV analysis.</p> <p>A continuing calibration blank (CCB) was analyzed for every <u>10</u> samples or every ___ hours, whichever occurred more frequently.</p> <p>The CCB was analyzed at the beginning of the analytical run, and after the last CCV that was analyzed after the last analytical sample of the run.</p> <p>Field QC samples were associated with this SDG.</p> |
|---|---|--|

Note: Negative blanks whose absolute values are > MDL must be carefully evaluated to determine their effect on the sample data. When the observed blank exceeds a negative RL, all non-detects should be considered unusable.

Field QC associated with this SDG were:

Field Blanks	Associated Samples	Field Blanks	Associated Samples

Equip Blanks	Associated Samples	Equip Blanks	Associated Samples

Comments:

Blank Worksheet

Analyte	Equip. Blank	Equip. Rinse	Prep Blank	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	CCB12
As			-								AL = (white)					
Ba			3.7		0.5	0.9	0.8	0.5		4.5	Ba					
Cd			0.1							0.5						
Cr					5.4					27	Pb					
Pb					17.2	21.9	26.9	13.1		130	Se					
Se					0.3					1.5	As					
Ag																
Hg																
Al																
Ba			120		max ccb											
Be					9.0 us/L											
Cd				0.1	0.12		AL mg/kg									
Ca				0.03	0.06		900 mg/kg									
Co					0.04		4									
Cr					1.2		4									
Cu				1.26	1.24		1200									
Fe				6.3	5.8		120									
Mn				186	248		580									
Mg				0.01	0.04		2500									
Ni					0.04		4									
Ni					0.06		6									
K					8.6		800									
As					0.08		8									
Na				1.3	0.6		130									
V					3.1		310									
Zn				0.64	0.04		40									
Sb				1.6	4.3		320									
As				1.9	0.15		.95									
Se				3.1	4.3		2.2									
Tl				1.6	1.8											
Cr																
Pb																

5 OK
SOG 20212901

AL ug/L
KEMICON
W30 + LOZOBAG9
0.050
0.21
110
114
220

3.3
0.37
0.70
0.18
0.23
0.42
0.21
0.40
97
0.125
205
0.401
0.173
0.065
0.074
0.065
0.14
0.003
0.014
0.056
0.033
0.041
0.079
0.068

Se
Tl
Cr
As
Pb
Co

V. ICP INTERFERENCE CHECK SAMPLE

- Yes** **No**
 The ICS was between the QC limits of 8000%.
 For **ICP analysis**, the interference QC samples were run at the beginning and end of each sample analysis run or at a minimum of once per 8 hour working shift, whichever occurred more frequently.
 No deficiencies were found.

The following deficiencies were found:

Analyte	True Conc	Found Conc	%R	Affected Samples	Action

Report the concentration of any elements detected in the ICS A solution >2 x IDL that should be present.

Element	Concentration detected in the ICS	Interferent concentration in the ICS			
		Al	Ca	Fe	Mg

Estimate the concentration produced by the interfering element in all affected samples. List the samples affected by the interferences below:

Affected Sample	Affected Element	Sample Conc.	Interferent Concentration in the ICS				Estimated Interference
			Al	Ca	Fe	Mg	

Remarks:

VI. LABORATORY CONTROL SAMPLE

Yes

No

At least one LCS analysis was performed per batch of samples.

LCS recoveries were within criteria. *GCAL 75-125 Kumron 80-120*

The following compounds fell outside the specified QC limits:

LCS	Matrix	Compound	Percent Recovery	Control Limits	Qualifier Flags
<i>2050129 F1</i>	<i>H2O</i>				
<i>WG115494-04</i>	<i>Soil</i>				
<i>WG11557-02</i>	<i>Soil</i>				
<i>WG117549-02</i>	<i>H2O</i>				
<i>WG117612-02</i>	<i>H2O</i>				

LCS Summary: Unacceptable recoveries for each LCS analysis in the SDG.

LCS ID	Matrix:	LCS ID	Matrix:
Spike Recovery	Out of	Spike Recovery	Out of
Outside Limits		Outside Limits	

Remarks:

VIII. MATRIX SPIKE ANALYSIS

A. Matrix Spike/Matrix Spike Duplicate Analysis

Yes

No

Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG.
 MS/MSD analysis was performed on the following project sample(s):

Sample ID: 200012901 01 Matrix: Soil SDG: 200012901

TCLP

All recoveries and relative percent differences (RPDs) were within control limits.

The following deficiencies were found:

Matrix	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit
<u>TCLP Extract</u>	<u>As</u>	<u>119</u>	<u>126</u>	<u>75-125</u>		

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction.

Sample ID			
SDG		Matrix	
RPD		out of	outside limits
Spike Rec.		out of	outside limits

Sample ID			
SDG		Matrix	
RPD		out of	Outside limits
Spike Rec.		out of	outside limits

B. Post-digestion Spike Recovery

Listed below are those samples with post-digestion spike recoveries not within 75-125%.

Sample ID	Element	%R	Action
<u>200012901 01</u>	<u>As</u>	<u>133%</u>	

Remarks:

POD performed on 200012901 01

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

SDG C111651
Iron by ICP

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
ICP and CVAA Metals**

Fe

Project File(s) 206329, 206729
111651, 112283, Sampling Date(s) Various
 Laboratory SL-Pensacola Receipt Date(s) various
 SDG Number C111651 Matrix Water Air
 Soil/Sediment

Sample Identification Numbers: *N = Normal; FL = Field Blank; EB = Rinsate Blank;
 FD = Field Duplicate; TB = Trip Blank*

<u>C111651-1</u>	<u>C112283-2</u>	<u>C206329-2</u>	<u>C206729-2</u>
2 MS/D	3	3	↓ -3 EB
↓ 3 FD ₂₆	↓ 4 FD ₁	4	
↓ 4 EB	↓ 5 EB	5 FD ₁	
		↓ 6 EB	
<u>C112283-1</u>	<u>C206329-1</u>		

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Inorganic Data Review (EPA-540/R-94/013, February 1994)
- USEPA SW846 (SW-846) Methods (6010, 8010 Trace, 7471, 7470)
- USEPA Drinking Water (DW) Methods (200.7)
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other:

Lab QC Limits

The following parameters were examined: holding time, sample preservation, initial and continuing calibrations, laboratory and field blank results, laboratory and field duplicate results, ICP interference check sample (ICS) results, matrix spike (MS) results, laboratory control sample (LCS) results, ICP serial dilution results, and detection limits.

Reviewed by Chris Chelid

Date: Aug 19, 2002

QA Concurrence by: _____

Date: _____

Validation Summary

Trace levels of iron were measured in the PB, JCB, and CCB analyses. Action levels were determined based on the 5x Rule. Sample results less than the action levels are qualified non-detected and flagged "U."



Qualifiers:

U - Not detected.

R - Unusable.

J - Approximate data due to other quality control criteria.

[none] - Detected at the reported concentration level.

II. INITIAL and CONTINUING CALIBRATION

A. Inductively Coupled Plasma (ICP) Analysis:

Yes No

Yes No

- The instrument was standardized with at least a blank and one traceable standard.
- The initial calibration verification (ICV) solutions were immediately analyzed after each instrument was calibrated.

B. Cold Vapor (CV) Mercury Analysis:

Yes No

Yes No

- The instrument was standardized with at least a blank and _____ traceable standards.
- The concentration for one of the calibration standards was at the CRDL.
- The ICV solutions were immediately analyzed after each instrument was calibrated.
- The calibration curves have a correlation coefficient of \geq _____.

C. Continuing Verifications

The continuing calibration verification (CCV) standard was traceable and analyzed at the beginning of the run and after the last analytical sample.

Yes No Yes No
 ICP Analysis CV Mercury Analysis

The CCV standard was analyzed at a frequency of 10% or every _____ hours during the analytical run, whichever is more frequent.

Yes No Yes No
 ICP Analysis CV Mercury Analysis

Recoveries for initial and/or continuing calibrations were within the control limits.

Control Limits: Mercury 80 – 120 %; Other Metals 90 – 110 %

Yes No Yes No
 ICP Analysis CV Mercury Analysis

The following calibration deficiencies were found:

Calibration Date	Instr ID	ICV / CCV	Analyte	%R	Affected Samples	Action

Remarks:

III. LOW-LEVEL CHECK STANDARD ANALYSIS

A. Low-level Check Standard Analysis

- Yes ~~(No~~
- The low-level standard was analyzed at the beginning and end of each sample analysis run, or at a minimum of once per 8 hour working shift, whichever is more frequent, but not before the ICV.
- The low-level standard was analyzed at a concentration less than 2 times RL.
- Recoveries for the low-level standard were within acceptance limits (ICP: _____%; Mercury _____%).

The following deficiencies were found for the CRI/CRA analysis:

Calibration Date	Instr ID	Std. ID	Analyte	%R	Affected Samples

Remarks:

- No Action was taken to qualify data based on CRI/CRA recoveries.

IV. BLANKS

- | | | |
|-------------------------------------|--------------------------|--|
| Yes | No | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Calibration and/or preparation blanks were analyzed for each matrix. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Blanks were reported at the MDL <u>IDL</u> for all non-detects. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The initial calibration blank (ICB) was analyzed after the analytical standards, but not before the ICV analysis. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | A continuing calibration blank (CCB) was analyzed for every <u>10</u> samples or every _____ hours, whichever occurred more frequently. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The CCB was analyzed at the beginning of the analytical run, and after the last CCV that was analyzed after the last analytical sample of the run. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Field QC samples were associated with this SDG. |

Note: Negative blanks whose absolute values are > MDL must be carefully evaluated to determine their effect on the sample data. When the observed blank exceeds a negative RL, all non-detects should be considered unusable.

Field QC associated with this SDG were:

Field Blanks	Associated Samples	Field Blanks	Associated Samples

Equipmt Blanks	Associated Samples	Equipmt Blanks	Associated Samples
C111651-4	clean		
C112283-5	↓		
C206329-6	↓		
C206329-3	↓		

Comments:

Blank Worksheet

Analyte	Equip. Blank	Equip. Rinse	Prep Blank	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	CCB12
Work Order # C111651																
Fe@29.9		ND	ND	7.4	8.2	9.4	9.8		10.3	11.9	35.8	7.8	7.3	41.7		AL
Fe@271.4		↓	↓							21.6	32.9			48.3		210
Work Order # C112283																
Fe@29.9		ND	12.5	7.2	14.4	8.9						31.8				160
Fe@271.4		↓	↓									33.4				
Work Order # C206329																
Fe@29.9		ND	ND	9.5	9.4	9.2		10.4								52
Fe@271.4		↓	↓													
Work Order # C206729																
Fe@29.9		ND	ND	7.4	52.8	21.1	21.2	25								210

Action Level Summary

Analyte	Field Blank	Equip Blank	Prep Blank	ICB	Highest CCB	Action Level	Affected Samples	Action Taken
work order			C111651					
Fe	-	ND	ND	7.4	41.7	210		u < AL
work order			C112283					
Fe	-	-	125	7.2	31.8	160		
work order			C206329					
Fe	-	-	-	9.5	10.4	52		
work order			C206729					
Fe	-	-	-	7.4	50.8	250		

Remarks:

V. ICP INTERFERENCE CHECK SAMPLE

Yes No

The ICS was between the QC limits of 8-120 %.

For **ICP analysis**, the interference QC samples were run at the beginning and end of each sample analysis run or at a minimum of once per 8 hour working shift, whichever occurred more frequently.

No deficiencies were found.

The following deficiencies were found:

Analyte	True Conc	Found Conc	%R	Affected Samples	Action

Report the concentration of any elements detected in the ICS A solution >2 x IDL that should be present.

Element	Concentration detected in the ICS	Interferent concentration in the ICS			
		Al	Ca	Fe	Mg

Estimate the concentration produced by the interfering element in all affected samples. List the samples affected by the interferences below:

Affected Sample	Affected Element	Sample Conc.	Interferent Concentration in the ICS				Estimated Interference
			Al	Ca	Fe	Mg	

Remarks:

VII. DUPLICATE SAMPLE ANALYSIS

Yes No

A laboratory sample/duplicate analysis was performed for every matrix in a batch, at a frequency of one matrix duplicate for every 20 samples.

Sample ID:	C111651-2 C206329-2	Matrix:	H2O H2O	SDG:	111651 206329
------------	------------------------	---------	------------	------	------------------

Reported relative percent differences (RPDs) for laboratory sample/duplicate analysis were <25% when the original and duplicate values were $\pm 5 \times$ RL

The control limit of \pm the RL was used for water ($\pm 2 \times$ the RL for soil) when either the sample or duplicate value was $< 5 \times$ RL. (In the case where only one result was above the $5 \times$ RL level and the other was below, the \pm the RL criteria was applied.)

If both sample and duplicate values were $<$ the MDL, the RPD was not calculated.

Field duplicate data were included in this data package.

Sample ID:	C206329-1/5 C111651-2/3 C112283-1/4	Matrix:	H2O H2O H2O	SDG:	206329 111651 112283
------------	---	---------	-------------------	------	----------------------------

Qualification of field duplicate data was attempted.

Field/Laboratory Precision Evaluation Deficiency Worksheet:

Element	RL	5 x RL	Sample	Duplicate	RPD	Action

Remarks:

VIII. MATRIX SPIKE ANALYSIS

A. Matrix Spike/Matrix Spike Duplicate Analysis

Yes No

Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG.
 MS/MSD analysis was performed on the following project sample(s):

Sample ID:	C111651-2	Matrix:	H2O	SDG:	111651
	C206329-2		H2O		206329

All recoveries and relative percent differences (RPDs) were within control limits.

The following deficiencies were found:

Matrix	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction.

Sample ID			
SDG		Matrix	
RPD		out of	outside limits
Spike Rec.		out of	outside limits

Sample ID			
SDG		Matrix	
RPD		out of	Outside limits
Spike Rec.		out of	outside limits

B. Post-digestion Spike Recovery

Listed below are those samples with post-digestion spike recoveries not within 75-125%.

Sample ID	Element	%R	Action

Remarks:

POS performed on C111651-2 ; C206329-2

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

SDG C111648
Arsenic by ICP

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
ICP and CVAA Metals**

As

Project File(s) 206324 20629 111648, 112046, 203721 Sampling Date(s) Various
 Laboratory STL-Pensacola Receipt Date(s) Various
 SDG Number C111648 Matrix Water Air
 Soil/Sediment

Sample Identification Numbers: N = Normal; FL = Field Blank; EB = Rinsate Blank;
 FD = Field Duplicate; TB = Trip Blank

<u>C111648-1</u>	<u>C112046-1</u>	<u>C206324-2</u>	<u>C206324-7^{EB}</u>
2 ^{MS/D}	↓ -2	3	<u>C206729-1</u>
3	<u>C203721-1^{MS/D}</u>	4	↓ 3 ^{EB}
4 ^{FD}	↓ -2 ^{EB}	5 ^{MS/D}	
↓ 5 ^{EB}	<u>C206324-1</u>	↓ 6 ^{FD}	
		1	

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Inorganic Data Review (EPA-540/R-94/013, February 1994)
- USEPA SW846 (SW-846) Methods (6010, 6010 Trace, 7471, 7470)
- USEPA Drinking Water (DW) Methods (200.7)
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other:

Lab QC limits

The following parameters were examined: holding time, sample preservation, initial and continuing calibrations, laboratory and field blank results, laboratory and field duplicate results, ICP interference check sample (ICS) results, matrix spike (MS) results, laboratory control sample (LCS) results, ICP serial dilution results, and detection limits.

Reviewed by: Chin Chial

Date: Aug 19, 2002

QA Concurrence by: _____

Date: _____

Validation Summary

Work Order C112046 is reported w/ C111648 using same batch QC & instrument sequence.

Trace levels of arsenic were measured in the AB and CCB analyses. Action levels were determined based on 5X Rule. The associated samples were either non-detect for arsenic or greater than the RL. No action was taken to qualify the sample results.

Qualifiers:

U - Not detected.
R - Unusable.

J - Approximate data due to other quality control criteria.
[none] - Detected at the reported concentration level.

II. INITIAL and CONTINUING CALIBRATION

A. Inductively Coupled Plasma (ICP) Analysis:

Yes No

Yes

No

The instrument was standardized with at least a blank and one traceable standard.

The initial calibration verification (ICV) solutions were immediately analyzed after each instrument was calibrated.

B. Cold Vapor (CV) Mercury Analysis:

Yes No

Yes

No

The instrument was standardized with at least a blank and _____ traceable standards.

The concentration for one of the calibration standards was at the CRDL.

The ICV solutions were immediately analyzed after each instrument was calibrated.

The calibration curves have a correlation coefficient of \geq _____.

C. Continuing Verifications

The continuing calibration verification (CCV) standard was traceable and analyzed at the beginning of the run and after the last analytical sample.

Yes

No

ICP Analysis

Yes

No

CV Mercury Analysis

The CCV standard was analyzed at a frequency of 10% or every _____ hours during the analytical run, whichever is more frequent.

Yes

No

ICP Analysis

Yes

No

CV Mercury Analysis

Recoveries for initial and/or continuing calibrations were within the control limits.

Control Limits: Mercury 80 – 120 %; Other Metals 90 – 110 %

Yes

No

ICP Analysis

Yes

No

CV Mercury Analysis

The following calibration deficiencies were found:

Calibration Date	Instr ID	ICV / CCV	Analyte	%R	Affected Samples	Action

Remarks:

III. LOW-LEVEL CHECK STANDARD ANALYSIS

A. Low-level Check Standard Analysis

- Yes No
- The low-level standard was analyzed at the beginning and end of each sample analysis run, or at a minimum of once per 8 hour working shift, whichever is more frequent, but not before the ICV.
- The low-level standard was analyzed at a concentration less than 2 times RL.
- Recoveries for the low-level standard were within acceptance limits (ICP: _____%; Mercury _____%).

The following deficiencies were found for the CRI/CRA analysis:

Calibration Date	Instr ID	Std. ID	Analyte	%R	Affected Samples

Remarks:

No Action was taken to qualify data based on CRI/CRA recoveries.

IV. BLANKS

- | | | |
|---|--|--|
| <p>Yes</p> <p><input checked="" type="checkbox"/></p> | <p>No</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Calibration and/or preparation blanks were analyzed for each matrix.</p> <p>Blanks were reported at the MDL/IDL for all non-detects.</p> <p>The initial calibration blank (ICB) was analyzed after the analytical standards, but not before the ICV analysis.</p> <p>A continuing calibration blank (CCB) was analyzed for every <u>10</u> samples or every _____ hours, whichever occurred more frequently.</p> <p>The CCB was analyzed at the beginning of the analytical run, and after the last CCV that was analyzed after the last analytical sample of the run.</p> <p>Field QC samples were associated with this SDG.</p> |
|---|--|--|

Note: Negative blanks whose absolute values are > MDL must be carefully evaluated to determine their effect on the sample data. When the observed blank exceeds a negative RL, all non-detects should be considered unusable.

Field QC associated with this SDG were:

Field Blanks	Associated Samples	Field Blanks	Associated Samples

Equip Blanks	Associated Samples	Equip Blanks	Associated Samples
C111648-5	"clean"		
C203701-2			
C206324-7	↓		

Comments:

Blank Worksheet

Analyte	Equip. Blank	Equip. Rinse	Prep Blank	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	CCB12
Work order - C11648 & C112046 (H ₂ O)					(H ₂ O)											
As		ND	ND	-	-	-	3.11	3.17	-	-	-	-	-	-	-	-
Work order - C203721 (soil)																
As		ND	0.35	-	-	-	-	-	-							
Work order - C206324 (H ₂ O)																
As		ND	ND	-	-	-	-	-								
Work order - C206729 (H ₂ O)																
As		ND	ND	-	-	-	-	-								

V. ICP INTERFERENCE CHECK SAMPLE

Yes No

The ICS was between the QC limits of 80-120 %.

For **ICP analysis**, the interference QC samples were run at the beginning and end of each sample analysis run or at a minimum of once per 8 hour working shift, whichever occurred more frequently.

No deficiencies were found.

The following deficiencies were found:

Analyte	True Conc	Found Conc	%R	Affected Samples	Action

Report the concentration of any elements detected in the ICS A solution >2 x IDL that should be present.

Element	Concentration detected in the ICS	Interferent concentration in the ICS			
		Al	Ca	Fe	Mg

Estimate the concentration produced by the interfering element in all affected samples. List the samples affected by the interferences below:

Affected Sample	Affected Element	Sample Conc.	Interferent Concentration in the ICS				Estimated Interference
			Al	Ca	Fe	Mg	

Remarks:

VII. DUPLICATE SAMPLE ANALYSIS

Yes No

A laboratory sample/duplicate analysis was performed for every matrix in a batch, at a frequency of one matrix duplicate for every 20 samples.

Sample ID:	C206324-5	Matrix:	H2O	SDG:	206324
	C111648-2		H2O		111648
	C203721-1		Soil		203721

Reported relative percent differences (RPDs) for laboratory sample/duplicate analysis were <25% when the original and duplicate values were $\pm 5 \times$ RL

The control limit of \pm the RL was used for water ($\pm 2 \times$ the RL for soil) when either the sample or duplicate value was $< 5 \times$ RL. (In the case where only one result was above the $5 \times$ RL level and the other was below, the \pm the RL criteria was applied.)

If both sample and duplicate values were $<$ the MDL, the RPD was not calculated.

Field duplicate data were included in this data package.

Sample ID:	C111648-2/-4	Matrix:	H2O	SDG:	C111648
	C206324-1/-6		H2O		C206324

Qualification of field duplicate data was attempted.

Field/Laboratory Precision Evaluation Deficiency Worksheet:

Element	RL	5 x RL	Sample	Duplicate	RPD	Action

Remarks:

VIII. MATRIX SPIKE ANALYSIS

A. Matrix Spike/Matrix Spike Duplicate Analysis

Yes No

Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. MS/MSD analysis was performed on the following project sample(s):

Sample ID:	C206324-5	Matrix:	H2O	SDG:	206324
	C111648-2		H2O		111648
	C203721-1		Soil		203721

All recoveries and relative percent differences (RPDs) were within control limits.

The following deficiencies were found:

Matrix	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction.

Sample ID			
SDG		Matrix	
RPD		out of	outside limits
Spike Rec.		out of	outside limits

Sample ID			
SDG		Matrix	
RPD		out of	Outside limits
Spike Rec.		out of	outside limits

B. Post-digestion Spike Recovery

Listed below are those samples with post-digestion spike recoveries not within 75-125%.

Sample ID	Element	%R	Action

Remarks:

performed on C111648-2 ; C203721-1 ; C206324-5

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

SDG 202012901
Wet Chemistry by Various Methods

**QUALITY ASSURANCE REVIEW
DATA VALIDATION CHECKLIST
Wet Chemistry Data**

Project File(s) 10205169 Sampling Date(s) Various
 Laboratory 202012901, 1020401 Receipt Date(s) Various
Kemron Environmental Svcs.
Gulf Coast Analytical Matrix Water Air
 SDG Number 202012901 Soil/Sediment

Sample Identification Numbers:

<u>202012901/01</u>	<u>10205169-01</u>	_____	_____	_____	_____
<u>2</u>	<u>202032201-01</u>	_____	_____	_____	_____
<u>3</u>	<u>02</u>	_____	_____	_____	_____
<u>4</u>	<u>10203446-01</u>	_____	_____	_____	_____
<u>1020401-01</u>	<u>02</u>	_____	_____	_____	_____

The general criteria used to determine the data performance and quality assurance were based on:

- Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- USEPA SW846 (SW-846) Methods
- Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- Other:

<u>Parameter</u>	<u>Method</u>	<u>Parameter</u>	<u>Method</u>	<u>Parameter</u>	<u>Method</u>
<u>Total Alkalis</u>	<u>2540G</u>	_____	_____	_____	_____
<u>pH</u>	<u>SW9045C</u>	_____	_____	_____	_____
<u>Flashpoint</u>	<u>SW1010</u>	_____	_____	_____	_____
<u>Reactive (N)</u>	<u>SW9012</u>	_____	_____	_____	_____
<u>Reactive Sulfide</u>	<u>SW9034</u>	_____	_____	_____	_____

The following parameters were examined: sample preservation and holding time, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and/or rinsate blank results, field and laboratory duplicate results, initial and continuing calibrations, reporting limits and sample result verification.

Reviewed by: Chris Allard Date: 8/21/02

QA Concurrence by: _____ Date: _____

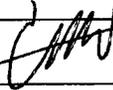
Validation Summary

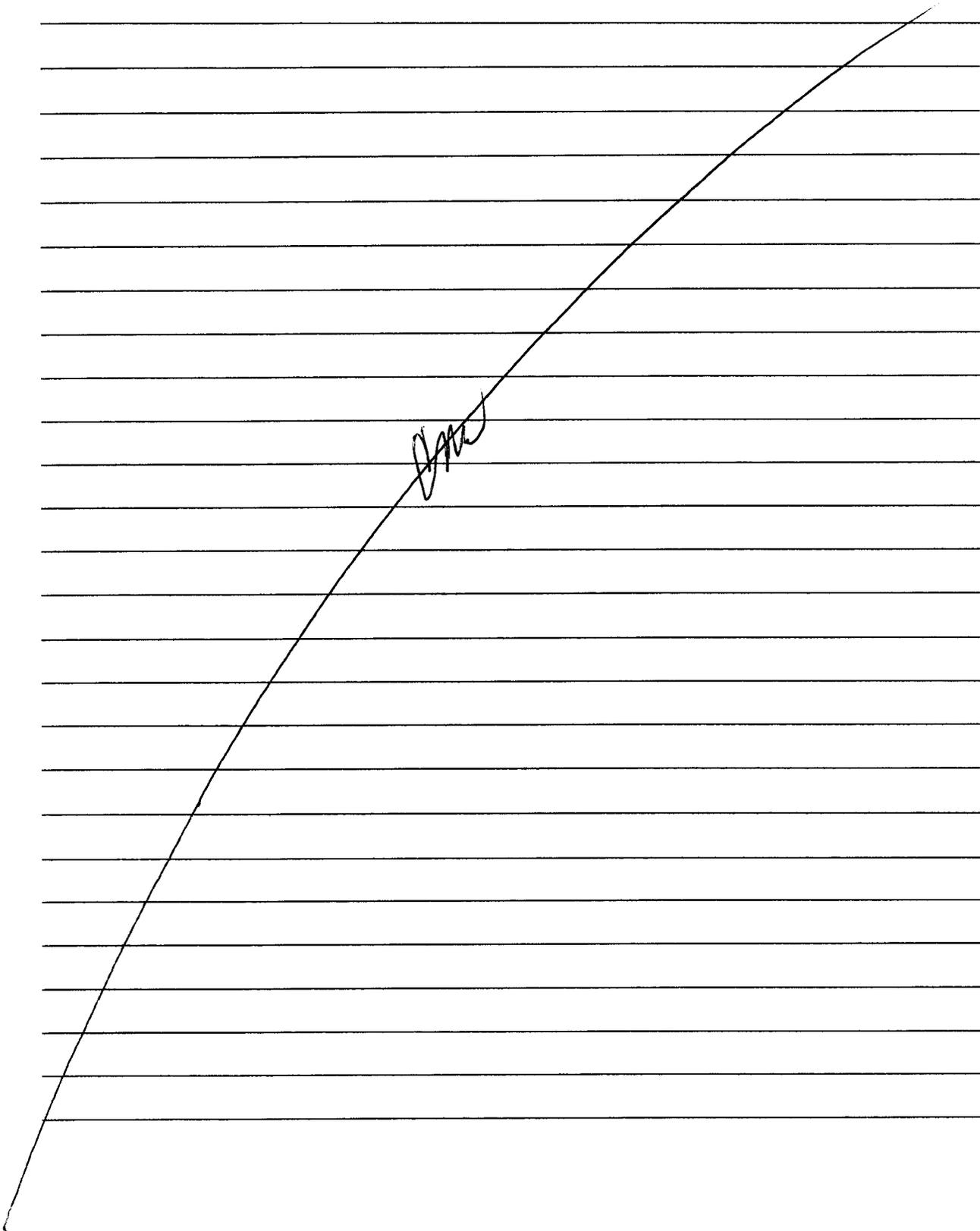
Raw data for flashpoint (Samples 20203220101-02) was not included in the data packages and was not reviewed by E-Data.

The reaction CN LCS ^{recovery (39%)} associated w/ GCAL Samples 202012901* was below the lower control limit. All sample results were non-detected. The results are qualified as estimates and flagged 4J.

FD, MS, MSD, and LR were not always included in each analytical data package. An assessment of these QC types could not be completed.

Kemion data reports FP @ $>95^{\circ}\text{C}$; whereas GCAL report $>212^{\circ}\text{F}$. Either way the results pass the FP test and are considered non-equitable.





IV. LABORATORY CONTROL SAMPLE

- Yes No
 At least one LCS analysis was performed per batch of samples. *CN, Sulfide, FP.*
 LCS recoveries were within criteria (±20% % for water, or ±25% % for soil).
 No deficiencies were noted.

The following compounds fell outside the specified QC limits:

LCS ID	Matrix	Compound	%R	Control Limits	Qualifier Flags
<i>2423438</i>	<i>Soil</i>	<i>CN</i>	<i>31.7%</i>	<i>±25%</i>	
<i>D136LCS</i>		<i>Sulfide</i>	<i>ok</i>		
<i>011109</i>		<i>FP</i>	<i>ok</i>		
<i>L6117587</i>		<i>FP</i>	<i>ok</i>		
<i>0117209</i>		<i>Reactive CN</i>	<i>ok</i>		
<i>0117710</i>		<i>Reactive Sulfide</i>	<i>ok</i>		
<i>0115271</i>		<i>FP</i>	<i>ok</i>		

LCS Summary: Unacceptable recoveries for each LCS analysis in the SDG.

Analysis: _____ Analysis: _____
 LCS: _____ Matrix: _____ LCS: _____ Matrix: _____
 Spike Recovery: _____ out of _____ outside limits. Spike Recovery: _____ out of _____ outside limits.

Remarks:

V. DUPLICATE ANALYSES

- Yes No Laboratory duplicate analyses were performed with each sample batch, if MS/MSD analyses were not performed.
 RPDs for the laboratory duplicate analyses were within criteria guidelines (< 20 % for water, or < 30 % for soil).
 Field duplicates were associated with this QC batch.
 Qualification for field duplicates was attempted.

Laboratory Sample/Duplicate ID: 26201290101/02

Matrix: Soil

Field Sample/Duplicate ID: _____

Matrix: _____

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or (field) duplicate. There are no specific review criteria for field duplicate analysis comparability.

RPD is calculated using the following equation: $RPD: \frac{|A-B|}{(A+B)/2} \times 100$

A = Sample Result
B = Duplicate Sample Result

The following deficiencies were found:

Type Duplicate Analysis		Compound	Sample Result	Duplicate Result	RPD	Action
Field	Lab					

Remarks:

No all kb dups were performed on project - pipe one specific samples.

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSIS

- Yes** **No**
 At least one MS or MS/MSD analysis was performed for each matrix or sample batch.
 The percent recoveries were within control limits (_____ % for water, or _____ % for soil).
 The RPDs were within the QC limits (< _____ % for water, or < _____ % for soil).

Matrix Spike/Matrix Spike Duplicate analysis was performed on sample(s) _____ and can be found in SDG# _____. Matrix: _____.

The following deficiencies were found:

Type Analysis	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

Sample ID: _____ Analysis: _____ SDG: _____ Matrix: _____

RPD: _____ out of _____ outside limits; Spike Recovery: _____ out of _____ outside limits.

Remarks:

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

Appendix C
EDD Verification

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	20201290101	20201290102	20201290103	20201290104	20201290105
		027-15-DP01-	027-15-DP02-	027-43-DP01-	027-43-DP02-	027-43-TB-
Field Sample ID:	S-10	S-02	S-02	S-02	S-02	012802
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Sample Type:	N	N	N	N	N	TB
Sample Collection Date:	1/28/2002	1/28/2002	1/28/2002	1/28/2002	1/28/2002	1/28/2002
TCLP VOCs		UNITS				
1,1-DICHLOROETHENE	ug/L	200 U	200 U	200 U	200 U	200 U
1,2-DICHLOROETHANE	ug/L	200 U	200 U	200 U	200 U	200 U
2-BUTANONE	ug/L	1000 U	1000 U	1000 U	1000 U	1000 U
BENZENE	ug/L	200 U	200 U	200 U	200 U	200 U
CARBON TETRACHLORIDE	ug/L	200 U	200 U	200 U	200 U	200 U
CHLOROETHENE	ug/L	200 U	200 U	200 U	200 U	200 U
CHLOROFORM	ug/L	200 U	200 U	200 U	200 U	200 U
TETRACHLOROETHENE	ug/L	200 U	200 U	200 U	200 U	200 U
TRICHLOROETHENE	ug/L	200 U	200 U	200 U	200 U	200 U
VINYL CHLORIDE	ug/L	200 U	200 U	200 U	200 U	200 U
TCLP SVOCs						
1,4-DICHLOROBENZENE	ug/L	50 U	50 U	50 U	50 U	--
2,4,5-TRICHLOROPHENOL	ug/L	50 U	50 U	50 U	50 U	--
2,4,6-TRICHLOROPHENOL	ug/L	50 U	50 U	50 U	50 U	--
2,4-DINITROTOLUENE	ug/L	50 U	50 U	50 U	50 U	--
CRESOLS	ug/L	100 U	100 U	100 U	100 U	--
HEXACHLOROBENZENE	ug/L	50 U	50 U	50 U	50 U	--
HEXACHLOROBUTADIENE	ug/L	50 U	50 U	50 U	50 U	--
HEXACHLOROETHANE	ug/L	50 U	50 U	50 U	50 U	--
M,P-CRESOL	ug/L	50 U	50 U	50 U	50 U	--
NITROBENZENE	ug/L	50 U	50 U	50 U	50 U	--
O-CRESOL	ug/L	50 U	50 U	50 U	50 U	--
PENTACHLOROPHENOL	ug/L	100 U	100 U	100 U	100 U	--
PYRIDINE	ug/L	50 U	50 U	50 U	50 U	--
TCLP PESTICIDES						
CHLORDANE	ug/L	25 U	25 U	25 U	25 U	--
ENDRIN	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--
GAMMA BHC (LINDANE)	ug/L	0.50 U	0.50 U	0.50 U	0.50 U	--
HEPTACHLOR	ug/L	0.50 U	0.50 U	0.50 U	0.50 U	--
HEPTACHLOR EPOXIDE	ug/L	0.50 U	0.50 U	0.50 U	0.50 U	--
METHOXYCHLOR	ug/L	25 U	25 U	25 U	25 U	--
TOXAPHENE	ug/L	250 U	250 U	250 U	250 U	--
TCLP HERBICIDES						
2,4,5-TP (SILVEX)	ug/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	--
2,4'-D	ug/L	50 UJ	50 UJ	50 UJ	50 UJ	--
PCBs						
AROCLOR-1016	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1221	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1232	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1242	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1248	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1254	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--
AROCLOR-1260	ug/Kg	42.3 U	43.2 U	44.7 U	44.2 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	20201290101	20201290102	20201290103	20201290104	20201290105
		027-15-DP01-	027-15-DP02-	027-43-DP01-	027-43-DP02-	027-43-TB-
	Field Sample ID:	S-10	S-02	S-02	S-02	012802
	Matrix:	SOIL	SOIL	SOIL	SOIL	WATER
	Sample Type:	N	N	N	N	TB
	Sample Collection Date:	1/28/2002	1/28/2002	1/28/2002	1/28/2002	1/28/2002
METALS						
ARSENIC	mg/L	0.05 U	0.0481 J	0.05 U	0.05 U	--
BARIUM	mg/L	0.6611 J	0.219 J	3.16 =	2.62 =	--
CADMIUM	mg/L	0.01 U	0.0007 J	0.0972 =	0.0457 =	--
CHROMIUM	mg/L	0.05 U	0.0016 J	0.05 U	0.05 U	--
LEAD	mg/L	0.1 U	0.1 U	24.4 =	27.2 =	--
MERCURY	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	--
SELENIUM	mg/L	0.1 U	0.0304 U	0.028 U	0.022 U	--
SILVER	mg/L	0.05 U	0.0088 J	0.0053 J	0.0006 U	--
WET CHEMISTRY						
REACTIVITY CYANIDE (SW9012)	mg/kg	264 UJ	270 UJ	280 UJ	276 UJ	--
REACTIVITY SULFIDE (SW9034)	mg/kg	85 U	86 U	89 U	88 U	--
PH (SW9045C)	UNITS	7.43 =	8.27 =	7.22 =	7.33 =	--
IGNITABILITY (SW1010)	Deg F	212 >	140 =	212 >	212 >	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	20203110804	20203110807	20203110808
		027-15-DP02-	027-15-DP02-	027-15-DP02-
	Field Sample ID:	06-S-02	FD-S-02	11-S-02
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	FD	N
	Sample Collection Date:	3/6/2002	3/6/2002	3/6/2002
VOLATILE ORGANICS				
	UNITS			
1,1,1-TRICHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,1,2,2-TETRACHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,1,2-TRICHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,1-DICHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,1-DICHLOROETHENE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2,4-TRICHLOROENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2-DIBROMOETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2-DICHLOROENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2-DICHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,2-DICHLOROPROPANE	ug/Kg	5.32 U	5.36 U	5.35 U
1,3-DICHLOROENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
1,4-DICHLOROENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
2-BUTANONE	ug/Kg	26.6 U	26.8 U	26.8 U
2-HEXANONE	ug/Kg	5.32 U	5.36 U	5.35 U
4-METHYL-2-PENTANONE	ug/Kg	5.32 U	5.36 U	5.35 U
ACETONE	ug/Kg	51.4 J	93.3 J	93.2 J
BENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
BROMODICHLOROMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
BROMOFORM	ug/Kg	5.32 U	5.36 U	5.35 U
BROMOMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
CARBON DISULFIDE	ug/Kg	5.32 U	5.36 U	5.35 U
CARBON TETRACHLORIDE	ug/Kg	5.32 U	5.36 U	5.35 U
CHLOROENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
CHLOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
CHLOROFORM	ug/Kg	5.32 U	5.36 U	5.35 U
CHLOROMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
CIS-1,2-DICHLOROETHENE	ug/Kg	5.32 U	5.36 U	5.35 U
CIS-1,3-DICHLOROPROPENE	ug/Kg	5.32 U	5.36 U	5.35 U
CYCLOHEXANE	ug/Kg	5.32 U	5.36 U	5.35 U
DIBROMOCHLOROMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
DICHLORODIFLUOROMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
ETHYLBENZENE	ug/Kg	5.32 U	5.36 U	5.35 U
ISOPROPYLBENZENE (CUMENE)	ug/Kg	5.32 U	5.36 U	5.35 U
METHYL ACETATE	ug/Kg	5320 U	5360 U	5350 U
METHYLCYCLOHEXANE	ug/Kg	5320 U	5360 U	5350 U
METHYLENE CHLORIDE	ug/Kg	10.6 U	10.7 U	10.7 U
STYRENE	ug/Kg	5.32 U	5.36 U	5.35 U
TERT-BUTYL METHYL ETHER (MTE)	ug/Kg	5.32 U	5.36 U	5.35 U
TETRACHLOROETHENE	ug/Kg	5.32 U	5.36 U	5.35 U
TOLUENE	ug/Kg	5.32 U	5.36 U	5.35 U
TRANS-1,2-DICHLOROETHENE	ug/Kg	5.32 U	5.36 U	5.35 U
TRANS-1,3-DICHLOROPROPENE	ug/Kg	5.32 U	5.36 U	5.35 U
TRICHLOROETHENE	ug/Kg	5.32 U	5.36 U	5.35 U
TRICHLOROFLUOROMETHANE	ug/Kg	5.32 U	5.36 U	5.35 U
TRICHLOROTRIFLUOROETHANE	ug/Kg	5.32 U	5.36 U	5.35 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	20203110804	20203110807	20203110808
		027-15-DP02-	027-15-DP02-	027-15-DP02-
	Field Sample ID:	06-S-02	FD-S-02	11-S-02
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	FD	N
	Sample Collection Date:	3/6/2002	3/6/2002	3/6/2002
VOLATILE ORGANICS	UNITS			
VINYL CHLORIDE	ug/Kg	5.32 U	5.36 U	5.35 U
XYLENES (TOTAL)	ug/Kg	10.6 U	10.7 U	10.7 U
FLORIDA PRO				
PETROLEUM HYDROCARBONS	ug/Kg	4260 U	4290 U	22600 =

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	20203110801	20203110802	20203110803
		027-15PREEB	15POSTEB-W	027-15TB-
	Field Sample ID:	W-9	9	020307
	Matrix:	WATER	WATER	WATER
	Sample Type:	EB	EB	TB
	Sample Collection Date:	3/6/2002	3/6/2002	3/7/2002
VOLATILE ORGANICS	UNITS			
1,1,1-TRICHLOROETHANE	ug/L	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	ug/L	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	ug/L	5 U	5 U	5 U
1,1-DICHLOROETHANE	ug/L	5 U	5 U	5 U
1,1-DICHLOROETHENE	ug/L	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE	ug/L	5 U	5 U	5 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	5 U	5 U	5 U
1,2-DIBROMOETHANE	ug/L	5 U	5 U	5 U
1,2-DICHLOROBENZENE	ug/L	5 U	5 U	5 U
1,2-DICHLOROETHANE	ug/L	5 U	5 U	5 U
1,2-DICHLOROPROPANE	ug/L	5 U	5 U	5 U
1,3-DICHLOROBENZENE	ug/L	5 U	5 U	5 U
1,4-DICHLOROBENZENE	ug/L	5 U	5 U	5 U
2-BUTANONE	ug/L	25 U	25 U	25 U
2-HEXANONE	ug/L	5 U	5 U	5 U
4-METHYL-2-PENTANONE	ug/L	5 U	5 U	5 U
ACETONE	ug/L	25 U	25 U	25 U
BENZENE	ug/L	5 U	5 U	5 U
BROMODICHLOROMETHANE	ug/L	5 U	5 U	5 U
BROMOFORM	ug/L	5 U	5 U	5 U
BROMOMETHANE	ug/L	5 U	5 U	5 U
CARBON DISULFIDE	ug/L	5 U	5 U	5 U
CARBON TETRACHLORIDE	ug/L	5 U	5 U	5 U
CHLOROBENZENE	ug/L	5 U	5 U	5 U
CHLOROETHANE	ug/L	5 U	5 U	5 U
CHLOROFORM	ug/L	5 U	5 U	5 U
CHLOROMETHANE	ug/L	5 U	5 U	5 U
CIS-1,2-DICHLOROETHENE	ug/L	5 U	5 U	5 U
CIS-1,3-DICHLOROPROPENE	ug/L	5 U	5 U	5 U
CYCLOHEXANE	ug/L	100 U	100 U	100 U
DIBROMOCHLOROMETHANE	ug/L	5 U	5 U	5 U
DICHLORODIFLUOROMETHANE	ug/L	5 U	5 U	5 U
ETHYLBENZENE	ug/L	5 U	5 U	5 U
ISOPROPYLBENZENE (CUMENE)	ug/L	5 U	5 U	5 U
METHYL ACETATE	ug/L	5 U	5 U	5 U
METHYLCYCLOHEXANE	ug/L	5 U	5 U	5 U
METHYLENE CHLORIDE	ug/L	10 U	10 U	10 U
STYRENE	ug/L	5 U	5 U	5 U
TERT-BUTYL METHYL ETHER (MTE)	ug/L	5 U	5 U	5 U
TETRACHLOROETHENE	ug/L	5 U	5 U	5 U
TOLUENE	ug/L	5 U	5 U	5 U
TRANS-1,2-DICHLOROETHENE	ug/L	5 U	5 U	5 U
TRANS-1,3-DICHLOROPROPENE	ug/L	5 U	5 U	5 U
TRICHLOROETHENE	ug/L	5 U	5 U	5 U
TRICHLOROFLUOROMETHANE	ug/L	5 U	5 U	5 U
TRICHLOROTRIFLUOROETHANE	ug/L	5 U	5 U	5 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

Lab Sample ID:	20203110801	20203110802	20203110803
	027-15PREEB	15POSTEB-W	027-15TB-
Field Sample ID:	W-9	9	020307
Matrix:	WATER	WATER	WATER
Sample Type:	EB	EB	TB
Sample Collection Date:	3/6/2002	3/6/2002	3/7/2002

VOLATILE ORGANICS	UNITS			
VINYL CHLORIDE	ug/L	5 U	5 U	5 U
XYLENES (TOTAL)	ug/L	10 U	10 U	10 U
FLORIDA PRO				
PETROLEUM HYDROCARBONS	ug/L	100 U	100 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0203446-01	L0203446-02	L0204001-01
	Field Sample ID:	027-15-DP02-S-06	027-15-DP02-S-11	027-EQBFS-01
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	N	N
	Sample Collection Date:	3/21/2002	3/21/2002	3/29/2002
VOLATILE ORGANICS				
	UNITS			
1,1,1-TRICHLOROETHANE	ug/kg	--	--	0.503 U
1,1,2,2-TETRACHLOROETHANE	ug/kg	--	--	0.503 U
1,1,2-TRICHLOROETHANE	ug/kg	--	--	0.503 U
1,1-DICHLOROETHANE	ug/kg	--	--	1.01 U
1,1-DICHLOROETHENE	ug/kg	--	--	0.503 U
1,2-DICHLOROETHANE	ug/kg	--	--	0.503 U
1,2-DICHLOROPROPANE	ug/kg	--	--	0.503 U
2-BUTANONE	ug/kg	--	--	2.52 U
2-HEXANONE	ug/kg	--	--	2.52 U
4-METHYL-2-PENTANONE	ug/kg	--	--	2.52 U
ACETONE	ug/kg	--	--	2.52 U
BENZENE	ug/kg	--	--	0.503 U
BROMODICHLOROMETHANE	ug/kg	--	--	0.503 U
BROMOFORM	ug/kg	--	--	0.503 U
BROMOMETHANE	ug/kg	--	--	1.01 U
CARBON DISULFIDE	ug/kg	--	--	0.503 U
CARBON TETRACHLORIDE	ug/kg	--	--	0.503 U
CHLOROENZENE	ug/kg	--	--	0.503 U
CHLOROETHANE	ug/kg	--	--	1.01 U
CHLOROFORM	ug/kg	--	--	0.503 U
CHLOROMETHANE	ug/kg	--	--	2.01 U
CIS-1,3-DICHLOROPROPENE	ug/kg	--	--	0.503 U
DIBROMOCHLOROMETHANE	ug/kg	--	--	0.503 U
ETHYLBENZENE	ug/kg	--	--	0.503 U
METHYLENE CHLORIDE	ug/kg	--	--	1.01 U
STYRENE	ug/kg	--	--	0.503 U
TETRACHLOROETHENE	ug/kg	--	--	0.503 U
TOLUENE	ug/kg	--	--	0.503 U
TOTAL 1,2-DICHLOROETHENE	ug/kg	--	--	0.553 U
TRANS-1,3-DICHLOROPROPENE	ug/kg	--	--	0.503 U
TRICHLOROETHENE	ug/kg	--	--	0.503 U
VINYL CHLORIDE	ug/kg	--	--	1.01 U
XYLENES (TOTAL)	ug/kg	--	--	0.503 U
SEMIVOLATILE ORGANICS				
1,2,4-TRICHLOROBENZENE	ug/kg	--	--	36 U
1,2-DICHLOROBENZENE	ug/kg	--	--	36.4 U
1,3-DICHLOROBENZENE	ug/kg	--	--	35.3 U
1,4-DICHLOROBENZENE	ug/kg	--	--	37.4 U
2,4,5-TRICHLOROPHENOL	ug/kg	--	--	51.8 U
2,4,6-TRICHLOROPHENOL	ug/kg	--	--	46.9 U
2,4-DICHLOROPHENOL	ug/kg	--	--	44.9 U
2,4-DIMETHYLPHENOL	ug/kg	--	--	41.1 U
2,4-DINITROPHENOL	ug/kg	--	--	117 U
2,4-DINITROTOLUENE	ug/kg	--	--	46.8 U
2,6-DINITROTOLUENE	ug/kg	--	--	44.5 U
2-CHLORONAPHTHALENE	ug/kg	--	--	43.9 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0203446-01	L0203446-02	L0204001-01
		027-15-DP02-	027-15-DP02-	027-EQBFS-
	Field Sample ID:	S-06	S-11	01
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	N	N
	Sample Collection Date:	3/21/2002	3/21/2002	3/29/2002
SEMIVOLATILE ORGANICS	UNITS			
2-CHLOROPHENOL	ug/kg	--	--	37.3 U
2-METHYLNAPHTHALENE	ug/kg	--	--	40.4 U
2-NITROANILINE	ug/kg	--	--	51 U
2-NITROPHENOL	ug/kg	--	--	35.8 U
3,3'-DICHLOROBENZIDINE	ug/kg	--	--	169 U
3-NITROANILINE	ug/kg	--	--	79.8 U
4,6-DINITRO-2-METHYLPHENOL	ug/kg	--	--	39.9 U
4-BROMOPHENYL PHENYL ETHER	ug/kg	--	--	41.8 U
4-CHLORO-3-METHYLPHENOL	ug/kg	--	--	50.6 U
4-CHLOROANILINE	ug/kg	--	--	58.7 U
4-CHLOROPHENYL PHENYL ETHER	ug/kg	--	--	48.6 U
4-NITROANILINE	ug/kg	--	--	44 U
4-NITROPHENOL	ug/kg	--	--	62.7 U
ACENAPHTHENE	ug/kg	--	--	46 U
ACENAPHTHYLENE	ug/kg	--	--	46.6 U
ANTHRACENE	ug/kg	--	--	38.6 U
BENZO(A)ANTHRACENE	ug/kg	--	--	31.7 U
BENZO(A)PYRENE	ug/kg	--	--	28.6 U
BENZO(B)FLUORANTHENE	ug/kg	--	--	30.8 U
BENZO(G,H,I)PERYLENE	ug/kg	--	--	40.6 U
BENZO(K)FLUORANTHENE	ug/kg	--	--	37.4 U
BENZYL BUTYL PHTHALATE	ug/kg	--	--	34.1 U
BIS(2-CHLOROETHOXY) METHANE	ug/kg	--	--	52.2 U
BIS(2-CHLOROETHYL) ETHER	ug/kg	--	--	44.6 U
BIS(2-CHLOROISOPROPYL) ETHER	ug/kg	--	--	45.7 U
BIS(2-ETHYLHEXYL) PHTHALATE	ug/kg	--	--	43.6 U
CARBAZOLE	ug/kg	--	--	40.2 U
CHRYSENE	ug/kg	--	--	44.7 U
DIBENZ(A,H)ANTHRACENE	ug/kg	--	--	42.8 U
DIBENZOFURAN	ug/kg	--	--	47.6 U
DIETHYL PHTHALATE	ug/kg	--	--	53.8 U
DIMETHYL PHTHALATE	ug/kg	--	--	50.3 U
DI-N-BUTYL PHTHALATE	ug/kg	--	--	34.5 U
DI-N-OCTYLPHTHALATE	ug/kg	--	--	33.8 U
FLUORANTHENE	ug/kg	--	--	31.2 U
FLUORENE	ug/kg	--	--	48.7 U
HEXACHLOROBENZENE	ug/kg	--	--	44.1 U
HEXACHLOROBUTADIENE	ug/kg	--	--	40.7 U
HEXACHLOROCYCLOPENTADIENE	ug/kg	--	--	96.3 U
HEXACHLOROETHANE	ug/kg	--	--	36 U
INDENO(1,2,3-C,D)PYRENE	ug/kg	--	--	39.7 U
ISOPHORONE	ug/kg	--	--	47.9 U
M,P-CRESOL	ug/kg	--	--	45.6 U
NAPHTHALENE	ug/kg	--	--	40.2 U
NITROBENZENE	ug/kg	--	--	37.9 U
N-NITROSODI-N-PROPYLAMINE	ug/kg	--	--	39 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0203446-01	L0203446-02	L0204001-01
	Field Sample ID:	S-06	S-11	01
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	N	N
	Sample Collection Date:	3/21/2002	3/21/2002	3/29/2002
SEMIVOLATILE ORGANICS				
	UNITS			
N-NITROSODIPHENYLAMINE	ug/kg	--	--	52.5 U
O-CRESOL	ug/kg	--	--	69.8 U
PENTACHLOROPHENOL	ug/kg	--	--	22.4 U
PHENANTHRENE	ug/kg	--	--	48 U
PHENOL	ug/kg	--	--	34.8 U
PYRENE	ug/kg	--	--	33.6 U
FLORIDA PRO				
PETROLEUM HYDROCARBONS	ug/kg	--	--	5520 U
PESTICIDES				
ALDRIN	ug/kg	--	--	0.442 U
ALPHA BHC	ug/kg	--	--	0.442 U
ALPHA ENDOSULFAN	ug/kg	--	--	0.442 U
ALPHA-CHLORDANE	ug/kg	--	--	0.442 U
BETA BHC	ug/kg	--	--	0.442 U
BETA ENDOSULFAN	ug/kg	--	--	0.911 U
DELTA BHC	ug/kg	--	--	0.442 U
DIELDRIN	ug/kg	--	--	0.911 U
ENDOSULFAN SULFATE	ug/kg	--	--	0.911 U
ENDRIN	ug/kg	--	--	0.911 U
ENDRIN ALDEHYDE	ug/kg	--	--	0.911 U
ENDRIN KETONE	ug/kg	--	--	0.911 U
GAMMA BHC (LINDANE)	ug/kg	--	--	0.442 U
GAMMA-CHLORDANE	ug/kg	--	--	0.442 U
HEPTACHLOR	ug/kg	--	--	0.442 U
HEPTACHLOR EPOXIDE	ug/kg	--	--	0.442 U
METHOXYCHLOR	ug/kg	--	--	0.911 U
P,P'-DDD	ug/kg	--	--	0.911 U
P,P'-DDE	ug/kg	--	--	0.911 U
P,P'-DDT	ug/kg	--	--	0.911 U
TOXAPHENE	ug/kg	--	--	18.5 U
HERBICIDES				
2,4 DB	ug/kg	--	--	22.1 U
2,4,5-T	ug/kg	--	--	2.21 U
2,4,5-TP (SILVEX)	ug/kg	--	--	1.66 U
2,4-D	ug/kg	--	--	22.1 U
DALAPON	ug/kg	--	--	55.2 U
DICAMBA	ug/kg	--	--	2.21 U
DICHLOROPROP	ug/kg	--	--	22.1 U
DINOSEB	ug/kg	--	--	11 U
MCPA	ug/kg	--	--	2210 U
MCPP	ug/kg	--	--	2210 U
PENTACHLOROPHENOL	ug/kg	--	--	2.21 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0203446-01	L0203446-02	L0204001-01
		027-15-DP02-	027-15-DP02-	027-EQBFS-
	Field Sample ID:	S-06	S-11	01
	Matrix:	SOIL	SOIL	SOIL
	Sample Type:	N	N	N
	Sample Collection Date:	3/21/2002	3/21/2002	3/29/2002
PCBS				
AROCLOR-1016	ug/kg	--	--	9.11 U
AROCLOR-1221	ug/kg	--	--	9.11 U
AROCLOR-1232	ug/kg	--	--	9.11 U
AROCLOR-1242	ug/kg	--	--	9.11 U
AROCLOR-1248	ug/kg	--	--	9.11 U
AROCLOR-1254	ug/kg	--	--	9.11 U
AROCLOR-1260	ug/kg	--	--	9.11 U
METALS				
ALUMINUM	mg/kg	--	--	12600 =
ANTIMONY	mg/kg	--	--	0.111 U
ARSENIC	mg/kg	--	--	1.06 =
BARIUM	mg/kg	--	--	8.96 U
BERYLLIUM	mg/kg	--	--	0.0133 U
CADMIUM	mg/kg	--	--	0.0553 U
CALCIUM	mg/kg	--	--	103 U
CHROMIUM	mg/kg	--	--	9.5 =
COBALT	mg/kg	--	--	0.133 U
COPPER	mg/kg	--	--	3.7 U
IRON	mg/kg	--	--	6000 =
LEAD	mg/kg	--	--	2.98 =
MAGNESIUM	mg/kg	--	--	150 U
MANGANESE	mg/kg	--	--	37.8 =
MERCURY	mg/kg	--	--	0.0199 U
NICKEL	mg/kg	--	--	2.4 U
POTASSIUM	mg/kg	--	--	112 U
SELENIUM	mg/kg	--	--	0.111 U
SILVER	mg/kg	--	--	0.277 U
SODIUM	mg/kg	--	--	5.53 U
THALLIUM	mg/kg	--	--	0.0553 U
VANADIUM	mg/kg	--	--	13.8 U
ZINC	mg/kg	--	--	5.02 U
WET CHEMISTRY				
PH (SW9045C)	UNITS	--	--	4.49 =
IGNITABILITY (SW1010)	DEG C	95 >	95 >	

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

Lab Sample ID:	L0204001-02	L0205169-01	L0205169-02
Field Sample ID:	TRIP BLANK	027-15&43- NW-01	TB-027-15&43- NW-01
Matrix:	WATER	WATER	WATER
Sample Type:	TB	N	N
Sample Collection Date:	3/29/2002	5/7/2002	5/7/2002
VOLATILE ORGANICS	UNITS		
1,1,1,2-TETRACHLOROETHANE	ug/L	--	0.25 U
1,1,1-TRICHLOROETHANE	ug/L	0.25 U	0.25 U
1,1,2,2-TETRACHLOROETHANE	ug/L	0.125 U	0.125 U
1,1,2-TRICHLOROETHANE	ug/L	0.25 U	0.25 U
1,1-DICHLOROETHANE	ug/L	0.125 U	0.125 U
1,1-DICHLOROETHENE	ug/L	0.5 U	0.5 U
1,1-DICHLOROPROPENE	ug/L	--	0.25 U
1,2,3-TRICHLOROBENZENE	ug/L	--	0.125 U
1,2,3-TRICHLOROPROPANE	ug/L	--	0.75 U
1,2,4-TRICHLOROBENZENE	ug/L	--	0.2 U
1,2,4-TRIMETHYLBENZENE	ug/L	--	0.25 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	--	1 U
1,2-DIBROMOETHANE	ug/L	--	0.25 U
1,2-DICHLOROBENZENE	ug/L	--	0.125 U
1,2-DICHLOROETHANE	ug/L	0.25 U	0.25 U
1,2-DICHLOROPROPANE	ug/L	0.125 U	0.125 U
1,3,5-TRIMETHYLBENZENE	ug/L	--	0.25 U
1,3-DICHLOROBENZENE	ug/L	--	0.25 U
1,3-DICHLOROPROPANE	ug/L	--	0.2 U
1,4-DICHLOROBENZENE	ug/L	--	0.125 U
2,2-DICHLOROPROPANE	ug/L	--	0.25 U
2-BUTANONE	ug/L	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	ug/L	--	10 U
2-CHLOROTOLUENE	ug/L	--	0.125 U
2-HEXANONE	ug/L	2.5 U	2.5 U
4-CHLOROTOLUENE	ug/L	--	0.25 U
4-METHYL-2-PENTANONE	ug/L	2.5 U	2.5 U
ACETONE	ug/L	2.5 U	42000 R
BENZENE	ug/L	0.125 U	0.125 U
BROMOBENZENE	ug/L	--	0.125 U
BROMOCHLOROMETHANE	ug/L	--	0.2 U
BROMODICHLOROMETHANE	ug/L	0.25 U	0.25 U
BROMOFORM	ug/L	0.54 U	0.54 U
BROMOMETHANE	ug/L	0.5 U	0.5 U
CARBON DISULFIDE	ug/L	0.5 U	0.5 U
CARBON TETRACHLORIDE	ug/L	0.25 U	0.25 U
CHLOROBENZENE	ug/L	0.125 U	0.125 U
CHLOROETHANE	ug/L	0.5 U	0.5 U
CHLOROFORM	ug/L	0.125 U	0.125 U
CHLOROMETHANE	ug/L	0.25 U	0.25 U
CIS-1,2-DICHLOROETHENE	ug/L	--	0.25 U
CIS-1,3-DICHLOROPROPENE	ug/L	0.25 U	0.25 U
DIBROMOCHLOROMETHANE	ug/L	0.25 U	0.25 U
DIBROMOMETHANE	ug/L	--	0.25 U
DICHLORODIFLUOROMETHANE	ug/L	--	0.25 U
ETHYLBENZENE	ug/L	0.25 U	0.25 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0204001-02	L0205169-01	L0205169-02
	Field Sample ID:	TRIP BLANK	027-15&43- NW-01	TB-027-15&43- NW-01
	Matrix:	WATER	WATER	WATER
	Sample Type:	TB	N	N
	Sample Collection Date:	3/29/2002	5/7/2002	5/7/2002
VOLATILE ORGANICS				
	UNITS			
HEXACHLOROBUTADIENE	ug/L	--	0.25 U	0.25 U
ISOPROPYLBENZENE (CUMENE)	ug/L	--	0.25 U	0.25 U
M,P-XYLENE	ug/L	--	0.5 U	0.5 U
METHYLENE CHLORIDE	ug/L	0.39 J	0.25 U	0.25 U
NAPHTHALENE	ug/L	--	0.2 U	0.2 U
N-BUTYLBENZENE	ug/L	--	0.25 U	0.25 U
N-PROPYLBENZENE	ug/L	--	0.125 U	0.125 U
O-XYLENE	ug/L	--	0.25 U	0.25 U
P-CYMENE (P-ISOPROPYLTOLUEN	ug/L	--	0.25 U	0.25 U
SEC-BUTYLBENZENE	ug/L	--	0.25 U	0.25 U
STYRENE	ug/L	0.125 U	0.125 U	0.125 U
T-BUTYLBENZENE	ug/L	--	0.25 U	0.25 U
TETRACHLOROETHENE	ug/L	0.25 U	0.25 U	0.25 U
TOLUENE	ug/L	0.25 U	0.25 U	0.25 U
TOTAL 1,2-DICHLOROETHENE	ug/L	0.25 U		
TRANS-1,2-DICHLOROETHENE	ug/L	--	0.25 U	0.25 U
TRANS-1,3-DICHLOROPROPENE	ug/L	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	ug/L	0.25 U	0.25 U	0.25 U
TRICHLOROFLUOROMETHANE	ug/L	--	0.25 U	0.25 U
VINYL ACETATE	ug/L	--	2.5 U	2.5 U
VINYL CHLORIDE	ug/L	0.25 U	0.25 U	0.25 U
XYLENES (TOTAL)	ug/L	0.5 U	--	--
SEMIVOLATILE ORGANICS				
1,2,4-TRICHLOROBENZENE	ug/L	--	2.5 U	--
1,2-DICHLOROBENZENE	ug/L	--	2.5 U	--
1,3-DICHLOROBENZENE	ug/L	--	2.5 U	--
1,4-DICHLOROBENZENE	ug/L	--	2.5 U	--
2,4,5-TRICHLOROPHENOL	ug/L	--	2.5 U	--
2,4,6-TRICHLOROPHENOL	ug/L	--	2.5 U	--
2,4-DICHLOROPHENOL	ug/L	--	2.5 U	--
2,4-DIMETHYLPHENOL	ug/L	--	2.5 U	--
2,4-DINITROPHENOL	ug/L	--	12.5 U	--
2,4-DINITROTOLUENE	ug/L	--	2.5 U	--
2,6-DINITROTOLUENE	ug/L	--	2.5 U	--
2-CHLORONAPHTHALENE	ug/L	--	2.5 U	--
2-CHLOROPHENOL	ug/L	--	2.5 U	--
2-METHYLNAPHTHALENE	ug/L	--	2.5 U	--
2-NITROANILINE	ug/L	--	2.5 U	--
2-NITROPHENOL	ug/L	--	2.5 U	--
3,3'-DICHLOROBENZIDINE	ug/L	--	2.5 U	--
3-NITROANILINE	ug/L	--	2.5 U	--
4,6-DINITRO-2-METHYLPHENOL	ug/L	--	12.5 U	--
4-BROMOPHENYL PHENYL ETHER	ug/L	--	2.5 U	--
4-CHLORO-3-METHYLPHENOL	ug/L	--	2.5 U	--
4-CHLOROANILINE	ug/L	--	5 U	--
4-CHLOROPHENYL PHENYL ETHER	ug/L	--	2.5 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0204001-02	L0205169-01	L0205169-02
	Field Sample ID:	TRIP BLANK	027-15&43- NW-01	TB-027-15&43- NW-01
	Matrix:	WATER	WATER	WATER
	Sample Type:	TB	N	N
	Sample Collection Date:	3/29/2002	5/7/2002	5/7/2002
SEMIVOLATILE ORGANICS	UNITS			
4-NITROANILINE	ug/L	--	2.5 U	--
4-NITROPHENOL	ug/L	--	2.5 U	--
ACENAPHTHENE	ug/L	--	2.5 U	--
ACENAPHTHYLENE	ug/L	--	2.5 U	--
ANTHRACENE	ug/L	--	2.5 U	--
BENZO(A)ANTHRACENE	ug/L	--	2.5 U	--
BENZO(A)PYRENE	ug/L	--	2.5 U	--
BENZO(B)FLUORANTHENE	ug/L	--	2.5 U	--
BENZO(G,H,I)PERYLENE	ug/L	--	2.5 U	--
BENZO(K)FLUORANTHENE	ug/L	--	2.5 U	--
BENZOIC ACID	ug/L	--	2.5 U	--
BENZYL ALCOHOL	ug/L	--	2.5 U	--
BENZYL BUTYL PHTHALATE	ug/L	--	2.5 U	--
BIS(2-CHLOROETHOXY) METHANE	ug/L	--	2.5 U	--
BIS(2-CHLOROETHYL) ETHER	ug/L	--	2.5 U	--
BIS(2-CHLOROISOPROPYL) ETHER	ug/L	--	2.5 U	--
BIS(2-ETHYLHEXYL) PHTHALATE	ug/L	--	2.5 U	--
CHRYSENE	ug/L	--	2.5 U	--
DIBENZ(A,H)ANTHRACENE	ug/L	--	2.5 U	--
DIBENZOFURAN	ug/L	--	2.5 U	--
DIETHYL PHTHALATE	ug/L	--	2.5 U	--
DIMETHYL PHTHALATE	ug/L	--	2.5 U	--
DI-N-BUTYL PHTHALATE	ug/L	--	2.5 U	--
DI-N-OCTYLPHTHALATE	ug/L	--	2.5 U	--
FLUORANTHENE	ug/L	--	2.5 U	--
FLUORENE	ug/L	--	2.5 U	--
HEXACHLOROBENZENE	ug/L	--	2.5 U	--
HEXACHLOROBUTADIENE	ug/L	--	2.5 U	--
HEXACHLOROCYCLOPENTADIENE	ug/L	--	5 U	--
HEXACHLOROETHANE	ug/L	--	2.5 U	--
INDENO(1,2,3-C,D)PYRENE	ug/L	--	2.5 U	--
ISOPHORONE	ug/L	--	2.5 U	--
M,P-CRESOL	ug/L	--	5 U	--
NAPHTHALENE	ug/L	--	2.5 U	--
NITROBENZENE	ug/L	--	2.5 U	--
N-NITROSODI-N-PROPYLAMINE	ug/L	--	2.5 U	--
N-NITROSODIPHENYLAMINE	ug/L	--	2.5 U	--
O-CRESOL	ug/L	--	2.5 U	--
PENTACHLOROPHENOL	ug/L	--	2.5 U	--
PHENANTHRENE	ug/L	--	2.5 U	--
PHENOL	ug/L	--	2.5 U	--
PYRENE	ug/L	--	2.5 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0204001-02	L0205169-01	L0205169-02
	Field Sample ID:	TRIP BLANK	027-15&43- NW-01	TB-027-15&43- NW-01
	Matrix:	WATER	WATER	WATER
	Sample Type:	TB	N	N
	Sample Collection Date:	3/29/2002	5/7/2002	5/7/2002
PESTICIDES				
ALDRIN	ug/L	--	0.01 U	--
ALPHA BHC	ug/L	--	0.01 U	--
ALPHA ENDOSULFAN	ug/L	--	0.01 U	--
ALPHA-CHLORDANE	ug/L	--	0.01 U	--
BETA BHC	ug/L	--	0.01 U	--
BETA ENDOSULFAN	ug/L	--	0.025 U	--
DELTA BHC	ug/L	--	0.01 U	--
DIELDRIN	ug/L	--	0.025 U	--
ENDOSULFAN SULFATE	ug/L	--	0.025 U	--
ENDRIN	ug/L	--	0.025 U	--
ENDRIN ALDEHYDE	ug/L	--	0.025 U	--
ENDRIN KETONE	ug/L	--	0.025 U	--
GAMMA BHC (LINDANE)	ug/L	--	0.01 U	--
GAMMA-CHLORDANE	ug/L	--	0.01 U	--
HEPTACHLOR	ug/L	--	0.01 U	--
HEPTACHLOR EPOXIDE	ug/L	--	0.01 U	--
METHOXYCHLOR	ug/L	--	0.025 U	--
P,P'-DDD	ug/L	--	0.025 U	--
P,P'-DDE	ug/L	--	0.025 U	--
P,P'-DDT	ug/L	--	0.099 U	--
TOXAPHENE	ug/L	--	0.5 U	--
HERBICIDES				
2,4 DB	ug/L	--	1 U	--
2,4,5-T	ug/L	--	0.1 U	--
2,4,5-TP (SILVEX)	ug/L	--	0.1 U	--
2,4-D	ug/L	--	1 U	--
DALAPON	ug/L	--	2.5 U	--
DICAMBA	ug/L	--	0.1 U	--
DICHLOROPROP	ug/L	--	1 U	--
DINOSEB	ug/L	--	0.5 U	--
MCPA	ug/L	--	100 U	--
MCPP	ug/L	--	100 U	--
PENTACHLOROPHENOL	ug/L	--	0.1 U	--
PCBS				
AROCLOR-1016	ug/L	--	0.25 U	--
AROCLOR-1221	ug/L	--	0.25 U	--
AROCLOR-1232	ug/L	--	0.25 U	--
AROCLOR-1242	ug/L	--	0.25 U	--
AROCLOR-1248	ug/L	--	0.25 U	--
AROCLOR-1254	ug/L	--	0.25 U	--
AROCLOR-1260	ug/L	--	0.25 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	L0204001-02	L0205169-01	L0205169-02
	Field Sample ID:	TRIP BLANK	027-15&43- NW-01	TB-027-15&43- NW-01
	Matrix:	WATER	WATER	WATER
	Sample Type:	TB	N	N
	Sample Collection Date:	3/29/2002	5/7/2002	5/7/2002
METALS				
ALUMINUM	mg/L	--	2.92 =	--
ANTIMONY	mg/L	--	0.00551 =	--
BARIUM	mg/L	--	0.161 =	--
BERYLLIUM	mg/L	--	0.00025 U	--
CADMIUM	mg/L	--	0.0025 U	--
CALCIUM	mg/L	--	14.5 =	--
CHROMIUM	mg/L	--	0.0025 U	--
COBALT	mg/L	--	0.0025 U	--
COPPER	mg/L	--	0.199 =	--
LEAD	mg/L	--	0.584 =	--
MAGNESIUM	mg/L	--	4.4 =	--
MANGANESE	mg/L	--	0.954 =	--
MERCURY	mg/L	--	0.00076 =	--
NICKEL	mg/L	--	0.005 U	--
POTASSIUM	mg/L	--	5.01 =	--
SELENIUM	mg/L	--	0.0059 =	--
SILVER	mg/L	--	0.005 U	--
SODIUM	mg/L	--	72 =	--
THALLIUM	mg/L	--	0.0001 U	--
VANADIUM	mg/L	--	0.0241 =	--
ZINC	mg/L	--	1.68 =	--
WET CHEMISTRY				
REACTIVITY CYANIDE (SW9010)	mg/kg	--	10 U	--
REACTIVITY SULFIDE (SW9034)	mg/kg	--	100 U	--
PH (SW9045C)	UNITS	--	7.57 =	--
IGNITABILITY (SW1010)	DEG C	--	95 =	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C111648*1	C111648*2	C111648*3	C111648*4	C111648*5
		027-15GS68-	027-15GR03-	027-15GR65-	027-15GS99-	027-15PREEB-
	Field Sample ID:	W-S1	W-S1	W-S1	W-S1	W-S1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sample Type:	N	N	N	N	EB
	Sample Collection Date:	11/29/2001	11/29/2001	11/29/2001	11/29/2001	11/29/2001
METALS	UNITS					
ARSENIC	mg/L	0.005 U	0.490 =	0.170 =	0.510 =	0.005 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C111651*1	C111651*2	C111651*3	C111651*4	C112046*1
	Field Sample ID:	027-43-01S-W S1	027-43-04S-W S1	027-43-06S-W S1	027-43PREEB W-S1	027-15GS71- W-S1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sample Type:	N	N	FD	EB	N
	Sample Collection Date:	11/28/2001	11/28/2001	11/28/2001	11/28/2001	12/3/2001
METALS	UNITS					
ARSENIC	mg/L	--	--	--	--	0.005 U
IRON	mg/L	0.240 =	0.091 U	0.110 U	0.100 U	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C112046*2	C112283*1	C112283*2	C112283*3	C112283*4
	Field Sample ID:	027-15GR36- W-S1	027-PEN-43- 02S-W-S1	027-PEN-43- 03S-W-S1	027-PEN-43- 5S-W-S1	027-PEN-43- 07S-W-S1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sample Type:	N	N	N	N	FD
	Sample Collection Date:	12/3/2001	12/12/2001	12/12/2001	12/12/2001	12/12/2001
METALS	UNITS					
ARSENIC	mg/L	0.070 =	--	--	--	--
IRON	mg/L	--	0.140 U	0.064 U	0.130 U	0.130 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C112283*5	C203721*1	C203721*2	C206324*1	C206324*2
	Field Sample ID:	43PREEB2-W-S	027-15SS400-S-2	027-15PRE-EB-W-9	027-15GR03-W-S2	027-15GR36-W-S2
	Matrix:	WATER	SOIL	WATER	WATER	WATER
	Sample Type:	EB	N	EB	N	N
	Sample Collection Date:	12/12/2001	3/29/2002	3/29/2002	6/13/2002	6/13/2002
METALS	UNITS					
ARSENIC	mg/kg	--	9.4 =	--	--	--
ARSENIC	mg/L	--	--	0.005 U	0.650 =	0.066 =
IRON	mg/L	0.100 U	--	--	--	--

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C206324*3	C206324*4	C206324*5	C206324*6	C206324*7
	Field Sample ID:	027-15GS68-	027-15GS70-	027-15GS71-	027-15GS72-	027-15PREEB-
	Matrix:	W-S2	W-S2	W-S2	W-S2	W-S2
	Sample Type:	N	N	N	FD	EB
	Sample Collection Date:	6/13/2002	6/13/2002	6/13/2002	6/13/2002	6/13/2002
METALS	UNITS					
ARSENIC	mg/L	0.005 U	0.005 U	0.005 U	0.650 =	0.005 U

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C206329*1	C206329*2	C206329*3	C206329*4	C206329*5
	Field Sample ID:	027-PEN-43-	027-PEN-43-	027-PEN-43-	027-PEN-43-	027-PEN-43-
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sample Type:	N	N	N	N	FD
	Sample Collection Date:	6/13/2002	6/13/2002	6/13/2002	6/13/2002	6/13/2002
METALS	UNITS					
IRON	mg/L	0.510 =	0.190 =	0.210 =	0.470 =	0.610 =

Appendix C - EDD Verification

SUMMARY OF VERIFIED EDD DATA

(CTO#0027-NAS Pensacola – Sites 15 and 46)

	Lab Sample ID:	C206329*6	C206729*1	C206729*2	C206729*3
	Field Sample ID:	027-PEN-43- PREEB-W-S	027-15GS69- W-S2	027-PEN-43- 02S-W-02	027-15PREEB- W-S2B
	Matrix:	WATER	WATER	WATER	WATER
	Sample Type:	EB	N	N	EB
	Sample Collection Date:	6/13/2002	6/27/2002	6/27/2002	6/27/2002
METALS	UNITS				
ARSENIC	mg/L	--	0.005 U	--	0.005 U
IRON	mg/L	0.100 U	--	0.820 =	0.100 U

VALIDATA

Chemical Services, Inc.

4070 Balleycastle Lane, Duluth, GA 30097

(770) 232-0130
(770) 232-5082 (Fax)
www.datavalidator.com

CH2M HILL Constructors, Inc.
115 Perimeter Center Place, N.E., Suite 700
Atlanta, GA 30346-1278
Attn: Ms. Christelle Newsome

12/7/01

Dear Ms. Newsome:

Please find enclosed data validation reports, qualified Form I's and validation checklists for NAS Pensacola, CTO-027, Site 43, SDG C108606. This SDG was validated mistakenly when it was sent to us with other Pensacola data. These samples were billed previously with the rest of the Pensacola data.

Please call me at (770) 232-0130 if you have any questions. We are pleased to be of service to CH2M HILL.

Sincerely,



Kevin C. Harmon
Client Services Director

RECEIVED
12-12-0107

VALIDATA

Chemical Services, Inc.

4070 Balleycastle Lane, Duluth, GA 30097

(770) 232-0130

(770) 232-5082 (Fax)

www.datavalidator.com

DATA VALIDATION SUMMARY REPORT

COMPANY: CH2M HILL, Atlanta
SITE NAME: NAS Pensacola, CTO-0027, Site 43
CONTRACTED LAB: Severn Trent Laboratories, Inc.
PROJECT NUMBER: 154039
LAB PROJECT NUMBER: C108606 and C108606S
QA/QC LEVEL: EPA Level III
EPA SOW/METHODS: EPA 1990 SOW / SW-846
VALIDATION GUIDELINES: USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 1994
SAMPLE MATRICES: Soil and Water
TYPES OF ANALYSES: Total Metals, Soluble Metals
SDG NUMBER: C108606, CTO-0027 (Level III)

OVERVIEW

SAMPLES:

<u>Client Sample #</u>	<u>Lab Sample #</u>	<u>Matrix</u>	<u>Antimony</u>	<u>Arsenic</u>	<u>Barium</u>	<u>Copper</u>
43SO15-S-03	C108606-1	Soil	X			
43SO15-S-03W	C108606S-1	Water	X			
43SS18-S-02	C108606-2	Soil	X			
43SS19-S-02	C108606-3	Soil	X			
43SS20-S-02	C108606-4	Soil	X			
43SS21-S-02	C108606-5	Soil	X			
43SO12-S-06	C108606-6	Soil	X			X
43SO12-S-06W	C108606S-6	Water	X			X
43SS10-S-03	C108606-7	Soil	X			X
43SS10-S-03W	C108606S-7	Water	X			X
43SS14-S-03	C108606-8	Soil	X			X
43SS14-S-03W	C108606S-8	Water	X			X
43SS25-S-02	C108606-9	Soil	X			X
43SS26-S-02	C108606-10	Soil	X			X
43SS27-S-02	C108606-11	Soil	X			X
43SS28-S-02	C108606-12	Soil	X			X
43SO05-S-03	C108606-13	Soil	X			X
43SO05-S-03W	C108606S-13	Water	X			X
43SO07-S-06	C108606-14	Soil	X	X	X	X
43SO07-S-06W	C108606S-14	Water	X	X	X	X
43SS34-S-02	C108606-15	Soil	X	X	X	X
43SS34-S-02W	C108606S-15	Water	X	X	X	X
43SO36-S-06	C108606-16	Soil	X	X	X	X
43SO36-S-06W	C108606S-16	Water	X	X	X	X

<u>Client Sample #</u>	<u>Lab Sample #</u>	<u>Matrix</u>	<u>Antimony</u>	<u>Arsenic</u>	<u>Barium</u>	<u>Copper</u>
43SS31-S-02	C108606-17	Soil	X	X	X	X
43SS32-S-02	C108606-18	Soil	X	X	X	X
43SS33-S-02	C108606-19	Soil	X	X	X	X
43SS35-S-02	C108606-20	Soil	X	X	X	X
43PREEB01-W	C108606-21	Water	X	X	X	X
43POSTEB01-W	C108606-22	Water	X	X	X	X
43SO07-S-06MS	C108606-14MS	Soil	X	X	X	X
43SO07-S-06MSD	C108606-14MSD	Soil	X	X	X	X
43SO07-S-06WMS	C108606S-16MS	Water	X	X	X	X
43SO07-S-06WMSD	C108606S-16MSD	Water	X	X	X	X

<u>Client Sample #</u>	<u>Lab Sample #</u>	<u>Matrix</u>	<u>Iron</u>	<u>Lead</u>	<u>Nickel</u>	<u>Vanadium</u>	<u>Zinc</u>
43SO12-S-06	C108606-6	Soil	X	X	X		
43SO12-S-06	C108606S-6	Water	X	X	X		
43SS10-S-03	C108606-7	Soil		X		X	
43SS10-S-03	C108606S-7	Water		X		X	
43SS14-S-03	C108606-8	Soil		X		X	
43SS14-S-03	C108606S-8	Water		X		X	
43SS25-S-02	C108606-9	Soil		X		X	
43SS26-S-02	C108606-10	Soil		X		X	
43SS27-S-02	C108606-11	Soil		X		X	
43SS28-S-02	C108606-12	Soil		X			
43SO05-S-03	C108606-13	Soil	X	X			
43SO05-S-03	C108606S-13	Water	X	X			
43SO07-S-06	C108606-14	Soil	X	X	X	X	X
43SO07-S-06	C108606S-14	Water	X	X	X	X	X
43SS34-S-02	C108606-15	Soil	X	X	X	X	X
43SS34-S-02	C108606S-15	Water	X	X	X	X	X
43SO36-S-06	C108606-16	Soil	X	X	X	X	X
43SO36-S-06	C108606S-16	Water	X	X	X	X	X
43SS31-S-02	C108606-17	Soil	X	X	X	X	X
43SS32-S-02	C108606-18	Soil	X	X	X	X	X
43SS33-S-02	C108606-19	Soil	X	X	X	X	X
43SS35-S-02	C108606-20	Soil	X	X	X	X	X
43PREEB01-W	C108606-21	Water	X	X	X	X	X
43POSTEB01-W	C108606-22	Water	X	X	X	X	X
43SO07-S-06MS	C108606-14MS	Soil	X	X	X	X	X
43SO07-S-06MSD	C108606-14MSD	Soil	X	X	X	X	X
43SO07-S-06WMS	C108606S-16MS	Water	X	X	X	X	X
43SO07-S-06WMSD	C108606S-16MSD	Water	X	X	X	X	X

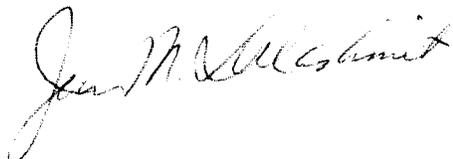
Sample

ID Code: EB = EQUIPMENT RINSATE BLANK

Suffix Codes: MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE, W = SOLUBLE METALS

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE:



Data Qualifier Definitions

- J - The associated numerical value is an estimated quantity.
- R - The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
- U - The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
- UJ - The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Severn Trent Laboratories, Inc. - C108606 Total and Soluble Metals

SAMPLES: 43SO15-S-03, 43SS18-S-02, 43SS19-S-02, 43SS20-S-02, 43SS21-S-02, 43SO12-S-06, 43SS10-S-03, 43SS14-S-03, 43SS25-S-02, 43SS26-S-02, 43SS27-S-02, 43SS28-S-02, 43SO05-S-03, 43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43SS31-S-02, 43SS32-S-02, 43SS33-S-02, 43SS35-S-02, 43SO15-S-03, 43SO12-S-03, 43SS10-S-03, 43SS14-S-02, 43SO05-S-03, 43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43PREEB01-W, 43POSTEB01-W

TOTAL AND SOLUBLE METALS

SUMMARY

I.) General:

The total and soluble metals fraction was analyzed according to Method 6010B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in this SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was necessary.

III.) Blanks:

Soil Samples:

The following blank results represent the highest detections associated with the soil samples and were used for data qualifications:

<u>Blank ID</u>	<u>Analyte</u>	<u>Blank Conc.</u>	<u>Action Limit</u>
PREEB	antimony	2.10 ug/L	2.10 mg/kg
POSTEB	barium	1.20 ug/L	1.20 mg/kg

<u>Blank ID</u>	<u>Analyte</u>	<u>Blank Conc.</u>	<u>Action Limit</u>
CCB4	copper	6.54 ug/L	6.54 mg/kg
PREEB	iron	49.0 ug/L	49.0 mg/kg
POSTEB	lead	3.60 ug/L	3.60 mg/kg
POSTEB	zinc	21.0 ug/L	21.0 mg/kg

CCB = Continuing Calibration Blank
 PREEB = Equipment Rinsate Blank (43PREEB01-W)
 POSTEB = Equipment Rinsate Blank (43POSTEB01-W)

All results greater than the IDL, but less than 5X the blank amount (Action Level), after corrections for percent moisture, for which the contaminated blank was an associated calibration or field blank were qualified as undetected (U).

The following analyte had a negative result with an absolute value greater than the IDL:

<u>Blank ID</u>	<u>Analyte</u>	<u>Neg. Conc.</u>	<u>5X Conc.</u>
PBS	nickel	-0.27 mg/kg	1.35 mg/kg

PBS = Preparation Blank (Soil)

All associated positive sample results less than 5X the blank amount, and associated non-detects were qualified as estimated (J) and (UJ).

Soluble Metals Samples:

The following blank results represent the highest detections associated with the dissolved metals samples and were used for data qualifications:

<u>Blank ID</u>	<u>Analyte</u>	<u>Blank Conc.</u>	<u>Action Limit</u>
ICB	antimony	9.80 ug/L	49.0 ug/L
POSTEB	barium	1.20 ug/L	6.00 ug/L
PBW	iron	50.1 ug/L	251 ug/L
POSTEB	lead	3.60 ug/L	18.0 ug/L
ICB	nickel	2.13 ug/L	10.7 ug/L
ICB	vanadium	2.04 ug/L	10.2 ug/L
PBW	zinc	71.3 ug/L	357 ug/L

ICB = Initial Calibration Blank, PBW = Preparation Blank (Water),
 POSTEB = Equipment Rinsate Blank 43POSTEB01-W

All results greater than the IDL, but less than 5X the blank amount (Action Level) for which the contaminated blank was an associated calibration, preparation or field blank were qualified as undetected (U).

IV.) ICP Interference Check Sample Results:

All ICP Interference Check Sample Recovery criteria were met. No data qualifiers were applied.

The following analytes were detected in ICS Solution A:

antimony	2 ug/L
barium	1 ug/L
copper	2 ug/L
lead	4 ug/L
zinc	8 ug/L

These analytes should not be present. Since the concentrations of aluminum, calcium, iron and magnesium in the SDG samples were not provided by the laboratory, no data qualifiers were applied.

The following negative results were observed in ICS Solution A:

antimony	-3 ug/L
arsenic	-4 ug/L
nickel	-2 ug/L
vanadium	-3 ug/L

Since neither aluminum, calcium, iron nor magnesium concentrations were provided for the SDG samples, no data qualifiers were applied.

V.) ICP Serial Dilution Analysis:

All Serial Dilution criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was taken.

VII.) Duplicate Sample Analysis:

The Relative Percent Difference (RPD) for zinc was 43% for spiked samples 43SO07-S-06MS and 43SO07-S-06MSD, which exceeded the 35% QC limit for soil samples. All positive and non-detect results for zinc in the associated soil samples were qualified as estimated (J) and (UJ).

VIII.) Matrix Spike / Matrix Spike Duplicate (MS /MSD):

The Percent Recoveries (%R's) were outside the 75-125% QC limits in spiked soil samples 43SO07-S-06MS and 43SO07-S-06MSD for the following analytes:

<u>Analyte</u>	<u>MS, %R</u>	<u>MSD, %R</u>
copper		152
iron	44	31
lead	6	72
zinc		284

All positive results for copper in the associated soil samples were qualified as estimated (J). All positive and non-detect results for iron and lead in the associated soil samples were qualified as estimated (J) and (UJ). All positive results for zinc in the associated soil samples were previously qualified based on Laboratory Duplicate criteria. No further action was taken.

The Percent Recoveries (%R's) were outside the 75-125% QC limits in spiked water samples 43SO07-S-06WMS and 43SO07-S-06WMSD for the following analytes:

<u>Analyte</u>	<u>MS, %R</u>	<u>MSD, %R</u>
copper	131	135
zinc		131

All positive results for copper and zinc in the associated water samples were qualified as estimated (J).

IX.) Field Duplicates:

One set of field duplicate soil samples (43SS34-S-02 and 43SS35-S-02) were associated with this SDG. The calculable Relative Percent Differences (RPDs) were:

<u>Analyte</u>	<u>43SS34-S-02</u>	<u>43SS35-S-02</u>	<u>RPD</u>
antimony	44 mg/kg	20 mg/kg	75%
arsenic	52 mg/kg	28 mg/kg	60%
barium	2300 mg/kg	2400 mg/kg	4.3%
copper	4500 mg/kg	3500 mg/kg	25%
iron	150000 mg/kg	53000 mg/kg	96%
lead	12000 mg/kg	23000 mg/kg	63%
nickel	160 mg/kg	62 mg/kg	88%
vanadium	40 mg/kg	34 mg/kg	13%
zinc	11000 mg/kg	15000 mg/kg	31%

The RPDs for antimony, iron, lead and nickel exceeded the 60% QC limit for soil samples. Data validation action based on field duplicate RPD criteria was not required. No action was taken.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No further action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRDL):

All CRDL criteria were met. No data qualifiers were applied.

XII.) Quarterly Verification of Instrumental Parameters:

All criteria were met. No data qualifiers were applied.

**Table 1
SUMMARY OF QUALIFIED DATA**

Target Analyte	Sample(s) Affected	Qualifier	Qualification Code or Reason
antimony	43SS19-S-02, 43SS20-S-02, 43SO07-S-06	U+	F
antimony	43SO07-S-06W, 43SO36-S-06W, 43SS14-S-03, 43SO05-S-03W	U+	B
copper	43SO12-S-06, 43SS10-S-03, 43SS14-S-03, 43SS25-S-02, 43SS26-S-02, 43SS27-S-02, 43SO05-S-03, 43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43SS31-S-02, 43SS32-S-02, 43SS33-S-02, 43SS35-S-02, 43SO12-S-06W, 43SS10-S-03W, 43SS14-S-03W, 43SO05-S-03W, 43SO07-S-06W, 43SS34-S-02W, 43SO36-S-06W	J+	Q
copper	43SS28-S-02	U+	B
iron	43SS34-S-02W	U+	B
iron	43SO12-S-06, 43SO05-S-03, 43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43SS31-S-02, 43SS32-S-02, 43SS33-S-02, 43SS35-S-02	J+	Q
lead	43SO12-S-06, 43SS10-S-03, 43SS14-S-03, 43SS25-S-02, 43SS26-S-02, 43SS27-S-02, 43SO05-S-03, 43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43SS31-S-02, 43SS32-S-02, 43SS33-S-02, 43SS35-S-02, 43SS28-S-02	J+	Q
nickel	43SO12-S-06	J+	Q
zinc	43SO07-S-06, 43SS34-S-02, 43SO36-S-06, 43SS31-S-02, 43SS32-S-02, 43SS33-S-02, 43SS35-S-02, 43SO07-S-06W, 43SS34-S-02W, 43SO36-S-06W	J+	Q

Table 2
QUALIFICATION CODE REFERENCE

Qualifier	Organics	Inorganics
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
B	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) blank or calibration blank.
C	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
E	Not applicable.	Duplicates showed poor agreement.
F	Presumed contamination from FB or ER.	Presumed contamination from FB or ER.
H	Holding times were exceeded.	Holding times were exceeded.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
L	Laboratory Blank Spike / Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
P	Instrument performance poor for pesticides.	Digestion Spike recovery was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
R	Calibration RRF was <0.05.	Calibration %R was not within control limits.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive -- reported compound was not present.	Not applicable.
-	False negative -- compound was present but not reported.	Not applicable.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
#	Unusual problems found with the data that have been described in the report. The number following the asterisk () indicates the subsection where the problem is described.	Unusual problems found with the data that have been described in the report. The number following the asterisk (*) indicates the subsection where the problem is described.

Appendix A

Qualified Form I's

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-1

Client ID: 027-43S015-S-03-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 94

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	4.0	mg/Kg	U		P	0.16	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-2

Client ID: 027-43SS18-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 94

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	4.9	mg/Kg	U		P	0.20	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-3

Client ID: 027-43SS19-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 90

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	0.31	mg/Kg		<i>B U / F</i>	P	0.21	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

ms
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-4

Client ID: 027-43SS20-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 96

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual M	DL	Instrument ID	Analytical Run	
7440-36-0	Antimony	0.26	mg/Kg	B	<u>U/F</u>	P	0.16	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

MS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-5

Client ID: 027-43SS21-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 93

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	5.3	mg/Kg	U		P	0.21	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-6

Client ID: 027-43SO12-S-06-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 94

CAS No.	Analyte	Concentration	Units	C	Rev/Code			DL	Instrument ID	Analytical Run
					Qual	M				
7440-36-0	Antimony	4.7	mg/Kg	U		P	0.19	TJA61E Trace	TAUG26A	
7440-50-8	Copper	7.1	mg/Kg		J 19	P	0.28	TJA61E Trace	TAUG26A	
7439-89-6	Iron	1500	mg/Kg		J 19	P	0.6	TJA61E Trace	TAUG26A	
7439-92-1	Lead	35	mg/Kg		J 19	P	0.19	TJA61E Trace	TAUG26A	
7440-02-0	Nickel	0.65	mg/Kg		J 18	P	0.19	TJA61E Trace	TAUG26A	

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

ms
10-23-01

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606S

Method Type: SW846

Sample ID: C108606-6

Client ID: 027-43SO12-S-06-0823-01 W

Contract: NAS PENSACOLA SITE 43 Lab Code: STL PN Case No.: NA SAS No.: NA

Matrix: WATER Date Received: 8/27/01 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Rev/Qual	code	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	250	ug/L	U			P	10	TJA61E Trace	TAUG26B
7440-50-8	Copper	310	ug/L	J	19		P	15	TJA61E Trace	TAUG26B
7439-89-6	Iron	12000	ug/L				P	35	TJA61E Trace	TAUG26B
7439-92-1	Lead	760	ug/L				P	10	TJA61E Trace	TAUG26B
7440-02-0	Nickel	17	ug/L	J			P	10	TJA61E Trace	TAUG26B

Color Before: Clarity Before: Texture: Color After: Clarity After: Artifacts:

Comments:

2nd 10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-7

Client ID: 027-43SS10-S-03-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 82

CAS No.	Analyte	Concentration	Units	C	Res/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	30	mg/Kg			P	0.22	TJA61E Trace	TAUG26A
7440-50-8	Copper	6500	mg/Kg		J/φ	P	0.33	TJA61E Trace	TAUG26A
7439-92-1	Lead	8200	mg/Kg		J/φ	P	0.22	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

MJ
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-8

Client ID: 027-43SS14-S-03-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 92

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	8.8	mg/Kg			P	0.21	TJA61E Trace	TAUG26A
7440-50-8	Copper	1700	mg/Kg		J/9	P	0.31	TJA61E Trace	TAUG26A
7439-92-1	Lead	3300	mg/Kg		J/9	P	0.21	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JAS
10-23-01

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606S

Method Type: SW846

Sample ID: C108606-8

Client ID: 027-43SS14-S-03-0823-01 W

Contract: NAS PENSACOLA SITE 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: WATER

Date Received: 8/27/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Rev / Code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	11	ug/L	B	U/B	P	10	TJA61E Trace	TAUG26B
7440-50-8	Copper	45	ug/L	B	J/Q	P	15	TJA61E Trace	TAUG26B
7439-92-1	Lead	160	ug/L			P	10	TJA61E Trace	TAUG26B

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

SAS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-9

Client ID: 027-43SS25-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 94

CAS No.	Analyte	Concentration	Units	C	Rev/Code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	4.4	mg/Kg	U		P	0.17	TJA61E Trace	TAUG26A
7440-50-8	Copper	12	mg/Kg		J1φ	P	0.26	TJA61E Trace	TAUG26A
7439-92-1	Lead	48	mg/Kg		J1φ	P	0.17	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JMS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-10

Client ID: 027-43SS26-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 83

CAS No.	Analyte	Concentration	Units	C	Rev/code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	25	mg/Kg			P	0.20	TJA61E Trace	TAUG26A
7440-50-8	Copper	2300	mg/Kg		J/φ	P	0.30	TJA61E Trace	TAUG26A
7439-92-1	Lead	9800	mg/Kg		J/φ	P	0.20	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

gms
 10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-11

Client ID: 027-43SS27-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 92

CAS No.	Analyte	Concentration	Units	C	Rev / code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	23	mg/Kg			P	0.20	TJA61E Trace	TAUG26A
7440-50-8	Copper	1100	mg/Kg		J/Q	P	0.30	TJA61E Trace	TAUG26A
7439-92-1	Lead	4000	mg/Kg		J/Q	P	0.20	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JAL
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-12

Client ID: 027-43SS28-S-02-082

Contract: NAS Pensacola Site 43 Lab Code: STL PN Case No.: NA SAS No.: NA

Matrix: SOIL Date Received: 8/23/01 Level: LOW

% Solids: 95

CAS No.	Analyte	Concentration	Units	C	Rev/Code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	4.8	mg/Kg	U		P	0.19	TJA61E Trace	TAUG26A
7440-50-8	Copper	6.0	mg/Kg		U/B	P	0.29	TJA61E Trace	TAUG26A
7439-92-1	Lead	20	mg/Kg		J/9	P	0.19	TJA61E Trace	TAUG26A

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

JMS
 10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-13

Client ID: 027-43S005-S-03-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 90

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	58	mg/Kg		P	0.18	TJA61E Trace	TAUG26A
7440-50-8	Copper	6900	mg/Kg		J/G P	0.26	TJA61E Trace	TAUG26A
7439-89-6	Iron	66000	mg/Kg		J/G P	8.8	TJA61E Trace	TAUG26A
7439-92-1	Lead	5200	mg/Kg		J/G P	0.18	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JMS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-14

Client ID: 027-43S007-S-06-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 96

CAS No.	Analyte	Concentration	Units	C	Rev / code		DL	Instrument ID	Analytical Run	
					Qual	M				
7440-36-0	Antimony	0.85	mg/Kg		<i>B</i>	<i>U/F</i>	P	0.19	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	1.0	mg/Kg				P	0.28	TJA61E Trace	TAUG26A
7440-39-3	Barium	56	mg/Kg				P	0.09	TJA61E Trace	TAUG26A
7440-50-8	Copper	120	mg/Kg			<i>XJ/Q</i>	P	0.28	TJA61E Trace	TAUG26A
7439-89-6	Iron	3200	mg/Kg			<i>XJ/Q</i>	P	0.7	TJA61E Trace	TAUG26A
7439-92-1	Lead	450	mg/Kg			<i>XJ/Q</i>	P	0.19	TJA61E Trace	TAUG26A
7440-02-0	Nickel	3.2	mg/Kg				P	0.19	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	32	mg/Kg				P	0.09	TJA61E Trace	TAUG26A
7440-66-6	Zinc	290	mg/Kg			<i>XJ/Q,E</i>	P	0.56	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

MS
 10-23-01

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606S

Method Type: SW846

Sample ID: C108606-14

Client ID: 027-43SO07-S-06-0823-01 W

Contract: NAS PENSACOLA SITE 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: WATER

Date Received: 8/27/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	14	ug/L	B	U/B	P	10	TJA61E Trace	TAUG26B
7440-38-2	Arsenic	25	ug/L	U		P	15	TJA61E Trace	TAUG26B
7440-39-3	Barium	520	ug/L			P	5.0	TJA61E Trace	TAUG26B
7440-50-8	Copper	8900	ug/L		J/Q	P	15	TJA61E Trace	TAUG26B
7439-89-6	Iron	1000	ug/L			P	35	TJA61E Trace	TAUG26B
7439-92-1	Lead	4800	ug/L			P	10	TJA61E Trace	TAUG26B
7440-02-0	Nickel	71	ug/L			P	10	TJA61E Trace	TAUG26B
7440-62-2	Vanadium	42	ug/L	B		P	5.0	TJA61E Trace	TAUG26B
7440-66-6	Zinc	13000	ug/L		J/Q, E	P	30	TJA61E Trace	TAUG26B

Color Before: _____

Clarity Before: 10-26-01

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JMS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-15

Client ID: 027-43SS34-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 85

CAS No.	Analyte	Concentration	Units	C	Rev/Code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	44	mg/Kg			P	0.18	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	52	mg/Kg			P	0.28	TJA61E Trace	TAUG26A
7440-39-3	Barium	2300	mg/Kg			P	0.46	TJA61E Trace	TAUG26A
7440-50-8	Copper	4500	mg/Kg			P	0.28	TJA61E Trace	TAUG26A
7439-89-6	Iron	150000	mg/Kg			P	9.2	TJA61E Trace	TAUG26A
7439-92-1	Lead	12000	mg/Kg			P	0.92	TJA61E Trace	TAUG26A
7440-02-0	Nickel	160	mg/Kg			P	0.18	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	40	mg/Kg			P	0.09	TJA61E Trace	TAUG26A
7440-66-6	Zinc	11000	mg/Kg			P	2.8	TJA61E Trace	TAUG26A

J/Q
J/Q
J/Q
J/Q,E

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JM
10-23-01

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606S

Method Type: SW846

Sample ID: C108606-15

Client ID: 027-43SS34-S-02-0823-01 *W*

Contract: NAS PENSACOLA SITE 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: WATER

Date Received: 8/27/01

Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Rev / Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	250	ug/L	U		P	10	TJA61E Trace	TAUG26B
7440-38-2	Arsenic	25	ug/L	U		P	15	TJA61E Trace	TAUG26B
7440-39-3	Barium	770	ug/L			P	5.0	TJA61E Trace	TAUG26B
7440-50-8	Copper	57	ug/L		<i>J/g</i>	P	15	TJA61E Trace	TAUG26B
7439-89-6	Iron	190	ug/L	<i>X</i>	<i>U/B</i>	P	35	TJA61E Trace	TAUG26B
7439-92-1	Lead	630	ug/L			P	10	TJA61E Trace	TAUG26B
7440-02-0	Nickel	25	ug/L	U		P	10	TJA61E Trace	TAUG26B
7440-62-2	Vanadium	50	ug/L	U		P	5.0	TJA61E Trace	TAUG26B
7440-66-6	Zinc	1200	ug/L		<i>J/g</i>	P	30	TJA61E Trace	TAUG26B

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

MS
 10-23 01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-16

Client ID: 027-43SO36-S-06-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 85

CAS No.	Analyte	Concentration	Units	C	Rev / code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	30	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	35	mg/Kg			P	0.29	TJA61E Trace	TAUG26A
7440-39-3	Barium	1900	mg/Kg			P	0.10	TJA61E Trace	TAUG26A
7440-50-8	Copper	40000	mg/Kg		J/Q	P	5.8	TJA61E Trace	TAUG26A
7439-89-6	Iron	69000	mg/Kg		J/Q	P	14	TJA61E Trace	TAUG26A
7439-92-1	Lead	16000	mg/Kg		J/Q	P	3.9	TJA61E Trace	TAUG26A
7440-02-0	Nickel	400	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	870	mg/Kg			P	0.10	TJA61E Trace	TAUG26A
7440-66-6	Zinc	13000	mg/Kg		J/P, E	P	12	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

MS
10-23-01

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606S

Method Type: SW846

Sample ID: C108606-16

Client ID: 027-43SO36-S-06-0823-01 W

Contract: NAS PENSACOLA SITE 43 Lab Code: STL PN Case No.: NA SAS No.: NA

Matrix: WATER Date Received: 8/27/01 Level: LOW

% Solids:

CAS No.	Analyte	Concentration	Units	C	Rev/Code	M	DL	Instrument ID	Analytical Run
					Qual				
7440-36-0	Antimony	24	ug/L	B	U/B	P	10	TJA61E Trace	TAUG26B
7440-38-2	Arsenic	25	ug/L	U		P	15	TJA61E Trace	TAUG26B
7440-39-3	Barium	320	ug/L			P	5.0	TJA61E Trace	TAUG26B
7440-50-8	Copper	550	ug/L		J/S	P	15	TJA61E Trace	TAUG26B
7439-89-6	Iron	1500	ug/L			P	35	TJA61E Trace	TAUG26B
7439-92-1	Lead	1300	ug/L			P	10	TJA61E Trace	TAUG26B
7440-02-0	Nickel	310	ug/L			P	10	TJA61E Trace	TAUG26B
7440-62-2	Vanadium	56	ug/L			P	5.0	TJA61E Trace	TAUG26B
7440-66-6	Zinc	27000	ug/L		J/S	P	30	TJA61E Trace	TAUG26B

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

J/S
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-17

Client ID: 027-43SS31-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 85

CAS No.	Analyte	Concentration	Units	C	Rev / Code		DL	Instrument ID	Analytical Run	
					Qual	M				
7440-36-0	Antimony	31	mg/Kg				P	0.22	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	30	mg/Kg				P	0.34	TJA61E Trace	TAUG26A
7440-39-3	Barium	2300	mg/Kg				P	0.11	TJA61E Trace	TAUG26A
7440-50-8	Copper	2900	mg/Kg		J/Q		P	0.34	TJA61E Trace	TAUG26A
7439-89-6	Iron	98000	mg/Kg		J/Q		P	22	TJA61E Trace	TAUG26A
7439-92-1	Lead	9900	mg/Kg		J/Q		P	0.22	TJA61E Trace	TAUG26A
7440-02-0	Nickel	110	mg/Kg				P	0.22	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	130	mg/Kg				P	0.11	TJA61E Trace	TAUG26A
7440-66-6	Zinc	10000	mg/Kg		J/Q, E		P	6.7	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JMS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-18

Client ID: 027-43SS32-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 87

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	60	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	18	mg/Kg			P	0.28	TJA61E Trace	TAUG26A
7440-39-3	Barium	2200	mg/Kg			P	0.09	TJA61E Trace	TAUG26A
7440-50-8	Copper	5800	mg/Kg		J/Q	P	0.28	TJA61E Trace	TAUG26A
7439-89-6	Iron	59000	mg/Kg		J/Q	P	9.5	TJA61E Trace	TAUG26A
7439-92-1	Lead	10000	mg/Kg		J/Q	P	0.95	TJA61E Trace	TAUG26A
7440-02-0	Nickel	410	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	670	mg/Kg			P	0.09	TJA61E Trace	TAUG26A
7440-66-6	Zinc	9100	mg/Kg		J/Q, E	P	2.8	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JTB
 10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-19

Client ID: 027-43SS33-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 88

CAS No.	Analyte	Concentration	Units	C	Rev/Code Qual	M	DL	Instrument ID	Analytical Run
7440-36-0	Antimony	54	mg/Kg			P	0.20	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	32	mg/Kg			P	0.29	TJA61E Trace	TAUG26A
7440-39-3	Barium	2000	mg/Kg			P	0.10	TJA61E Trace	TAUG26A
7440-50-8	Copper	54000	mg/Kg		J/Q	P	15	TJA61E Trace	TAUG26A
7439-89-6	Iron	120000	mg/Kg		J/Q	P	9.8	TJA61E Trace	TAUG26A
7439-92-1	Lead	9800	mg/Kg		J/Q	P	0.98	TJA61E Trace	TAUG26A
7440-02-0	Nickel	60	mg/Kg			P	0.20	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	31	mg/Kg			P	0.10	TJA61E Trace	TAUG26A
7440-66-6	Zinc	34000	mg/Kg		J/Q, E	P	29	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

JMS
10-23-01

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CCI

SDG No.: C108606

Method Type: SW846

Sample ID: C108606-20

Client ID: 027-43SS35-S-02-082

Contract: NAS Pensacola Site 43

Lab Code: STL PN

Case No.: NA

SAS No.: NA

Matrix: SOIL

Date Received: 8/23/01

Level: LOW

% Solids: 90

CAS No.	Analyte	Concentration	Units	C	Req/Code		DL	Instrument ID	Analytical Run
					Qual	M			
7440-36-0	Antimony	20	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-38-2	Arsenic	28	mg/Kg			P	0.28	TJA61E Trace	TAUG26A
7440-39-3	Barium	2400	mg/Kg			P	0.46	TJA61E Trace	TAUG26A
7440-50-8	Copper	3500	mg/Kg		J/φ	P	0.28	TJA61E Trace	TAUG26A
7439-89-6	Iron	53000	mg/Kg		J/φ	P	9.3	TJA61E Trace	TAUG26A
7439-92-1	Lead	23000	mg/Kg		J/φ	P	0.93	TJA61E Trace	TAUG26A
7440-02-0	Nickel	62	mg/Kg			P	0.19	TJA61E Trace	TAUG26A
7440-62-2	Vanadium	34	mg/Kg			P	0.09	TJA61E Trace	TAUG26A
7440-66-6	Zinc	15000	mg/Kg		J/φ.E	P	2.8	TJA61E Trace	TAUG26A

Color Before: _____

Clarity Before: _____

Texture: _____

Color After: _____

Clarity After: _____

Artifacts: _____

Comments: _____

SMS
 10-23-01

Metals

- 5a -

MATRIX SPIKE SUMMARY

Client: CCI Level: LOW SDG No.: C108606
 Contract: NAS Pensacola Site 43 Lab Code: STL PN Case No.: NA SAS No.: NA
 Matrix: SOIL Sample ID: C108606-14 Client ID: 027-43SO07-S-06-082S
 Percent Solids for Sample: 96.00 Spiked ID: C108606-14S Percent Solids for Spike Sample: 96.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	86.66		4.69	P	98.3	88.2		P
Arsenic	mg/Kg	75 - 125	93.11		1.00		98.3	93.7		P
Barium	mg/Kg	75 - 125	158.80		55.50		98.3	105.1		P
Copper	mg/Kg	75 - 125	202.47		122.53		98.3	81.3		P
Iron	mg/Kg	75 - 125	3601.4		3167.5		982.7	44.2	N	P
Lead	mg/Kg	75 - 125	456.64		450.66		98.3	6.1	N	P
Nickel	mg/Kg	75 - 125	103.39		3.23		98.3	101.9		P
Vanadium	mg/Kg	75 - 125	132.19		32.32		98.3	101.6		P
Zinc	mg/Kg	75 - 125	374.52		293.45		98.3	82.5		P

Metals

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: CCI Level: LOW SDG No.: C108606

Contract: NAS Pensacola Site 43 Lab Code: STL PN Case No.: NA SAS No.: NA

Matrix: SOIL Sample ID: C108606-14 Client ID: 027-43SO07-S-06-082SD

Percent Solids for Sample: 96.00 Spiked ID: C108606-14SD Percent Solids for Spike Sample: 96.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	86.38		4.69	✓	100.2	86.2		P
Arsenic	mg/Kg	75 - 125	96.49		1.00		100.2	95.3		P
Barium	mg/Kg	75 - 125	178.46		55.50		100.2	122.8		P
Copper	mg/Kg	75 - 125	274.38		122.53		100.2	151.6	✓	P
Iron	mg/Kg	75 - 125	3475.0		3167.5		1001.6	30.7	✓	P
Lead	mg/Kg	75 - 125	522.82		450.66		100.2	72.0	✓	P
Nickel	mg/Kg	75 - 125	104.59		3.23		100.2	101.2		P
Vanadium	mg/Kg	75 - 125	135.28		32.32		100.2	102.8		P
Zinc	mg/Kg	75 - 125	577.75		293.45		100.2	283.8	✓	P

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: CCI Level: LOW SDG No.: C108606
 Contract: NAS Pensacola Site 43 Lab Code: STL.PN Case No.: NA SAS No.: NA
 Matrix: SOIL Sample ID: C108606-14S Client ID: 027-43SO07-S-06-082SD
 Percent Solids for Sample: 96.00 Duplicate ID: C108606-14SD Percent Solids for Duplicate: 96.00

Analyte	Units	Acceptance Limit	Sample Result	Duplicate		RPD	Qual	M
				C	Result			
Antimony	mg/Kg		86.66		86.38	0.3		P
Arsenic	mg/Kg		93.11		96.49	3.6		P
Barium	mg/Kg		158.80		178.46	11.7		P
Copper	mg/Kg		202.47		274.38	30.2		P
Iron	mg/Kg		3601.4		3475.0	3.6		P
Lead	mg/Kg		456.64		522.82	13.5		P
Nickel	mg/Kg		103.39		104.59	1.2		P
Vanadium	mg/Kg		132.19		135.28	2.3		P
Zinc	mg/Kg		374.52		577.75	42.7		P

MATRIX SPIKE SUMMARY

Client: CCI Level: LOW SDG No.: C108606S
 Contract: NAS PENSACOLA SITE 43 Lab Code: STL PN Case No.: NA SAS No.: NA
 Matrix: WATER Sample ID: C108606-14 Client ID: 027-43SO07-S-06-0823-01S
 Percent Solids for Sample: 0.00 Spiked ID: C108606-14S Percent Solids for Spike Sample: 0.00

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75 - 125	1065.00		13.90	B	1000.0	105.1		P
Arsenic	ug/L	75 - 125	1030.60		25.00	U	1000.0	103.1		P
Barium	ug/L	75 - 125	1591.05		523.00		1000.0	106.8		P
Copper	ug/L	75 - 125	10202.60		8889.60		1000.0	131.3	N	P
Iron	ug/L	75 - 125	11844.4		1019.0		10000.0	108.3		P
Lead	ug/L	75 - 125	5970.65		4831.50		1000.0	113.9		P
Nickel	ug/L	75 - 125	1132.80		70.65		1000.0	106.2		P
Vanadium	ug/L	75 - 125	1099.00		41.60	B	1000.0	105.7		P
Zinc	ug/L	75 - 125	14491.65		13281.20		1000.0	121.0		P

- 5a -

MATRIX SPIKE DUPLICATE SUMMARY

Client: CCI Level: LOW SDG No.: C108606S
 Contract: NAS PENSACOLA SITE 43 Lab Code: STL PN Case No.: NA SAS No.: NA
 Matrix: WATER Sample ID: C108606-14 Client ID: 027-43SO07-S-06-0823-01SD
 Percent Solids for Sample: 0.00 Spiked ID: C108606-14SD Percent Solids for Spike Sample: 0.00

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75 - 125	1060.55		13.90	✓	1000.0	104.7		P
Arsenic	ug/L	75 - 125	1043.15		25	U	1000.0	104.3		P
Barium	ug/L	75 - 125	1597.10		523.00		1000.0	107.4		P
Copper	ug/L	75 - 125	10236.95		8889.60		1000.0	134.7	✓	P
Iron	ug/L	75 - 125	12471.9		1019.0		10000.0	114.5		P
Lead	ug/L	75 - 125	6011.65		4831.50		1000.0	118.0		P
Nickel	ug/L	75 - 125	1142.50		70.65		1000.0	107.2		P
Vanadium	ug/L	75 - 125	1108.80		41.60	✓	1000.0	106.7		P
Zinc	ug/L	75 - 125	14595.60		13281.20		1000.0	131.4	✓	P

Appendix B

Validation Checklists

STANDARD OPERATING PROCEDURE

Title: Evaluation of Inorganics Analyses
 Attachment B2: Data Assessment
 (Total Review-Metals/Cyanide)

Version: 3.2
 SOW: ILM04.0, 1994
 SOP: NFG Feb. 1994

Project SDG C109606
NAS Pensacola, CTO-0027

Reviewer [Signature]

YES NO N/A

B2.1 Chain-of-Custody - Present or on file?
 Legible?

B2.2 Cover Page - Present?

ACTION: If no, contact the Validata Project Manager.

Do sample numbers on Chain-of-Custody (C-O-C) agree with sample numbers on:

- (a) Cover page?
- (b) Form I's?
- (c) Validata Sample Identification Summary (if used)?

ACTION: If no for any of the above, contact the Validata Project Manager.

B2.3 Form I (Final Data) -Are all Forms I's present and complete?

ACTION: If no, contact the Validata Project Manager.

Are correct units (ug/L for water samples and mg/kg for soil samples) indicated in Form I's?

Are sample results for each parameter corrected for percent solids on soils?

Are all "less than" values properly coded with "U"?

ACTION: If no for any of the above, contact the Validata Project Manager.

YES **NO** **N/A**

Was a brief physical description of samples given in the comments section?

— —

Were any samples diluted beyond requirements of the contract?

— —

If yes, were dilutions noted on Form I's?

—

ACTION: If no for any of the above, note under "Overall Assessment" in the Data Validation Narrative.

B2.4 Holding Times (C-O-C vs. data package) - Aqueous (apply to soil matrix at reviewer's discretion):
If criteria other than water criteria are used for soil samples, comment in data review narrative.

Mercury (28 days), PH < 2 exceeded?

—

Cyanide (14 days), PH >12 exceeded?

—

Other Metals (6 months), PH < 2 exceeded?

— —

ACTION: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from collection date to the analysis date (from raw data). If holding times have been exceeded, flag all results as estimated (J) and (UJ). If a gross exceedance in holding times exists (holding times are more than 2X the above limits) or professional judgement indicates, reject (R) values less than IDL.

B2.5 Raw Data (* Weights, dilutions and volumes used to obtain values.)

Digestion Log* (CLP Form XIII) for flame AA/ICP present?

— —

Digestion Log for furnace AA present?

—

Digestion Log for mercury present?

—

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Digestion Log for cyanide present?	<input type="checkbox"/>	—	— ✓
Percent solids calculation present for soil (sediments)?	<input checked="" type="checkbox"/>	—	—
Are preparation dates present on Digestion Log?	<input checked="" type="checkbox"/>	—	—
ACTION: If no for any of the above, contact the Validata project Manager.			

B2.5.2 Raw Data - Measurement read out record present for:

ICP?	<input checked="" type="checkbox"/>	—	—
Flame AA (If Used)?	<input type="checkbox"/>	—	— ✓
Furnace AA (If Used)?	<input type="checkbox"/>	—	— ✓
Mercury?	<input type="checkbox"/>	—	— ✓
Cyanide?	<input type="checkbox"/>	—	— ✓

B2.5.3 Are all raw data to support all sample analyses and QC operations present?

Legible?	<input checked="" type="checkbox"/>	—	—
Properly Labeled?	<input checked="" type="checkbox"/>	—	—

ACTION: If no for any of above, contact the Validata Project Manager.

B2.5.4 Is record of at least 2 point calibration present for ICP?

	<input checked="" type="checkbox"/>	—	—
--	-------------------------------------	---	---

Is record of 4 point calibration present for:

Flame AA?	<input type="checkbox"/>	—	— ✓
Furnace AA?	<input type="checkbox"/>	—	— ✓

NOTE: If less than 4, other standards must be run immediately after calibration and must be $\pm 5\%$ of true value.

ACTION: Flag associated data if the standards are not within $\pm 5\%$ of their true values. **YES NO N/A**

Is record of 5 point calibration present for Mercury?

Is record of 4 point calibration present for Cyanide?

ACTION: If no for any of the above (section B2.5.4), contact the Validata Project Manager.

B2.6 Data Validation and Verification

B2.6.1 Form II (Initial and Continuing Calibration Verification) -

B2.6.1.2 Are all calibration standards (initial and continuing) within controls limits?

Metals 90-110%

Hg 80-120%

Cyanides 85-115%

Are all calibration standards (initial and continuing) within 50-150%?

If no, are any recoveries:

a. between 75-89% (65-79% for Hg, 70-84% for CN)?

b. or between 111-125% (121-135% for Hg, 116-130% for CN)?

ACTION: If yes, flag as estimated (J) all positive data (not flagged with a "U") and flag as estimated (UJ) data <IDL analyzed between the standard with the above recovery and the nearest calibration standard.

Are any recoveries:

c. less than 75% (CN < 70%, Hg < 65%)?

ACTION: If yes, reject (R) as unacceptable the positive data for which standard is the nearest adjacent standard. Flag the associated non-detects as estimated (UJ) .

Are any recoveries: **YES** **NO** **N/A**

d. greater than 125% (CN >130%, Hg >135%)?

ACTION: If yes, reject (R) as unacceptable positive results for which standard is the nearest adjacent standard.

Was continuing calibration performed every 10 samples or every 2 hours?

ACTION: If no, flag the excess sample data (eleventh and up) as estimated (J) or (UJ).

B2.6.1.3 Was a CRI standard for ICP (at 2X CRDL or IDL, whichever is greater) or a CRA standard for Furnace AA and Cold Vapor AA (at CRDL or IDL, whichever is greater) run at the beginning of the sample run, but not before ICV and at least once during each 8-hour period (exemptions: Al, Ba, Ca, Fe, Mg, Na and K) ?

ACTION: If no, comment in narrative. Use professional judgement to qualify the data.

Were the CRI/CRA %R's within the 80-120% QC limits?

ACTION: If no, flag as estimated (UJ) and (J) all non-detect results and all positive results up to 3X CRDL, for which the CRI/CRA standard was the nearest adjacent CRI/CRA standard.

B2.6.1.4 Was the midrange Cyanide standard distilled?

ACTION: If no, qualify the associated data as estimated (J) and (UJ).

B2.6.2 Form III (Initial and Continuing Calibration Blanks)
Note: Do not use a blank value to qualify data as undetected (U) if that blank was rejected for any reason.

B2.6.2.1 Present and complete?

For both AA and ICP when both are used for the same analyte?

YES NO N/A

ACTION: If no, contact the Validata project manager.

B2.6.2.2 Are all calibration blanks < Contract Required
Detection Limits (CRDL)?

— —

Are all calibration blanks less than Instrument
Detection Limit (if IDL > CRDL)?

—

ACTION: If no for any of above, make a table of the highest
calibration blank value for each analyte on Data
Summary Sheet. Flag as undetected (U) on
Form I's throughout the SDG all results greater
than IDL but less than 5X the highest blank amount.

Did any calibration blanks have negative results
with absolute values greater then the IDL/CRDL?

—

ACTION: If yes, make a table of the highest calibration
blank absolute value for each analyte on Data
Summary Sheet. Flag as estimated (UJ) and (J)
on Form I's throughout the SDG all non-detects
and all results greater than IDL but less than
3X the highest blank amount for that analyte.

B2.6.2.3 Was an initial calibration blank analyzed?

— —

Was a continuing calibration blank analyzed after
every 10 samples or every 2 hours
(whichever is more frequent)?

— —

ACTION: If no, flag as estimated (J) all positive results for
sample not analyzed within 5 samples of a
calibration blank.

B2.6.2.4 Does the concentration of any blank fall below IDL,
other than as noted in section B2.6.2.2?

— —

ACTION: If yes, use professional judgement to
qualify the data.

B2.6.3 Form III (Preparation Blank)

**Note: Do not use a blank value to qualify
data as undetected (U) if that blank was
rejected for any reason.**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
B2.6.3.1 Was one Prep. blank analyzed for: each 20 samples:	<input checked="" type="checkbox"/>	—	—
each batch?	<input checked="" type="checkbox"/>	—	—
each matrix type?	<input checked="" type="checkbox"/>	—	—
For both AA and ICP when both are used for the same analyte?	<input checked="" type="checkbox"/>	—	—

ACTION: If no for any of the above, flag as estimated (J) all associated positive results for which a Prep. blank was not analyzed. (NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated.)

B2.6.3.2 Do concentrations of Prep. blank fall below IDL when IDL is greater than CRDL?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
--	--------------------------	---	-------------------------------------

ACTION: If no, include the highest value in the table generated for section B2.6.2.2 and flag as undetected (U) all associated results greater than IDL but less than 5X the preparation blank amount.

(NOTE: The preparation blank for mercury is the same as the calibration blank.)

Do any Prep. blanks have negative results with absolute values greater than the IDL/CRDL?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	—
--	-------------------------------------	--------------------------	---

ACTION: If yes, include in the table for section B2.6.2.2 the highest Prep. blank absolute value for each analyte. Flag as estimated (UJ) and (J) on Form I's all associated non-detects and all results greater than IDL but less than 3X the highest blank amount for that analyte.

B2.6.3.3 Is the concentration of the Prep. blank greater than the CRDL when IDL is less than CRDL?	—	<input checked="" type="checkbox"/>	—
---	---	-------------------------------------	---

If yes, is the concentration of the sample with the lowest positive detection of that analyte less than 10 times the Prep. blank value?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
---	---	--------------------------	-------------------------------------

YES NO N/A

ACTION: If yes, flag as estimated (J) all associated positive data that has a concentration of less than 10 times the Prep. blank value, but not previously flagged as undetected (U).

B2.6.3.4 Does the concentration of the Prep. blank fall below the IDL?

ACTION: If yes, use professional judgement to qualify the data.

B2.6.4 Form I (Field Blank)

Note: Do not use a blank value to qualify data as undetected (U) if that blank was rejected for any reason.

Do concentrations of field blanks fall below 2X IDL for all aqueous and soil parameters?

If no, was field blank value already rejected due to another QC criterion?

ACTION: If no, flag as undetected (U) all aqueous and soil/sediment data (except field blank) that have a concentration less than five times the field blank value not flagged with a "U" (less than).

B2.6.4.1 Was one Field blank analyzed for each 20 samples or each sampling trip, whichever is greater?

ACTION: If no, comment in the Data Validation Narrative.

B2.6.5 Form IV (ICP Interference Check Sample)
(Note: Only for ICP analyses. Not required for furnace AA, flame AA, mercury or cyanide.)

B2.6.5.1 Present and complete for each sample analysis run or twice per 8 hour shift, whichever is more frequent (NOTE: The ICS should **not** be run before the Initial Calibration Verification)?

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
B2.6.5.2 Are any results >IDL for analytes which were not present in the ICS solution?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACTION: If yes, flag as estimated (J) the positive results for that analyte in samples with comparable or higher levels of Al, Ca, Fe or Mg. Comment in the Data Validation Narrative that false positives may exist.

Are any negative results with absolute values >IDL observed for analytes which were not present in the ICS solution?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ACTION: If yes, flag as estimated (UJ) the non-detect results for that analyte in samples with comparable or higher levels of Al, Ca, Fe or Mg. Comment in the Data Validation Narrative that false negatives may exist.

B2.6.5.3 Are any Interference Check Sample results outside of control limits ($\pm 20\%$)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

If yes, is ICS recovery between 50-79% of mean value?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	-------------------------------------

ACTION: If yes, flag as estimated (J) and/or (UJ) associated sample results.

Is ICS recovery above 120%?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

ACTION: If yes, flag all positive results as estimated (J).

Is ICS recovery less than 50%?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------

ACTION: If yes, reject (R) associated sample results.

B2.6.6 Form IX (ICP Serial Dilution Analysis)

B2.6.6.1 Was Serial Dilution analysis performed for sample results greater than 50X IDL for:

each 20 samples?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

each matrix type?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

each concentration range (i.e. low, med., high)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------

ACTION: If no, flag all associated data as estimated (J) for which Serial Dilution Analysis was not performed.

YES NO N/A

B2.6.6.2 Was field blank(s) used for Serial Dilution Analysis?

— —

If yes, was field blank described as such on the Chain-of-Custody Report?

— —

ACTION: If yes, flag all associated data >50 X IDL as estimated (J).

B2.6.6.3 Are all ICP Serial Dilution results within control limits of 10% for sample results at least 50 X IDL?

— —

ACTION: If no, flag as estimated (J) all associated positive sample results for which percent difference is greater than 10%. If evidence of negative interference exists, use professional judgement to qualify the data. Flag data throughout the same matrix of the Sample Delivery Group (SDG).

B2.6.7 Form V (Spike Sample Recovery)
[Note: Not required for Ca, Mg, K, and Na (both matrices), Al, and Fe (soil only)].

B2.6.7.1 Present and complete for:

each 20 samples?

— —

each matrix type?

— —

each conc. range (i.e. low, med., high)?

— —

For both AA and ICP when both are used for same analyte?

— —

ACTION: If no for any of the above, flag as estimated (J) all data for which a spiked sample was not analyzed. (NOTE: If one spiked sample was analyzed for more than 20 samples, then the first 20 samples analyzed do not have to be flagged as estimated).

B2.6.7.2 Was a field blank used as the spiked sample?

— —

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
If yes, was field blank described as such on the Chain-of-Custody Report?	—	<input checked="" type="checkbox"/>	—
ACTION: If yes, flag all <u>positive</u> data as estimated (J) for which a field blank was used as the spiked sample.			
B2.6.7.3 Are all recoveries within 75-125% control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	—
If no:			
A.) Is sample concentration greater than four times the spike concentration?	—	<input checked="" type="checkbox"/>	—
ACTION: If yes, do not flag data based on spike recoveries for analytes whose concentrations are greater than four times the spike added. Consider only those analytes on Form V for which sample concentration was <4X the spike concentration.			
Are any spike recoveries:			
a). less than 30%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	—
ACTION: If yes, reject (R) all sample results <IDL; flag results >IDL as estimated (J).			
b). between 30-74%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	—
ACTION: If yes, flag all sample results >IDL as estimated (J); flag all results <IDL as estimated (UJ).			
c). greater than 125%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	—
ACTION: If yes, flag all sample results of the same matrix type for the analysis >IDL as estimated (J).			
B.) Was a post digestion/post-distillation spike performed when the pre-distillation/pre-digestion spike did not meet criteria, even if the sample concentration was > 4X the original spike concentration?	<input checked="" type="checkbox"/>	—	—
ACTION: If no, comment in the Data Validation Narrative, but do not flag data > 4X the spike amount.			

B2.6.8 Form VI (Lab Duplicates)

YES NO N/A

B2.6.8.1 Present and complete for:

each 20 samples?

— —

each matrix type?

— —

each concen. range (i.e. low, med., high)?

— —

For both AA and ICP when both are used for same analyte?

— —

ACTION: If no for any above, flag as estimated (J) all data > CRDL for which duplicate sample was not analyzed. Note: If one duplicate sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

B2.6.8.2 Are all values on the Data Summary Sheet within the control limits (20% for aqueous, 35% for soil) for sample and duplicate values >5X CRDL?

—

ACTION: If no, flag as estimated (J) and/or (UJ) all associated sample data of the same matrix.

B2.6.8.3 Was a field blank used for duplicate analysis?

— —

If yes, was field blank identified as such on the Chain-of-Custody Report?

—

ACTION: If yes, flag all data >CRDL as estimated (J) for which field blank was used as a duplicate.

B2.6.8.4 Aqueous Samples

Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?

— —

ACTION: If yes, flag as estimated (J) and/or (UJ) all associated data.

B2.6.8.5 Soil/Sediment

YES **NO** **N/A**

Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?

ACTION: If yes, flag as estimated (J) and/or (UJ) all associated data.

B2.6.9 Field Duplicates

B2.6.9.1 Were field duplicates analyzed and identified as such?

ACTION: If yes and the pairs are identifiable, prepare a summary table for each sample/duplicate pair in the Data Validation Narrative. Calculate RPD where both values are greater than CRDL. (See Appendix A for formula.)

B2.6.9.2 Advisory control limits:

Aqueous Samples: 30% RPD or CRDL
Soil Samples: 60% RPD or CRDL

Are all values within control limits?

ACTION: If no, flag the associated positive results as estimated (J), and note exceedances in the Data Validation Narrative.

B2.6.10 Form VII (Instrument Detection Limits) -
(Note: IDL not required for cyanide.)

B2.6.10.1 Are IDL's present for all analytes?

for both AA and ICP when both are used for same analyte?

ACTION: If no for any of the above, contact the Validata project manager, who will contact the laboratory.

B2.6.10.2 Is IDL greater than CRDL for any analyte?

If yes, make a note in the data validation narrative.

B2.6.11 Form VII (Laboratory Control Sample) **YES NO N/A**
 (Note: LCS - not required for aqueous Hg.)

B2.6.11.1 Was one LCS prepared and analyzed for:
 every 20 water samples? YES NO N/A
 every month for solid samples? YES NO N/A
 for both AA and ICP when both are used
 for the same analyte? YES NO N/A

ACTION: If no for any of the above, contact the Validata Project Manager for submittal of LCS results. Flag as estimated (J) all aqueous data for which LCS was not analyzed.

NOTE: If only one LCS was analyzed for more than 20 samples, then the first 20 samples closest to the LCS do not have to be flagged as estimated.

Aqueous LCS

B2.6.11.2 Are all LCS values on Data Summary Sheet within the 80-120% control limits? YES NO N/A

If no, is any LCS value:
 less than 50%? YES NO N/A

ACTION: If yes, reject (R) all associated data.
 between 50% and 79%? YES NO N/A

ACTION: If yes, flag all associated data <IDL as estimated (UJ).
 greater than 120%? YES NO N/A

ACTION: If yes, flag all positive results (i.e. not flagged with a "U") as estimated (J).

Soil LCS

Are any recoveries outside the 80-120% QC limits? YES NO N/A

ACTION: If any recoveries are above the 80-120% QC limits, flag associated positive data as estimated (J). If recoveries are below QC limits, flag associated positive and non-detect results as estimated (J) and (UJ).

YES **NO** **N/A**

B2.6.11.3 Is "NC" reported for any analyte in % R column of Form VII?

— —

If yes, does concentration of the analyte fall within acceptable range of LCS?

 —

ACTION: If no, flag associated data as estimated (J).

B2.6.12 Furnace Atomic Absorption (AA) QC Analysis

B2.6.12.1 Are duplicate injections present in furnace raw data (except during full method of Standard Addition) for each sample analyzed by GFAA?

 —

ACTION: If no, reject (R) the data on Form I's for which duplicate injections were not performed.

B2.6.12.2 For sample concentrations less than 50% of spike concentrations/absorbances, was post digestion spike recovery outside the 85-115% QC limits?

—

ACTION: If yes, flag all associated results as estimated (J) and/or (UJ).

B2.6.12.3 Was post digestion spike recovery for any sample below the 40% QC limit for sample concentrations less than 50% of spike absorbances?

—

ACTION: If yes, flag all associated data as estimated (J) and/or (UJ).

B2.6.12.4 Is post digestion spike recovery less than 10% for any result?

—

ACTION: If yes, reject (R) the affected non-detect result and flag as estimated (J) the positive result.

B2.6.12.5 Do the duplicate injection readings agree within 20% Relative Standard Deviation

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
(RSD) or Coefficient of Variation (CV) for concentrations greater than CRDL?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
If no, was the sample rerun with results within the 20% RSD or CV limits?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
ACTION: If no, flag the associated positive data as estimated (J).			
Was a dilution analyzed for any sample with post digestion spike recovery less than 40%?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
ACTION: If no, flag all the associated data as estimated (J) and/or (UJ).			
B2.6.13 <u>Form VIII (Method of Standard Addition Results)</u>			
B2.6.13.1 Present?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
If no, is any Form I result coded with "S" or a "+"?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ACTION: If yes, contact the Validata Project Manager for submittal of Form VIII.			
B2.6.13.2 Was MSA required for any sample but not performed? (Required if sample concentration is > 50% of spike concentration or absorbance, and post-digestion spike recovery is < 85% or >115%)	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is coefficient of correlation for MSA less than 0.995?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ACTION: If yes for any of above, flag all associated data as estimated (J) and/or (UJ).			
B2.6.13.4 Was proper quantitation procedure followed correctly?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>
ACTION: If no, note exception in the Data Validation Narrative, or prepare a separate list.			
B2.6.13.5 Are MSA calculations within the linear range of the calibration curve generated at the beginning of the analytical run?	<input type="checkbox"/>	—	<input checked="" type="checkbox"/>

ACTION: If no, flag all affected data as estimated (J).

YES **NO** **N/A**

B2.6.14 Dissolved Inorganics (only if client requested)

B2.6.14.1 Were any analyses performed for dissolved as well as total analytes on the same sample?

If yes, apply the following questions only if both dissolved and total constituents are above CRDL (For SAS parameters: above 5 X IDL).

B2.6.14.2 Is the concentration of any dissolved analyte greater than its total concentration by more than 15% (See Appendix A for formula)?

ACTION: If yes, prepare a list comparing differences between all dissolved and total analytes. Compute the differences as a percent of the total analyte only when both are above CRDL (5 X IDL for SAS parameters). If %D is more than 15%, flag both dissolved and total values as estimated (J).

B2.6.15 Forms I to IX - Sample Result, Calculation/Transcription Verification

B2.6.15.1 Site sample number?

Lab ID sample number?

QC report number?

date?

correct units?

matrix?

ACTION: If no for any of above, note under contract problem/non-compliance section of Data Assessment Narrative.

B2.6.15.2 Perform a 10% spot check of all types of computation/transcription for Forms I-IX. Are there any transcription/computation errors for the following:

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
(a) all analytes analyzed by ICP?	—	<input checked="" type="checkbox"/>	—
(b) all analytes analyzed by GFAA?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) all analytes analyzed by AA Flame?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Mercury?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Cyanide?	—	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ACTION: If yes, perform a 100% check of the remaining data for the computation or transcription found to be in error and document any other errors found. Contact the Validata Project Manager.

B2.6.16 Forms XI, XII, XIII (Quarterly Verification of Instrumental Parameters)

B2.6.16.1 Is quarterly verification report present or on file for:

Instrument Detection Limits?	<input checked="" type="checkbox"/>	—	—
ICP Interelement Correction Factors?	<input checked="" type="checkbox"/>	—	—
ICP Linear Ranges?	<input checked="" type="checkbox"/>	—	—

ACTION: If no, contact the Validata Project Manager.

B2.6.16.2 Was any sample result higher than the linear range of the ICP by more than 10%?	—	<input checked="" type="checkbox"/>	—
Was any sample result higher than the highest calibration standard for non-ICP parameters?	—	<input checked="" type="checkbox"/>	—
If ICP was used to analyze As, Tl, Se or Pb, was any result <5X ICP IDL reported?	—	<input checked="" type="checkbox"/>	—

ACTION: If yes for any of the above, flag result reported on Form I as estimated (J) and (UJ).

B2.6.17.3 Examine the raw data for any anomalies (i.e., baseline shifts, negative absorbances, omissions, legibility, etc). Are any anomalies present?	—	<input checked="" type="checkbox"/>	—
---	---	-------------------------------------	---

ACTION: If yes, use professional judgement to qualify the data. Contact the Validata Project Manager for resubmissions if necessary.

YES NO N/A

B2.6.18 Overall Assessment of Data/General

After all other data qualification is completed, are any laboratory flags remaining (other than U, J, or R)?

— —

ACTION: If yes, cross out (remove) the remaining lab flags, unless project-specific memo states otherwise.

Were any samples reanalyzed?

— —

ACTION: If yes, comment in Data Validation Narrative as to which sample analysis is considered to be of preferable data quality.

Evaluate in this section any technical problems which have not been previously addressed.

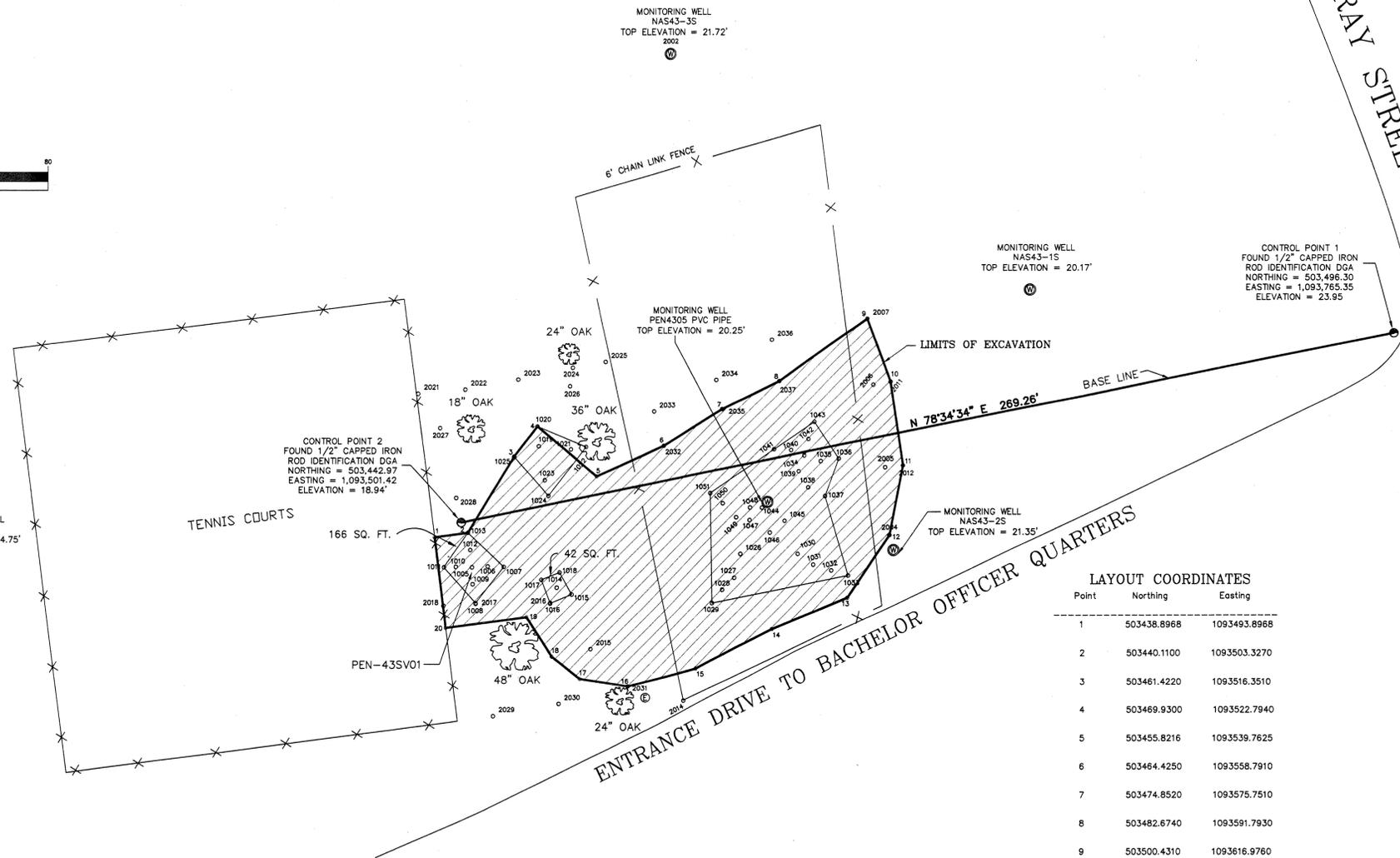
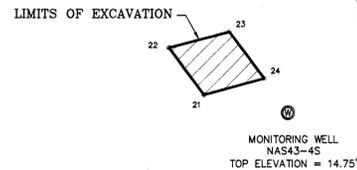
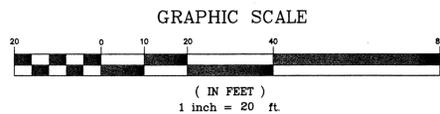
Assess the overall quality of the data. Consider the additive nature of the analytical problems encountered and make recommendations for further data qualification when appropriate.

Comment briefly on the analytical limitations of the data, incorporating project-specific considerations when sufficient information is available. Include a summary of rejected ("R" flagged) data.

Appendix D

Utility Excavation Permit

A SPECIFIC PURPOSE SURVEY BEING A PORTION OF NAVAL AIR STATION PENSACOLA PENSACOLA, ESCAMBIA COUNTY, FLORIDA SITE NUMBER 43 "DENOTES LIMITS OF EXCAVATION"



LAYOUT COORDINATES

Point	Northing	Easting
1	503438.8968	1093493.8968
2	503440.1100	1093503.3270
3	503461.4220	1093516.3510
4	503469.9300	1093522.7940
5	503455.8216	1093539.7625
6	503464.4250	1093558.7910
7	503474.8520	1093575.7510
8	503482.6740	1093591.7930
9	503500.4310	1093616.9760
10	503482.5390	1093623.5490
11	503458.9340	1093627.1710
12	503439.4440	1093623.3680
13	503420.5060	1093612.4030
14	503412.6560	1093590.4330
15	503401.6470	1093570.3590
16	503397.3168	1093548.7719
17	503399.4341	1093535.0793
18	503405.6348	1093527.0551
19	503416.6749	1093519.9393
20	503413.7409	1093497.1331
21	503454.2767	1093340.4914
22	503465.3134	1093332.3247
23	503469.0636	1093346.4262
24	503458.1073	1093354.7639

Point #	Northing	Easting	Description
100	503461.624	1093343.409	43SS18
1001	503457.860	1093355.197	43SS18
1002	503453.996	1093340.580	43SS19
1003	503465.180	1093331.852	43SS20
1004	503469.662	1093346.904	43SS21
1005	503430.478	1093504.527	43SS12
1006	503430.714	1093504.008	43SS42
1007	503430.604	1093513.523	43SS60
1008	503420.631	1093505.583	43SS61
1009	503425.822	1093504.735	43SS40
1010	503430.609	1093499.916	43SS41
1011	503430.492	1093496.543	43SS41
1012	503435.264	1093504.008	43SS42
1013	503440.110	1093503.927	43SS63+43SS71
1014	503424.855	1093528.280	43SS10
1015	503422.979	1093532.687	43SS44
1016	503420.527	1093526.574	43SS45
1017	503427.025	1093524.035	43SS46
1018	503429.014	1093529.225	43SS47
1019	503464.310	1093523.207	43SS14
1020	503469.930	1093522.794	43SS25
1021	503463.418	1093532.360	43SS26
1022	503464.105	1093536.710	43SS26
1023	503454.766	1093524.912	43SS26
1024	503450.349	1093525.963	43SS49
1025	503461.422	1093516.351	43SS28
1026	503434.098	1093580.648	43SS407
1027	503427.568	1093579.278	43SS34
1028	503424.297	1093575.871	43SS55
1029	503420.659	1093572.994	43SS68
1030	503434.464	1093577.549	43SS006
1031	503431.178	1093601.784	43SS33
1032	503429.608	1093607.031	43SS54
1033	503428.189	1093611.794	43SS67
1034	503461.925	1093599.711	43SS05
1035	503460.185	1093603.878	43SS50
1036	503460.856	1093609.082	43SS64
1037	503460.310	1093605.159	43SS70
1038	503452.749	1093600.238	43SS57
1039	503457.284	1093597.483	43SS51
1040	503463.219	1093595.262	43SS52
1041	503463.451	1093590.378	43SS65
1042	503466.360	1093600.278	43SS53
1043	503471.238	1093602.033	43SS56
1044	503447.464	1093587.532	43SS07
1045	503443.112	1093593.068	43SS03
1046	503440.011	1093589.007	43SS04
1047	503443.608	1093583.537	43SS02
1048	503447.106	1093583.639	43SS05
1049	503444.401	1093579.767	43SS21
1050	503448.308	1093575.981	43SS65
1051	503451.150	1093572.397	43SS69

Point #	Northing	Easting	Elev.	Description
2000	503508.548	1093662.848	20.17	MW NAS43-1S
2001	503435.212	1093624.520	21.35	MW NAS43-2S
2002	503574.413	1093574.457	21.72	MW NAS43-3S
2003	503448.667	1093588.541	20.25	MW PEN4305
2004	503439.444	1093623.368	21.07	43SS97
2005	503458.458	1093622.078	20.73	43SS96
2006	503481.713	1093618.701	19.48	43SS95
2007	503500.431	1093616.976	18.81	43SS94
2008	503420.503	1093612.403	21.15	43SS98
2009	503412.656	1093590.433	20.98	43SS99
2010	503401.647	1093570.359	20.98	43SS100+101
2011	503482.539	1093623.549	19.37	43SS110
2012	503458.934	1093627.171	20.61	43SS111+112
2013	503394.077	1093553.896	21.20	ELECTRIC MANHOLE
2014	503393.247	1093584.729	21.11	FENCE CORNER
2015	503407.734	1093538.164	20.51	43SS82
2016	503420.671	1093526.568	20.45	43SS45
2017	503420.498	1093505.609	19.26	43SS61
2018	503419.953	1093496.466	18.18	FENCE LINE
2019	503465.659	1093539.998	20.81	36" OAK
2020	503490.076	1093531.831	18.92	16" OAK
2021	503479.240	1093489.217	18.08	FENCE LINE
2022	503482.38	1093502.452	17.91	GROUND SHOT
2023	503483.158	1093517.449	17.87	GROUND SHOT
2024	503486.443	1093532.825	18.92	GROUND SHOT
2025	503488.091	1093542.232	19.23	GROUND SHOT
2026	503481.271	1093532.061	18.77	43SS87+88
2027	503469.507	1093495.365	17.97	43SS86
2028	503449.816	1093499.968	18.65	43SS85
2029	503388.862	1093510.653	20.09	43SS103
2030	503392.287	1093529.086	20.48	43SS84
2031	503396.254	1093547.321	20.96	43SS81
2032	503464.425	1093558.791	20.06	43SS104
2033	503474.176	1093555.970	19.80	43SS89
2034	503483.024	1093574.033	18.43	43SS90
2035	503474.852	1093575.751	19.09	43SS92
2036	503494.460	1093589.653	18.48	43SS91
2037	503482.674	1093591.793	19.01	43SS93
2038	503392.919	1093546.612	21.23	24" OAK
2039	503408.310	1093516.898	20.59	48" OAK
2040	503468.978	1093505.185	19.24	18" OAK
2041	503450.064	1093360.514	14.75	MW NAS43-4S

- GENERAL NOTES:**
- SOUTHERN SURVEYING, INC., HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY UNDERGROUND IMPROVEMENTS THAT MIGHT EXIST. VISIBLE EVIDENCE OF EASEMENTS WILL BE SHOWN HEREON.
 - MEASUREMENTS ARE MADE TO U.S. STANDARDS.
 - PROPERTY IS SUBJECT TO ZONING SETBACKS AND RESTRICTIONS OF RECORD.
 - THE ACCURACY OF MEASUREMENTS PERFORMED MEETS THE RELATIVE ERROR OF CLOSURE PERMISSIBLE IN A SUBURBAN LAND AREA.
 - NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
 - THE VERTICAL CONTROL SHOWN HEREON IS BASED ON UNITED STATES COAST AND GEODETIC SURVEY BENCHMARK STAMPED P-26 WITH AN ESTABLISHED ELEVATION OF 12.79 FEET.
 - IF THE HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS TO BE USED FOR CONSTRUCTION PURPOSES, THEN ALL HORIZONTAL AND VERTICAL CONTROL SHALL BE FIELD VERIFIED FOR CORRECTNESS BEFORE THE START OF SAID CONSTRUCTION ACTIVITIES.

REVISION 04/10/2002: STAKED LIMITS OF EXCAVATION
FB 1054/ PG 29-30

SURVEYOR'S CERTIFICATE:
I HEREBY CERTIFY THE SURVEY SHOWN HEREON TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS ACCORDING TO STATE OF FLORIDA RULE 61G17-6 AS ADOPTED BY THE BOARD OF LAND SURVEYORS AND MAPPERS.

CHARLES E. MARTIN
PROFESSIONAL LAND SURVEYORS
AND MAPPERS NUMBER 3463
CORP. NO. 5802

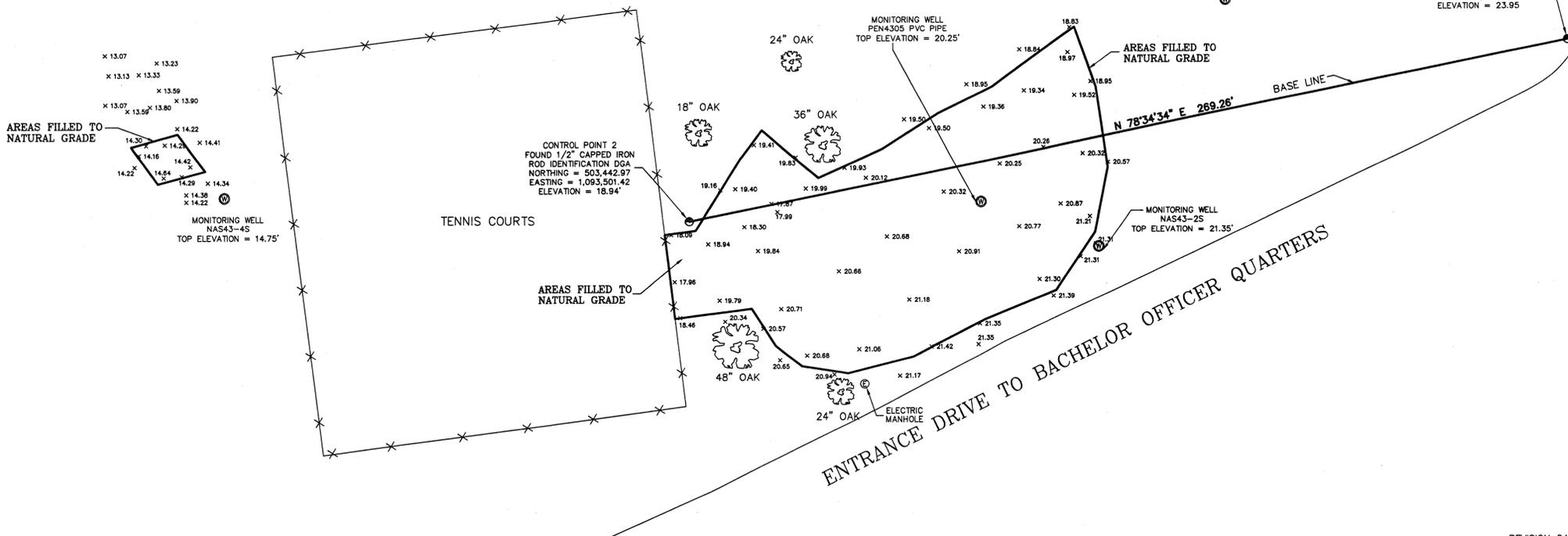
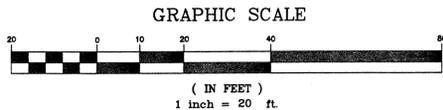
SOUTHERN SURVEYING, INC.
LAND SURVEYORS • LAND PLANNERS
2200 SOUTH HIGHWAY 87
NAVARRA, FLORIDA 32566
PHONE: (850) 939-4299
FAX NUMBER (850) 939-1960

Requested By: **CH2M HILL**
A SPECIFIC PURPOSE SURVEY OF
NAVAL AIR STATION PENSACOLA
SITE 43

Scale: 1" = 20'
Field Date: 04/10/2002
Field Book: 1054
Page: 29-30
Drawn By: DLP
Revisions:

Sheet
1 OF **1**
Project Number:
2001-246-3

A SPECIFIC PURPOSE SURVEY BEING A PORTION OF NAVAL AIR STATION PENSACOLA PENSACOLA, ESCAMBIA COUNTY, FLORIDA SITE NUMBER 43 "DENOTES FILLED AREAS ELEVATIONS"



Point #	Northing	Easting	Description
1000	503461.624	1093343.409	43SS15
1001	503457.860	1093355.197	43SS18
1002	503453.996	1093340.580	43SS19
1003	503455.180	1093331.852	43SS20
1004	503469.662	1093346.904	43SS21
1005	503430.478	1093504.527	43SS12
1006	503430.714	1093508.993	43SS43
1007	503430.604	1093513.523	43SS60
1008	503420.631	1093505.583	43SS51
1009	503425.822	1093504.717	43SS40
1010	503430.609	1093499.916	43SS41
1011	503430.492	1093496.543	43SS41
1012	503435.264	1093504.008	43SS42
1013	503440.110	1093503.327	43SS63+43SS71
1014	503424.855	1093522.794	43SS10
1015	503422.979	1093532.687	43SS44
1016	503420.527	1093526.574	43SS45
1017	503427.025	1093524.035	43SS46
1018	503429.014	1093529.225	43SS47
1019	503464.310	1093523.207	43SS14
1020	503469.930	1093522.794	43SS25
1021	503463.418	1093532.360	43SS26
1022	503464.105	1093536.710	43SS26
1023	503454.766	1093524.912	43SS26
1024	503450.349	1093525.963	43SS49
1025	503461.422	1093516.351	43SS28
1026	503434.098	1093580.648	43SS407
1027	503427.568	1093579.278	43SS34
1028	503424.297	1093575.871	43SS55
1029	503420.659	1093572.994	43SS68
1030	503434.464	1093597.549	43S006
1031	503431.178	1093601.784	43SS33
1032	503429.608	1093607.031	43SS54
1033	503428.189	1093611.794	43SS67
1034	503461.925	1093599.711	43SS05
1035	503460.185	1093603.878	43SS50
1036	503460.856	1093609.082	43SS64
1037	503450.310	1093605.159	43SS70
1038	503452.749	1093600.238	43SS57
1039	503457.483	1093587.483	43SS51
1040	503463.219	1093595.262	43SS52
1041	503463.451	1093590.378	43SS65
1042	503466.360	1093600.278	43SS53
1043	503471.238	1093602.033	43SS66
1044	503447.464	1093587.532	43SS07
1045	503443.112	1093593.068	43SS03
1046	503440.011	1093589.007	43SS04
1047	503443.608	1093583.537	43SV02
1048	503447.106	1093583.639	43SV05
1049	503444.401	1093579.767	43SS31
1050	503448.308	1093575.981	43SS56
1051	503451.150	1093572.397	43SS69

Point #	Northing	Easting	Elev.	Description
2000	503508.548	1093662.848	20.17	MW NAS43-1S
2001	503435.212	1093624.520	21.35	MW NAS43-2S
2002	503574.413	1093560.467	21.72	MW NAS43-3S
2003	503448.667	1093588.541	20.25	MW PEN4305
2004	503439.444	1093623.368	21.07	43SS97
2005	503458.458	1093622.078	20.73	43SS96
2006	503481.713	1093618.701	19.48	43SS95
2007	503500.431	1093616.976	18.81	43SS94
2008	503420.506	1093612.403	21.15	43SS98
2009	503412.656	1093590.433	20.98	43SS99
2010	503401.647	1093570.359	20.98	43SS100+101
2011	503482.539	1093623.549	19.37	43SS110
2012	503458.934	1093627.171	20.61	43SS111+112
2013	503394.077	1093553.696	21.20	ELECTRIC MANHOLE
2014	503393.243	1093564.729	21.11	FENCE CORNER
2015	503407.734	1093538.164	20.51	43SS82
2016	503420.671	1093526.568	20.45	43SS45
2017	503420.498	1093505.809	19.26	43SS61
2018	503419.953	1093496.466	18.18	FENCE LINE
2019	503465.659	1093539.998	20.81	36" OAK
2020	503490.076	1093531.831	18.92	16" OAK
2021	503479.240	1093489.217	18.08	FENCE LINE
2022	503480.389	1093502.452	17.91	GROUND SHOT
2023	503483.158	1093517.449	17.97	GROUND SHOT
2024	503486.443	1093532.828	18.92	GROUND SHOT
2025	503488.091	1093542.232	19.23	GROUND SHOT
2026	503481.271	1093532.061	18.77	43SS87+88
2027	503469.507	1093495.365	17.97	43SS86
2028	503449.816	1093499.988	18.65	43SS85
2029	503388.862	1093510.653	20.09	43SS103
2030	503392.287	1093529.086	20.48	43SS84
2031	503396.254	1093547.321	20.96	43SS81
2032	503464.425	1093558.791	20.06	43SS104
2033	503474.176	1093555.970	19.80	43SS89
2034	503483.024	1093574.033	18.43	43SS90
2035	503474.852	1093575.751	19.09	43SS92
2036	503494.460	1093589.853	18.48	43SS91
2037	503482.674	1093591.793	19.01	43SS93
2038	503392.919	1093546.612	21.23	24" OAK
2039	503408.310	1093516.898	20.59	48" OAK
2040	503468.978	1093505.185	19.24	18" OAK
2041	503450.064	1093360.514	14.75	MW NAS43-4S

REVISION 04/10/2002: STAKED LIMITS OF EXCAVATION FB 1054/PG 29-30
 REVISION 04/24/2002: OBTAINED ELEVATIONS OF THE BOTTOM OF EXCAVATION
 AREA FB 1054/PG 60
 REVISION 04/29/2002: OBTAINED FINISHED GRADE AT EXCAVATION SITE
 FB 1054/PG 71

- GENERAL NOTES:**
- 1) SOUTHERN SURVEYING, INC., HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY UNDERGROUND IMPROVEMENTS THAT MIGHT EXIST. VISIBLE EVIDENCE OF EASEMENTS WILL BE SHOWN HEREON.
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 - 7) IF THE HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS TO BE USED FOR CONSTRUCTION PURPOSES, THEN ALL HORIZONTAL AND VERTICAL CONTROL SHALL BE FIELD VERIFIED FOR CORRECTNESS BEFORE THE START OF SAID CONSTRUCTION ACTIVITIES.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THE SURVEY SHOWN HEREON TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS ACCORDING TO STATE OF FLORIDA RULE 61G17-6 AS ADOPTED BY THE BOARD OF LAND SURVEYORS AND MAPPERS.

CHARLES E. MARTIN
 PROFESSIONAL LAND SURVEYOR
 AND MAPPERS NUMBER 3463

CORP. NO. 5802

SOUTHERN SURVEYING, INC.
 LAND SURVEYORS • LAND PLANNERS
 2200 SOUTH HIGHWAY 87
 NAVARRE, FLORIDA 32566
 PHONE: (850) 939-4299
 FAX NUMBER (850) 939-1960

Requested By: **CH2M HILL**
 A SPECIFIC PURPOSE SURVEY OF
 NAVAL AIR STATION PENSACOLA
 SITE 43

Scale:	1" = 20'
Field Date:	04/29/2002
Field Book:	1054
Page:	71
Drawn By:	DLP
Revisions:	

Sheet
1 OF **1**
 Project Number:
2001-246-5

A SPECIFIC PURPOSE SURVEY BEING A PORTION OF NAVAL AIR STATION PENSACOLA PENSACOLA, ESCAMBIA COUNTY, FLORIDA SITE NUMBER 43

"DENOTES AREA EXCAVATED"



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

EXCAVATED AREA
SURFACE AREA = 187.29 SQUARE FEET
AVERAGE DEPTH = 2.45'
CALCULATED VOLUME = 17.0 CUBIC YARDS

MONITORING WELL
NAS43-4S
TOP ELEVATION = 14.75'

CONTROL POINT 2
FOUND 1/2" CAPPED IRON
ROD IDENTIFICATION DGA
NORTHING = 503,442.97
EASTING = 1,093,501.42
ELEVATION = 18.94'

MONITORING WELL
NAS43-3S
TOP ELEVATION = 21.72'

SURFACE AREA = 7666.39 SQUARE FEET
AVERAGE DEPTH = 2.23'
CALCULATED VOLUME = 633.19 CUBIC YARDS

MONITORING WELL
NAS43-1S
TOP ELEVATION = 20.17'

CONTROL POINT 1
FOUND 1/2" CAPPED IRON
ROD IDENTIFICATION DGA
NORTHING = 503,496.30
EASTING = 1,093,765.35
ELEVATION = 23.95'

ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS

MURRAY STREET

Point #	Northing	Easting	Description
1000	503461.624	1093343.409	43SS15
1001	503457.860	1093355.197	43SS18
1002	503453.996	1093340.580	43SS19
1003	503465.180	1093331.852	43SS20
1004	503469.662	1093346.904	43SS21
1005	503404.478	1093340.577	43SS12
1006	503430.714	1093508.993	43SS43
1007	503430.604	1093513.523	43SS60
1008	503420.631	1093505.583	43SS61
1009	503425.822	1093504.735	43SS40
1010	503430.609	1093499.916	43SS41
1011	503430.492	1093496.543	43SS41
1012	503435.264	1093504.008	43SS42
1013	503440.110	1093503.327	43SS63+43SS71
1014	503424.855	1093528.280	43SS10
1015	503422.979	1093532.687	43SS44
1016	503420.527	1093526.574	43SS45
1017	503427.025	1093524.035	43SS46
1018	503429.014	1093529.225	43SS47
1019	503464.310	1093523.207	43SS14
1020	503469.930	1093522.794	43SS25
1021	503463.418	1093532.360	43SS26
1022	503464.105	1093536.710	43SS26
1023	503454.766	1093524.912	43SS26
1024	503450.349	1093525.963	43SS49
1025	503461.422	1093516.351	43SS28
1026	503434.098	1093580.648	43SS407
1027	503427.568	1093579.278	43SS34
1028	503424.297	1093575.871	43SS55
1029	503420.659	1093572.994	43SS58
1030	503434.464	1093597.549	43SS06
1031	503431.178	1093601.784	43SS33
1032	503429.608	1093607.031	43SS54
1033	503428.189	1093611.794	43SS67
1034	503461.925	1093599.711	43SS05
1035	503460.185	1093603.878	43SS50
1036	503460.856	1093609.082	43SS64
1037	503450.310	1093605.159	43SS70
1038	503452.749	1093600.238	43SS57
1039	503457.284	1093597.483	43SS51
1040	503463.219	1093595.262	43SS52
1041	503463.451	1093590.378	43SS65
1042	503466.360	1093600.278	43SS53
1043	503471.238	1093602.033	43SS66
1044	503447.464	1093587.532	43SS07
1045	503443.112	1093593.068	43SS03
1046	503440.011	1093589.007	43SS04
1047	503443.608	1093583.537	43SS02
1048	503447.106	1093583.639	43SS05
1049	503444.401	1093579.767	43SS31
1050	503448.308	1093575.981	43SS56
1051	503451.150	1093572.397	43SS69

Point #	Northing	Easting	Elev.	Description
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2001	503435.212	1093624.520	21.35	MW NAS43-2S
2002	503574.413	1093560.467	21.72	MW NAS43-3S
2003	503448.667	1093588.541	20.25	MW PEN4305
2004	503439.444	1093623.368	21.07	43SS97
2005	503458.458	1093622.078	20.73	43SS96
2006	503481.713	1093618.701	19.48	43SS95
2007	503500.431	1093616.976	18.81	43SS94
2008	503420.506	1093612.403	21.15	43SS98
2009	503412.656	1093590.433	20.98	43SS99
2010	503401.647	1093570.359	20.98	43SS100+101
2011	503482.539	1093623.549	19.37	43SS110
2012	503458.934	1093627.171	20.61	43SS111+112
2013	503394.077	1093553.696	21.20	ELECTRIC MANHOLE
2014	503393.243	1093564.729	21.11	FENCE CORNER
2015	503407.734	1093538.164	20.51	43SS82
2016	503420.671	1093526.568	20.45	43SS45
2017	503420.498	1093505.609	19.26	43SS61
2018	503419.953	1093496.466	18.18	FENCE LINE
2019	503465.659	1093539.998	20.81	36" OAK
2020	503490.076	1093531.831	18.92	16" OAK
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2023	503483.158	1093517.449	17.97	GROUND SHOT
2024	503486.443	1093532.825	18.92	GROUND SHOT
2025	503488.091	1093542.232	19.23	GROUND SHOT
2026	503481.271	1093532.061	18.77	43SS87+88
2027	503469.507	1093495.365	17.97	43SS87
2028	503449.816	1093499.968	18.65	43SS85
2029	503388.862	1093510.653	20.09	43SS103
2030	503392.287	1093529.086	20.48	43SS84
2031	503396.254	1093547.321	20.96	43SS81
2032	503464.425	1093558.791	20.06	43SS104
2033	503474.176	1093555.970	19.80	43SS89
2034	503483.024	1093574.033	18.43	43SS90
2035	503474.852	1093575.751	19.09	43SS92
2036	503494.460	1093589.653	18.48	43SS91
2037	503482.674	1093591.793	19.01	43SS93
2038	503392.919	1093546.612	21.23	24" OAK
2039	503408.310	1093516.898	20.59	48" OAK
2040	503468.978	1093505.165	19.24	18" OAK
2041	503450.064	1093360.514	14.75	MW NAS43-4S

REVISION 04/10/2002: STAKED LIMITS OF EXCAVATION FB 1054/PG 29-30
REVISION 04/24/2002: OBTAINED ELEVATIONS OF THE BOTTOM OF EXCAVATION AREA FB 1054/PG 60

GENERAL NOTES:

- 1) SOUTHERN SURVEYING, INC., HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY UNDERGROUND IMPROVEMENTS THAT MIGHT EXIST. VISIBLE EVIDENCE OF EASEMENTS WILL BE SHOWN HEREON.
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SURVEYOR'S CERTIFICATE:

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NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

CHARLES E. MARTIN
PROFESSIONAL LAND SURVEYORS
AND MAPPERS NUMBER 3463

CORP. NO. 5802

SOUTHERN SURVEYING, INC.
LAND SURVEYORS • LAND PLANNERS

2200 SOUTH HIGHWAY 87
NAYABRE, FLORIDA 32566
PHONE: (850) 939-4299
FAX NUMBER: (850) 939-1900

CH2M HILL
A SPECIFIC PURPOSE SURVEY OF
NAVAL AIR STATION PENSACOLA
SITE 43

Scale: 1" = 20'

Field Date: 04/24/2002

Field Book: 1054

Page: 60

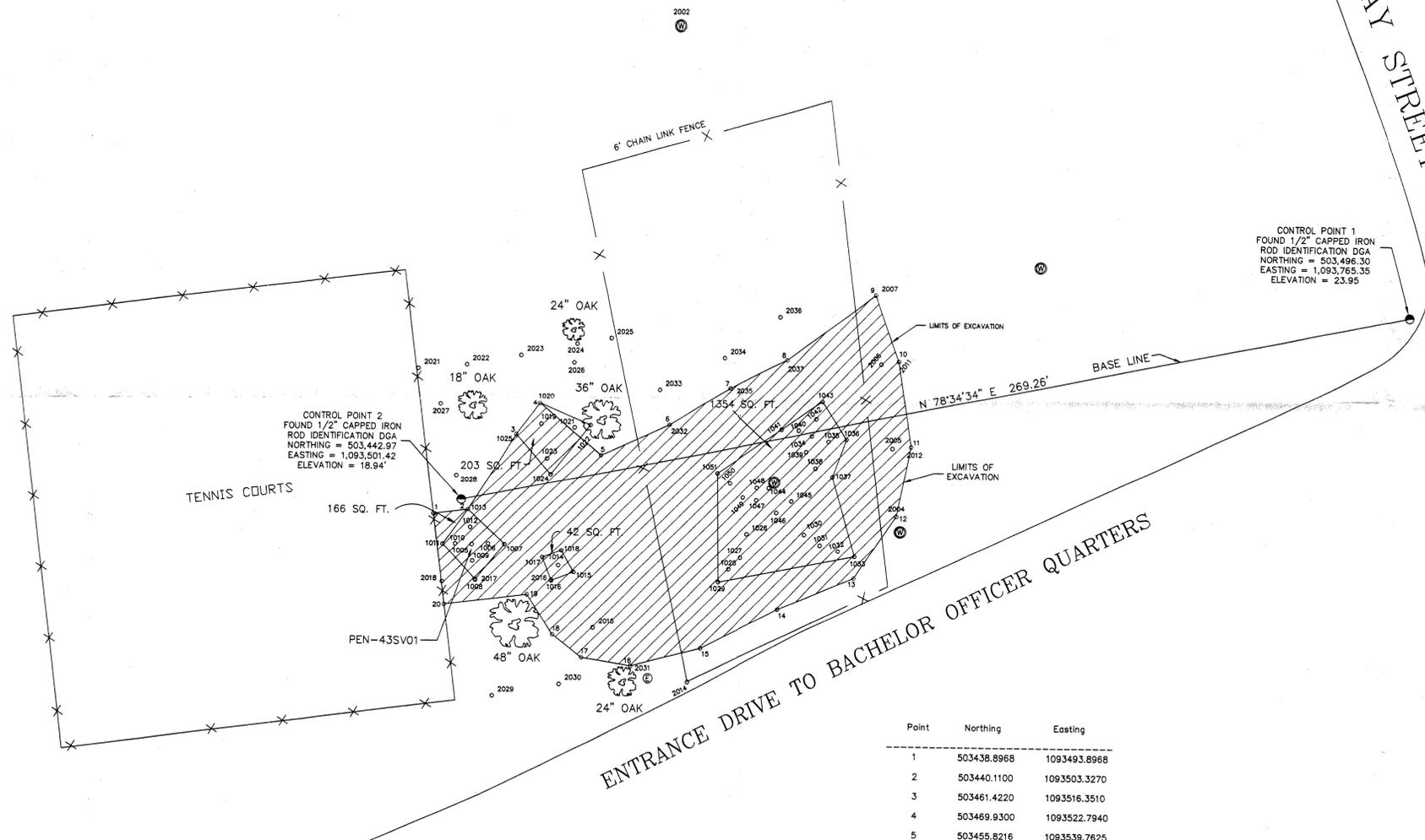
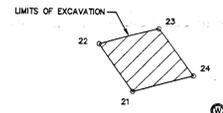
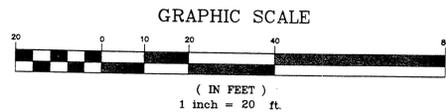
Drawn By: DLP

Revisions:

1 OF 1

Project Number:
2001-246-4

A SPECIFIC PURPOSE SURVEY BEING A PORTION OF NAVAL AIR STATION PENSACOLA PENSACOLA, ESCAMBIA COUNTY, FLORIDA SITE NUMBER 43



Point #	Northing	Eastng	Elev.	Description
1000	503461.624	1093343.409	18.87	43SS15
1001	503457.860	1093355.197	19.39	43SS18
1002	503440.996	1093340.580	19.72	43SS19
1003	503465.180	1093331.852	18.91	43SS20
1004	503469.662	1093346.904	19.08	43SS21
1005	503430.478	1093504.527	24.31	43SS12
1006	503430.714	1093508.993	24.09	43SS43
1007	503430.804	1093513.523	24.36	43SS60
1008	503430.633	1093505.583	24.26	43SS61
1009	503425.822	1093504.735	23.96	43SS40
1010	503430.609	1093499.916	23.50	43SS41
1011	503430.492	1093496.543	23.30	43SS41
1012	503435.264	1093504.008	24.04	43SS42
1013	503440.110	1093503.327	23.91	43SS63+43SS71
1014	503424.855	1093528.280	25.52	43SS10
1015	503422.979	1093532.687	25.44	43SS44
1016	503420.527	1093526.574	25.47	43SS45
1017	503427.025	1093521.000	25.00	43SS46
1018	503429.014	1093529.225	25.37	43SS47
1019	503464.310	1093523.207	24.57	43SS14
1020	503469.930	1093522.794	24.79	43SS25
1021	503463.418	1093532.360	24.69	43SS26
1022	503464.105	1093536.710	25.02	43SS26
1023	503454.766	1093524.912	24.38	43SS26
1024	503450.349	1093525.963	24.50	43SS49
1025	503461.422	1093516.351	24.54	43SS28
1026	503434.098	1093580.848	26.00	43SS407
1027	503427.568	1093579.278	26.27	43SS34
1028	503424.297	1093575.871	26.19	43SS55
1029	503420.659	1093572.994	26.40	43SS68
1030	503434.464	1093597.549	26.42	43S006
1031	503431.178	1093601.784	26.55	43SS33
1032	503429.698	1093607.031	26.50	43SS54
1033	503428.189	1093611.794	26.68	43SS67
1034	503461.925	1093599.711	25.90	43SS05
1035	503460.185	1093603.878	25.93	43SS50
1036	503460.856	1093609.082	25.96	43SS64
1037	503450.310	1093605.159	25.65	43SS70
1038	503452.749	1093600.238	25.49	43SS57
1039	503457.284	1093597.483	25.36	43SS51
1040	503463.219	1093595.262	25.39	43SS52
1041	503463.451	1093590.378	24.98	43SS65
1042	503466.360	1093600.278	25.39	43SS53
1043	503471.238	1093602.033	25.41	43SS66
1044	503447.464	1093587.532	25.22	43SS07
1045	503443.112	1093593.068	25.57	43SS03
1046	503440.011	1093589.007	25.68	43SS04
1047	503443.608	1093583.537	25.47	43SV02
1048	503447.106	1093583.639	25.22	43SV05
1049	503444.401	1093579.767	25.35	43SS31
1050	503448.308	1093575.981	25.21	43SS56
1051	503451.150	1093572.397	25.35	43SS69

Point #	Northing	Eastng	Elev.	Description
2000	503508.548	1093662.848	20.17	MW NAS43-1S
2001	503435.212	1093624.520	21.35	MW NAS43-2S
2002	503574.413	1093560.467	21.72	MW NAS43-3S
2003	503448.667	1093588.541	20.25	MW PEN4305
2004	503444.444	1093623.078	20.73	43SS96
2005	503458.458	1093623.368	21.07	43SS97
2006	503481.713	1093618.701	19.48	43SS93
2007	503500.431	1093616.976	18.81	43SS94
2008	503420.506	1093612.403	21.15	43SS98
2009	503412.656	1093590.433	20.98	43SS99
2010	503401.647	1093570.359	20.98	43SS100+101
2011	503482.539	1093623.549	19.37	43SS110
2012	503458.934	1093627.171	20.61	43SS111+112
2013	503394.077	1093553.696	21.20	ELECTRIC MANHOLE
2014	503393.243	1093564.729	21.11	FENCE CORNER
2015	503407.734	1093538.164	20.51	43SS82
2016	503420.671	1093526.568	20.45	43SS45
2017	503420.498	1093505.609	19.26	43SS61
2018	503419.953	1093496.466	18.18	FENCE LINE
2019	503465.659	1093539.998	20.81	36\"/>

Point	Northing	Eastng
1	503438.8968	1093493.8968
2	503440.1100	1093503.3270
3	503461.4220	1093516.3510
4	503469.9300	1093522.7940
5	503455.8216	1093539.7625
6	503464.4250	1093558.7910
7	503474.8520	1093575.7510
8	503482.6740	1093591.7930
9	503500.4310	1093616.9760
10	503482.5390	1093623.5490
11	503458.9340	1093627.1710
12	503439.4440	1093623.3680
13	503420.5060	1093612.4030
14	503412.6560	1093590.4330
15	503401.6470	1093570.3590
16	503397.3168	1093548.7719
17	503399.4341	1093535.0793
18	503405.6348	1093527.0551
19	503416.6749	1093519.9393
20	503413.7409	1093497.1331
21	503454.2767	1093340.4814
22	503465.3134	1093332.3247
23	503469.0636	1093346.4262
24	503458.1073	1093354.7639

- GENERAL NOTES:**
- SOUTHERN SURVEYING, INC., HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY UNDERGROUND IMPROVEMENTS THAT MIGHT EXIST. VISIBLE EVIDENCE OF EASEMENTS WILL BE SHOWN HEREON.
 - MEASUREMENTS ARE MADE TO U.S. STANDARDS.
 - PROPERTY IS SUBJECT TO ZONING SETBACKS AND RESTRICTIONS OF RECORD.
 - THE ACCURACY OF MEASUREMENTS PERFORMED MEETS THE RELATIVE ERROR OF CLOSURE PERMISSIBLE IN A SUBURBAN LAND AREA.
 - NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
 - THE VERTICAL CONTROL SHOWN HEREON IS BASED ON UNITED STATES COAST AND GEODETIC SURVEY BENCHMARK STAMPED P-26 WITH AN ESTABLISHED ELEVATION OF 12.79 FEET.
 - IF THE HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS TO BE USED FOR CONSTRUCTION PURPOSES, THEN ALL HORIZONTAL AND VERTICAL CONTROL SHALL BE FIELD VERIFIED FOR CORRECTNESS BEFORE THE START OF SAID CONSTRUCTION ACTIVITIES.

SURVEYOR'S CERTIFICATE:
I HEREBY CERTIFY THE SURVEY SHOWN HEREON TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS ACCORDING TO STATE OF FLORIDA RULE 61G17-6 AS ADOPTED BY THE BOARD OF LAND SURVEYORS AND MAPPERS.

CHARLES E. MARTIN
PROFESSIONAL LAND SURVEYORS
AND MAPPERS NUMBER 3463
CORP. NO. 5802

NOT VALID WITHOUT
THE SIGNATURE AND THE
ORIGINAL RAISED SEAL OF
A FLORIDA LICENSED
SURVEYOR AND MAPPER

SOUTHERN SURVEYING, INC.
 LAND SURVEYORS * LAND PLANNERS
 2500 SOUTH HIGHWAY 87
 NAVARE, FLORIDA 32566
 PHONE: (850) 939-4299
 FAX NUMBER: (850) 939-1960

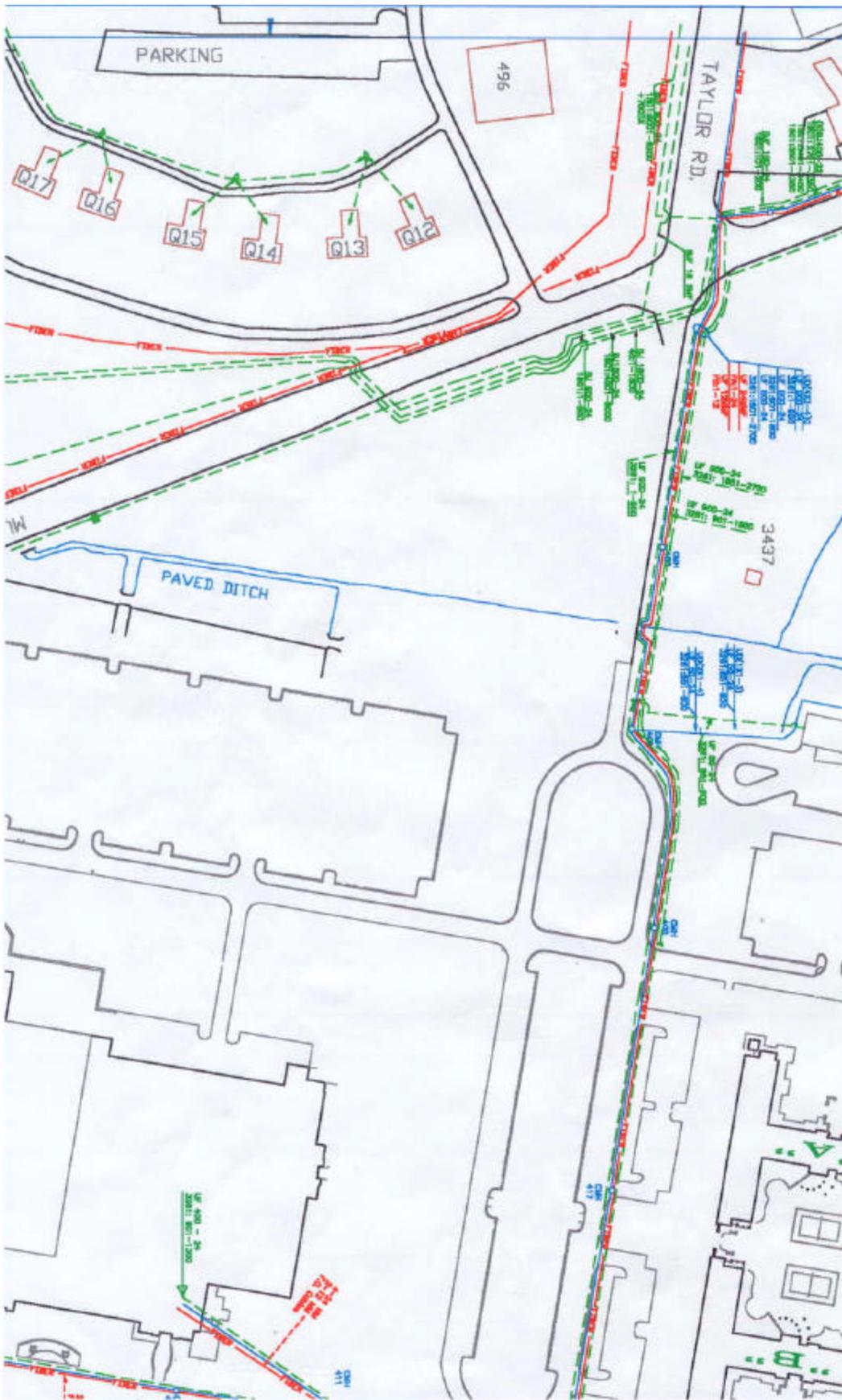
CH2M HILL
 A SPECIFIC PURPOSE SURVEY OF
 NAVAL AIR STATION PENSACOLA
 SITE 43

Scale: 1" = 20'
 Field Date: 12/12/01
 Field Book: 1031
 Page: 74-76
 Drawn By: DLP
 Revisions:

Sheet
 1 OF 1
 Project Number:
 2001-246-3

Appendix E

Pre- and Post-Excavation Survey



EXCAVATION PERMIT - NAVAL AIR STATION PENSACOLA

An excavation permit must be obtained prior to any excavation aboard the Naval Air Station (Bronson, Choctaw, Corry, and Saufley). The permit must be displayed on the job site or work will be stopped. To obtain a permit, fill out blocks 1 - 4, obtain signatures in blocks 5 - 11 below, attach plans/drawing and submit this form to the Naval Air Station Facilities Management Department, Building 3560, Phone 452-4515 ext. 375. FAX 452-2758. Instructions are on the reverse side of permit.

Permit No. <u>02-037</u>	Date: <u>4-3-02</u>
1. PROJECT TITLE Title: <u>NAS Pensacola site 43</u>	2. PROJECT LOCATION Street Address: Nearest Intersection: <u>Taylor & Murray Road</u> Nearest Building:
3. PROJECT DESCRIPTION Detailed Descriptions: <u>Excavate contaminated soil from 0-2 FT. BLS</u> Proposed Start Date: <u>04/09/02</u> Duration: <u>60 Days</u> Machinery: <u>Trackhoe / Backhoe</u> Depth: <u>2 FT.</u> Width: <u>VARIES</u> Length: <u>VARIES</u> JON: _____ ESR: _____	4. REQUESTOR INFORMATION Name: <u>Scott DUMBAR</u> Command/Company: <u>CH2MHill/EQ35</u> E-mail Address: <u>SDUMBAR@CH2M.COM</u> Phone: <u>678-427-2559</u> FAX: <u>(850) 939-0035</u>
5. FMD ROUTE APPROVAL/CLEARANCE	SIGNATURE <u>D.K. Mazy</u> DATE <u>4-3-02</u>
6. NASP ARCHAEOLOGICAL REVIEW Contact NAS Cultural Resource Manager at 452-4515 ext385. Comments: _____ Notes: Clearance may require extended time depending on location. Report all inadvertent discoveries.	SIGNATURE <u>D.K. Mazy</u> DATE <u>4-3-02</u>
7. NASP ENVIRONMENTAL REVIEW Contact NASP Installation Restoration and Natural Resources at 452-4611 ext. 122 Comments: <u>No Problem</u>	SIGNATURE <u>[Signature]</u> DATE <u>4/3/02</u>
8. NASP SAFETY REVIEW Contact NASP Safety at 452-3013 for all projects accomplished by federal employees. CONTRACTORS MUST PERFORM REVIEW FOR COMPLIANCE WITH APPROPRIATE OSH REGULATIONS Comments: _____	SIGNATURE <u>OK</u> DATE _____
NOTICE: When locating services have revealed a concentration of telephone cables and/or utilities in areas where excavation operations will be performed, a trench greater than the depth of the intended work, six (6) feet to either side and perpendicular to the intended line of work shall be hand dug to verify that all cables and/or utilities in this area have been properly located and/or identified. Machine excavation in areas of concentration shall not be undertaken until hand-digging operations have been completed. One mark or flag could identify multiple utilities.	
9. PWC UTILITY CLEARANCE (Utility markings valid for 5 working days.) Contact PWC Survey Branch at 452-4315 ext. 339/340. Comments: _____	Date Located: <u>4-10-02</u>
Electrical/Ground Electronics Present: <input checked="" type="checkbox"/> / N For Ground Electronics contact NASP at 452-2849 or Sherman Field at 452-3460 if applicable. Date contacted: _____ For Electrical contact High Voltage Shop at <u>452-2648</u> each day of digging. <u>Roger Flemming</u> Date contacted: <u>4/10/02</u> Note: Excavations within 2 feet of marked utilities on all sides must be hand dug until utilities are exposed.	SIGNATURE <u>Jammy Thomas</u>
10. NCTS - Fiber Optic Cable and Navy Telephone Clearance Contact NCTS at 452-3454. Comments: <u>NAVY FACILITIES MARKED</u>	Date Located: <u>4-10-02</u> SIGNATURE <u>[Signature]</u>
11. COMMERCIAL AND OTHER UTILITIES CLEARANCE Contact the following to clear utility locations: For Bell South, Gulf Power and Cable TV (Mediacom) contact Sunshine State One-Call at 1-800-432-4770. <u>Bygas</u> Ticket No. <u>09324158</u> Date: <u>4/3/02 4:10 PM</u> Time: <u>1500 : 0800</u>	SIGNATURE <u>Rodney & Bennett</u>
FINAL PERMIT APPROVAL Signature: <u>[Signature]</u> Date: <u>4-10-02</u> Comments: <u>04324158</u>	Date: <u>4-10-02</u>

Appendix F

Offsite Backfill Analytical Results

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1.0 Summary Report

1.1 Laboratory Report

Cover Page

Laboratory Narrative

Laboratory Results

**KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE**

L0204001

CHAIN OF CUSTODY:

The chain of custody number was 157338-020329-02.

SHIPMENT CONDITIONS:

The chain of custody forms were received sealed in a cooler. The cooler temperature was 1 ° C.

SAMPLE MANAGEMENT:

All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

REVIEWED: Stephan Stepe DATE: 4/2/02

**REPORT NARRATIVE
GC/MS VOLATILE ORGANICS**

KEMRON Login No: L0204001

METHOD

Preparation: SW- 846 5030B/5035
Analysis: SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Per client, Encore sampling containers stored in freezer in lieu of sodium bisulfate preservation. The Encore sampling container for fraction 01 was received in the laboratory not sealed in strict accordance with the manufacturer's instructions.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied or if the mean %RSD for all analytes was less than 15% the average response factors were used. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Samples: The soil LCS analyzed 04/02/02 on HPMS-9 yielded a % recovery for bromomethane above the upper advisory limit. The water LCS analyzed 04/04/02 on HPMS-6 yielded a % recovery for 2-hexanone below the lower advisory limit. All other acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG).

SAMPLES

Internal Standards: All acceptance criteria were met.

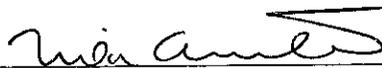
Surrogates: All acceptance criteria were met.

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: MES

REVIEWED: _____



DATE: 4/8/02

Rev. 7/14/00

**REPORT NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

KEMRON Report No.: L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: The MS/MSD were not associated with these samples.

SAMPLES

Internal Standards: All acceptance criteria were met.
Surrogates: Sample 02 yielded a % recovery for p-terphenyl-d14 that was above the upper advisory limit. All other acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: mdc

REVIEWED: _____

DATE: 4/4/02

Rev. 6/00

**REPORT NARRATIVE
GC PETROLEUM RANGE ORGANICS**

KEMRON Report No.: L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

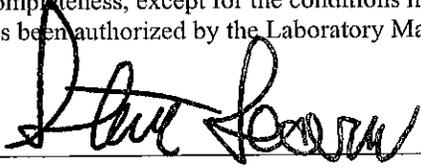
Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: An MS/MSD was not associated with this sample delivery group.
SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK

REVIEWED: _____



DATE: _____

4/4/02

Rev. 7/14/00

REPORT NARRATIVE
GC PESTICIDES

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8081

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

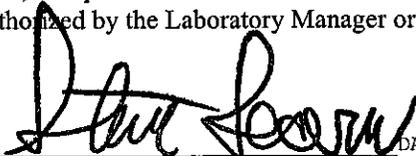
Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.
Endrin/ DDT Breakdown : All acceptance criteria were met.
Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED:  DATE: 4/3/02

Rev. 7/14/00

REPORT NARRATIVE
GC PCB

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8082

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Samples: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED: _____

DATE: _____

Rev. 7/14/00

REPORT NARRATIVE
GC HERBICIDES

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8151

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

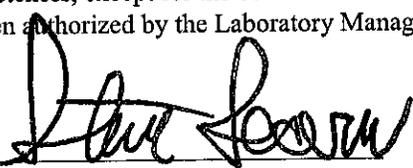
Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED: 

DATE: 4/9/02

Rev. 7/14/00

REPORT NARRATIVE
METALS

KEMRON Login No: L0204001

METHOD

Analysis: SW-846 6010/6020/7000

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met

MS/MSD: WG115563 - A post digestion spike was performed for antimony with 103 % recovery.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

REVIEWED:

Maren Beery

DATE:

04/05/02

Rev. 6/00

**REPORT NARRATIVE
GENERAL CHEMISTRY**

KEMRON Login No: L0204001

METHOD

Analysis: See report for method reference.

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met

Duplicates: All acceptance criteria were met

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties with this sample group

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: dih

REVIEWED: _____

dih

DATE: _____

4/4/02

Rev. 6/00

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8260 AAB # : WG115463
Lab Name : Kemron Environmental Services Contract # : Steve Grant
Base/Command : NAS Pensacola FL Prime Contractor : EQIS

Field sample ID Lab Sample ID
027-EQBFS-01 L0204001-01

Comments:
RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.
Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:  Name: David L. Bumgarner
Date: 09-APR-02 Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5035 AAB # : WG115463
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-BOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS9 05-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 02-APR-02 11:27
 Concentration Units: ug/kg File ID: 9M19484

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1-Trichloroethane	0.503	5.0	0.503	.91	ND
1,1,2,2-Tetrachloroethane	0.503	5.0	0.503	.91	ND
1,1,2-Trichloroethane	0.503	5.0	0.503	.91	ND
1,1-Dichloroethane	1.01	5.0	1.01	.91	ND
1,1-Dichloroethene	0.503	5.0	0.503	.91	ND
1,2-Dichloroethane	0.503	5.0	0.503	.91	ND
1,2-Dichloroethene (Total)	0.553	5.5	0.553	1	ND
1,2-Dichloropropane	0.503	5.0	0.503	.91	ND
2-Butanone	2.52	10	2.52	.91	ND
2-Hexanone	2.52	10	2.52	.91	ND
4-Methyl-2-pentanone	2.52	10	2.52	.91	ND
Acetone	2.52	10	2.52	.91	ND
Benzene	0.503	5.0	0.503	.91	ND
Bromodichloromethane	0.503	5.0	0.503	.91	ND
Bromoform	0.503	5.0	0.503	.91	ND
Bromomethane	1.01	10	1.01	.91	ND
Carbon disulfide	0.503	5.0	0.503	.91	ND
Carbon tetrachloride	0.503	5.0	0.503	.91	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5035 AAB # : WG115463
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-BOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS9 05-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 02-APR-02 11:27
 Concentration Units: ug/kg File ID: 9M19484

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.503	5.0	0.503	.91	ND
Chloroethane	1.01	10	1.01	.91	ND
Chloroform	0.503	5.0	0.503	.91	ND
Chloromethane	2.01	10	2.01	.91	ND
Dibromochloromethane	0.503	5.0	0.503	.91	ND
Ethyl benzene	0.503	5.0	0.503	.91	ND
Methylene chloride	1.01	5.0	1.01	.91	ND
Styrene	0.503	5.0	0.503	.91	ND
Tetrachloroethene	0.503	5.0	0.503	.91	ND
Toluene	0.503	5.0	0.503	.91	ND
Trichloroethene	0.503	5.0	0.503	.91	ND
Vinyl chloride	1.01	10	1.01	.91	ND
Xylenes, Total	0.503	5.0	0.503	.91	ND
cis-1,3-Dichloropropene	0.503	5.0	0.503	.91	ND
trans-1,3-Dichloropropene	0.503	5.0	0.503	.91	ND

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	106	80 ~ 120	
Dibromofluoromethane	109	80 ~ 120	
Toluene-d8	102	81 ~ 117	
p-Bromofluorobenzene	97.5	74 ~ 121	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8260
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115698
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

TRIP BLANK

L0204001-02

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5030B AAB # : WG115698
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TRIP BLANK Lab Sample ID: L0204001-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 22-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 04-APR-02 22:12
 Concentration Units: ug/L File ID: 6M29956

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,1,1-Trichloroethane	0.250	5.0	0.250	1	ND
1,1,2,2-Tetrachloroethane	0.125	5.0	0.125	1	ND
1,1,2-Trichloroethane	0.250	5.0	0.250	1	ND
1,1-Dichloroethane	0.125	5.0	0.125	1	ND
1,1-Dichloroethene	0.500	5.0	0.500	1	ND
1,2-Dichloroethane	0.250	5.0	0.250	1	ND
1,2-Dichloroethene (Total)	0.250	5.0	0.250	1	ND
1,2-Dichloropropane	0.125	5.0	0.125	1	ND
2-Butanone	2.50	10	2.50	1	ND
2-Hexanone	2.50	10	2.50	1	ND
4-Methyl-2-pentanone	2.50	10	2.50	1	ND
Acetone	2.50	10	2.50	1	ND
Benzene	0.125	5.0	0.125	1	ND
Bromodichloromethane	0.250	5.0	0.250	1	ND
Bromoform	0.540	5.0	0.540	1	ND
Bromomethane	0.500	10	0.500	1	ND
Carbon disulfide	0.500	5.0	0.500	1	ND
Carbon tetrachloride	0.250	5.0	0.250	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8260 Preparatory Method: 8260B\5030B AAB # : WG115698
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: TRIP BLANK Lab Sample ID: L0204001-02 Matrix: Water
 % Solids: 0 Initial Calibration ID: HPMS6 22-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 04-APR-02 22:12
 Concentration Units: ug/L File ID: 6M29956

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Chlorobenzene	0.125	5.0	0.125	1	ND
Chloroethane	0.500	10	0.500	1	ND
Chloroform	0.125	5.0	0.125	1	ND
Chloromethane	0.250	10	0.250	1	ND
Dibromochloromethane	0.250	5.0	0.250	1	ND
Ethyl benzene	0.250	5.0	0.250	1	ND
Methylene chloride	0.250	5.0	0.250	1	ND
Styrene	0.125	5.0	0.125	1	ND
Tetrachloroethene	0.250	5.0	0.250	1	ND
Toluene	0.250	5.0	0.250	1	ND
Trichloroethene	0.250	5.0	0.250	1	ND
Vinyl chloride	0.250	10	0.250	1	ND
Xylenes, Total	0.500	5.0	0.500	1	ND
cis-1,3-Dichloropropene	0.250	5.0	0.250	1	ND
trans-1,3-Dichloropropene	0.500	5.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	105	80 - 120	
Dibromofluoromethane	102	86 - 118	
Toluene-d8	106	88 - 110	
p-Bromofluorobenzene	112	86 - 115	

Internal Std	Qualifier
Fluorobenzene	
Chlorobenzene-d5	
1,4-Dichlorobenzene-d4	

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8270
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WGL15546
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1,2,4-Trichlorobenzene	36.0	180	36.0	1	ND
1,2-Dichlorobenzene	36.4	180	36.4	1	ND
1,3-Dichlorobenzene	35.3	180	35.3	1	ND
1,4-Dichlorobenzene	37.4	180	37.4	1	ND
2,4,5-Trichlorophenol	51.8	910	51.8	1	ND
2,4,6-Trichlorophenol	46.9	180	46.9	1	ND
2,4-Dichlorophenol	44.9	180	44.9	1	ND
2,4-Dimethylphenol	41.1	180	41.1	1	ND
2,4-Dinitrophenol	117	910	117	1	ND
2,4-Dinitrotoluene	46.8	180	46.8	1	ND
2,6-Dinitrotoluene	44.5	180	44.5	1	ND
2-Chloronaphthalene	43.9	180	43.9	1	ND
2-Chlorophenol	37.3	180	37.3	1	ND
2-Methylnaphthalene	40.4	180	40.4	1	ND
2-Methylphenol	69.8	180	69.8	1	ND
2-Nitroaniline	51.0	910	51.0	1	ND
2-Nitrophenol	35.8	180	35.8	1	ND
3,3'-Dichlorobenzidine	169	360	169	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
3-,4-Methylphenol	45.6	180	45.6	1	ND
3-Nitroaniline	79.7	910	79.7	1	ND
4,6-Dinitro-2-methylphenol	39.9	910	39.9	1	ND
4-Bromophenyl-phenylether	41.8	180	41.8	1	ND
4-Chloro-3-methylphenol	50.6	180	50.6	1	ND
4-Chloroaniline	58.7	180	58.7	1	ND
4-Chlorophenyl-phenyl ether	48.6	180	48.6	1	ND
4-Nitroaniline	44.0	910	44.0	1	ND
4-Nitrophenol	62.7	910	62.7	1	ND
Acenaphthene	46.0	180	46.0	1	ND
Acenaphthylene	46.6	180	46.6	1	ND
Anthracene	38.6	180	38.6	1	ND
Benzo(a)anthracene	31.7	180	31.7	1	ND
Benzo(a)pyrene	28.6	180	28.6	1	ND
Benzo(b)fluoranthene	30.8	180	30.8	1	ND
Benzo(g,h,i)Perylene	40.6	180	40.6	1	ND
Benzo(k)fluoranthene	37.4	180	37.4	1	ND
Bis(2-Chloroethoxy)Methane	52.2	180	52.2	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Bis(2-Chloroethyl) ether	44.6	180	44.6	1	ND
Butylbenzylphthalate	34.1	180	34.1	1	ND
Carbazole	40.2	180	40.2	1	ND
Chrysene	44.7	180	44.7	1	ND
Di-N-Butylphthalate	34.5	180	34.5	1	ND
Di-n-octylphthalate	33.8	180	33.8	1	ND
Dibenzo(a,h)Anthracene	42.8	180	42.8	1	ND
Dibenzofuran	47.6	180	47.6	1	ND
Diethylphthalate	53.8	180	53.8	1	ND
Dimethylphthalate	50.3	180	50.3	1	ND
Fluoranthene	31.2	180	31.2	1	ND
Fluorene	48.7	180	48.7	1	ND
Hexachlorobenzene	44.1	180	44.1	1	ND
Hexachlorobutadiene	40.7	180	40.7	1	ND
Hexachlorocyclopentadiene	96.3	180	96.3	1	ND
Hexachloroethane	36.0	180	36.0	1	ND
Indeno(1,2,3-cd)pyrene	39.7	180	39.7	1	ND
Isophorone	47.9	180	47.9	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8270 Preparatory Method: 8270C\3550B AAB # : WG115546
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HPMS4 01-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:55
 Concentration Units: ug/kg File ID: 4M12774

Analyte	MDL	RL	Concentration	Dilution	Qualifier
N-Nitroso-di-n-propylamine	39.0	180	39.0	1	ND
N-Nitrosodiphenylamine	52.5	180	52.5	1	ND
Naphthalene	40.2	180	40.2	1	ND
Nitrobenzene	37.9	180	37.9	1	ND
Pentachlorophenol	22.4	910	22.4	1	ND
Phenanthrene	48.0	180	48.0	1	ND
Phenol	34.8	180	34.8	1	ND
Pyrene	33.6	180	33.6	1	ND
bis(2-Chloroisopropyl) ether	45.7	180	45.7	1	ND
bis(2-Ethylhexyl) phthalate	43.6	180	43.6	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4,6-Tribromophenol	44.3	19 - 122	
2-Fluorobiphenyl	52.3	30 - 115	
2-Fluorophenol	47.2	25 - 121	
Nitrobenzene-d5	50.4	23 - 120	
P-Terphenyl-d14	53.9	18 - 137	
Phenol-d5	50.1	24 - 113	

Internal Std	Qualifier
1,4-Dichlorobenzene-d4	
Naphthalene-d8	
Acenaphthene-d10	
Phenanthrene-d10	
Chrysene-d12	
Perylene-d12	

Comments:

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8015
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115499
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

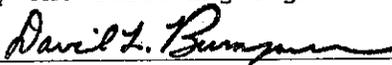
Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature:



Name: David L. Bumgarner

Date:

09-APR-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8015 Preparatory Method: 8015 MOD\3550B AAB # : WG115499
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP2 26-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 11:06
 Concentration Units: ug/kg File ID: 2G19690

Analyte	MDL	RL	Concentration	Dilution	Qualifier
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TRPH-Florida PRO	5520	11000	5520	1	ND
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Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	90.5	43 - 136	

Internal Std	Qualifier
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Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8081
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115454
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8081 Preparatory Method: 8081A\3550B AAB # : WG115454
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP9 27-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 01-APR-02 19:41
 Concentration Units: ug/kg File ID: 9G19330.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
4,4'-DDD	0.911	3.6	0.911	1	ND
4,4'-DDE	0.911	3.6	0.911	1	ND
4,4'-DDT	0.911	3.6	0.911	1	ND
Aldrin	0.442	1.8	0.442	1	ND
Dieldrin	0.911	3.6	0.911	1	ND
Endosulfan I	0.442	1.8	0.442	1	ND
Endosulfan II	0.911	3.6	0.911	1	ND
Endosulfan sulfate	0.911	3.6	0.911	1	ND
Endrin	0.911	3.6	0.911	1	ND
Endrin aldehyde	0.911	3.6	0.911	1	ND
Endrin ketone	0.911	3.6	0.911	1	ND
Heptachlor	0.442	1.8	0.442	1	ND
Heptachlor epoxide	0.442	1.8	0.442	1	ND
Methoxychlor	0.911	18	0.911	1	ND
Toxaphene	18.5	37	18.5	1	ND
alpha Chlordane	0.442	1.8	0.442	1	ND
alpha-BHC	0.442	1.8	0.442	1	ND
beta-BHC	0.442	1.8	0.442	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8081 Preparatory Method: 8081A\3550B AAB # : WG115454
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP9 27-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 01-APR-02 19:41
 Concentration Units: ug/kg File ID: 9G19330.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
delta-BHC	0.442	1.8	0.442	1	ND
gamma Chlordane	0.442	1.8	0.442	1	ND
gamma-BHC (Lindane)	0.442	1.8	0.442	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	86.3	29 - 133	
Decachlorobiphenyl	111	30 - 173	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8082
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115489
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 8082 Preparatory Method: 8082\3550B AAB # : WG115489
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP4 19-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 01-APR-02 Date Analyzed: 02-APR-02 14:26
 Concentration Units: ug/kg File ID: 4GF13838

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	9.11	18	9.11	1	ND
Aroclor-1221	9.11	18	9.11	1	ND
Aroclor-1232	9.11	18	9.11	1	ND
Aroclor-1242	9.11	18	9.11	1	ND
Aroclor-1248	9.11	18	9.11	1	ND
Aroclor-1254	9.11	18	9.11	1	ND
Aroclor-1260	9.11	18	9.11	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4,5,6-Tetrachloro-M-Xylene	104	29 - 133	
Decachlorobiphenyl	109	30 - 173	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8151
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115556
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature: *David L. Bumgarner*

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 8151 Preparatory Method: 8151A\METHOD AAB # : WQ115556
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: HP1 26-MAR-2002
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 14:18
 Concentration Units: ug/kg File ID: 1G4755.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
2,4,5-T	2.21	4.4	2.21	1	ND
2,4,5-TP (Silvex)	1.66	3.3	1.66	1	ND
2,4-D	22.1	44	22.1	1	ND
2,4-DB	22.1	44	22.1	1	ND
Dalapon	55.2	110	55.2	1	ND
Dicamba	2.21	4.4	2.21	1	ND
Dichloroprop	22.1	44	22.1	1	ND
Dinoseb	11.0	22	11.0	1	ND
MCPA	2210	4400	2210	1	ND
MCPP	2210	4400	2210	1	ND
Pentachlorophenol	2.21	4.4	2.21	1	ND

Surrogate	Recovery	Control Limits	Qualifier
2,4-Dichlorophenylacetic acid	86.9	51 - 146	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 6010 AAB # : WG115553
Lab Name : Kemron Environmental Services Contract # : Steve Grant
Base/Command : NAS Pensacola FL Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

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Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS

Analytical Method : 6010 Preparatory Method: 6010B\3050B AAB # : WG115553
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EORFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: IRIS-ICP 03-APR-2002
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 08:37
 Concentration Units: mg/kg File ID: IR.040302.083700

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Total	11.1	22	12600	1	
Barium, Total	0.111	0.55	8.96	1	
Beryllium, Total	0.0133	0.55	0.0133	1	ND
Cadmium, Total	0.0553	0.55	0.0553	1	ND
Calcium, Total	5.53	11	103	1	
Chromium, Total	0.133	1.1	9.50	1	
Cobalt, Total	0.133	1.1	0.133	1	ND
Copper, Total	0.553	1.1	3.70	1	
Iron, Total	1.11	2.2	6000	1	
Magnesium, Total	13.3	28	150	1	
Manganese, Total	0.111	0.55	37.8	1	
Nickel, Total	0.553	2.2	2.40	1	
Potassium, Total	27.7	55	112	1	
Silver, Total	0.277	2.2	0.277	1	ND
Sodium, Total	5.53	28	5.53	1	ND
Vanadium, Total	0.277	0.55	13.8	1	
Zinc, Total	0.553	1.1	5.02	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 6020A
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115563
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature: *David L. Bumgarner*

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 6020A Preparatory Method: 3051 AAB # : WG115563
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EQBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: ELAN-ICP 03-APR-02
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 03-APR-02 09:03
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Total	0.111	0.22	0.111	10	ND
Arsenic, Total	0.277	0.55	1.06	10	
Lead, Total	0.277	0.55	2.98	10	
Selenium, Total	0.111	0.22	0.111	10	ND
Thallium, Total	0.0553	0.11	0.0553	10	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 7471A
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115530
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

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Suffix Matches parent to QC

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Signature: 

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 7471A Preparatory Method: METHOD AAB # : WG115530
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: PS202 02-APR-02
 Date Received: 30-MAR-02 Date Extracted: 02-APR-02 Date Analyzed: 02-APR-02 16:22
 Concentration Units: mg/kg File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Mercury, Total	0.0199	0.28	0.0199	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 221690
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115438
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

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Signature: *David L. Bumgarner*

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA SHEET 2
RESULTS**

Analytical Method : 221690 Preparatory Method: D2216-90 AAB # : WG115438
 Lab Name : Kemron Environmental Services Contract#: Steve Grant
 Field Sample ID: 027-EOBFS-01 Lab Sample ID: L0204001-01 Matrix: Soil
 % Solids: 90.4 Initial Calibration ID: OVEN 01-APR-02
 Date Received: 30-MAR-02 Date Extracted: _____ Date Analyzed: 01-APR-02 14:00
 Concentration Units: weight % File ID: _____

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Percent Solids	1.00	1.0	90.0	1	

Comments:

 All results, MDLs, and RLs have been corrected to dry weight, where applicable.

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KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 9045
Lab Name : Kemron Environmental Services
Base/Command : NAS Pensacola FL

AAB # : WG115446
Contract # : Steve Grant
Prime Contractor : EQIS

Field sample ID

Lab Sample ID

027-EQBFS-01

L0204001-01

Comments:

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Suffix Matches parent to QC

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Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-APR-02

Title: Laboratory Director

1.2 Attachments

KEMRON ANALYST LIST

Ohio Valley Laboratory

04/01/2002

ADH - ANGELA D. HURST	JMT - JOY M. THOMAS
AJF - AMANDA J. FICKIESEN	JWR - JOHN W. RICHARDS
ALT - ANN L. THAYER	JWS - JACK W. SHEAVES
AMT - ANDREA M. TUCKER	JYH - JI Y. HU
ARS - ANGELINA R. SCOTT	KBS - KASEY B. SNYDER
BRG - BRENDA R. GREGORY	KHR - KIM H. RHODES
CAF - CHERYL A. FLOWERS	KRA - KATHY R. ALBERTSON
CAK - CHERYL A. KOELSCH	LKN - LINDA K. NEDEFF
CBN - CHARLES B. NOLL	LRR - LUCYND A. ROBERTS
CEB - CHAD E. BARNES	LSA - LUCINDA S. ARNOLD
CLC - CHRYS L. CRAWFORD	LSB - LESLIE S. BUCINA
CLK - CARL L. KING	MDA - MICHAEL D. ALBERTSON
CLW - CHARISSA L. WINTERS	MDC - MICHAEL D. COCHRAN
CMS - CRYSTAL M. STEVENS	MEF - MIKE E. FLANAGAN
CRC - CARLA R. COCHRAN	MES - MARY E. SCHILLING
CSH - CHRIS S. HILL	MKZ - MARILYN K. ZUMBRO
DAD - DAVE A. DAULEY	MLR - MARY L. ROCHOTTE
DAH - DON A. HUNTER	MLS - MICHAEL L. SCHIMMEL
DAM - DAN A. MUSGRAVE	MMB - MAREN M. BEERY
DAS - DALLAS A. SULLIVAN	MSW - MATT S. WILSON
DAT - DEBBIE A. TORNES	NJB - NATALIE J. BOOTH
DEL - DON E. LIGHTFRITZ	OGT - OKEY G. TUCKER
DEV - DAVID E. VANDENBERG	RDC - REBECCA D. CUTLIP
DGB - DOUGLAS G. BUTCHER	REF - RON E. FERTILE
DIH - DEANNA I. HESSON	REK - ROBERT E. KYER
DLA - DENISE L. ADAMS	RJW - RHONDA J. WITTEKIND
DLB - DAVID L. BUMGARNER	RLW - RON L. WATSON
DLN - DEANNA L. NORTON	RSS - REGINA S. SIMMONS
DLP - DOROTHY L. PAYNE	RWC - ROD W. CAMPBELL
DLR - DIANNA L. RAUCH	SJK - SINDY J. KINNEY
DP - DEANNA L. PIERSON	SLP - SHERI L. PFALZGRAF
DRB - DOUG R. BARNETT	SLT - STEPHANIE L. TEPE
DSM - DAVID S. MOSSOR	SMW - SHAUNA M. WELCH
DST - DENNIS S. TEPE	SMW - SHARON M. WASHBURN
ECL - ERIC C. LAWSON	SPL - STEVE P. LEARN
GSG - GALEN S. GEORGE	TJH - TIM J. HOEFLICH
HV - HEMA VILASAGAR	TMM - TAMMY M. MORRIS
JAL - JOHN A. LENT	VC - VICKI COLLIER
JJG - JAKE J. GREUEY	VKL - VICKY K. LAUER
JKW - JANE K. WARDEN	
JLS - JANICE L. SCHIMMEL	
JMM - JARROD M. MARTIN	

KEMRON Environmental Services, Inc
List of Valid Qualifiers
December 15, 2000

Standard Qualifiers

These are KEMRON's Standard Report Qualifiers

A	See the report narrative	NR	Analyte is not required to be analyzed
B	Present in the method blank	NS	Not spiked
C	Confirmed by GC/MS	P	Concentration >40% difference between The two GC columns
CG	Confluent growth		
D	The analyte was quantified at a secondary dilution factor	QNS	Quantity not sufficient to perform analysis
DL	Surrogate or spike was diluted out	R	Analyte exceeds regulatory limit
E	Estimated concentration due to sample matrix interference	RA	Re analysis confirms reported results
FL	Free liquid	RE	Re analysis confirms sample matrix Interference
I	Semiquantitative result, out of instrument calibration range	S	Analyzed by method of standard addition
J	Present below nominal reporting limit	SMI	Sample matrix interference on surrogate
L	Sample reporting limits elevated due to matrix interference	SP	Reported results are for spike compounds only
M	Duplicate injection precision not met	TNTC	Too numerous to count
N	Tentatively Identified Compound (TIC)	U	Analyzed for but not detected
NA	Not applicable	W	Post-digestion spike for furnace AA out Of control limits
ND	Not detected at or above the reporting limit (RL)	Z	Can not be resolved from isomer.***
NF	Not found	+	Correlation coefficient for the MSA is less Than 0.995
NFL	No free liquid	<	Less than
NI	Non-ignitable	>	Greater than
		*	Surrogate or spike compound out of range

***** Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semiquantative screens only
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene
3. N-nitrosodiphenylamine cannot be separated from diphenylamine
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds
5. m-Xylene and p-Xylene are unresolvable compounds
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent

AFCEE Qualifiers

These are KEMRON's AFCEE Report Qualifiers

J	The analyte was positively identified, the quantitation is an estimation
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL
F	The analyte was positively identified but the associated numerical value is below the RL
R	The data is unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
B	The analyte was found in an associated blank, as well as in the sample
M	The matrix effect was present
S	To be applied to all field screening data
T	Tentatively identified compound (using GC/MS)

CHAIN-OF-CUSTODY RECORD

157338-020329-02

1 PROJECT NAME: NAS Pensacola		2 PROJECT NUMBER: CTO-0027		3 LAB NAME AND CONTACT: KEMRON Stephanie Tepe		11 FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company) Danielle Waske EQ Industrial Services		14 RECIPIENT 1 (Address, Tel No., and Fax No.): 470 Great Seal Parkway, Atl., GA. 30336 (404) 472-0410 P 472-0704 F	
3 PROJECT PHASE/SITE/TASK:		6 CTO OR DO NUMBER:		9 LAB PO NUMBER:		12 FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company)		13 RECIPIENT 2 (Address, Tel No., and Fax No.):	
4 PROJECT CONTACT: Steve Grant		7 PROJECT TEL NO AND FAX NO:		10 LAB TEL NO AND FAX NO: (740) 373-4071 P (740) 373-4835 F		15 FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)		16 RECIPIENT 3 (Address, Tel No., and Fax No.):	

17 ITEM	18 SAMPLE IDENTIFIER	19 SAMPLE DESCRIPTION/LOCATION	20 MATRIX (see codes on SOP)	21 DATE COLLECTED	22 TIME COLLECTED	23 DATA PKG LEVEL (see codes on SOP)	24 TAT (calendar days)	25 ANALYSES REQUIRED (include Method Numbers)										26 SAMPLE TYPE (see codes on SOP)	27 COMMENTS/ SCREENING READINGS	28 LAB ID (for lab's use)
								TCL 8260B	TCL 8270X	TCL 8280A	TCL 8280F	8151A	8082	PCBs	FL-PIG TALK	60100 7471A	TAL Metals				PH 9045
1	027-EQ BFS-01	Backfill Source	S	3/29/02	0950	III	7	X	X	X	X	X	X	X	X	X				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

29 SAMPLER(S) AND COMPANY: (please print) Craig Smith EnvSale			30 COURIER AND SHIPPING NUMBER: Exp Ex # 7903-6262-6240			31 SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)		
32 RELINQUISHED BY		DATE	TIME	33 RECEIVED BY		DATE	TIME	
Printed Name and Signature: Craig Smith		3/29/02	1130	Printed Name and Signature:				
Printed Name and Signature:				Printed Name and Signature:				
Printed Name and Signature:				Printed Name and Signature: Kene K. Warden		4/1/02	0800	

Samples locked in walk-in over weekend.

KEMRON Internal Laboratory Chain of Custody

Work Order: <u>LD20400</u>		Client: <u>EQ IS</u>		# of Samples: <u>2</u>		Due Date: <u>Apr 5</u>		Page: _____		
Sample #	Analysis	Reason	Removed By ADT	Removed From	Moved To	Reliq. by	Ret'd By ADT	Ret'd To	Rec'd By	Reason
D2	BARWT ENV	anal	CEB 4-1-02 @0910	VI	ORG-1	JKW				
O1A	PESTRB/PRO	EXT	4/1/02 CEB 01040	WALKIN	ENV	WJ	4/1/02 CEB P 1250	WALKIN	JKW	HOLD
O1A	Met	dig	STR 04-01-02 @1105	WALKIN	met	JKW	STR 04-02-02 @1020	WALKIN	JKW	HOLD
O1A	pH	anal	DLN 4/1/02 @1405	WALKIN	WET	JKW	4/1/02 CEB @ 1435	WALKIN	JKW	HOLD
O1A	HERB	EXT	4/2/02 CEB 0650	WALKIN	ENV	CEB	4/2/02 CEB P0838	WALKIN	DLG	HOLD
O1	base	ANV	meq 4/2/02 1000	F-1 V-1 + 2.02	ORG-1	vc				
report sent 4-10-02 LL.										

CRF#4

Sample Receipt Form #2

Client: EQIS

Project: 701-Nas Pensacola

Date Received: 3-30-02

Cooler temperature > than 6 degrees Celcius
Reason _____

Samples received not on chain of custody
TRIP blank? log per DAT

Samples on chain of custody not received

Information on ^{work order} ~~sample containers~~ different from chain of custody
There is no ph on WORK ORDER. It's on chain, log per DAT

Sample containers received broken, leaking or not sealed (List sample ID)

pH out (List sample ID & which container)

Insufficient sample volume

Air bubbles present in Voa vials (List sample ID)

Hold time expired (List sample ID)

TSR:

Was client notified regarding information: YES

NO

Name of person contacted: _____

Company: EQIS

TSR: D. TORRES

Date: 4/1/02

Attach: Phone Logs, e-mails, faxes, etc.

COOLER RECEIPT FORM

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers 1

PROJECT: NAS Pensacola LIMS# L0204001

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 3/30/02 C-of-C Number: 157338-020329-02
by (print) Brenda Gregory (sign) Brenda Gregory

- 1. Did cooler come with a shipping slip (air bill, etc.)? YES NO
If YES, enter carrier name & air bill number here: Fed Ex - 7903 6262 6240
- 2. Were custody seals on outside of cooler? YES NO
How many & where? 2 front/back seal date: 3/29/02 seal name: Custody Seal
- 3. Were custody seals unbroken and intact at the data and time of arrival? YES NO
- 4. Did you screen samples for radioactivity using the Geiger Counter? YES NO
- 5. Were custody papers sealed in a plastic bag & taped inside to the lid? YES NO
- 6. Were custody papers filled out properly (ink, signed, etc.)? YES NO
- 7. Did you sign custody papers in the appropriate place? YES NO
- 8. Was project identifiable from custody papers? If yes, enter project name at the top of this form YES NO
- 9. If required, was enough ice used? Type of ice: Wet Temp 1 °C YES NO
- 10. Have designated person initial here to acknowledge receipt of cooler: Big (date) 3/30/02

B. **LOG-IN PHASE:** Date samples were logged-in: 4-1-02
by (print) Jane K. Warden (sign) Jane K. Warden

- 11. Describe type of packing in cooler: bubble wrap
- 12. Were all bottles sealed in separate plastic bags? YES NO
- 13. Did all bottles arrive unbroken & were labels in good condition? YES NO
- 14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES NO
- 15. Did all bottle labels agree with custody papers? Trips not on chain YES NO
- 16. Were correct containers used for the tests indicated? YES NO
- 17. Were correct preservatives added to samples? YES NO
- 18. Was a sufficient amount of sample sent for tests indicated? YES NO
- 19. Were bubbles absent in volatile samples? If NO, list by Sample # YES NO
- 20. Was the project manager called and status discussed? If YES, give details on the back of this form YES NO
- 21. Who was called? _____ By whom? _____ (date) _____

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

**REPORT NARRATIVE
GC/MS VOLATILE ORGANICS**

KEMRON Login No: L0204001

METHOD

Preparation: SW- 846 5030B/5035
Analysis: SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Per client, Encore sampling containers stored in freezer in lieu of sodium bisulfate preservation. The Encore sampling container for fraction 01 was received in the laboratory not sealed in strict accordance with the manufacturer's instructions.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied or if the mean %RSD for all analytes was less than 15% the average response factors were used. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Samples: The soil LCS analyzed 04/02/02 on HPMS-9 yielded a % recovery for bromomethane above the upper advisory limit. The water LCS analyzed 04/04/02 on HPMS-6 yielded a % recovery for 2-hexanone below the lower advisory limit. All other acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG).

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: MES REVIEWED: DATE: 4/6/02

VOLATILES GC/MS DATA

Login Number: L0204001

A. QC Summary

- na Batch QC Summary Forms
- ✓ Internal Standard/Surrogate Summary Forms

B. Sample Data

- ✓ Target Compound List Results - See Summary Report
- na Tentatively Identified Compounds (TICs) - See Summary Report (c) (if requested)
- ✓ Reconstructed total ion chromatograph (RIC) and quantitation report for each sample
- ✓ Raw spectra and background subtracted mass spectra of target compounds identified
- na Mass spectra of all reported TICs with three best library matches (if requested)

C. Standards Data

- ✓ Initial calibration data summary form
- ✓ Chromatograms and quantitation reports for initial calibration standards
- ✓ Continuing calibration data summary form
- ✓ Chromatogram and quantitation report for continuing calibration standard

D. Raw QC Data

- ✓ GC/MS Instrument Performance Check (BFB)
- ✓ Blank chromatogram and quantitation report
- ✓ Laboratory Control Sample chromatogram and quantitation report
- na Matrix Spike/Matrix Spike Duplicate chromatograms and quantitation reports (if not reported as samples)
- ✓ Instrument runlogs
- ✓ na 5035 preservation logs
110102

Checked By: CWenters

Date: 04/05/02

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2.1.1.1 QC Summary

METHOD BLANK SUMMARY

Login Number: L0204001
Blank File ID: 9M19482
Date Analyzed: 04/02/02
Time Analyzed: 10:18
Analyst: MES

Work Group: WG115463
Blank Sample ID: WG115463-01
Instrument ID: HPMS9
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115463-02	9M19481	04/02/02 09:43	
027-EQBFS-01	L0204001-01	9M19484	04/02/02 11:27	

**KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT**

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115463-01
 Instrument ID: HPMS9 Run Time: 10:18 Method: 8260B
 File ID: 9M19482 Analyst: MES Matrix: Solid
 Workgroup (AAB#): WG115463 Units: ug/kg
 Contract #: _____ Cal ID: HPMS9-05-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Chloromethane	2.00	10.0	2.00	1.00	ND
Vinyl Chloride	1.00	10.0	1.00	1.00	ND
Bromomethane	1.00	10.0	1.00	1.00	ND
Chloroethane	1.00	10.0	1.00	1.00	ND
Acetone	2.50	10.0	2.50	1.00	ND
1,1-Dichloroethane	0.500	5.00	0.500	1.00	ND
Methylene Chloride	1.00	5.00	1.00	1.00	ND
Carbon Disulfide	0.500	5.00	0.500	1.00	ND
1,1-Dichloroethane	1.00	5.00	1.00	1.00	ND
2-Butanone	2.50	10.0	2.50	1.00	ND
1,2-Dichloroethane	0.500	5.00	0.500	1.00	ND
Chloroform	0.500	5.00	0.500	1.00	ND
1,1,1-Trichloroethane	0.500	5.00	0.500	1.00	ND
Carbon Tetrachloride	0.500	5.00	0.500	1.00	ND
1,2-Dichloroethane	0.500	5.00	0.500	1.00	ND
Benzene	0.500	5.00	0.500	1.00	ND
Trichloroethene	0.500	5.00	0.500	1.00	ND
1,2-Dichloropropane	0.500	5.00	0.500	1.00	ND
Bromodichloromethane	0.500	5.00	0.500	1.00	ND
4-Methyl-2-Pentanone	2.50	10.0	2.50	1.00	ND
cis-1,3-Dichloropropene	0.500	5.00	0.500	1.00	ND
Toluene	0.500	5.00	0.500	1.00	ND
trans-1,3-Dichloropropene	0.500	5.00	0.500	1.00	ND
1,1,2-Trichloroethane	0.500	5.00	0.500	1.00	ND
2-Hexanone	2.50	10.0	2.50	1.00	ND
Tetrachloroethene	0.500	5.00	0.500	1.00	ND
Dibromochloromethane	0.500	5.00	0.500	1.00	ND
Chlorobenzene	0.500	5.00	0.500	1.00	ND
Ethylbenzene	0.500	5.00	0.500	1.00	ND
Xylenes	0.500	5.00	0.500	1.00	ND
Styrene	0.500	5.00	0.500	1.00	ND
Bromoform	0.500	5.00	0.500	1.00	ND
1,1,2,2-Tetrachloroethane	0.500	5.00	0.500	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	105	80 - 120	PASS
1,2-Dichloroethane-d4	98.1	80 - 120	PASS
Toluene-d8	102	81 - 117	PASS
p-Bromofluorobenzene	96.1	74 - 121	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

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**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE**

Login Number: L0204001
Instrument ID: HPMS9
File ID: 9M19481
Workgroup (AAB#): WG115463
Contract #:

Run Date: 04/02/2002
Run Time: 09:43
Analyst: MES

Sample ID: WG115463-02
Method: 8260B
Matrix: Solid
Units: ug/kg
Cal ID: HPMS9-05-MAR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloromethane	20	16.4	82.1	30 - 131	
Vinyl Chloride	20	18.7	93.7	25 - 130	
Bromomethane	20	29.3	146	37 - 143	*
Chloroethane	20	18.9	94.6	52 - 135	
Acetone	20	17.6	88.1	20 - 176	
1,1-Dichloroethene	20	23.6	118	61 - 133	
Methylene Chloride	20	19.1	95.6	74 - 128	
Carbon Disulfide	20	20.2	101	39 - 139	
1,1-Dichloroethane	20	21.6	108	73 - 130	
2-Butanone	20	18.9	94.4	37 - 172	
1,2-Dichloroethene	40	46.5	116	74 - 127	
Chloroform	20	21.3	107	74 - 129	
1,1,1-Trichloroethane	20	23.4	117	68 - 133	
Carbon Tetrachloride	20	24.0	120	59 - 136	
1,2-Dichloroethane	20	19.7	98.3	63 - 133	
Benzene	20	21.3	106	70 - 139	
Trichloroethene	20	24.7	124	72 - 126	
1,2-Dichloropropane	20	20.6	103	70 - 130	
Bromodichloromethane	20	21.9	110	72 - 137	
4-Methyl-2-Pentanone	20	19.1	95.5	47 - 146	
cis-1,3-Dichloropropene	20	23.2	116	70 - 142	
Toluene	20	21.0	105	77 - 126	
trans-1,3-Dichloropropene	20	21.8	109	65 - 139	
1,1,2-Trichloroethane	20	20.0	100	67 - 129	
2-Hexanone	20	15.0	75.0	39 - 139	
Tetrachloroethene	20	22.4	112	72 - 130	
Dibromochloromethane	20	21.0	105	59 - 136	
Chlorobenzene	20	21.0	105	70 - 130	
Ethylbenzene	20	22.2	111	70 - 130	
Xylenes	60	65.0	108	70 - 130	
Styrene	20	21.6	108	74 - 130	
Bromoform	20	21.7	108	49 - 136	
1,1,2,2-Tetrachloroethane	20	19.8	99.1	62 - 132	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	107	80 - 120	PASS
1,2-Dichloroethane-d4	97.7	80 - 120	PASS
Toluene-d8	101	81 - 117	PASS
p-Bromofluorobenzene	94.8	74 - 121	PASS

* Analyte outside control limits

NS Analyte not spiked

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KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B

AAB#: WG115463

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	14	4.07	02-APR-02	14	4.07	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYTICAL HOLD TIME

SURROGATE STANDARDS

Login Number: L0204001
 Instrument Id: HPMS9
 Workgroup (AAB#): WG115463

Method: 8260
 Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4
L0204001-01	0.910		106	109	97.5	102
WG115463-01	1.00		98.1	105	96.1	102
WG115463-02	1.00		97.7	107	94.8	101

Surrogates	Surrogate Limits
1 - 1,2-Dichloroethane-d4	80 - 120
2 - Dibromofluoromethane	80 - 120
3 - p-Bromofluorobenzene	74 - 121
4 - Toluene-d8	81 - 117

Underline = Result out of surrogate limits
 DL = surrogate diluted out

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK
BFB

Login Number: L0204001 _____ Tune ID: WG113899-01 _____
 Instrument: HPMS9 _____ Run Date: 03/05/2002 _____
 Analyst: MES _____ Run Time: 08:29 _____
 Workgroup: WG113899 _____ File ID: 9M18980 _____
 Cal ID: HPMS9-05-MAR-02 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.6	11451	PASS
75.0	95.0	30.0	60.0	58.2	26072	PASS
95.0	95.0	100	100	100	44816	PASS
96.0	95.0	5.00	9.00	6.86	3076	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	74.5	33408	PASS
175	174	5.00	9.00	7.33	2448	PASS
176	174	95.0	101	99.0	33080	PASS
177	176	5.00	9.00	6.18	2043	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag
WG113899-02	STD-S	01
WG113899-04	STD-S	01
WG113899-05	STD-S	01
WG113899-06	STD-S	01
WG113899-08	STD-S	01
WG113899-09	STD-S	01
WG113899-03	STD-S	01

* Sample past 12 hour tune limit

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0204001 _____ Tune ID: WG114002-01 _____
 Instrument: HPMS9 _____ Run Date: 03/06/2002 _____
 Analyst: MES _____ Run Time: 09:04 _____
 Workgroup: WG114002 _____ File ID: 9M18998 _____
 Cal ID: HPMS9-06-MAR-02 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.9	7505	PASS
75.0	95.0	30.0	60.0	52.1	16401	PASS
95.0	95.0	100	100	100	31456	PASS
96.0	95.0	5.00	9.00	7.19	2262	PASS
173	174	0	2.00	0.496	119	PASS
174	95.0	50.0	100	76.2	23981	PASS
175	174	5.00	9.00	7.69	1844	PASS
176	174	95.0	101	99.8	23933	PASS
177	176	5.00	9.00	6.97	1669	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag
WG113899-10	SSCV-S	03

* Sample past 12 hour tune limit

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK
BFB

Login Number: L0204001 _____
Instrument: HPMS9 _____
Analyst: MES _____
Workgroup: WG115462 _____

Tune ID: WG115462-01 _____
Run Date: 04/02/2002 _____
Run Time: 08:00 _____
File ID: 9M19478 _____
Cal ID: HPMS9 - 05-MAR-2002 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	21.9	11891	PASS
75.0	95.0	30.0	60.0	52.5	28528	PASS
95.0	95.0	100	100	100	54336	PASS
96.0	95.0	5.00	9.00	7.22	3923	PASS
173	174	0	2.00	0.918	409	PASS
174	95.0	50.0	100	82.0	44560	PASS
175	174	5.00	9.00	7.83	3488	PASS
176	174	95.0	101	101	44832	PASS
177	176	5.00	9.00	6.94	3113	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Q
L0204001-01	027-EQBFS-01		
WG115463-01	BLANK		
WG115463-02	LCS		

* Sample past 12 hour tune limit

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Summary			
		AVG RF	% RSD	R ²	Q
ETHYLBENZENE	CCC	.478	6.73		
TOLUENE	CCC	1.29	3.92		
1,2-DICHLOROPROPANE	CCC	.224	6.09		
CHLOROFORM	CCC	.475	5.85		
1,1-DICHLOROETHENE	CCC	.181	7.99		
VINYL CHLORIDE	CCC	.245	14.50		
1,1,2,2-TETRACHLOROETHANE	SPCC	.749	17.30	.997	
BROMOFORM	SPCC	.243	10.40		
CHLOROBENZENE	SPCC	.897	10.70		
1,1-DICHLOROETHANE	SPCC	.383	40.60	1	
CHLOROMETHANE	SPCC	.282	8.66		
1,2,3-TRICHLOROBENZENE		.966	14.80		
NAPHTHALENE		2.1	20.50	.999	
HEXACHLOROBUTADIENE		.662	8.72		
1,2,4-TRICHLOROBENZENE		1.01	12.80		
1,2-DIBROMO-3-CHLOROPROPANE		.142	15.10	.998	
1,2-DICHLOROBENZENE		1.33	13.60		
N-BUTYLBENZENE		2.65	6.70		
1,4-DICHLOROBENZENE		1.46	14.40		
1,3-DICHLOROBENZENE		1.39	13.20		
P-ISOPROPYLTOLUENE		2.65	6.89		
SEC-BUTYLBENZENE		3.07	11.50		
1,2,4-TRIMETHYLBENZENE		2.59	12.50		
TERT-BUTYLBENZENE		2.33	12.90		
A-METHYLSTYRENE		1.17	13.50		
4-CHLOROTOLUENE		2.29	9.98		
2-CHLOROTOLUENE		2.2	11.70		
1,3,5-TRIMETHYLBENZENE		2.36	13.30		
BROMOBENZENE		.673	12.30		
N-PROPYLBENZENE		3.49	11.10		
TRANS-1,4-DICHLORO-2-BUTENE		.207	12.40		
1,2,3-TRICHLOROPROPANE		.235	13.60		
P-BROMOFLUOROBENZENE		.807	4.31		
ISOPROPYLBENZENE		1.59	6.20		
STYRENE		.963	12.90		
O-XYLENE		.549	9.30		
M-, P-XYLENE		.62	7.84		
1,1,1,2-TETRACHLOROETHANE		.32	5.68		
1-CHLOROHEXANE		.404	14.00		
1,2-DIBROMOETHANE		.282	8.62		
DIBROMOCHLOROMETHANE		.325	8.68		
TETRACHLOROETHENE		.279	5.92		
1,3-DICHLOROPROPANE		.507	9.78		
2-HEXANONE		.287	48.30	.993	Q

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	AVG RF	% RSD	R ²	Q
1,1,2-TRICHLOROETHANE	.284	11.90		
TRANS-1,3-DICHLOROPROPENE	.458	12.40		
ETHYL METHACRYLATE	.367	11.70		
TOLUENE-D8	1.04	1.96		
DIMETHYL DISULFIDE	.173	22.10	1	
CIS-1,3-DICHLOROPROPENE	.317	14.40		
4-METHYL-2-PENTANONE	.0933	44.00	.995	
2-CHLOROETHYL VINYL ETHER	.0537	57.10	.993	Q
DIBROMOMETHANE	.136	5.32		
BROMODICHLOROMETHANE	.341	4.64		
TRICHLOROETHENE	.207	6.79		
BENZENE	.9	5.00		
1,2-DICHLOROETHANE	.428	7.36		
1,2-DICHLOROETHANE-D4	.33	6.84		
CARBON TETRACHLORIDE	.363	3.57		
1,1-DICHLOROPROPENE	.334	6.86		
CYCLOHEXANE	.403	6.87		
1,1,1-TRICHLOROETHANE	.421	3.96		
DIBROMOFLUOROMETHANE	.214	3.42		
BROMOCHLOROMETHANE	.0935	5.47		
CIS-1,2-DICHLOROETHENE	.214	6.30		
2,2-DICHLOROPROPANE	.351	8.97		
2-BUTANONE	.118	27.30	.997	
VINYL ACETATE	.48	21.50	1	
N-HEXANE	.356	3.50		
TRANS-1,2-DICHLOROETHENE	.207	6.33		
METHYL TERT-BUTYL ETHER	.544	8.70		
ACRYLONITRILE	.0854	13.50		
CARBON DISULFIDE	.701	8.23		
METHYLENE CHLORIDE	.244	5.01		
IODOMETHANE	.0865	51.80	.998	
DIMETHYL SULFIDE	.21	8.48		
ACETONE	.12	49.90	.999	
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	.258	8.50		
ACROLEIN	.0284	15.20	1	
ISOPRENE	.279	4.89		
TRICHLOROFLUOROMETHANE	.554	6.69		
CHLOROETHANE	.187	7.67		
BROMOMETHANE	.136	5.49		
DICHLORODIFLUOROMETHANE	.438	8.58		

= CC
 * = SPCC

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-02	9M18984	1
		Conc	Response	RF
ETHYLBENZENE	CCC	1.0	4880	.4257
TOLUENE	CCC	1.0	14591	1.273
1,2-DICHLOROPROPANE	CCC	1.0	3342	.2013
CHLOROFORM	CCC	1.0	8161	.4916
1,1-DICHLOROETHENE	CCC	1.0	2502	.1507
VINYL CHLORIDE	CCC	1.0	4488	.2703
1,1,2,2-TETRACHLOROETHANE	SPCC			
BROMOFORM	SPCC			
CHLOROBENZENE	SPCC	1.0	10402	.9074
1,1-DICHLOROETHANE	SPCC	1.0	0	0
CHLOROMETHANE	SPCC			
1,2,3-TRICHLOROBENZENE				
NAPHTHALENE		1.0	9484	1.531
HEXACHLOROBUTADIENE		1.0	3686	.5951
1,2,4-TRICHLOROBENZENE				
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DICHLOROBENZENE				
N-BUTYLBENZENE				
1,4-DICHLOROBENZENE		1.0	9153	1.478
1,3-DICHLOROBENZENE		1.0	7889	1.274
P-ISOPROPYLTOLUENE				
SEC-BUTYLBENZENE		1.0	14367	2.32
1,2,4-TRIMETHYLBENZENE		1.0	11967	1.932
TERT-BUTYLBENZENE		1.0	10403	1.68
A-METHYLSTYRENE				
4-CHLOROTOLUENE		1.0	11787	1.903
2-CHLOROTOLUENE		1.0	12017	1.94
1,3,5-TRIMETHYLBENZENE		1.0	10306	1.664
BROMOBENZENE		1.0	3793	.6124
N-PROPYLBENZENE		1.0	16341	2.638
TRANS-1,4-DICHLORO-2-BUTENE				
1,2,3-TRICHLOROPROPANE				
P-BROMOFLUOROBENZENE				
ISOPROPYLBENZENE				
STYRENE		1.0	7808	.6811
O-XYLENE		1.0	5149	.4492
M-, P-XYLENE		2.0	12164	.5305
1,1,1,2-TETRACHLOROETHANE		1.0	3381	.2949
1-CHLOROHEXANE		1.0	3653	.3187
1,2-DIBROMOETHANE		1.0	2950	.2573
DIBROMOCHLOROMETHANE		1.0	3137	.2736
TETRACHLOROETHENE		1.0	3206	.2797
1,3-DICHLOROPROPANE		1.0	5214	.4548

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INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MBS
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
2-HEXANONE			
1,1,2-TRICHLOROETHANE	1.0	3137	.2736
TRANS-1,3-DICHLOROPROPENE	1.0	3853	.3361
ETHYL METHACRYLATE			
TOLUENE-D8			
DIMETHYL DISULFIDE			
CIS-1,3-DICHLOROPROPENE	1.0	3846	.2317
4-METHYL-2-PENTANONE			
2-CHLOROETHYL VINYL ETHER			
DIBROMOMETHANE	1.0	1988	.1197
BROMODICHLOROMETHANE	1.0	5212	.3139
TRICHLOROETHENE	1.0	3208	.1932
BENZENE	1.0	15164	.9134
1,2-DICHLOROETHANE	1.0	7757	.4672
1,2-DICHLOROETHANE-D4			
CARBON TETRACHLORIDE	1.0	6197	.3733
1,1-DICHLOROPROPENE	1.0	4877	.2938
CYCLOHEXANE			
1,1,1-TRICHLOROETHANE	1.0	6490	.3909
DIBROMOFLUOROMETHANE			
BROMOCHLOROMETHANE	1.0	1528	.092
CIS-1,2-DICHLOROETHENE	1.0	3160	.1903
2,2-DICHLOROPROPANE			
2-BUTANONE			
VINYL ACETATE			
N-HEXANE			
TRANS-1,2-DICHLOROETHENE	1.0	3118	.1878
METHYL TERT-BUTYL ETHER			
ACRYLONITRILE			
CARBON DISULFIDE	1.0	13569	.8173
METHYLENE CHLORIDE	1.0	4249	.2559
IODOMETHANE			
DIMETHYL SULFIDE			
ACETONE			
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE			
ACROLEIN			
ISOPRENE			
TRICHLOROFLUOROMETHANE	1.0	9760	.5879
CHLOROETHANE	1.0	3080	.1855
BROMOMETHANE			
DICHLORODIFLUOROMETHANE	1.0	7718	.4649

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-03	9M18995	2
		Conc	Response	RF
ETHYLBENZENE	CCC	2.0	14669	.5383
TOLUENE	CCC	2.0	37954	1.393
1,2-DICHLOROPROPANE	CCC	2.0	9827	.2482
CHLOROFORM	CCC	2.0	20911	.5281
1,1-DICHLOROETHENE	CCC	2.0	7313	.1847
VINYL CHLORIDE	CCC	2.0	11253	.2842
1,1,2,2-TETRACHLOROETHANE	SPCC	2.0	14480	.9518
BROMOFORM	SPCC	2.0	7040	.2583
CHLOROBENZENE	SPCC	2.0	30507	1.119
1,1-DICHLOROETHANE	SPCC	2.0	18590	.4694
CHLOROMETHANE	SPCC			
1,2,3-TRICHLOROBENZENE		2.0	18366	1.207
NAPHTHALENE		2.0	43245	2.843
HEXACHLOROBUTADIENE		2.0	11662	.7666
1,2,4-TRICHLOROBENZENE		2.0	18595	1.222
1,2-DIBROMO-3-CHLOROPROPANE		2.0	2359	.1551
1,2-DICHLOROBENZENE		2.0	24729	1.626
N-BUTYLBENZENE		2.0	40613	2.67
1,4-DICHLOROBENZENE		2.0	28331	1.862
1,3-DICHLOROBENZENE		2.0	26952	1.772
P-ISOPROPYLTOLUENE		2.0	40952	2.692
SEC-BUTYLBENZENE		2.0	48614	3.196
1,2,4-TRIMETHYLBENZENE		2.0	44485	2.924
TERT-BUTYLBENZENE		2.0	39684	2.609
A-METHYLSTYRENE				
4-CHLOROTOLUENE		2.0	40013	2.63
2-CHLOROTOLUENE		2.0	40857	2.686
1,3,5-TRIMETHYLBENZENE		2.0	38006	2.498
BROMOBENZENE		2.0	12820	.8427
N-PROPYLBENZENE		2.0	58079	3.818
TRANS-1,4-DICHLORO-2-BUTENE				
1,2,3-TRICHLOROPROPANE				
P-BROMOFLUOROBENZENE		2.0	13215	.8687
ISOPROPYLBENZENE		2.0	43494	1.596
STYRENE		2.0	27385	1.005
O-XYLENE		2.0	16401	.6018
M-, P-XYLENE		4.0	38482	.706
1,1,1,2-TETRACHLOROETHANE		2.0	9257	.3397
1-CHLOROHEXANE		2.0	10393	.3814
1,2-DIBROMOETHANE		2.0	9158	.336
DIBROMOCHLOROMETHANE		2.0	9678	.3551
TETRACHLOROETHENE		2.0	8673	.3182
1,3-DICHLOROPROPANE		2.0	16822	.6173

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WGI13899-03	9M18995	2
	Conc	Response	RF
2-HEXANONE			
1,1,2-TRICHLOROETHANE	2.0	9746	.3576
TRANS-1,3-DICHLOROPROPENE	2.0	12872	.4723
ETHYL METHACRYLATE	2.0	8939	.328
TOLUENE-D8	2.0	28031	1.029
DIMETHYL DISULFIDE	2.0	4805	.1213
CIS-1,3-DICHLOROPROPENE	2.0	12105	.3057
4-METHYL-2-PENTANONE			
2-CHLOROETHYL VINYL ETHER			
DIBROMOMETHANE	2.0	5620	.1419
BROMODICHLOROMETHANE	2.0	14576	.3681
TRICHLOROETHENE	2.0	9134	.2307
BENZENE	2.0	39568	.9992
1,2-DICHLOROETHANE	2.0	18365	.4638
1,2-DICHLOROETHANE-D4	2.0	13814	.3488
CARBON TETRACHLORIDE	2.0	13404	.3385
1,1-DICHLOROPROPENE	2.0	14007	.3537
CYCLOHEXANE	2.0	16395	.414
1,1,1-TRICHLOROETHANE	2.0	16906	.4269
DIBROMOFLUOROMETHANE	2.0	8959	.2262
BROMOCHLOROMETHANE	2.0	4169	.1053
CIS-1,2-DICHLOROETHENE	2.0	9130	.2306
2,2-DICHLOROPROPANE	2.0	12827	.3239
2-BUTANONE			
VINYL ACETATE	2.0	12640	.3192
N-HEXANE	2.0	14324	.3617
TRANS-1,2-DICHLOROETHENE	2.0	9072	.2291
METHYL TERT-BUTYL ETHER	2.0	23630	.5967
ACRYLONITRILE	2.0	3292	.0831
CARBON DISULFIDE	2.0	30234	.7635
METHYLENE CHLORIDE	2.0	10533	.266
IODOMETHANE			
DIMETHYL SULFIDE	2.0	8287	.2093
ACETONE			
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.0	11746	.2966
ACROLEIN			
ISOPRENE			
TRICHLOROFLUOROMETHANE	2.0	23824	.6016
CHLOROETHANE	2.0	8728	.2204
BROMOMETHANE	2.0	5757	.1454
DICHLORODIFLUOROMETHANE	2.0	19508	.4926

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-04	9M18986	3
		Conc	Response	RF
ETHYLBENZENE	CCC	5.0	25415	.4712
TOLUENE	CCC	5.0	69535	1.289
1,2-DICHLOROPROPANE	CCC	5.0	17408	.2186
CHLOROFORM	CCC	5.0	39130	.4914
1,1-DICHLOROETHENE	CCC	5.0	13788	.1731
VINYL CHLORIDE	CCC	5.0	21364	.2683
1,1,2,2-TETRACHLOROETHANE	SPCC	5.0	22055	.7336
BROMOFORM	SPCC	5.0	11453	.2123
CHLOROBENZENE	SPCC	5.0	48638	.9017
1,1-DICHLOROETHANE	SPCC	5.0	35576	.4468
CHLOROMETHANE	SPCC	5.0	25408	.3191
1,2,3-TRICHLOROBENZENE		5.0	26454	.8799
NAPHTHALENE		5.0	51439	1.711
HEXACHLOROBUTADIENE		5.0	19350	.6436
1,2,4-TRICHLOROBENZENE		5.0	26743	.8895
1,2-DIBROMO-3-CHLOROPROPANE		5.0	3578	.119
1,2-DICHLOROBENZENE		5.0	38374	1.276
N-BUTYLBENZENE		5.0	71525	2.379
1,4-DICHLOROBENZENE		5.0	43691	1.453
1,3-DICHLOROBENZENE		5.0	40581	1.35
P-ISOPROPYLTOLUENE		5.0	70331	2.339
SEC-BUTYLBENZENE		5.0	86532	2.878
1,2,4-TRIMETHYLBENZENE		5.0	77239	2.569
TERT-BUTYLBENZENE		5.0	70388	2.341
A-METHYLSTYRENE		5.0	26614	.8852
4-CHLOROTOLUENE		5.0	69597	2.315
2-CHLOROTOLUENE		5.0	67061	2.231
1,3,5-TRIMETHYLBENZENE		5.0	66513	2.212
BROMOBENZENE		5.0	20616	.6857
N-PROPYLBENZENE		5.0	101012	3.36
TRANS-1,4-DICHLORO-2-BUTENE		5.0	5298	.1762
1,2,3-TRICHLOROPROPANE		5.0	7429	.2471
P-BROMOFLUOROBENZENE		5.0	24370	.8106
ISOPROPYLBENZENE		5.0	75103	1.392
STYRENE		5.0	49223	.9126
O-XYLENE		5.0	27307	.5063
M-, P-XYLENE		10.0	66284	.6144
1,1,1,2-TETRACHLOROETHANE		5.0	17318	.3211
1-CHLOROHEXANE		5.0	18366	.3405
1,2-DIBROMOETHANE		5.0	15138	.2807
DIBROMOCHLOROMETHANE		5.0	16765	.3108
TETRACHLOROETHENE		5.0	14510	.269
1,3-DICHLOROPROPANE		5.0	27675	.5131

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WG113899-04	9M18986	3
	Conc	Response	RF
2-HEXANONE	5.0	10079	.1869
1,1,2-TRICHLOROETHANE	5.0	15397	.2855
TRANS-1,3-DICHLOROPROPENE	5.0	23611	.4377
ETHYL METHACRYLATE	5.0	15831	.2935
TOLUENE-D8	5.0	57046	1.058
DIMETHYL DISULFIDE	5.0	10248	.1287
CIS-1,3-DICHLOROPROPENE	5.0	23283	.2924
4-METHYL-2-PENTANONE	5.0	4293	.0539
2-CHLOROETHYL VINYL ETHER			
DIBROMOMETHANE	5.0	11145	.14
BROMODICHLOROMETHANE	5.0	27343	.3434
TRICHLOROETHENE	5.0	15602	.1959
BENZENE	5.0	71291	.8953
1,2-DICHLOROETHANE	5.0	36214	.4548
1,2-DICHLOROETHANE-D4	5.0	29180	.3664
CARBON TETRACHLORIDE	5.0	28718	.3606
1,1-DICHLOROPROPENE	5.0	25227	.3168
CYCLOHEXANE	5.0	28179	.3539
1,1,1-TRICHLOROETHANE	5.0	33538	.4212
DIBROMOFLUOROMETHANE	5.0	17558	.2205
BROMOCHLOROMETHANE	5.0	7324	.092
CIS-1,2-DICHLOROETHENE	5.0	16525	.2075
2,2-DICHLOROPROPANE	5.0	25397	.3189
2-BUTANONE	5.0	7949	.0998
VINYL ACETATE	5.0	33136	.4161
N-HEXANE	5.0	27252	.3422
TRANS-1,2-DICHLOROETHENE	5.0	15945	.2002
METHYL TERT-BUTYL ETHER	5.0	38382	.482
ACRYLONITRILE	5.0	5850	.0735
CARBON DISULFIDE	5.0	53461	.6714
METHYLENE CHLORIDE	5.0	19778	.2484
IODOMETHANE	5.0	2078	.0261
DIMETHYL SULFIDE	5.0	14481	.1819
ACETONE	5.0	17842	.2241
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5.0	20588	.2585
ACROLEIN	10.0	3591	.0225
ISOPRENE	5.0	21704	.2726
TRICHLOROFLUOROMETHANE	5.0	44981	.5649
CHLOROETHANE	5.0	14352	.1802
BROMOMETHANE	5.0	10115	.127
DICHLORODIFLUOROMETHANE	5.0	36013	.4523

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-05	9M18987	4
		Conc	Response	RF
ETHYLBENZENE	CCC	10.0	56590	.4732
TOLUENE	CCC	10.0	145834	1.22
1,2-DICHLOROPROPANE	CCC	10.0	36782	.2164
CHLOROFORM	CCC	10.0	78784	.4635
1,1-DICHLOROETHENE	CCC	10.0	29955	.1762
VINYL CHLORIDE	CCC	10.0	42544	.2503
1,1,2,2-TETRACHLOROETHANE	SPCC	10.0	61765	.9035
BROMOFORM	SPCC	10.0	33671	.2816
CHLOROBENZENE	SPCC	10.0	106476	.8904
1,1-DICHLOROETHANE	SPCC	10.0	70919	.4172
CHLOROMETHANE	SPCC	10.0	50758	.2986
1,2,3-TRICHLOROBENZENE		10.0	77011	1.127
NAPHTHALENE		10.0	171615	2.511
HEXACHLOROBUTADIENE		10.0	49777	.7282
1,2,4-TRICHLOROBENZENE		10.0	77592	1.135
1,2-DIBROMO-3-CHLOROPROPANE		10.0	11534	.1687
1,2-DICHLOROBENZENE		10.0	105938	1.55
N-BUTYLBENZENE		10.0	200443	2.932
1,4-DICHLOROBENZENE		10.0	113726	1.664
1,3-DICHLOROBENZENE		10.0	107466	1.572
P-ISOPROPYLTOLUENE		10.0	197528	2.89
SEC-BUTYLBENZENE		10.0	236080	3.454
1,2,4-TRIMETHYLBENZENE		10.0	203594	2.978
TERT-BUTYLBENZENE		10.0	181507	2.655
A-METHYLSTYRENE		10.0	85711	1.254
4-CHLOROTOLUENE		10.0	173359	2.536
2-CHLOROTOLUENE		10.0	167460	2.45
1,3,5-TRIMETHYLBENZENE		10.0	180932	2.647
BROMOBENZENE		10.0	50199	.7343
N-PROPYLBENZENE		10.0	259737	3.8
TRANS-1,4-DICHLORO-2-BUTENE		10.0	15862	.232
1,2,3-TRICHLOROPROPANE		10.0	20053	.2934
P-BROMOFLUOROBENZENE		10.0	51913	.7594
ISOPROPYLBENZENE		10.0	194682	1.628
STYRENE		10.0	125512	1.05
O-XYLENE		10.0	66856	.5591
M-,P-XYLENE		20.0	149701	.6259
1,1,1,2-TETRACHLOROETHANE		10.0	41463	.3467
1-CHLOROHEXANE		10.0	45721	.3823
1,2-DIBROMOETHANE		10.0	32645	.273
DIBROMOCHLOROMETHANE		10.0	42646	.3566
TETRACHLOROETHENE		10.0	31856	.2664
1,3-DICHLOROPROPANE		10.0	61826	.517

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INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
2-HEXANONE	10.0	67615	.5654
1,1,2-TRICHLOROETHANE	10.0	36602	.3061
TRANS-1,3-DICHLOROPROPENE	10.0	54383	.4548
ETHYL METHACRYLATE	10.0	44306	.3705
TOLUENE-D8	10.0	119797	1.002
DIMETHYL DISULFIDE	10.0	26268	.1545
CIS-1,3-DICHLOROPROPENE	10.0	51161	.301
4-METHYL-2-PENTANONE	10.0	29330	.1725
2-CHLOROETHYL VINYL ETHER	10.0	2863	.0168
DIBROMOMETHANE	10.0	23889	.1405
BROMODICHLOROMETHANE	10.0	57517	.3384
TRICHLOROETHENE	10.0	32194	.1894
BENZENE	10.0	143364	.8434
1,2-DICHLOROETHANE	10.0	70554	.4151
1,2-DICHLOROETHANE-D4	10.0	57098	.3359
CARBON TETRACHLORIDE	10.0	60344	.355
1,1-DICHLOROPROPENE	10.0	53309	.3136
CYCLOHEXANE	10.0	63583	.3741
1,1,1-TRICHLOROETHANE	10.0	69310	.4077
DIBROMOFLUOROMETHANE	10.0	35742	.2103
BROMOCHLOROMETHANE	10.0	14998	.0882
CIS-1,2-DICHLOROETHENE	10.0	34285	.2017
2,2-DICHLOROPROPANE	10.0	53197	.313
2-BUTANONE	10.0	30865	.1816
VINYL ACETATE	10.0	71641	.4215
N-HEXANE	10.0	57077	.3358
TRANS-1,2-DICHLOROETHENE	10.0	32897	.1935
METHYL TERT-BUTYL ETHER	10.0	82691	.4865
ACRYLONITRILE	10.0	18567	.1092
CARBON DISULFIDE	10.0	110390	.6494
METHYLENE CHLORIDE	10.0	38813	.2283
IODOMETHANE	10.0	8290	.0488
DIMETHYL SULFIDE	10.0	33084	.1946
ACETONE	10.0	27440	.1614
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10.0	42381	.2493
ACROLEIN	20.0	8401	.0247
ISOPRENE	10.0	43497	.2559
TRICHLOROFLUOROMETHANE	10.0	90357	.5316
CHLOROETHANE	10.0	29761	.1751
BROMOMETHANE	10.0	21952	.1291
DICHLORODIFLUOROMETHANE	10.0	72398	.4259

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-06	9M18988	5
		Conc	Response	RF
ETHYLBENZENE	CCC	20.0	113073	.471
TOLUENE	CCC	20.0	306795	1.278
1,2-DICHLOROPROPANE	CCC	20.0	76802	.2228
CHLOROFORM	CCC	20.0	161395	.4682
1,1-DICHLOROETHENE	CCC	20.0	64997	.1886
VINYL CHLORIDE	CCC	20.0	91528	.2655
1,1,2,2-TETRACHLOROETHANE	SPCC	20.0	85399	.6161
BROMOFORM	SPCC	20.0	51504	.2145
CHLOROBENZENE	SPCC	20.0	200883	.8367
1,1-DICHLOROETHANE	SPCC	20.0	151353	.4391
CHLOROMETHANE	SPCC	20.0	99417	.2884
1,2,3-TRICHLOROBENZENE		20.0	116207	.8384
NAPHTHALENE		20.0	252676	1.823
HEXACHLOROBUTADIENE		20.0	88819	.6408
1,2,4-TRICHLOROBENZENE		20.0	122326	.8826
1,2-DIBROMO-3-CHLOROPROPANE		20.0	15303	.1104
1,2-DICHLOROBENZENE		20.0	164425	1.186
N-BUTYLBENZENE		20.0	359848	2.596
1,4-DICHLOROBENZENE		20.0	180345	1.301
1,3-DICHLOROBENZENE		20.0	176852	1.276
P-ISOPROPYLTOLUENE		20.0	353663	2.552
SEC-BUTYLBENZENE		20.0	433286	3.126
1,2,4-TRIMETHYLBENZENE		20.0	349929	2.525
TERT-BUTYLBENZENE		20.0	320916	2.315
A-METHYLSTYRENE		20.0	187963	1.356
4-CHLOROTOLUENE		20.0	312000	2.251
2-CHLOROTOLUENE		20.0	286206	2.065
1,3,5-TRIMETHYLBENZENE		20.0	332732	2.401
BROMOBENZENE		20.0	85223	.6149
N-PROPYLBENZENE		20.0	490690	3.54
TRANS-1,4-DICHLORO-2-BUTENE		20.0	33867	.2443
1,2,3-TRICHLOROPROPANE		20.0	29160	.2104
P-BROMOFLUOROBENZENE		20.0	108689	.7842
ISOPROPYLBENZENE		20.0	377527	1.572
STYRENE		20.0	232487	.9683
O-XYLENE		20.0	129761	.5405
M-,P-XYLENE		40.0	298795	.6222
1,1,1,2-TETRACHLOROETHANE		20.0	74215	.3091
1-CHLOROHEXANE		20.0	114254	.4759
1,2-DIBROMOETHANE		20.0	63580	.2648
DIBROMOCHLOROMETHANE		20.0	74383	.3098
TETRACHLOROETHENE		20.0	66027	.275
1,3-DICHLOROPROPANE		20.0	114663	.4776

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INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WG113899-06	9M18988	5
	Conc	Response	RF
2-HEXANONE	20.0	54954	.2289
1,1,2-TRICHLOROETHANE	20.0	61418	.2558
TRANS-1,3-DICHLOROPROPENE	20.0	107919	.4495
ETHYL METHACRYLATE	20.0	100802	.4198
TOLUENE-D8	20.0	247908	1.033
DIMETHYL DISULFIDE	20.0	64666	.1876
CIS-1,3-DICHLOROPROPENE	20.0	110747	.3213
4-METHYL-2-PENTANONE	20.0	24902	.0722
2-CHLOROETHYL VINYL ETHER	20.0	10063	.0292
DIBROMOMETHANE	20.0	46535	.135
BROMODICHLOROMETHANE	20.0	115743	.3358
TRICHLOROETHENE	20.0	70560	.2047
BENZENE	20.0	306399	.8889
1,2-DICHLOROETHANE	20.0	145674	.4226
1,2-DICHLOROETHANE-D4	20.0	111379	.3231
CARBON TETRACHLORIDE	20.0	128604	.3731
1,1-DICHLOROPROPENE	20.0	118638	.3442
CYCLOHEXANE	20.0	142620	.4138
1,1,1-TRICHLOROETHANE	20.0	151061	.4382
DIBROMOFLUOROMETHANE	20.0	70602	.2048
BROMOCHLOROMETHANE	20.0	31347	.0909
CIS-1,2-DICHLOROETHENE	20.0	75168	.2181
2,2-DICHLOROPROPANE	20.0	123188	.3574
2-BUTANONE	20.0	32621	.0946
VINYL ACETATE	20.0	161066	.4673
N-HEXANE	20.0	123911	.3595
TRANS-1,2-DICHLOROETHENE	20.0	73341	.2128
METHYL TERT-BUTYL ETHER	20.0	179736	.5214
ACRYLONITRILE	20.0	26710	.0775
CARBON DISULFIDE	20.0	233636	.6778
METHYLENE CHLORIDE	20.0	82521	.2394
IODOMETHANE	20.0	25163	.073
DIMETHYL SULFIDE	20.0	71372	.2071
ACETONE	20.0	33344	.0967
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	20.0	94900	.2753
ACROLEIN	40.0	18525	.0269
ISOPRENE	20.0	95319	.2765
TRICHLOROFLUOROMETHANE	20.0	204271	.5926
CHLOROETHANE	20.0	64705	.1877
BROMOMETHANE	20.0	46767	.1357
DICHLORODIFLUOROMETHANE	20.0	161312	.468

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-07	9M18989	6
		Conc	Response	RF
ETHYLBENZENE	CCC	50.0	315020	.4761
TOLUENE	CCC	50.0	848179	1.282
1,2-DICHLOROPROPANE	CCC	50.0	212231	.2245
CHLOROFORM	CCC	50.0	434210	.4593
1,1-DICHLOROETHENE	CCC	50.0	179748	.1901
VINYL CHLORIDE	CCC	50.0	217723	.2303
1,1,2,2-TETRACHLOROETHANE	SPCC	50.0	247672	.6468
BROMOFORM	SPCC	50.0	155702	.2353
CHLOROBENZENE	SPCC	50.0	547044	.8268
1,1-DICHLOROETHANE	SPCC	50.0	411951	.4358
CHLOROMETHANE	SPCC	50.0	239573	.2534
1,2,3-TRICHLOROBENZENE		50.0	330607	.8634
NAPHTHALENE		50.0	771430	2.015
HEXACHLOROBUTADIENE		50.0	237845	.6212
1,2,4-TRICHLOROBENZENE		50.0	356340	.9306
1,2-DIBROMO-3-CHLOROPROPANE		50.0	50600	.1321
1,2-DICHLOROBENZENE		50.0	458864	1.198
N-BUTYLBENZENE		50.0	1003354	2.62
1,4-DICHLOROBENZENE		50.0	490883	1.282
1,3-DICHLOROBENZENE		50.0	487039	1.272
P-ISOPROPYLTOLUENE		50.0	1002440	2.618
SEC-BUTYLBENZENE		50.0	1202858	3.141
1,2,4-TRIMETHYLBENZENE		50.0	978906	2.557
TERT-BUTYLBENZENE		50.0	867443	2.265
A-METHYLSTYRENE		50.0	438069	1.144
4-CHLOROTOLUENE		50.0	851571	2.224
2-CHLOROTOLUENE		50.0	790023	2.063
1,3,5-TRIMETHYLBENZENE		50.0	935430	2.443
BROMOBENZENE		50.0	234282	.6119
N-PROPYLBENZENE		50.0	1356642	3.543
TRANS-1,4-DICHLORO-2-BUTENE		50.0	74702	.1951
1,2,3-TRICHLOROPROPANE		50.0	82438	.2153
P-BROMOFLUOROBENZENE		50.0	307185	.8022
ISOPROPYLBENZENE		50.0	1059021	1.601
STYRENE		50.0	657588	.9938
O-XYLENE		50.0	376776	.5694
M-, P-XYLENE		100.0	818677	.6186
1,1,1,2-TETRACHLOROETHANE		50.0	204003	.3083
1-CHLOROHEXANE		50.0	289564	.4376
1,2-DIBROMOETHANE		50.0	180175	.2723
DIBROMOCHLOROMETHANE		50.0	211261	.3193
TETRACHLOROETHENE		50.0	181769	.2747
1,3-DICHLOROPROPANE		50.0	318881	.4819

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WG113899-07	9M18989	6
	Conc	Response	RF
2-HEXANONE	50.0	157618	.2382
1,1,2-TRICHLOROETHANE	50.0	173460	.2622
TRANS-1,3-DICHLOROPROPENE	50.0	324650	.4906
ETHYL METHACRYLATE	50.0	247145	.3735
TOLUENE-D8	50.0	689085	1.041
DIMETHYL DISULFIDE	50.0	188896	.1998
CIS-1,3-DICHLOROPROPENE	50.0	329293	.3483
4-METHYL-2-PENTANONE	50.0	78635	.0832
2-CHLOROETHYL VINYL ETHER	50.0	55050	.0582
DIBROMOMETHANE	50.0	130014	.1375
BROMODICHLOROMETHANE	50.0	319781	.3383
TRICHLOROETHENE	50.0	198202	.2097
BENZENE	50.0	839311	.8878
1,2-DICHLOROETHANE	50.0	394756	.4176
1,2-DICHLOROETHANE-D4	50.0	304461	.3221
CARBON TETRACHLORIDE	50.0	352786	.3732
1,1-DICHLOROPROPENE	50.0	331221	.3504
CYCLOHEXANE	50.0	395996	.4189
1,1,1-TRICHLOROETHANE	50.0	411401	.4352
DIBROMOFLUOROMETHANE	50.0	199061	.2106
BROMOCHLOROMETHANE	50.0	86976	.092
CIS-1,2-DICHLOROETHENE	50.0	208142	.2202
2,2-DICHLOROPROPANE	50.0	353530	.374
2-BUTANONE	50.0	102183	.1081
VINYL ACETATE	50.0	526824	.5573
N-HEXANE	50.0	344731	.3647
TRANS-1,2-DICHLOROETHENE	50.0	200950	.2126
METHYL TERT-BUTYL ETHER	50.0	530820	.5615
ACRYLONITRILE	50.0	76635	.0811
CARBON DISULFIDE	50.0	640403	.6774
METHYLENE CHLORIDE	50.0	221309	.2341
IODOMETHANE	50.0	98150	.1038
DIMETHYL SULFIDE	50.0	208254	.2203
ACETONE	50.0	83752	.0886
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	50.0	233798	.2473
ACROLEIN	100.0	58204	.0308
ISOPRENE	50.0	269023	.2846
TRICHLOROFLUOROMETHANE	50.0	497796	.5266
CHLOROETHANE	50.0	166004	.1756
BROMOMETHANE	50.0	122252	.1293
DICHLORODIFLUOROMETHANE	50.0	392296	.415

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte		Sample #	File #	Level
		WG113899-08	9M18990	7
		Conc	Response	RF
ETHYLBENZENE	CCC	100.0	700879	.5022
TOLUENE	CCC	100.0	1847539	1.324
1,2-DICHLOROPROPANE	CCC	100.0	464113	.2336
CHLOROFORM	CCC	100.0	914553	.4603
1,1-DICHLOROETHENE	CCC	100.0	388241	.1954
VINYL CHLORIDE	CCC	100.0	404190	.2034
1,1,2,2-TETRACHLOROETHANE	SPCC	100.0	579122	.7295
BROMOFORM	SPCC	100.0	362336	.2596
CHLOROBENZENE	SPCC	100.0	1222204	.8758
1,1-DICHLOROETHANE	SPCC	100.0	866598	.4361
CHLOROMETHANE	SPCC	100.0	524474	.264
1,2,3-TRICHLOROBENZENE		100.0	756220	.9526
NAPHTHALENE		100.0	1780236	2.243
HEXACHLOROBUTADIENE		100.0	533941	.6726
1,2,4-TRICHLOROBENZENE		100.0	805336	1.015
1,2-DIBROMO-3-CHLOROPROPANE		100.0	122416	.1542
1,2-DICHLOROBENZENE		100.0	1035062	1.304
N-BUTYLBENZENE		100.0	2227678	2.806
1,4-DICHLOROBENZENE		100.0	1100535	1.386
1,3-DICHLOROBENZENE		100.0	1091568	1.375
P-ISOPROPYLTOLUENE		100.0	2241826	2.824
SEC-BUTYLBENZENE		100.0	2695399	3.395
1,2,4-TRIMETHYLBENZENE		100.0	2172527	2.737
TERT-BUTYLBENZENE		100.0	1967973	2.479
A-METHYLSTYRENE		100.0	940254	1.184
4-CHLOROTOLUENE		100.0	1886040	2.376
2-CHLOROTOLUENE		100.0	1747967	2.202
1,3,5-TRIMETHYLBENZENE		100.0	2087981	2.63
BROMOBENZENE		100.0	531621	.6697
N-PROPYLBENZENE		100.0	3001108	3.781
TRANS-1,4-DICHLORO-2-BUTENE		100.0	154025	.194
1,2,3-TRICHLOROPROPANE		100.0	186455	.2349
P-BROMOFLUOROBENZENE		100.0	658256	.8292
ISOPROPYLBENZENE		100.0	2400252	1.72
STYRENE		100.0	1506174	1.079
O-XYLENE		100.0	841230	.6028
M-,P-XYLENE		200.0	1792281	.6422
1,1,1,2-TETRACHLOROETHANE		100.0	461890	.331
1-CHLOROHEXANE		100.0	629468	.4511
1,2-DIBROMOETHANE		100.0	409270	.2933
DIBROMOCHLOROMETHANE		100.0	486464	.3486
TETRACHLOROETHENE		100.0	392874	.2815
1,3-DICHLOROPROPANE		100.0	712613	.5106

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WG113899-08	9M18990	7
	Conc	Response	RF
2-HEXANONE	100.0	339125	.243
1,1,2-TRICHLOROETHANE	100.0	386748	.2771
TRANS-1,3-DICHLOROPROPENE	100.0	730623	.5236
ETHYL METHACRYLATE	100.0	532518	.3816
TOLUENE-D8	100.0	1481880	1.062
DIMETHYL DISULFIDE	100.0	413362	.208
CIS-1,3-DICHLOROPROPENE	100.0	743571	.3742
4-METHYL-2-PENTANONE	100.0	170988	.0861
2-CHLOROETHYL VINYL ETHER	100.0	144600	.0728
DIBROMOMETHANE	100.0	277912	.1399
BROMODICHLOROMETHANE	100.0	705092	.3549
TRICHLOROETHENE	100.0	433937	.2184
BENZENE	100.0	1787153	.8994
1,2-DICHLOROETHANE	100.0	805038	.4052
1,2-DICHLOROETHANE-D4	100.0	627223	.3157
CARBON TETRACHLORIDE	100.0	742882	.3739
1,1-DICHLOROPROPENE	100.0	706915	.3558
CYCLOHEXANE	100.0	848987	.4273
1,1,1-TRICHLOROETHANE	100.0	869059	.4374
DIBROMOFLUOROMETHANE	100.0	424961	.2139
BROMOCHLOROMETHANE	100.0	188513	.0949
CIS-1,2-DICHLOROETHENE	100.0	448601	.2258
2,2-DICHLOROPROPANE	100.0	772475	.3888
2-BUTANONE	100.0	211375	.1064
VINYL ACETATE	100.0	1154934	.5813
N-HEXANE	100.0	735811	.3703
TRANS-1,2-DICHLOROETHENE	100.0	426143	.2145
METHYL TERT-BUTYL ETHER	100.0	1136601	.572
ACRYLONITRILE	100.0	169396	.0853
CARBON DISULFIDE	100.0	1355710	.6823
METHYLENE CHLORIDE	100.0	476276	.2397
IODOMETHANE	100.0	257089	.1294
DIMETHYL SULFIDE	100.0	450934	.2269
ACETONE	100.0	153603	.0773
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	100.0	495166	.2492
ACROLEIN	200.0	126818	.0319
ISOPRENE	100.0	580444	.2921
TRICHLOROFLUOROMETHANE	100.0	1047165	.527
CHLOROETHANE	100.0	371667	.1871
BROMOMETHANE	100.0	279734	.1408
DICHLORODIFLUOROMETHANE	100.0	807540	.4064

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level	
				WG113899-09	9M18991	8
	Conc	Response	RF	
ETHYLBENZENE	CCC	200.0	1412556	.4653
TOLUENE	CCC	200.0	3831527	1.262
1,2-DICHLOROPROPANE	CCC	200.0	985201	.229
CHLOROFORM	CCC	200.0	1882831	.4376
1,1-DICHLOROETHENE	CCC	200.0	822420	.1911
VINYL CHLORIDE	CCC	200.0	790831	.1838
1,1,2,2-TETRACHLOROETHANE	SPCC	200.0	1164680	.662
BROMOFORM	SPCC	200.0	733390	.2416
CHLOROBENZENE	SPCC	200.0	2483034	.818
1,1-DICHLOROETHANE	SPCC	200.0	1807174	.42
CHLOROMETHANE	SPCC	200.0	1160775	.2698
1,2,3-TRICHLOROBENZENE		200.0	1577160	.8965
NAPHTHALENE		200.0	3736073	2.124
HEXACHLOROBUTADIENE		200.0	1109833	.6308
1,2,4-TRICHLOROBENZENE		200.0	1692705	.9622
1,2-DIBROMO-3-CHLOROPROPANE		200.0	266078	.1512
1,2-DICHLOROBENZENE		200.0	2096990	1.192
N-BUTYLBENZENE		200.0	4506581	2.562
1,4-DICHLOROBENZENE		200.0	2210055	1.256
1,3-DICHLOROBENZENE		200.0	2212713	1.258
P-ISOPROPYLTOLUENE		200.0	4574951	2.601
SEC-BUTYLBENZENE		200.0	5433049	3.088
1,2,4-TRIMETHYLBENZENE		200.0	4372505	2.485
TERT-BUTYLBENZENE		200.0	4098004	2.329
A-METHYLSTYRENE		200.0	2152297	1.223
4-CHLOROTOLUENE		200.0	3734045	2.123
2-CHLOROTOLUENE		200.0	3455625	1.964
1,3,5-TRIMETHYLBENZENE		200.0	4240764	2.411
BROMOBENZENE		200.0	1071920	.6093
N-PROPYLBENZENE		200.0	6014182	3.419
TRANS-1,4-DICHLORO-2-BUTENE		200.0	355050	.2018
1,2,3-TRICHLOROPROPANE		200.0	371933	.2114
P-BROMOFLUOROBENZENE		200.0	1399007	.7952
ISOPROPYLBENZENE		200.0	4835991	1.593
STYRENE		200.0	3067772	1.011
O-XYLENE		200.0	1707119	.5624
M-,P-XYLENE		400.0	3622358	.5967
1,1,1,2-TETRACHLOROETHANE		200.0	928493	.3059
1-CHLOROHEXANE		200.0	1350298	.4448
1,2-DIBROMOETHANE		200.0	847570	.2792
DIBROMOCHLOROMETHANE		200.0	996738	.3284
TETRACHLOROETHENE		200.0	819468	.27
1,3-DICHLOROPROPANE		200.0	1461331	.4814

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS9

Analyst: MES
 Initial Calibration Date: 05-MAR-02

Analyte	Sample #	File #	Level
	WG113899-09	9M18991	8
	Conc	Response	RF
2-HEXANONE	200.0	784441	.2584
1,1,2-TRICHLOROETHANE	200.0	782528	.2578
TRANS-1,3-DICHLOROPROPENE	200.0	1506672	.4963
ETHYL METHACRYLATE	200.0	1211966	.3993
TOLUENE-D8	200.0	3182556	1.048
DIMETHYL DISULFIDE	200.0	919787	.2138
CIS-1,3-DICHLOROPROPENE	200.0	1563599	.3634
4-METHYL-2-PENTANONE	200.0	396411	.0921
2-CHLOROETHYL VINYL ETHER	200.0	392825	.0913
DIBROMOMETHANE	200.0	571569	.1328
BROMODICHLOROMETHANE	200.0	1438965	.3344
TRICHLOROETHENE	200.0	923266	.2146
BENZENE	200.0	3760488	.8739
1,2-DICHLOROETHANE	200.0	1623238	.3772
1,2-DICHLOROETHANE-D4	200.0	1281832	.2979
CARBON TETRACHLORIDE	200.0	1525000	.3544
1,1-DICHLOROPROPENE	200.0	1482304	.3445
CYCLOHEXANE	200.0	1806198	.4197
1,1,1-TRICHLOROETHANE	200.0	1777689	.4131
DIBROMOFLUOROMETHANE	200.0	901564	.2095
BROMOCHLOROMETHANE	200.0	399450	.0928
CIS-1,2-DICHLOROETHENE	200.0	951905	.2212
2,2-DICHLOROPROPANE	200.0	1626703	.378
2-BUTANONE	200.0	495367	.1151
VINYL ACETATE	200.0	2585024	.6007
N-HEXANE	200.0	1545308	.3591
TRANS-1,2-DICHLOROETHENE	200.0	893120	.2076
METHYL TERT-BUTYL ETHER	200.0	2528927	.5877
ACRYLONITRILE	200.0	378497	.088
CARBON DISULFIDE	200.0	2886416	.6708
METHYLENE CHLORIDE	200.0	1031984	.2398
IODOMETHANE	200.0	592489	.1377
DIMETHYL SULFIDE	200.0	997772	.2319
ACETONE	200.0	318213	.074
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	200.0	986575	.2293
ACROLEIN	400.0	286849	.0333
ISOPRENE	200.0	1252569	.2911
TRICHLOROFLUOROMETHANE	200.0	2164106	.5029
CHLOROETHANE	200.0	795404	.1848
BROMOMETHANE	200.0	615371	.143
DICHLORODIFLUOROMETHANE	200.0	1633547	.3796

Login Number: L0204001
 File ID: 9M19003
 ALT ID: WG113899-10
 Units: ug/kg

Instrument ID: HPMS9
 Run Date: 03/06/2002
 Run Time: 12:10
 Analyst: MES
 Cal ID: HPMS9 - 05-MAR-02

Analyte		Expected	Found	RF	%D	Q
Ethylbenzene	CCC	20	20.3	0.484	1.5	
Toluene	CCC	20	20.4	1.32	2.0	
1,2-Dichloropropane	CCC	20	19.5	0.219	2.5	
Chloroform	CCC	20	19.4	0.460	3.0	
1,1-Dichloroethene	CCC	20	22.7	0.205	13.5	
Vinyl Chloride	CCC	20	17.8	0.218	11.0	
1,1,2,2-Tetrachloroethane	SPCC	20	18.0	0.647	10.0	
Bromoform	SPCC	20	16.1	0.196	19.5	
Chlorobenzene	SPCC	20	18.3	0.823	8.5	
1,1-Dichloroethane	SPCC	20	20.2	0.446	1.0	
Chloromethane	SPCC	20	17.7	0.249	11.5	
1,2,3-Trichlorobenzene		20	18.8	0.908	6.0	
Naphthalene		20	19.3	2.03	3.5	
Hexachlorobutadiene		20	19.1	0.631	4.5	
1,2,4-Trichlorobenzene		20	19.0	0.954	5.0	
1,2-Dibromo-3-Chloropropane		20	18.0	0.123	10.0	
1,2-Dichlorobenzene		20	18.1	1.21	9.5	
n-Butylbenzene		20	20.0	2.66	0.0	
1,4-Dichlorobenzene		20	18.1	1.32	9.5	
1,3-Dichlorobenzene		20	18.6	1.30	7.0	
p-Isopropyltoluene		20	18.6	2.46	7.0	
sec-Butylbenzene		20	21.0	3.23	5.0	
1,2,4-Trimethylbenzene		20	19.3	2.50	3.5	
tert-Butylbenzene		20	19.4	2.26	3.0	
a-Methylstyrene		20	0.0363	0.00210	99.8	*
4-Chlorotoluene		20	18.1	2.08	9.5	
2-Chlorotoluene		20	19.0	2.09	5.0	
1,3,5-Trimethylbenzene		20	20.4	2.41	2.0	
Bromobenzene		20	19.4	0.652	3.0	
n-Propylbenzene		20	20.1	3.50	0.5	
trans-1,4-Dichloro-2-Butene		20	1.90	0.0197	90.5	*
1,2,3-Trichloropropane		20	18.6	0.220	7.0	
Isopropylbenzene		20	19.1	1.51	4.5	
Styrene		20	19.5	0.936	2.5	
o-Xylene		20	21.0	0.576	5.0	
m-,p-Xylene		40	39.9	0.618	0.3	
1,1,1,2-Tetrachloroethane		20	18.5	0.296	7.5	
1-Chlorohexane		20	19.3	0.401	3.5	
1,2-Dibromoethane		20	19.1	0.270	4.5	
Dibromochloromethane		20	17.8	0.290	11.0	
Tetrachloroethene		20	20.5	0.287	2.5	
1,3-Dichloropropane		20	18.7	0.474	6.5	
2-Hexanone		20	17.9	0.241	10.5	
1,1,2-Trichloroethane		20	18.4	0.262	8.0	

Login Number: L0204001
 File ID: 9M19003
 ALT ID: WG113899-10
 Units: ug/kg

Instrument ID: HPMS9
 Run Date: 03/06/2002
 Run Time: 12:10
 Analyst: MES
 Cal ID: HPMS9 05-MAR-02

Analyte	Expected	Found	RF	%D	Q
trans-1,3-Dichloropropene	20	19.1	0.453	4.5	
Ethyl Methacrylate	20		0		
Dimethyl Disulfide	20	2.45	0.000200	87.8	*
cis-1,3-Dichloropropene	20	20.6	0.340	3.0	
4-Methyl-2-Pentanone	20	19.8	0.0868	1.0	
2-Chloroethyl Vinyl Ether	20	25.9	0.0511	29.5	
Dibromomethane	20	20.2	0.137	1.0	
Bromodichloromethane	20	19.5	0.333	2.5	
Trichloroethene	20	21.6	0.224	8.0	
Benzene	20	20.1	0.905	0.5	
1,2-Dichloroethane	20	19.1	0.408	4.5	
Carbon Tetrachloride	20	19.7	0.357	1.5	
1,1-Dichloropropene	20	20.1	0.336	0.5	
Cyclohexane	20	0.0132	0.000300	99.9	*
1,1,1-Trichloroethane	20	20.5	0.431	2.5	
Bromochloromethane	20	21.2	0.0990	6.0	
cis-1,2-Dichloroethene	20	21.6	0.231	8.0	
2,2-Dichloropropane	20	20.5	0.359	2.5	
2-Butanone	20	21.5	0.118	7.5	
Vinyl Acetate	20	15.4	0.379	23.0	
n-Hexane	20	18.6	0.331	7.0	
trans-1,2-Dichloroethene	20	22.0	0.228	10.0	
Methyl Tert Butyl Ether	20	19.3	0.524	3.5	
Acrylonitrile	20	0.628	0.00270	96.9	*
Carbon Disulfide	20	21.9	0.767	9.5	
Methylene Chloride	20	18.0	0.220	10.0	
Iodomethane	20	27.9	0.139	39.5	
Dimethyl Sulfide	20		0		
Acetone	20	18.9	0.105	5.5	
1,1,2-Trichloro-1,2,2-Trifluoroethane	20		0		
Acrolein	40		0		
Isoprene	20	0.853	0.0119	95.7	*
Trichlorofluoromethane	20	19.1	0.529	4.5	
Chloroethane	20	19.4	0.181	3.0	
Bromomethane	20	19.8	0.134	1.0	
Dichlorodifluoromethane	20	19.1	0.419	4.5	

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

Login Number: L0204001
 File ID: 9M19479
 CCV ID: WG115462-02
 Units: ug/kg

Instrument ID: HPMS9
 Run Date: 04/02/2002
 Run Time: 08:34
 Analyst: MES
 Cal ID: HPMS9 - 05-MAR-02

Analyte		Expected	Found	RF	%D	Q
Ethylbenzene	CCC	50	54.4	0.520	8.8	
Toluene	CCC	50	51.9	1.34	3.8	
1,2-Dichloropropane	CCC	50	54.1	0.243	8.2	
Chloroform	CCC	50	51.9	0.494	3.8	
1,1-Dichloroethene	CCC	50	48.5	0.176	3.0	
Vinyl Chloride	CCC	50	52.2	0.255	4.4	
1,1,2,2-Tetrachloroethane	SPCC	50	52.6	0.721	5.2	
Bromoform	SPCC	50	61.4	0.299	22.8	*
Chlorobenzene	SPCC	50	52.9	0.949	5.8	
1,1-Dichloroethane	SPCC	50	51.5	0.455	3.0	
Chloromethane	SPCC	50	50.9	0.288	1.8	
1,2,3-Trichlorobenzene		50	53.7	1.04	7.4	
Naphthalene		50	51.6	2.20	3.2	
Hexachlorobutadiene		50	57.2	0.758	14.4	
1,2,4-Trichlorobenzene		50	54.6	1.10	9.2	
1,2-Dibromo-3-Chloropropane		50	58.0	0.171	16.0	
1,2-Dichlorobenzene		50	51.4	1.37	2.8	
n-Butylbenzene		50	50.8	2.69	1.6	
1,4-Dichlorobenzene		50	50.2	1.47	0.4	
1,3-Dichlorobenzene		50	52.0	1.45	4.0	
p-Isopropyltoluene		50	53.7	2.84	7.4	
sec-Butylbenzene		50	54.0	3.32	8.0	
1,2,4-Trimethylbenzene		50	52.4	2.71	4.8	
tert-Butylbenzene		50	56.1	2.62	12.2	
a-Methylstyrene		50	50.8	1.19	1.6	
4-Chlorotoluene		50	51.5	2.37	3.0	
2-Chlorotoluene		50	49.6	2.18	0.8	
1,3,5-Trimethylbenzene		50	54.8	2.59	9.6	
Bromobenzene		50	56.9	0.765	13.8	
n-Propylbenzene		50	53.5	3.73	7.0	
trans-1,4-Dichloro-2-Butene		50	46.5	0.193	7.0	
1,2,3-Trichloropropane		50	52.6	0.247	5.2	
Isopropylbenzene		50	54.8	1.74	9.6	
Styrene		50	56.7	1.09	13.4	
o-Xylene		50	56.3	0.618	12.6	
m-,p-Xylene		100	107	0.660	7.0	
1,1,1,2-Tetrachloroethane		50	57.9	0.370	15.8	
1-Chlorohexane		50	56.6	0.471	13.2	
1,2-Dibromoethane		50	53.4	0.302	6.8	
Dibromochloromethane		50	56.5	0.368	13.0	
Tetrachloroethene		50	54.3	0.303	8.6	
1,3-Dichloropropane		50	50.8	0.515	1.6	

Login Number: L0204001
 File ID: 9M19479
 CCV ID: WG115462-02
 Units: ug/kg

Instrument ID: HPMS9
 Run Date: 04/02/2002
 Run Time: 08:34
 Analyst: MES
 Cal ID: HPMS9 05-MAR-02

Analyte	Expected	Found	RF	%D	Q
2-Hexanone	50	44.2	0.229	11.6	
1,1,2-Trichloroethane	50	50.8	0.289	1.6	
trans-1,3-Dichloropropene	50	57.4	0.546	14.8	
Ethyl Methacrylate	50	50.9	0.373	1.8	
Dimethyl Disulfide	50	51.9	0.213	3.8	
cis-1,3-Dichloropropene	50	60.5	0.398	21.0	
4-Methyl-2-Pentanone	50	48.4	0.0867	3.2	
2-Chloroethyl Vinyl Ether	50	70.6	0.106	41.2	*
Dibromomethane	50	56.1	0.152	12.2	
Bromodichloromethane	50	54.0	0.368	8.0	
Trichloroethene	50	59.5	0.246	19.0	
Benzene	50	51.8	0.932	3.6	
1,2-Dichloroethane	50	48.6	0.416	2.8	
Carbon Tetrachloride	50	57.4	0.416	14.8	
1,1-Dichloropropene	50	54.4	0.363	8.8	
Cyclohexane	50	55.7	0.449	11.4	
1,1,1-Trichloroethane	50	55.2	0.465	10.4	
Bromochloromethane	50	57.7	0.108	15.4	
cis-1,2-Dichloroethene	50	55.9	0.240	11.8	
2,2-Dichloropropane	50	62.8	0.440	25.6	
2-Butanone	50	47.3	0.106	5.4	
Vinyl Acetate	50	53.8	0.617	7.6	
n-Hexane	50	57.5	0.409	15.0	
trans-1,2-Dichloroethene	50	53.7	0.223	7.4	
Methyl Tert Butyl Ether	50	57.9	0.630	15.8	
Acrylonitrile	50	50.5	0.0862	1.0	
Carbon Disulfide	50	54.0	0.757	8.0	
Methylene Chloride	50	48.4	0.236	3.2	
Iodomethane	50	67.5	0.169	35.0	
Dimethyl Sulfide	50	54.0	0.227	8.0	
Acetone	50	55.5	0.0932	11.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54.5	0.281	9.0	
Acrolein	100	94.6	0.0296	5.4	
Isoprene	50	54.2	0.302	8.4	
Trichlorofluoromethane	50	53.4	0.592	6.8	
Chloroethane	50	52.9	0.198	5.8	
Bromomethane	50	76.1	0.207	52.2	*
Dichlorodifluoromethane	50	50.7	0.445	1.4	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

INTERNAL STANDARD AREA SUMMARY

Login Number: L0204001
 Instrument ID: HPMS9
 Workgroup (AAB#): WG115463

CCV Number: WG115462-02
 CCV Date: 02-APR-02
 Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG115462-02	NA	NA	372186	641700	857159
Upper Limit	NA	NA	744372	1283400	1714318
Lower Limit	NA	NA	186093	320850	428580
<u>L0204001-01</u>	<u>0.910</u>		<u>335065</u>	<u>593047</u>	<u>821884</u>

IS-1 - 1,4-Dichlorobenzene-d4
 IS-2 - Chlorobenzene-d5
 IS-3 - Fluorobenzene

Underline = Response outside limits

Analyst: MES

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9M18980.D	1.	WG113899-01 50NG BFB 8260B	7,1 SV9043 ✓	5 Mar 2002 08:29
2	2	9M18981.D	1.	WG113899-02 50PPB STD 8260B	1,1 SV9048 ✓	5 Mar 2002 09:03
3	3	9M18982.D	1.	WG113900-01 VBLK0305 8260B	1,1 ✓	5 Mar 2002 09:38
4	4	9M18983.D	1.	WG113900-01 VBLK0305 8260B	1,1 ✓	5 Mar 2002 10:12
5	5	9M18984.D	1.	WG113899-02 1PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 10:46
6	6	9M18985.D	1.	WG113899-03 2PPB SOIL STD SV9122	7,1 DNR	5 Mar 2002 12:24
7	7	9M18986.D	1.	WG113899-04 5PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 12:59
8	8	9M18987.D	1.	WG113899-05 10PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 13:33
9	9	9M18988.D	1.	WG113899-06 20PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 14:08
10	10	9M18989.D	1.	WG113899-07 50PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 14:42
11	11	9M18990.D	1.	WG113899-08 100PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 15:17
12	12	9M18991.D	1.	WG113899-09 200PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 15:52
13	13	9M18992.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 16:26
14	14	9M18993.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 17:01
15	15	9M18994.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 17:36
16	16	9M18995.D	1.	WG113899-03 2PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 18:10
17	15	9M18996.D	1.	WG113899-10 20PPB ALT SOURCE SV91-6	7,1 ✓	5 Mar 2002 18:44

Analyst: MES

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9M19478.D	1.	WG115462-01 50NG BFB 8260B	7,1 SV9148 ✓	2 Apr 2002 08:00
2	2	9M19479.D	1.	WG115462-02 50PPB SOIL STD 8260B	7,1 SV9218 ✓	2 Apr 2002 08:34
3	3	9M19480.D	1.	WG115463-01 VBLK0402 8260B	7,1 ✓	2 Apr 2002 09:09
4	4	9M19481.D	1.	WG115463-02 20PPB LCS 8260B	7,1 SV9139 ✓	2 Apr 2002 09:43
5	5	9M19482.D	1.	WG115463-01 VBLK0402 8260B	7,1 ✓	2 Apr 2002 10:18
6	6	9M19483.D	1.	100PPB FOO STD	7,1 SV9207 ✓	2 Apr 2002 10:52
7	7	9M19484.D	1.	L0204001-01 A 00 0.91X 826-TCL 5.52G	7,0.91 ✓	2 Apr 2002 11:27
8	8	9M19485.D	1.	L0203519-05 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 12:01
9	9	9M19486.D	1.	L0203519-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 12:35
10	10	9M19487.D	1.	L0203558-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 13:09
11	11	9M19488.D	1.	L0203558-07 MS 00 826-AF31-SPE	7,1 SV9231 ✓	2 Apr 2002 13:43
12	12	9M19489.D	1.	L0203558-08 MSD 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 14:18
13	13	9M19490.D	1.	L0203527-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 14:52
14	14	9M19491.D	1.	L0203528-04 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 15:26
15	15	9M19492.D	1.	L0203528-05 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 16:00
16	16	9M19493.D	1.	L0203528-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 16:35
17	17	9M19494.D	1.	L0203511-01 00 8260/826-F	7,1 RR 5X for SS	2 Apr 2002 17:08
18	18	9M19495.D	1.	L0203511-03 00 8260/826-F	7,1 ✓	2 Apr 2002 17:43
19	19	9M19496.D	1.	L0203568-01 00 8260/826-F	7,1 RR 5X acetone	2 Apr 2002 18:17
20	20	9M19497.D	1.	L0203558-02 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 18:51
21	21	9M19498.D	1.	L0203558-10 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 19:25
22	22	9M19499.D	1.	L0203558-11 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 19:59

WG115463 reanalyses

L0203511-01 @ 5X

L0203568-01 @ 5X

METHOD BLANK SUMMARY

Login Number: L0204001
Blank File ID: 6M29953
Date Analyzed: 04/04/02
Time Analyzed: 20:21
Analyst: CMS

Work Group: WG115698
Blank Sample ID: WG115698-01
Instrument ID: HPMS6
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115698-02	6M29954	04/04/02 20:54	
TRIP BLANK	L0204001-02	6M29956	04/04/02 22:12	

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/04/2002 Sample ID: WG115698-01
 Instrument ID: HPMS6 Run Time: 20:21 Method: 8260B
 File ID: 6M29953 Analyst: CMS Matrix: Water
 Workgroup (AAB#): WG115698 Units: ug/L
 Contract #: Cal ID: HPMS6-22-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Chloromethane	0.250	10.0	0.250	1.00	ND
Vinyl Chloride	0.250	10.0	0.250	1.00	ND
Bromomethane	0.500	10.0	0.500	1.00	ND
Chloroethane	0.500	10.0	0.500	1.00	ND
Acetone	2.50	10.0	2.50	1.00	ND
1,1-Dichloroethene	0.500	5.00	0.500	1.00	ND
Methylene Chloride	0.250	5.00	0.250	1.00	ND
Carbon Disulfide	0.500	5.00	0.500	1.00	ND
1,1-Dichloroethane	0.125	5.00	0.125	1.00	ND
2-Butanone	2.50	10.0	2.50	1.00	ND
1,2-Dichloroethene	0.250	5.00	0.250	1.00	ND
Chloroform	0.125	5.00	0.125	1.00	ND
1,1,1-Trichloroethane	0.250	5.00	0.250	1.00	ND
Carbon Tetrachloride	0.250	5.00	0.250	1.00	ND
1,2-Dichloroethane	0.250	5.00	0.250	1.00	ND
Benzene	0.125	5.00	0.125	1.00	ND
1,2-Dichloropropane	0.125	5.00	0.125	1.00	ND
Bromodichloromethane	0.250	5.00	0.250	1.00	ND
4-Methyl-2-Pentanone	2.50	10.0	2.50	1.00	ND
cis-1,3-Dichloropropene	0.250	5.00	0.250	1.00	ND
Toluene	0.250	5.00	0.250	1.00	ND
trans-1,3-Dichloropropene	0.500	5.00	0.500	1.00	ND
1,1,2-Trichloroethane	0.250	5.00	0.250	1.00	ND
2-Hexanone	2.50	10.0	2.50	1.00	ND
Tetrachloroethene	0.250	5.00	0.250	1.00	ND
Dibromochloromethane	0.250	5.00	0.250	1.00	ND
Chlorobenzene	0.125	5.00	0.125	1.00	ND
Ethylbenzene	0.250	5.00	0.250	1.00	ND
Xylenes	0.500	5.00	0.500	1.00	ND
Styrene	0.125	5.00	0.125	1.00	ND
Bromoform	0.540	5.00	0.540	1.00	ND
1,1,2,2-Tetrachloroethane	0.125	5.00	0.125	1.00	ND
Trichloroethane	0.250	5.00	0.250	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	100	86 - 118	PASS
1,2-Dichloroethane-d4	103	80 - 120	PASS
Toluene-d8	106	88 - 110	PASS
p-Bromofluorobenzene	112	86 - 115	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE**

Login Number: L0204001
Instrument ID: HPMS6
File ID: 6M29954
Workgroup (AAB#): WG115698
Contract #:

Run Date: 04/04/2002
Run Time: 20:54
Analyst: CMS

Sample ID: WG115698-02
Method: 8260B
Matrix: Water
Units: ug/L
Cal ID: HPMS6-22-MAR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloromethane	20	16.2	81.2	60 - 130	
Vinyl Chloride	20	17.0	85.0	65 - 140	
Bromomethane	20	18.5	92.3	61 - 151	
Chloroethane	20	18.5	92.7	77 - 133	
Acetone	20	17.4	87.0	40 - 142	
1,1-Dichloroethene	20	19.5	97.7	80 - 132	
Methylene Chloride	20	17.7	88.6	80 - 123	
Carbon Disulfide	20	19.1	95.3	58 - 138	
1,1-Dichloroethane	20	19.6	98.2	80 - 125	
2-Butanone	20	19.4	97.2	58 - 149	
1,2-Dichloroethene	40	42.8	107	80 - 124	
Chloroform	20	20.2	101	80 - 125	
1,1,1-Trichloroethane	20	21.0	105	80 - 134	
Carbon Tetrachloride	20	23.2	116	80 - 137	
1,2-Dichloroethane	20	22.3	111	80 - 129	
Benzene	20	21.6	108	80 - 121	
Trichloroethene	20	21.4	107	80 - 122	
1,2-Dichloropropane	20	20.7	103	80 - 120	
Bromodichloromethane	20	22.9	114	80 - 131	
4-Methyl-2-Pentanone	20	22.8	114	64 - 140	
cis-1,3-Dichloropropene	20	24.1	120	80 - 132	
Toluene	20	23.5	118	80 - 124	
trans-1,3-Dichloropropene	20	23.1	116	80 - 130	
1,1,2-Trichloroethane	20	22.3	112	80 - 125	
2-Hexanone	20	11.1	55.5	56 - 136	*
Tetrachloroethene	20	21.2	106	80 - 124	
Dibromochloromethane	20	23.5	117	80 - 127	
Chlorobenzene	20	19.9	99.7	80 - 120	
Ethylbenzene	20	22.3	111	80 - 122	
Xylenes	60	68.2	114	80 - 121	
Styrene	20	23.0	115	80 - 123	
Bromoform	20	22.7	114	74 - 130	
1,1,2,2-Tetrachloroethane	20	22.0	110	79 - 125	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	103	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
p-Bromofluorobenzene	108	86 - 115	PASS

* Analyte outside control limits
NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B

AAB#: WG115698

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
TRIP BLANK	29-MAR-02	30-MAR-02	04-APR-02	14	6.93	04-APR-02	14	6.93	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYTICAL HOLD TIME

SURROGATE STANDARDS

Login Number: L0204001
 Instrument Id: HPMS6
 Workgroup (AAB#): WG115698

Method: 8260
 Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4
L0204001-02	1.00		105	102	112	106
WG115698-01	1.00		103	100	112	106
WG115698-02	1.00		103	102	108	103

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - p-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0204001 _____ Tune ID: WG114932-01 _____
 Instrument: HPMS6 _____ Run Date: 03/21/2002 _____
 Analyst: CMS _____ Run Time: 22:40 _____
 Workgroup: WG114932 _____ File ID: 6M29660 _____
 Cal ID: HPMS6-21-MAR-02 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.5	7549	PASS
75.0	95.0	30.0	60.0	48.3	15497	PASS
95.0	95.0	100	100	100	32088	PASS
96.0	95.0	5.00	9.00	7.51	2409	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	90.6	29072	PASS
175	174	5.00	9.00	6.79	1974	PASS
176	174	95.0	101	97.1	28232	PASS
177	176	5.00	9.00	7.04	1987	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag
WG114932-03	STD	01
WG114932-04	STD	01
WG114932-05	STD	01
WG114932-06	STD	01
WG114932-07	STD	01
WG114932-08	STD	01
WG114932-10	STD	01
WG114932-11	STD	01
WG114932-12	SSCV	01

* Sample past 12 hour tune limit

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0204001
Instrument: HPMS6
Analyst: CMS
Workgroup: WG115697

Tune ID: WG115697-01
Run Date: 04/04/2002
Run Time: 18:54
File ID: 6M29951
Cal ID: HPMS6 - 22-MAR-2002

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.5	7794	PASS
75.0	95.0	30.0	60.0	49.0	15572	PASS
95.0	95.0	100	100	100	31752	PASS
96.0	95.0	5.00	9.00	6.18	1963	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	78.2	24824	PASS
175	174	5.00	9.00	7.65	1899	PASS
176	174	95.0	101	96.7	24008	PASS
177	176	5.00	9.00	7.79	1870	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Q
L0204001-02	TRIP BLANK		
WG115698-01	BLANK		
WG115698-02	LCS		

* Sample past 12 hour tune limit

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Summary			
		AVG RF	% RSD	R ²	Q
ETHYLBENZENE	CCC	.567	6.27		
TOLUENE	CCC	1.45	14.60		
1,2-DICHLOROPROPANE	CCC	.274	5.75		
CHLOROFORM	CCC	.584	10.70		
1,1-DICHLOROETHENE	CCC	.26	5.00		
VINYL CHLORIDE	CCC	.199	22.10	.997	
1,1,2,2-TETRACHLOROETHANE	SPCC	.392	3.45		
BROMOFORM	SPCC	.146	26.70	.999	
CHLOROBENZENE	SPCC	1.2	10.40		
1,1-DICHLOROETHANE	SPCC	.601	5.52		
CHLOROMETHANE	SPCC	.281	10.40		
1,2,3-TRICHLOROBENZENE		.571	16.80	.999	
NAPHTHALENE		.936	36.20	.999	
HEXACHLOROBUTADIENE		.441	6.64		
1,2,4-TRICHLOROBENZENE		.701	21.00	.999	
1,2-DIBROMO-3-CHLOROPROPANE		.0483	30.00	.995	
1,2-DICHLOROBENZENE		1.38	4.03		
N-BUTYLBENZENE		2.54	15.10	.994	Q
1,4-DICHLOROBENZENE		1.71	7.02		
1,3-DICHLOROBENZENE		1.63	4.33		
P-ISOPROPYLTOLUENE		2.88	17.60	.994	Q
SEC-BUTYLBENZENE		3.2	14.70		
1,2,4-TRIMETHYLBENZENE		2.93	10.50		
TERT-BUTYLBENZENE		2.46	11.50		
A-METHYLSTYRENE		1.42	10.50		
4-CHLOROTOLUENE		2.5	11.50		
2-CHLOROTOLUENE		2.41	8.74		
1,3,5-TRIMETHYLBENZENE		2.61	16.90	.994	Q
BROMOBENZENE		.768	5.63		
N-PROPYLBENZENE		3.62	16.50	.992	Q
TRANS-1,4-DICHLORO-2-BUTENE		.0958	13.60		
1,2,3-TRICHLOROPROPANE		.129	7.96		
P-BROMOFLUOROBENZENE		.928	8.65		
ISOPROPYLBENZENE		1.71	20.70	.995	
STYRENE		1.15	18.70	.996	
O-XYLENE		.63	21.10	.997	
M-,P-XYLENE		.732	8.80		
1,1,1,2-TETRACHLOROETHANE		.364	8.03		
1-CHLOROHEXANE		.41	34.40	.999	
1,2-DIBROMOETHANE		.206	11.60		
DIBROMOCHLOROMETHANE		.268	20.20	.999	
TETRACHLOROETHENE		.342	4.70		
1,3-DICHLOROPROPANE		.379	7.50		
2-HEXANONE		.169	39.50	.998	

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Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte	AVG RF	% RSD	R ²	Q
1,1,2-TRICHLOROETHANE	.231	3.23		
TRANS-1,3-DICHLOROPROPENE	.366	20.00	.999	
ETHYL METHACRYLATE	.222	16.40	.999	
TOLUENE-D8	1.34	6.75		
DIMETHYL DISULFIDE	.144	37.90	.999	
CIS-1,3-DICHLOROPROPENE	.314	23.80	.999	
4-METHYL-2-PENTANONE	.038	18.50	.998	
2-CHLOROETHYL VINYL ETHER	.0718	35.80	.997	
DIBROMOMETHANE	.125	7.20		
BROMODICHLOROMETHANE	.321	10.30		
TRICHLOROETHENE	.312	5.28		
BENZENE	1.1	5.46		
1,2-DICHLOROETHANE	.378	5.75		
1,2-DICHLOROETHANE-D4	.303	5.80		
CARBON TETRACHLORIDE	.422	10.60		
1,1-DICHLOROPROPENE	.4	12.60		
CYCLOHEXANE	.507	7.01		
1,1,1-TRICHLOROETHANE	.503	5.90		
DIBROMOFLUOROMETHANE	.301	3.05		
BROMOCHLOROMETHANE	.166	8.58		
CIS-1,2-DICHLOROETHENE	.29	10.50		
2,2-DICHLOROPROPANE	.407	11.20		
2-BUTANONE	.0436	8.45		
VINYL ACETATE	.327	17.20	.998	
N-HEXANE	.396	11.90		
TRANS-1,2-DICHLOROETHENE	.301	6.29		
METHYL TERT-BUTYL ETHER	.386	17.30	.999	
ACRYLONITRILE	.0479	13.00		
CARBON DISULFIDE	.856	4.70		
METHYLENE CHLORIDE	.302	9.24		
IODOMETHANE	.182	19.90	.998	
DIMETHYL SULFIDE	.244	7.14		
ACETONE	.0402	19.10	.998	
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	.347	6.03		
ACROLEIN	.0153	14.20		
ISOPRENE	.223	13.70		
TRICHLOROFLUOROMETHANE	.296	6.66		
CHLOROETHANE	.123	7.83		
BROMOMETHANE	.121	5.54		
DICHLORODIFLUOROMETHANE	.43	10.40		

= CC
 * = SPCC

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Sample #	File #	Level
		WG114932-08	6M29668	7
		Conc	Response	RF
ETHYLBENZENE	CCC	0.4	7617	.5543
TOLUENE	CCC	0.4	14435	1.05
1,2-DICHLOROPROPANE	CCC	0.4	5296	.2835
CHLOROFORM	CCC	0.4	13917	.7451
1,1-DICHLOROETHENE	CCC	0.4	4839	.2591
VINYL CHLORIDE	CCC			
1,1,2,2-TETRACHLOROETHANE	SPCC	0.4	3139	.395
BROMOFORM	SPCC			
CHLOROBENZENE	SPCC	0.4	20471	1.49
1,1-DICHLOROETHANE	SPCC	0.4	12481	.6682
CHLOROMETHANE	SPCC			
1,2,3-TRICHLOROBENZENE				
NAPHTHALENE				
HEXACHLOROBUTADIENE		0.4	3444	.4334
1,2,4-TRICHLOROBENZENE				
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DICHLOROBENZENE				
N-BUTYLBENZENE				
1,4-DICHLOROBENZENE				
1,3-DICHLOROBENZENE				
P-ISOPROPYLTOLUENE				
SEC-BUTYLBENZENE				
1,2,4-TRIMETHYLBENZENE				
TERT-BUTYLBENZENE				
A-METHYLSTYRENE				
4-CHLOROTOLUENE		0.4	15314	1.927
2-CHLOROTOLUENE		0.4	15633	1.967
1,3,5-TRIMETHYLBENZENE				
BROMOBENZENE		0.4	5562	.6999
N-PROPYLBENZENE				
TRANS-1,4-DICHLORO-2-BUTENE				
1,2,3-TRICHLOROPROPANE				
P-BROMOFLUOROBENZENE				
ISOPROPYLBENZENE				
STYRENE				
O-XYLENE				
M-, P-XYLENE		0.8	18488	.6727
1,1,1,2-TETRACHLOROETHANE		0.4	4875	.3547
1-CHLOROHEXANE		0.4	2554	.1859
1,2-DIBROMOETHANE		0.4	2552	.1857
DIBROMOCHLOROMETHANE		0.4	3023	.22
TETRACHLOROETHENE		0.4	5041	.3668
1,3-DICHLOROPROPANE		0.4	4904	.3569

INITIAL CALIBRATION

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Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
2-HEXANONE			
1,1,2-TRICHLOROETHANE	0.4	3312	.241
TRANS-1,3-DICHLOROPROPENE			
ETHYL METHACRYLATE			
TOLUENE-D8			
DIMETHYL DISULFIDE			
CIS-1,3-DICHLOROPROPENE			
4-METHYL-2-PENTANONE			
2-CHLOROETHYL VINYL ETHER			
DIBROMOMETHANE	0.4	2655	.1421
BROMODICHLOROMETHANE	0.4	6438	.3447
TRICHLOROETHENE	0.4	5753	.308
BENZENE	0.4	19651	1.052
1,2-DICHLOROETHANE	0.4	7893	.4226
1,2-DICHLOROETHANE-D4			
CARBON TETRACHLORIDE	0.4	7770	.416
1,1-DICHLOROPROPENE			
CYCLOHEXANE			
1,1,1-TRICHLOROETHANE	0.4	10393	.5564
DIBROMOFLUOROMETHANE			
BROMOCHLOROMETHANE	0.4	3805	.2037
CIS-1,2-DICHLOROETHENE	0.4	4871	.2608
2,2-DICHLOROPROPANE	0.4	7271	.3893
2-BUTANONE			
VINYL ACETATE			
N-HEXANE			
TRANS-1,2-DICHLOROETHENE	0.4	6045	.3236
METHYL TERT-BUTYL ETHER			
ACRYLONITRILE			
CARBON DISULFIDE	0.4	15258	.8169
METHYLENE CHLORIDE	0.4	6679	.3576
IODOMETHANE			
DIMETHYL SULFIDE			
ACETONE			
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE			
ACROLEIN			
ISOPRENE			
TRICHLOROFLUOROMETHANE			
CHLOROETHANE			
BROMOMETHANE			
DICHLORODIFLUOROMETHANE			

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Sample #	File #	Level
		WG114932-07	6M29667	6
		Conc	Response	RF
ETHYLBENZENE	CCC	1.0	18559	.5171
TOLUENE	CCC	1.0	42810	1.193
1,2-DICHLOROPROPANE	CCC	1.0	11985	.2459
CHLOROFORM	CCC	1.0	27533	.5649
1,1-DICHLOROETHENE	CCC	1.0	11892	.244
VINYL CHLORIDE	CCC	1.0	12744	.2615
1,1,2,2-TETRACHLOROETHANE	SPCC	1.0	7621	.368
BROMOFORM	SPCC	1.0	3088	.086
CHLOROBENZENE	SPCC	1.0	45277	1.262
1,1-DICHLOROETHANE	SPCC	1.0	29905	.6136
CHLOROMETHANE	SPCC	1.0	15777	.3237
1,2,3-TRICHLOROBENZENE		1.0	8297	.4006
NAPHTHALENE		1.0	8846	.4271
HEXACHLOROBUTADIENE		1.0	8672	.4187
1,2,4-TRICHLOROBENZENE		1.0	9776	.472
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DICHLOROBENZENE		1.0	26516	1.28
N-BUTYLBENZENE		1.0	37246	1.798
1,4-DICHLOROBENZENE		1.0	38505	1.859
1,3-DICHLOROBENZENE		1.0	31836	1.537
P-ISOPROPYLTOLUENE		1.0	38521	1.86
SEC-BUTYLBENZENE		1.0	47742	2.305
1,2,4-TRIMETHYLBENZENE		1.0	48362	2.335
TERT-BUTYLBENZENE		1.0	38347	1.852
A-METHYLSTYRENE				
4-CHLOROTOLUENE		1.0	47688	2.303
2-CHLOROTOLUENE		1.0	46409	2.241
1,3,5-TRIMETHYLBENZENE		1.0	35435	1.711
BROMOBENZENE		1.0	14448	.6976
N-PROPYLBENZENE		1.0	50270	2.427
TRANS-1,4-DICHLORO-2-BUTENE				
1,2,3-TRICHLOROPROPANE		1.0	2240	.1082
P-BROMOFLUOROBENZENE				
ISOPROPYLBENZENE		1.0	37588	1.047
STYRENE		1.0	25524	.7112
O-XYLENE		1.0	13629	.3797
M-, P-XYLENE		2.0	47655	.6639
1,1,1,2-TETRACHLOROETHANE		1.0	11211	.3124
1-CHLOROHEXANE		1.0	7990	.2226
1,2-DIBROMOETHANE		1.0	6152	.1714
DIBROMOCHLOROMETHANE		1.0	6878	.1916
TETRACHLOROETHENE		1.0	11303	.3149
1,3-DICHLOROPROPANE		1.0	11926	.3323

INITIAL CALIBRATION

Login Number: L0204001
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 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
2-HEXANONE			
1,1,2-TRICHLOROETHANE	1.0	7871	.2193
TRANS-1,3-DICHLOROPROPENE	1.0	8982	.2503
ETHYL METHACRYLATE			
TOLUENE-D8			
DIMETHYL DISULFIDE			
CIS-1,3-DICHLOROPROPENE	1.0	9630	.1976
4-METHYL-2-PENTANONE			
2-CHLOROETHYL VINYL ETHER			
DIBROMOMETHANE	1.0	5381	.1104
BROMODICHLOROMETHANE	1.0	13391	.2748
TRICHLOROETHENE	1.0	14373	.2949
BENZENE	1.0	48855	1.002
1,2-DICHLOROETHANE	1.0	18962	.3891
1,2-DICHLOROETHANE-D4	0.5	8178	.3356
CARBON TETRACHLORIDE	1.0	17661	.3624
1,1-DICHLOROPROPENE	1.0	14633	.3002
CYCLOHEXANE			
1,1,1-TRICHLOROETHANE	1.0	23210	.4762
DIBROMOFLUOROMETHANE	0.5	7702	.3161
BROMOCHLOROMETHANE	1.0	7815	.1603
CIS-1,2-DICHLOROETHENE	1.0	11410	.2341
2,2-DICHLOROPROPANE	1.0	16390	.3363
2-BUTANONE			
VINYL ACETATE	1.0	11052	.2268
N-HEXANE			
TRANS-1,2-DICHLOROETHENE	1.0	13248	.2718
METHYL TERT-BUTYL ETHER	1.0	13062	.268
ACRYLONITRILE			
CARBON DISULFIDE	1.0	38427	.7884
METHYLENE CHLORIDE	1.0	15601	.3201
IODOMETHANE	1.0	6744	.1384
DIMETHYL SULFIDE			
ACETONE			
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1.0	18369	.3769
ACROLEIN	2.0	1096	.0112
ISOPRENE	1.0	8055	.1653
TRICHLOROFLUOROMETHANE	1.0	15742	.323
CHLOROETHANE	1.0	6362	.1305
BROMOMETHANE	1.0	5588	.1147
DICHLORODIFLUOROMETHANE	1.0	22705	.4659

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Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Sample #	File #	Level
		WG114932-06	6M29666	5
		Conc	Response	RF
ETHYLBENZENE	CCC	2.0	41767	.5568
TOLUENE	CCC	2.0	101262	1.35
1,2-DICHLOROPROPANE	CCC	2.0	26368	.2616
CHLOROFORM	CCC	2.0	59225	.5876
1,1-DICHLOROETHENE	CCC	2.0	24539	.2435
VINYL CHLORIDE	CCC	2.0	25798	.256
1,1,2,2-TETRACHLOROETHANE	SPCC	2.0	17219	.4012
BROMOFORM	SPCC	2.0	7734	.1031
CHLOROBENZENE	SPCC	2.0	90138	1.202
1,1-DICHLOROETHANE	SPCC	2.0	61217	.6074
CHLOROMETHANE	SPCC	2.0	31642	.3139
1,2,3-TRICHLOROBENZENE		2.0	19968	.4652
NAPHTHALENE		2.0	21658	.5046
HEXACHLOROBUTADIENE		2.0	18811	.4383
1,2,4-TRICHLOROBENZENE		2.0	22890	.5333
1,2-DIBROMO-3-CHLOROPROPANE		2.0	1283	.0299
1,2-DICHLOROBENZENE		2.0	59877	1.395
N-BUTYLBENZENE		2.0	95171	2.217
1,4-DICHLOROBENZENE		2.0	79105	1.843
1,3-DICHLOROBENZENE		2.0	70203	1.636
P-ISOPROPYLTOLUENE		2.0	106494	2.481
SEC-BUTYLBENZENE		2.0	120073	2.798
1,2,4-TRIMETHYLBENZENE		2.0	122541	2.855
TERT-BUTYLBENZENE		2.0	101293	2.36
A-METHYLSTYRENE				
4-CHLOROTOLUENE		2.0	111394	2.595
2-CHLOROTOLUENE		2.0	107023	2.494
1,3,5-TRIMETHYLBENZENE		2.0	97869	2.28
BROMOBENZENE		2.0	33218	.7739
N-PROPYLBENZENE		2.0	137305	3.199
TRANS-1,4-DICHLORO-2-BUTENE				
1,2,3-TRICHLOROPROPANE		2.0	5155	.1201
P-BROMOFLUOROBENZENE				
ISOPROPYLBENZENE		2.0	99058	1.321
STYRENE		2.0	70648	.9419
O-XYLENE		2.0	35754	.4767
M-,P-XYLENE		4.0	109438	.7295
1,1,1,2-TETRACHLOROETHANE		2.0	25204	.336
1-CHLOROHEXANE		2.0	21956	.2927
1,2-DIBROMOETHANE		2.0	13517	.1802
DIBROMOCHLOROMETHANE		2.0	15853	.2113
TETRACHLOROETHENE		2.0	24893	.3319
1,3-DICHLOROPROPANE		2.0	25754	.3433

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 Instrument ID: HPMS6

Analyst: CMS
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Analyte	Sample #	File #	Level
	Conc	Response	RF
2-HEXANONE			
1,1,2-TRICHLOROETHANE	2.0	17032	.2271
TRANS-1,3-DICHLOROPROPENE	2.0	20340	.2712
ETHYL METHACRYLATE			
TOLUENE-D8	1.0	43607	1.163
DIMETHYL DISULFIDE			
CIS-1,3-DICHLOROPROPENE	2.0	23041	.2286
4-METHYL-2-PENTANONE			
2-CHLOROETHYL VINYL ETHER	2.0	3560	.0353
DIBROMOMETHANE	2.0	11912	.1182
BROMODICHLOROMETHANE	2.0	28985	.2876
TRICHLOROETHENE	2.0	30906	.3066
BENZENE	2.0	109417	1.086
1,2-DICHLOROETHANE	2.0	38659	.3836
1,2-DICHLOROETHANE-D4	1.0	15877	.3151
CARBON TETRACHLORIDE	2.0	37465	.3717
1,1-DICHLOROPROPENE	2.0	36509	.3622
CYCLOHEXANE			
1,1,1-TRICHLOROETHANE	2.0	48027	.4765
DIBROMOFLUOROMETHANE	1.0	15001	.2977
BROMOCHLOROMETHANE	2.0	16779	.1665
CIS-1,2-DICHLOROETHENE	2.0	27301	.2709
2,2-DICHLOROPROPANE	2.0	36268	.3598
2-BUTANONE	2.0	3961	.0393
VINYL ACETATE	2.0	27083	.2687
N-HEXANE	2.0	31109	.3087
TRANS-1,2-DICHLOROETHENE	2.0	28021	.278
METHYL TERT-BUTYL ETHER	2.0	32778	.3252
ACRYLONITRILE			
CARBON DISULFIDE	2.0	85158	.8449
METHYLENE CHLORIDE	2.0	32798	.3254
IODOMETHANE	2.0	15451	.1533
DIMETHYL SULFIDE			
ACETONE			
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	2.0	35383	.3511
ACROLEIN	4.0	2554	.0127
ISOPRENE	2.0	20261	.201
TRICHLOROFLUOROMETHANE	2.0	31379	.3113
CHLOROETHANE	2.0	13928	.1382
BROMOMETHANE	2.0	12921	.1282
DICHLORODIFLUOROMETHANE	2.0	48508	.4813

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 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Sample #	File #	Level
		Conc	Response	RF
		WG114932-05	6M29665	4
ETHYLBENZENE	CCC	5.0	112441	.5842
TOLUENE	CCC	5.0	299082	1.554
1,2-DICHLOROPROPANE	CCC	5.0	70691	.2702
CHLOROFORM	CCC	5.0	151361	.5784
1,1-DICHLOROETHENE	CCC	5.0	68872	.2632
VINYL CHLORIDE	CCC	5.0	60147	.2299
1,1,2,2-TETRACHLOROETHANE	SPCC	5.0	45315	.3962
BROMOFORM	SPCC	5.0	24096	.1252
CHLOROBENZENE	SPCC	5.0	228871	1.189
1,1-DICHLOROETHANE	SPCC	5.0	156259	.5972
CHLOROMETHANE	SPCC	5.0	79465	.3037
1,2,3-TRICHLOROENZENE		5.0	64365	.5627
NAPHTHALENE		5.0	88883	.777
HEXACHLOROBUTADIENE		5.0	47849	.4183
1,2,4-TRICHLOROENZENE		5.0	72153	.6308
1,2-DIBROMO-3-CHLOROPROPANE		5.0	4394	.0384
1,2-DICHLOROENZENE		5.0	161726	1.414
N-BUTYLBENZENE		5.0	302267	2.643
1,4-DICHLOROENZENE		5.0	203776	1.782
1,3-DICHLOROENZENE		5.0	191555	1.675
P-ISOPROPYLTOLUENE		5.0	338256	2.957
SEC-BUTYLBENZENE		5.0	375687	3.284
1,2,4-TRIMETHYLBENZENE		5.0	355321	3.106
TERT-BUTYLBENZENE		5.0	292350	2.556
A-METHYLSTYRENE		5.0	137495	1.202
4-CHLOROTOLUENE		5.0	316279	2.765
2-CHLOROTOLUENE		5.0	287203	2.511
1,3,5-TRIMETHYLBENZENE		5.0	311843	2.726
BROMOENZENE		5.0	90966	.7953
N-PROPYLBENZENE		5.0	437780	3.827
TRANS-1,4-DICHLORO-2-BUTENE		5.0	9031	.079
1,2,3-TRICHLOROPROPANE		5.0	15388	.1345
P-BROMOFLUROOENZENE		2.5	46056	.8053
ISOPROPYLBENZENE		5.0	330114	1.715
STYRENE		5.0	225434	1.171
O-XYLENE		5.0	121507	.6313
M-, P-XYLENE		10.0	301633	.7836
1,1,1,2-TETRACHLOROETHANE		5.0	70495	.3662
1-CHLOROHEXANE		5.0	80931	.4205
1,2-DIBROMOETHANE		5.0	38319	.1991
DIBROMOCHLOROMETHANE		5.0	47933	.249
TETRACHLOROETHENE		5.0	66343	.3447
1,3-DICHLOROPROPANE		5.0	73555	.3821

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Analyte	Sample #	File #	Level
	WG114932-05	6M29665	4
	Conc	Response	RF
2-HEXANONE	5.0	53050	.2756
1,1,2-TRICHLOROETHANE	5.0	45295	.2353
TRANS-1,3-DICHLOROPROPENE	5.0	65709	.3414
ETHYL METHACRYLATE	5.0	32144	.167
TOLUENE-D8	2.5	124685	1.296
DIMETHYL DISULFIDE	5.0	18889	.0722
CIS-1,3-DICHLOROPROPENE	5.0	73888	.2824
4-METHYL-2-PENTANONE	5.0	7386	.0282
2-CHLOROETHYL VINYL ETHER	5.0	12742	.0487
DIBROMOMETHANE	5.0	32888	.1257
BROMODICHLOROMETHANE	5.0	78809	.3012
TRICHLOROETHENE	5.0	78691	.3007
BENZENE	5.0	296512	1.133
1,2-DICHLOROETHANE	5.0	100089	.3825
1,2-DICHLOROETHANE-D4	2.5	40162	.307
CARBON TETRACHLORIDE	5.0	104486	.3993
1,1-DICHLOROPROPENE	5.0	104856	.4007
CYCLOHEXANE	5.0	123332	.4713
1,1,1-TRICHLOROETHANE	5.0	129760	.4959
DIBROMOFLUOROMETHANE	2.5	38746	.2961
BROMOCHLOROMETHANE	5.0	42446	.1622
CIS-1,2-DICHLOROETHENE	5.0	76661	.293
2,2-DICHLOROPROPANE	5.0	102126	.3903
2-BUTANONE	5.0	11525	.044
VINYL ACETATE	5.0	76990	.2942
N-HEXANE	5.0	101284	.3871
TRANS-1,2-DICHLOROETHENE	5.0	80278	.3068
METHYL TERT-BUTYL ETHER	5.0	98310	.3757
ACRYLONITRILE	5.0	11072	.0423
CARBON DISULFIDE	5.0	232748	.8895
METHYLENE CHLORIDE	5.0	80784	.3087
IODOMETHANE	5.0	43994	.1681
DIMETHYL SULFIDE	5.0	59160	.2261
ACETONE	5.0	14134	.054
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	5.0	96664	.3694
ACROLEIN	10.0	8291	.0158
ISOPRENE	5.0	56691	.2166
TRICHLOROFLUOROMETHANE	5.0	82497	.3153
CHLOROETHANE	5.0	34184	.1306
BROMOMETHANE	5.0	34632	.1323
DICHLORODIFLUOROMETHANE	5.0	123090	.4704

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Analyte		Sample #	File #	Level
		WG114932-04	6M29664	3
		Conc	Response	RF
ETHYLBENZENE	CCC	10.0	238400	.5875
TOLUENE	CCC	10.0	632752	1.559
1,2-DICHLOROPROPANE	CCC	10.0	151324	.2662
CHLOROFORM	CCC	10.0	308581	.5429
1,1-DICHLOROETHENE	CCC	10.0	139344	.2452
VINYL CHLORIDE	CCC	10.0	107872	.1898
1,1,2,2-TETRACHLOROETHANE	SPCC	10.0	99836	.3868
BROMOFORM	SPCC	10.0	59218	.1459
CHLOROBENZENE	SPCC	10.0	467669	1.153
1,1-DICHLOROETHANE	SPCC	10.0	320847	.5645
CHLOROMETHANE	SPCC	10.0	153126	.2694
1,2,3-TRICHLOROBENZENE		10.0	145558	.564
NAPHTHALENE		10.0	241444	.9355
HEXACHLOROBUTADIENE		10.0	104996	.4068
1,2,4-TRICHLOROBENZENE		10.0	175172	.6787
1,2-DIBROMO-3-CHLOROPROPANE		10.0	10391	.0403
1,2-DICHLOROBENZENE		10.0	354636	1.374
N-BUTYLBENZENE		10.0	679308	2.632
1,4-DICHLOROBENZENE		10.0	432668	1.676
1,3-DICHLOROBENZENE		10.0	425429	1.648
P-ISOPROPYLTOLUENE		10.0	780395	3.024
SEC-BUTYLBENZENE		10.0	856045	3.317
1,2,4-TRIMETHYLBENZENE		10.0	791529	3.067
TERT-BUTYLBENZENE		10.0	652656	2.529
A-METHYLSTYRENE		10.0	340655	1.32
4-CHLOROTOLUENE		10.0	675949	2.619
2-CHLOROTOLUENE		10.0	635536	2.462
1,3,5-TRIMETHYLBENZENE		10.0	704023	2.728
BROMOBENZENE		10.0	200204	.7757
N-PROPYLBENZENE		10.0	973851	3.773
TRANS-1,4-DICHLORO-2-BUTENE		10.0	21906	.0849
1,2,3-TRICHLOROPROPANE		10.0	33543	.13
P-BROMOFLUOROBENZENE		5.0	111591	.8647
ISOPROPYLBENZENE		10.0	754166	1.859
STYRENE		10.0	509469	1.256
O-XYLENE		10.0	275443	.6788
M-, P-XYLENE		20.0	646361	.7965
1,1,1,2-TETRACHLOROETHANE		10.0	153881	.3792
1-CHLOROHEXANE		10.0	184542	.4548
1,2-DIBROMOETHANE		10.0	84825	.209
DIBROMOCHLOROMETHANE		10.0	109316	.2694
TETRACHLOROETHENE		10.0	136854	.3373
1,3-DICHLOROPROPANE		10.0	158368	.3903

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Analyte	Sample #	File #	Level
	Conc	Response	RF
	WG114932-04	6M29664	3
2-HEXANONE	10.0	86592	.2134
1,1,2-TRICHLOROETHANE	10.0	93247	.2298
TRANS-1,3-DICHLOROPROPENE	10.0	151437	.3732
ETHYL METHACRYLATE	10.0	80157	.1975
TOLUENE-D8	5.0	282141	1.391
DIMETHYL DISULFIDE	10.0	53157	.0935
CIS-1,3-DICHLOROPROPENE	10.0	169830	.2988
4-METHYL-2-PENTANONE	10.0	18800	.0331
2-CHLOROETHYL VINYL ETHER	10.0	34025	.0599
DIBROMOMETHANE	10.0	69089	.1216
BROMODICHLOROMETHANE	10.0	168972	.2973
TRICHLOROETHENE	10.0	166865	.2936
BENZENE	10.0	618437	1.088
1,2-DICHLOROETHANE	10.0	205717	.3619
1,2-DICHLOROETHANE-D4	5.0	85603	.3012
CARBON TETRACHLORIDE	10.0	223463	.3932
1,1-DICHLOROPROPENE	10.0	221756	.3901
CYCLOHEXANE	10.0	270086	.4752
1,1,1-TRICHLOROETHANE	10.0	269314	.4738
DIBROMOFLUOROMETHANE	5.0	84784	.2983
BROMOCHLOROMETHANE	10.0	90593	.1594
CIS-1,2-DICHLOROETHENE	10.0	165398	.291
2,2-DICHLOROPROPANE	10.0	219701	.3865
2-BUTANONE	10.0	23391	.0412
VINYL ACETATE	10.0	205088	.3608
N-HEXANE	10.0	218161	.3838
TRANS-1,2-DICHLOROETHENE	10.0	163029	.2868
METHYL TERT-BUTYL ETHER	10.0	219341	.3859
ACRYLONITRILE	10.0	22304	.0392
CARBON DISULFIDE	10.0	474496	.8348
METHYLENE CHLORIDE	10.0	160990	.2832
IODOMETHANE	10.0	90725	.1596
DIMETHYL SULFIDE	10.0	127288	.2239
ACETONE	10.0	25195	.0443
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10.0	186906	.3288
ACROLEIN	20.0	18147	.016
ISOPRENE	10.0	121415	.2136
TRICHLOROFLUOROMETHANE	10.0	155033	.2728
CHLOROETHANE	10.0	64536	.1135
BROMOMETHANE	10.0	64423	.1133
DICHLORODIFLUOROMETHANE	10.0	237473	.4178

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Analyte		Sample #	File #	Level
		WG114932-03	6M29663	2
		Conc	Response	RF
ETHYLBENZENE	CCC	20.0	515490	.6018
TOLUENE	CCC	20.0	1397573	1.632
1,2-DICHLOROPROPANE	CCC	20.0	323547	.2762
CHLOROFORM	CCC	20.0	650676	.5554
1,1-DICHLOROETHENE	CCC	20.0	305519	.2608
VINYL CHLORIDE	CCC	20.0	208687	.1781
1,1,2,2-TETRACHLOROETHANE	SPCC	20.0	207681	.3939
BROMOFORM	SPCC	20.0	136947	.1599
CHLOROBENZENE	SPCC	20.0	1006845	1.175
1,1-DICHLOROETHANE	SPCC	20.0	683895	.5837
CHLOROMETHANE	SPCC	20.0	315608	.2694
1,2,3-TRICHLOROBENZENE		20.0	322268	.6112
NAPHTHALENE		20.0	583896	1.107
HEXACHLOROBUTADIENE		20.0	225700	.428
1,2,4-TRICHLOROBENZENE		20.0	401899	.7622
1,2-DIBROMO-3-CHLOROPROPANE		20.0	24232	.046
1,2-DICHLOROBENZENE		20.0	745944	1.415
N-BUTYLBENZENE		20.0	1475467	2.798
1,4-DICHLOROBENZENE		20.0	896569	1.7
1,3-DICHLOROBENZENE		20.0	885360	1.679
P-ISOPROPYLTOLUENE		20.0	1700016	3.224
SEC-BUTYLBENZENE		20.0	1869724	3.546
1,2,4-TRIMETHYLBENZENE		20.0	1657097	3.143
TERT-BUTYLBENZENE		20.0	1388437	2.633
A-METHYLSTYRENE		20.0	763028	1.447
4-CHLOROTOLUENE		20.0	1438296	2.728
2-CHLOROTOLUENE		20.0	1332393	2.527
1,3,5-TRIMETHYLBENZENE		20.0	1541462	2.923
BROMOBENZENE		20.0	421138	.7987
N-PROPYLBENZENE		20.0	2148296	4.074
TRANS-1,4-DICHLORO-2-BUTENE		20.0	49610	.0941
1,2,3-TRICHLOROPROPANE		20.0	71627	.1358
P-BROMOFLUOROBENZENE		10.0	243853	.9249
ISOPROPYLBENZENE		20.0	1680495	1.962
STYRENE		20.0	1108055	1.294
O-XYLENE		20.0	614778	.7177
M-,P-XYLENE		40.0	1355609	.7912
1,1,1,2-TETRACHLOROETHANE		20.0	337803	.3943
1-CHLOROHEXANE		20.0	433327	.5058
1,2-DIBROMOETHANE		20.0	186442	.2176
DIBROMOCHLOROMETHANE		20.0	250294	.2922
TETRACHLOROETHENE		20.0	297877	.3477
1,3-DICHLOROPROPANE		20.0	343569	.4011

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Analyte	Sample #	File #	Level
	WG114932-03	6M29663	2
	Conc	Response	RF
2-HEXANONE	20.0	152140	.1776
1,1,2-TRICHLOROETHANE	20.0	204344	.2385
TRANS-1,3-DICHLOROPROPENE	20.0	346851	.4049
ETHYL METHACRYLATE	20.0	190823	.2228
TOLUENE-D8	10.0	582899	1.361
DIMETHYL DISULFIDE	20.0	153354	.1309
CIS-1,3-DICHLOROPROPENE	20.0	402364	.3434
4-METHYL-2-PENTANONE	20.0	44908	.0383
2-CHLOROETHYL VINYL ETHER	20.0	87842	.075
DIBROMOMETHANE	20.0	144021	.1229
BROMODICHLOROMETHANE	20.0	373807	.3191
TRICHLOROETHENE	20.0	362306	.3092
BENZENE	20.0	1350880	1.153
1,2-DICHLOROETHANE	20.0	429225	.3664
1,2-DICHLOROETHANE-D4	10.0	168317	.2873
CARBON TETRACHLORIDE	20.0	508625	.4341
1,1-DICHLOROPROPENE	20.0	496177	.4235
CYCLOHEXANE	20.0	610297	.5209
1,1,1-TRICHLOROETHANE	20.0	583678	.4982
DIBROMOFLUOROMETHANE	10.0	170338	.2908
BROMOCHLOROMETHANE	20.0	188739	.1611
CIS-1,2-DICHLOROETHENE	20.0	362284	.3092
2,2-DICHLOROPROPANE	20.0	493637	.4213
2-BUTANONE	20.0	51745	.0442
VINYL ACETATE	20.0	427582	.365
N-HEXANE	20.0	496856	.4241
TRANS-1,2-DICHLOROETHENE	20.0	350947	.2996
METHYL TERT-BUTYL ETHER	20.0	483209	.4124
ACRYLONITRILE	20.0	57927	.0494
CARBON DISULFIDE	20.0	1008382	.8607
METHYLENE CHLORIDE	20.0	331932	.2833
IODOMETHANE	20.0	207056	.1767
DIMETHYL SULFIDE	20.0	277836	.2371
ACETONE	20.0	43576	.0372
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	20.0	400124	.3415
ACROLEIN	40.0	40344	.0172
ISOPRENE	20.0	273322	.2333
TRICHLOROFLUOROMETHANE	20.0	335215	.2861
CHLOROETHANE	20.0	137130	.117
BROMOMETHANE	20.0	135213	.1154
DICHLORODIFLUOROMETHANE	20.0	500523	.4272

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Analyte		Sample #	File #	Level
		WG114932-02	6M29662	1
		Conc	Response	RF
ETHYLBENZENE	CCC	50.0	1324759	.612
TOLUENE	CCC	50.0	3597853	1.662
1,2-DICHLOROPROPANE	CCC	50.0	829885	.2905
CHLOROFORM	CCC	50.0	1636887	.5729
1,1-DICHLOROETHENE	CCC	50.0	794761	.2782
VINYL CHLORIDE	CCC	50.0	500949	.1753
1,1,2,2-TETRACHLOROETHANE	SPCC	50.0	487762	.3764
BROMOFORM	SPCC	50.0	353119	.1631
CHLOROBENZENE	SPCC	50.0	2542670	1.175
1,1-DICHLOROETHANE	SPCC	50.0	1749831	.6124
CHLOROMETHANE	SPCC	50.0	775810	.2715
1,2,3-TRICHLOROBENZENE		50.0	812935	.6273
NAPHTHALENE		50.0	1504577	1.161
HEXACHLOROBUTADIENE		50.0	644612	.4974
1,2,4-TRICHLOROBENZENE		50.0	1073653	.8284
1,2-DIBROMO-3-CHLOROPROPANE		50.0	62979	.0486
1,2-DICHLOROBENZENE		50.0	1842187	1.421
N-BUTYLBENZENE		50.0	3916615	3.022
1,4-DICHLOROBENZENE		50.0	2202610	1.7
1,3-DICHLOROBENZENE		50.0	2223185	1.715
P-ISOPROPYLTOLUENE		50.0	4479618	3.457
SEC-BUTYLBENZENE		50.0	4897239	3.779
1,2,4-TRIMETHYLBENZENE		50.0	4223994	3.259
TERT-BUTYLBENZENE		50.0	3594019	2.773
A-METHYLSTYRENE		50.0	2086391	1.61
4-CHLOROTOLUENE		50.0	3613377	2.788
2-CHLOROTOLUENE		50.0	3414511	2.635
1,3,5-TRIMETHYLBENZENE		50.0	4016241	3.099
BROMOBENZENE		50.0	1047377	.8082
N-PROPYLBENZENE		50.0	5562876	4.292
TRANS-1,4-DICHLORO-2-BUTENE		50.0	123190	.0951
1,2,3-TRICHLOROPROPANE		50.0	164367	.1268
P-BROMOFLUOROBENZENE		25.0	637378	.9836
ISOPROPYLBENZENE		50.0	4465001	2.063
STYRENE		50.0	2846490	1.315
O-XYLENE		50.0	1629030	.7526
M-,P-XYLENE		100.0	3429798	.7923
1,1,1,2-TETRACHLOROETHANE		50.0	849555	.3925
1-CHLOROHEXANE		50.0	1195646	.5524
1,2-DIBROMOETHANE		50.0	464766	.2147
DIBROMOCHLOROMETHANE		50.0	655185	.3027
TETRACHLOROETHENE		50.0	778929	.3599
1,3-DICHLOROPROPANE		50.0	846630	.3911

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Analyte	Sample #	File #	Level
	WG114932-02	6M29662	1
	Conc	Response	RF
2-HEXANONE	50.0	257519	.119
1,1,2-TRICHLOROETHANE	50.0	488596	.2257
TRANS-1,3-DICHLOROPROPENE	50.0	892193	.4122
ETHYL METHACRYLATE	50.0	479897	.2217
TOLUENE-D8	25.0	1537306	1.42
DIMETHYL DISULFIDE	50.0	477102	.167
CIS-1,3-DICHLOROPROPENE	50.0	1071845	.3751
4-METHYL-2-PENTANONE	50.0	105172	.0368
2-CHLOROETHYL VINYL ETHER	50.0	224679	.0786
DIBROMOMETHANE	50.0	349439	.1223
BROMODICHLOROMETHANE	50.0	994457	.3481
TRICHLOROETHENE	50.0	961955	.3367
BENZENE	50.0	3392652	1.187
1,2-DICHLOROETHANE	50.0	1051442	.368
1,2-DICHLOROETHANE-D4	25.0	409861	.2869
CARBON TETRACHLORIDE	50.0	1370185	.4796
1,1-DICHLOROPROPENE	50.0	1298985	.4546
CYCLOHEXANE	50.0	1591143	.5569
1,1,1-TRICHLOROETHANE	50.0	1525815	.534
DIBROMOFLUOROMETHANE	25.0	426194	.2983
BROMOCHLOROMETHANE	50.0	461431	.1615
CIS-1,2-DICHLOROETHENE	50.0	931615	.3261
2,2-DICHLOROPROPANE	50.0	1336209	.4677
2-BUTANONE	50.0	114397	.04
VINYL ACETATE	50.0	1065717	.373
N-HEXANE	50.0	1317844	.4612
TRANS-1,2-DICHLOROETHENE	50.0	915862	.3206
METHYL TERT-BUTYL ETHER	50.0	1121907	.3927
ACRYLONITRILE	50.0	137187	.048
CARBON DISULFIDE	50.0	2607768	.9127
METHYLENE CHLORIDE	50.0	809019	.2832
IODOMETHANE	50.0	552023	.1932
DIMETHYL SULFIDE	50.0	708694	.248
ACETONE	50.0	95923	.0336
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	50.0	1025934	.3591
ACROLEIN	100.0	90399	.0158
ISOPRENE	50.0	719327	.2518
TRICHLOROFLUOROMETHANE	50.0	868135	.3038
CHLOROETHANE	50.0	349542	.1223
BROMOMETHANE	50.0	345103	.1208
DICHLORODIFLUOROMETHANE	50.0	1264802	.4427

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Analyte		Sample #	File #	Level
		WG114932-10	6M29670	8
		Conc	Response	RF
ETHYLBENZENE	CCC	100.0	2570099	.5809
TOLUENE	CCC	100.0	7059155	1.596
1,2-DICHLOROPROPANE	CCC	100.0	1711733	.2984
CHLOROFORM	CCC	100.0	3285043	.5727
1,1-DICHLOROETHENE	CCC	100.0	1571263	.2739
VINYL CHLORIDE	CCC	100.0	910901	.1588
1,1,2,2-TETRACHLOROETHANE	SPCC	100.0	1111428	.4123
BROMOFORM	SPCC	100.0	851328	.1924
CHLOROBENZENE	SPCC	100.0	5055012	1.143
1,1-DICHLOROETHANE	SPCC	100.0	3494473	.6092
CHLOROMETHANE	SPCC	100.0	1428095	.249
1,2,3-TRICHLOROBENZENE		100.0	1839969	.6826
NAPHTHALENE		100.0	3565796	1.323
HEXACHLOROBUTADIENE		100.0	1262957	.4685
1,2,4-TRICHLOROBENZENE		100.0	2345890	.8703
1,2-DIBROMO-3-CHLOROPROPANE		100.0	174964	.0649
1,2-DICHLOROBENZENE		100.0	3850463	1.429
N-BUTYLBENZENE		100.0	7440361	2.76
1,4-DICHLOROBENZENE		100.0	4445158	1.649
1,3-DICHLOROBENZENE		100.0	4507268	1.672
P-ISOPROPYLTOLUENE		100.0	8658445	3.212
SEC-BUTYLBENZENE		100.0	9467923	3.513
1,2,4-TRIMETHYLBENZENE		100.0	8188268	3.038
TERT-BUTYLBENZENE		100.0	7106851	2.637
A-METHYLSTYRENE		100.0	4168099	1.546
4-CHLOROTOLUENE		100.0	6910165	2.564
2-CHLOROTOLUENE		100.0	6899828	2.56
1,3,5-TRIMETHYLBENZENE		100.0	7801848	2.894
BROMOBENZENE		100.0	2185102	.8106
N-PROPYLBENZENE		100.0	10676993	3.961
TRANS-1,4-DICHLORO-2-BUTENE		100.0	300402	.1114
1,2,3-TRICHLOROPROPANE		100.0	376053	.1395
P-BROMOFLUOROBENZENE		50.0	1374748	1.02
ISOPROPYLBENZENE		100.0	8783598	1.985
STYRENE		100.0	5788059	1.308
O-XYLENE		100.0	3254404	.7356
M-, P-XYLENE		200.0	6509960	.7357
1,1,1,2-TETRACHLOROETHANE		100.0	1747394	.395
1-CHLOROHEXANE		100.0	2399036	.5422
1,2-DIBROMOETHANE		100.0	1062718	.2402
DIBROMOCHLOROMETHANE		100.0	1513095	.342
TETRACHLOROETHENE		100.0	1537164	.3474
1,3-DICHLOROPROPANE		100.0	1847708	.4176

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
	WG114932-10	6M29670	8
2-HEXANONE	100.0	500321	.1131
1,1,2-TRICHLOROETHANE	100.0	1056911	.2389
TRANS-1,3-DICHLOROPROPENE	100.0	1985050	.4487
ETHYL METHACRYLATE	100.0	1161871	.2626
TOLUENE-D8	50.0	3143724	1.421
DIMETHYL DISULFIDE	100.0	1158723	.202
CIS-1,3-DICHLOROPROPENE	100.0	2304552	.4018
4-METHYL-2-PENTANONE	100.0	259938	.0453
2-CHLOROETHYL VINYL ETHER	100.0	593109	.1034
DIBROMOMETHANE	100.0	765259	.1334
BROMODICHLOROMETHANE	100.0	2125016	.3705
TRICHLOROETHENE	100.0	1943321	.3388
BENZENE	100.0	6669690	1.163
1,2-DICHLOROETHANE	100.0	2192929	.3823
1,2-DICHLOROETHANE-D4	50.0	876689	.3057
CARBON TETRACHLORIDE	100.0	2772509	.4834
1,1-DICHLOROPROPENE	100.0	2580622	.4499
CYCLOHEXANE	100.0	3072760	.5357
1,1,1-TRICHLOROETHANE	100.0	3040117	.53
DIBROMOFLUOROMETHANE	50.0	904581	.3154
BROMOCHLOROMETHANE	100.0	949125	.1655
CIS-1,2-DICHLOROETHENE	100.0	1864049	.325
2,2-DICHLOROPROPANE	100.0	2622761	.4573
2-BUTANONE	100.0	272001	.0474
VINYL ACETATE	100.0	2161888	.3769
N-HEXANE	100.0	2389681	.4166
TRANS-1,2-DICHLOROETHENE	100.0	1832918	.3196
METHYL TERT-BUTYL ETHER	100.0	2658107	.4634
ACRYLONITRILE	100.0	316539	.0552
CARBON DISULFIDE	100.0	5161153	.8998
METHYLENE CHLORIDE	100.0	1644340	.2867
IODOMETHANE	100.0	1313965	.2291
DIMETHYL SULFIDE	100.0	1513946	.2639
ACETONE	100.0	214539	.0374
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	100.0	1920584	.3348
ACROLEIN	200.0	193585	.0169
ISOPRENE	100.0	1459733	.2545
TRICHLOROFLUOROMETHANE	100.0	1651912	.288
CHLOROETHANE	100.0	681795	.1189
BROMOMETHANE	100.0	706137	.1231
DICHLORODIFLUOROMETHANE	100.0	2099120	.366

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte		Sample #	File #	Level
		WG114932-11	6M29671	9
		Conc	Response	RF
ETHYLBENZENE	CCC	200.0	4662904	.5103
TOLUENE	CCC	200.0	13212127	1.446
1,2-DICHLOROPROPANE	CCC	200.0	3337779	.2775
CHLOROFORM	CCC	200.0	6459100	.5371
1,1-DICHLOROETHENE	CCC	200.0	3222829	.268
VINYL CHLORIDE	CCC	200.0	1759595	.1463
1,1,2,2-TETRACHLOROETHANE	SPCC	200.0	2249695	.4019
BROMOFORM	SPCC	200.0	1751520	.1917
CHLOROBENZENE	SPCC	200.0	9386427	1.027
1,1-DICHLOROETHANE	SPCC	200.0	6658378	.5537
CHLOROMETHANE	SPCC	200.0	2963726	.2464
1,2,3-TRICHLOROBENZENE		200.0	3651305	.6523
NAPHTHALENE		200.0	7029350	1.256
HEXACHLOROBUTADIENE		200.0	2595394	.4637
1,2,4-TRICHLOROBENZENE		200.0	4662458	.8329
1,2-DIBROMO-3-CHLOROPROPANE		200.0	392929	.0702
1,2-DICHLOROBENZENE		200.0	7332063	1.31
N-BUTYLBENZENE		200.0	13660379	2.44
1,4-DICHLOROBENZENE		200.0	8305096	1.484
1,3-DICHLOROBENZENE		200.0	8493963	1.517
P-ISOPROPYLTOLUENE		200.0	15732084	2.811
SEC-BUTYLBENZENE		200.0	17313126	3.093
1,2,4-TRIMETHYLBENZENE		200.0	14700313	2.626
TERT-BUTYLBENZENE		200.0	13204533	2.359
A-METHYLSTYRENE		200.0	7848990	1.402
4-CHLOROTOLUENE		200.0	12528699	2.238
2-CHLOROTOLUENE		200.0	12653709	2.261
1,3,5-TRIMETHYLBENZENE		200.0	14207724	2.538
BROMOBENZENE		200.0	4226673	.7551
N-PROPYLBENZENE		200.0	19055192	3.404
TRANS-1,4-DICHLORO-2-BUTENE		200.0	616359	.1101
1,2,3-TRICHLOROPROPANE		200.0	752814	.1345
P-BROMOFLUOROBENZENE		100.0	2708117	.9676
ISOPROPYLBENZENE		200.0	16079983	1.76
STYRENE		200.0	10683377	1.169
O-XYLENE		200.0	6094695	.667
M-,P-XYLENE		400.0	11452515	.6267
1,1,1,2-TETRACHLOROETHANE		200.0	3151122	.3449
1-CHLOROHEXANE		200.0	4684336	.5127
1,2-DIBROMOETHANE		200.0	2144533	.2347
DIBROMOCHLOROMETHANE		200.0	3051617	.334
TETRACHLOROETHENE		200.0	2993749	.3277
1,3-DICHLOROPROPANE		200.0	3609889	.3951

INITIAL CALIBRATION

Login Number: L0204001
 Analytical Method: 8260
 Instrument ID: HPMS6

Analyst: CMS
 Initial Calibration Date: 22-MAR-02

Analyte	Sample #	File #	Level
	Conc	Response	RF
	WG114932-11	6M29671	9
2-HEXANONE	200.0	1029379	.1127
1,1,2-TRICHLOROETHANE	200.0	2061594	.2256
TRANS-1,3-DICHLOROPROPENE	200.0	3913833	.4283
ETHYL METHACRYLATE	200.0	2364819	.2588
TOLUENE-D8	100.0	6140528	1.344
DIMETHYL DISULFIDE	200.0	2410902	.2005
CIS-1,3-DICHLOROPROPENE	200.0	4582089	.381
4-METHYL-2-PENTANONE	200.0	559235	.0465
2-CHLOROETHYL VINYL ETHER	200.0	1226721	.102
DIBROMOMETHANE	200.0	1508658	.1254
BROMODICHLOROMETHANE	200.0	4201812	.3494
TRICHLOROETHENE	200.0	3815460	.3173
BENZENE	200.0	12781130	1.063
1,2-DICHLOROETHANE	200.0	4146125	.3448
1,2-DICHLOROETHANE-D4	100.0	1699447	.2826
CARBON TETRACHLORIDE	200.0	5518604	.4589
1,1-DICHLOROPROPENE	200.0	5018281	.4173
CYCLOHEXANE	200.0	5817759	.4838
1,1,1-TRICHLOROETHANE	200.0	5892398	.49
DIBROMOFLUOROMETHANE	100.0	1795288	.2986
BROMOCHLOROMETHANE	200.0	1892252	.1573
CIS-1,2-DICHLOROETHENE	200.0	3654374	.3039
2,2-DICHLOROPROPANE	200.0	5418657	.4506
2-BUTANONE	200.0	588997	.049
VINYL ACETATE	200.0	4206870	.3498
N-HEXANE	200.0	4733224	.3936
TRANS-1,2-DICHLOROETHENE	200.0	3601271	.2995
METHYL TERT-BUTYL ETHER	200.0	5627749	.468
ACRYLONITRILE	200.0	642337	.0534
CARBON DISULFIDE	200.0	10255906	.8528
METHYLENE CHLORIDE	200.0	3264657	.2715
IODOMETHANE	200.0	2889256	.2402
DIMETHYL SULFIDE	200.0	3152306	.2621
ACETONE	200.0	420263	.0349
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	200.0	3792924	.3154
ACROLEIN	400.0	403984	.0168
ISOPRENE	200.0	2991190	.2487
TRICHLOROFLUOROMETHANE	200.0	3257810	.2709
CHLOROETHANE	200.0	1327255	.1104
BROMOMETHANE	200.0	1470268	.1223
DICHLORODIFLUOROMETHANE	200.0	4415987	.3672

Login Number: L0204001

Instrument ID: HPMS6

File ID: 6M29674

Run Date: 03/22/2002

ALT ID: WG114932-12

Run Time: 07:06

Units: ug/L

Analyst: CMS

Cal ID: HPMS6 - 21-MAR-02

Analyte		Expected	Found	RF	%D	Q
Ethylbenzene	CCC	20	22.0	0.625	10.0	
Toluene	CCC	20	23.2	1.68	16.0	
1,2-Dichloropropane	CCC	20	20.4	0.279	2.0	
Chloroform	CCC	20	19.5	0.570	2.5	
1,1-Dichloroethene	CCC	20	20.0	0.259	0.0	
Vinyl Chloride	CCC	20	15.3	0.152	23.5	
1,1,2,2-Tetrachloroethane	SPCC	20	20.9	0.410	4.5	
Bromoform	SPCC	20	20.8	0.152	4.0	
Chlorobenzene	SPCC	20	19.6	1.18	2.0	
1,1-Dichloroethane	SPCC	20	19.6	0.591	2.0	
Chloromethane	SPCC	20	15.9	0.224	20.5	
1,2,3-Trichlorobenzene		20	21.9	0.626	9.5	
Naphthalene		20	24.7	1.16	23.5	
Hexachlorobutadiene		20	19.2	0.423	4.0	
1,2,4-Trichlorobenzene		20	22.7	0.796	13.5	
1,2-Dibromo-3-Chloropropane		20	20.2	0.0489	1.0	
1,2-Dichlorobenzene		20	21.1	1.46	5.5	
n-Butylbenzene		20	22.4	2.84	12.0	
1,4-Dichlorobenzene		20	20.3	1.74	1.5	
1,3-Dichlorobenzene		20	21.0	1.72	5.0	
p-Isopropyltoluene		20	21.4	3.08	7.0	
sec-Butylbenzene		20	22.5	3.61	12.5	
1,2,4-Trimethylbenzene		20	21.3	3.12	6.5	
tert-Butylbenzene		20	20.5	2.53	2.5	
a-Methylstyrene		20		0		
4-Chlorotoluene		20	21.2	2.65	6.0	
2-Chlorotoluene		20	22.2	2.67	11.0	
1,3,5-Trimethylbenzene		20	22.7	2.97	13.5	
Bromobenzene		20	21.9	0.841	9.5	
n-Propylbenzene		20	22.2	4.03	11.0	
trans-1,4-Dichloro-2-Butene		20		0		
1,2,3-Trichloropropane		20	22.3	0.144	11.5	
Isopropylbenzene		20	22.6	1.94	13.0	
Styrene		20	22.8	1.31	14.0	
o-Xylene		20	23.8	0.749	19.0	
m-,p-Xylene		40	43.4	0.794	8.5	
1,1,1,2-Tetrachloroethane		20	22.0	0.401	10.0	
1-Chlorohexane		20	23.8	0.488	19.0	
1,2-Dibromoethane		20	22.5	0.232	12.5	
Dibromochloromethane		20	22.3	0.300	11.5	
Tetrachloroethene		20	20.8	0.356	4.0	
1,3-Dichloropropane		20	21.8	0.414	9.0	
2-Hexanone		20	11.1	0.0938	44.5	*
1,1,2-Trichloroethane		20	20.5	0.237	2.5	

Login Number: L0204001
 File ID: 6M29674
 ALT ID: WGL14932-12
 Units: ug/L

Instrument ID: HPMS6
 Run Date: 03/22/2002
 Run Time: 07:06
 Analyst: CMS
 Cal ID: HPMS6 21-MAR-02

Analyte	Expected	Found	RF	%D	Q
trans-1,3-Dichloropropene	20	22.5	0.412	12.5	
Ethyl Methacrylate	20		0		
Dimethyl Disulfide	20		0		
cis-1,3-Dichloropropene	20	22.9	0.359	14.5	
4-Methyl-2-Pentanone	20	22.9	0.0436	14.5	
2-Chloroethyl Vinyl Ether	20	24.7	0.0889	23.5	
Dibromomethane	20	21.6	0.135	8.0	
Bromodichloromethane	20	21.5	0.346	7.5	
Trichloroethene	20	21.4	0.334	7.0	
Benzene	20	21.6	1.19	8.0	
1,2-Dichloroethane	20	20.6	0.389	3.0	
Carbon Tetrachloride	20	21.7	0.458	8.5	
1,1-Dichloropropene	20	21.0	0.421	5.0	
Cyclohexane	20	0.0603	0.00150	99.7	*
1,1,1-Trichloroethane	20	20.9	0.527	4.5	
Bromochloromethane	20	20.1	0.167	0.5	
cis-1,2-Dichloroethene	20	21.9	0.319	9.5	
2,2-Dichloropropane	20	19.0	0.385	5.0	
2-Butanone	20	20.4	0.0444	2.0	
Vinyl Acetate	20	12.1	0.197	39.5	
n-Hexane	20	17.3	0.344	13.5	
trans-1,2-Dichloroethene	20	20.8	0.313	4.0	
Methyl Tert Butyl Ether	20	21.9	0.423	9.5	
Acrylonitrile	20		0		
Carbon Disulfide	20	19.4	0.832	3.0	
Methylene Chloride	20	17.4	0.262	13.0	
Iodomethane	20	37.6	0.343	88.0	*
Dimethyl Sulfide	20		0		
Acetone	20	19.2	0.0386	4.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	20		0		
Acrolein	40		0		
Isoprene	20		0		
Trichlorofluoromethane	20	17.8	0.264	11.0	
Chloroethane	20	17.8	0.109	11.0	
Bromomethane	20	19.1	0.116	4.5	
Dichlorodifluoromethane	20	15.1	0.325	24.5	

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

Login Number: L0204001
 File ID: 6M29952
 CCV ID: WG115697-02
 Units: ug/L

Instrument ID: HPMS6
 Run Date: 04/04/2002
 Run Time: 19:24
 Analyst: CMS
 Cal ID: HPMS6 - 22-MAR-02

Analyte		Expected	Found	RF	%D	Q
Ethylbenzene	CCC	50	52.9	0.601	5.8	
Toluene	CCC	50	56.7	1.64	13.4	
1,2-Dichloropropane	CCC	50	50.0	0.275	0.0	
Chloroform	CCC	50	47.2	0.552	5.6	
1,1-Dichloroethene	CCC	50	48.7	0.253	2.6	
Vinyl Chloride	CCC	50	40.2	0.160	19.6	
1,1,2,2-Tetrachloroethane	SPCC	50	54.6	0.429	9.2	
Bromoform	SPCC	50	66.2	0.193	32.4	*
Chlorobenzene	SPCC	50	46.8	1.12	6.4	
1,1-Dichloroethane	SPCC	50	49.4	0.594	1.2	
Chloromethane	SPCC	50	43.1	0.242	13.8	
1,2,3-Trichlorobenzene		50	64.6	0.737	29.2	
Naphthalene		50	74.2	1.39	48.4	*
Hexachlorobutadiene		50	52.2	0.461	4.4	
1,2,4-Trichlorobenzene		50	64.0	0.897	28.0	
1,2-Dibromo-3-Chloropropane		50	61.4	0.0593	22.8	
1,2-Dichlorobenzene		50	51.6	1.42	3.2	
n-Butylbenzene		50	57.4	2.91	14.8	
1,4-Dichlorobenzene		50	49.3	1.69	1.4	
1,3-Dichlorobenzene		50	51.0	1.67	2.0	
p-Isopropyltoluene		50	55.2	3.18	10.4	
sec-Butylbenzene		50	56.4	3.61	12.8	
1,2,4-Trimethylbenzene		50	52.1	3.05	4.2	
tert-Butylbenzene		50	53.3	2.63	6.6	
a-Methylstyrene		50	53.2	1.51	6.4	
4-Chlorotoluene		50	50.1	2.51	0.2	
2-Chlorotoluene		50	52.6	2.53	5.2	
1,3,5-Trimethylbenzene		50	55.0	2.87	10.0	
Bromobenzene		50	51.5	0.791	3.0	
n-Propylbenzene		50	54.0	3.91	8.0	
trans-1,4-Dichloro-2-Butene		50	58.1	0.111	16.2	
1,2,3-Trichloropropane		50	54.6	0.140	9.2	
Isopropylbenzene		50	58.6	2.01	17.2	
Styrene		50	55.2	1.27	10.4	
o-Xylene		50	58.9	0.742	17.8	
m-,p-Xylene		100	105	0.768	5.0	
1,1,1,2-Tetrachloroethane		50	54.5	0.397	9.0	
1-Chlorohexane		50	63.3	0.519	26.6	
1,2-Dibromoethane		50	57.1	0.235	14.2	
Dibromochloromethane		50	60.8	0.326	21.6	
Tetrachloroethene		50	51.4	0.352	2.8	
1,3-Dichloropropane		50	56.4	0.428	12.8	

Login Number: L0204001
 File ID: 6M29952
 CCV ID: WQ115697-02
 Units: ug/L

Instrument ID: HPMS6
 Run Date: 04/04/2002
 Run Time: 19:24
 Analyst: CMS
 Cal ID: HPMS6 22-MAR-02

Analyte	Expected	Found	RF	%D	Q
2-Hexanone	50	32.1	0.108	35.8	
1,1,2-Trichloroethane	50	53.1	0.246	6.2	
trans-1,3-Dichloropropene	50	60.8	0.446	21.6	
Ethyl Methacrylate	50	59.4	0.263	18.8	
Dimethyl Disulfide	50	58.3	0.168	16.6	
cis-1,3-Dichloropropene	50	61.1	0.383	22.2	
4-Methyl-2-Pentanone	50	61.5	0.0468	23.0	
2-Chloroethyl Vinyl Ether	50	73.4	0.106	46.8	*
Dibromomethane	50	55.4	0.138	10.8	
Bromodichloromethane	50	57.3	0.368	14.6	
Trichloroethene	50	49.3	0.307	1.4	
Benzene	50	52.2	1.15	4.4	
1,2-Dichloroethane	50	52.5	0.397	5.0	
Carbon Tetrachloride	50	55.9	0.472	11.8	
1,1-Dichloropropene	50	52.6	0.421	5.2	
Cyclohexane	50	53.4	0.542	6.8	
1,1,1-Trichloroethane	50	50.6	0.510	1.2	
Bromochloromethane	50	51.2	0.170	2.4	
cis-1,2-Dichloroethene	50	55.6	0.323	11.2	
2,2-Dichloropropene	50	49.6	0.404	0.8	
2-Butanone	50	52.6	0.0458	5.2	
Vinyl Acetate	50	65.3	0.427	30.6	
n-Hexane	50	55.8	0.443	11.6	
trans-1,2-Dichloroethene	50	51.9	0.312	3.8	
Methyl Tert Butyl Ether	50	55.4	0.428	10.8	
Acrylonitrile	50	49.3	0.0473	1.4	
Carbon Disulfide	50	50.1	0.858	0.2	
Methylene Chloride	50	47.3	0.286	5.4	
Iodomethane	50	72.9	0.266	45.8	*
Dimethyl Sulfide	50	51.5	0.251	3.0	
Acetone	50	44.9	0.0361	10.2	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49.7	0.345	0.6	
Acrolein	100	109	0.0166	9.0	
Isoprene	50	62.6	0.279	25.2	
Trichlorofluoromethane	50	50.6	0.300	1.2	
Chloroethane	50	48.2	0.118	3.6	
Bromomethane	50	44.3	0.108	11.4	
Dichlorodifluoromethane	50	40.3	0.346	19.4	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

INTERNAL STANDARD AREA SUMMARY

Login Number: L0204001
Instrument ID: HPMS6
Workgroup (AAB#): WG115698

CCV Number: WG115697-02
CCV Date: 04-APR-02
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG115697-02	NA	NA	622791	985308	1296036
Upper Limit	NA	NA	1245582	1970616	2592072
Lower Limit	NA	NA	311396	492654	648018
<u>L0204001-02</u>	<u>1.00</u>		<u>445050</u>	<u>771327</u>	<u>1072229</u>

- IS-1 - 1,4-Dichlorobenzene-d4
- IS-2 - Chlorobenzene-d5
- IS-3 - Fluorobenzene

Underline = Response outside limits

Injection Log

Directory: c:\hpchem\1\data\032102

IS:SV9126

SS:SV9127

Analyst: CMS

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	6m29645.d	1.	✓WG114853-01 BFB 50NG STD 8260	1,1 SV9148	21 Mar 02 07:25
2	2	6m29646.d	1.	RR WG114853-02 50 PPB STD 8260	1,1 SV9147	21 Mar 02 07:55
3	3	6m29647.d	1.	RR:SS WG114853-02 50 PPB STD 8260	1,1 SV9147	21 Mar 02 08:38
4	4	6m29648.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 09:11
5	5	6m29649.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 09:54
6	6	6m29650.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 10:26
7	7	6m29651.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 10:59
8	8	6m29652.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 11:33
9	9	6m29653.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 13:46
10	10	6m29654.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 14:19
11	11	6m29655.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 14:52
12	12	6m29656.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 15:25
13	1	6m29657.d	1.	RR WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 17:44
14	2	6m29658.d	1.	└ WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 18:13
15	3	6m29659.d	1.	└ WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 22:11
16	4	6m29660.d	1.	✓WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 22:40
17	5	6m29661.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 23:10
18	6	6m29662.d	1.	✓WG114932-02 50PPB STD	1,1 SV9206	22 Mar 02 00:36
19	7	6m29663.d	1.	✓WG114932-03 20PPB STD	1,1 SV9206	22 Mar 02 01:08
20	8	6m29664.d	1.	✓WG114932-04 10PPB STD	1,1 SV9206	22 Mar 02 01:40
21	9	6m29665.d	1.	✓WG114932-05 5PPB STD	1,1 SV9206	22 Mar 02 02:12
22	10	6m29666.d	1.	✓WG114932-06 2PPB STD	1,1 SV9206	22 Mar 02 02:44
23	11	6m29667.d	1.	✓WG114932-07 1PPB STD	1,1 SV9206	22 Mar 02 03:16
24	12	6m29668.d	1.	✓WG114932-08 0.4PPB STD	1,1 SV9206	22 Mar 02 03:48
25	13	6m29669.d	1.	DNR WG114932-09 0.25PPB STD	1,1 SV9206	22 Mar 02 04:20
26	14	6m29670.d	1.	✓WG114932-10 100PPB STD	1,1 SV9206	22 Mar 02 04:52
27	15	6m29671.d	1.	✓WG114932-11 200PPB STD	1,1 SV9206	22 Mar 02 05:24
28	16	6m29672.d	1.	✓SYSTEM BLANK	1,1	22 Mar 02 05:57
29	17	6m29673.d	1.	✓SYSTEM BLANK	1,1	22 Mar 02 06:31
30	18	6m29674.d	1.	✓WG114932-12 20PPB ALT SOURCE	1,1 SV9139	22 Mar 02 07:06

WG114932

No reanalyses

Injection Log

Directory: c:\hpchem\1\data\040402

IS: SV9223
SS: SV9209

Analyst: CMS

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	6m29930.d	1.	✓WG115617-01 BFB 50NG STD 8260	1,1 SV9148	4 Apr 02 06:40
2	2	6m29931.d	1.	✓WG115617-02 50 PPB STD 8260	1,1 SV9227	4 Apr 02 07:16
3	3	6m29932.d	1.	✓WG115618-01 VBLK0404 BLANK 8260	1,1	4 Apr 02 07:59
4	4	6m29933.d	1.	✓WG115618-02 20 PPB LCS STD 8260	1,1 SV9231	4 Apr 02 08:31
5	5	6m29934.d	1.	✓L0203572-10 B 00 8260	1,1 pH<2	4 Apr 02 09:13
6	6	6m29935.d	1.	✓L0203572-08 B 10X D1 8260	1,10	4 Apr 02 09:46
7	7	6m29936.d	1.	✓WG115618-03 L0203572-16 B 10X D1 8260	1,10	4 Apr 02 10:18
8	8	6m29937.d	1.	✓WG115618-04 L0203572-16 MS B 10X D1 826	1,10 SV9231	4 Apr 02 10:51
9	9	6m29938.d	1.	✓WG115618-05 L0203572-16 MSD B 10X D1 82	1,10 SV9231	4 Apr 02 11:23
10	10	6m29939.d	1.	✓L0203572-15 B 100X D1 8260	1,100	4 Apr 02 11:56
11	11	6m29940.d	1.	✓L0203572-14 B 100X D1 8260	1,100	4 Apr 02 12:29
12	12	6m29941.d	1.	✓L0203572-17 B 500X D1 8260	1,500	4 Apr 02 13:01
13	13	6m29942.d	1.	✓L0203572-13 B 500X D1 8260	1,500	4 Apr 02 13:34
14	14	6m29943.d	1.	✓L0203572-09 B 1000X D1 8260	1,1000	4 Apr 02 14:07
15	15	6m29944.d	1.	✓L0203572-12 B 1000X D1 8260	1,1000	4 Apr 02 14:39
16	16	6m29945.d	1.	✓L0203572-11 B 100X D1 8260	1,100	4 Apr 02 15:12
17	17	6m29946.d	1.	✓L0203560-09 B 100X D1 826-TC	17,100 (4/1@1600)	4 Apr 02 15:45
18	18	6m29947.d	1.	✓L0203572-03 B 00 8260	1,1 pH<2	4 Apr 02 16:18
19	19	6m29948.d	1.	RR 50X L0203572-04 B 00 8260	1,1 L	4 Apr 02 16:51
20	20	6m29949.d	1.	DNR: DNC L0203560-16 B 100X D1 826-TC	17,100 (4/1@1600)	4 Apr 02 17:23
21	21	6m29950.d	1.	✓L0204022-01 A 00 826-BETXN	2,1	4 Apr 02 17:56
22	1	6m29951.d	1.	✓WG115697-01 50NG BFB STD	1,1 SV9148	4 Apr 02 18:54
23	2	6m29952.d	1.	✓WG115697-02 50PPB STD	1,1 SV9227	4 Apr 02 19:24
24	3	6m29953.d	1.	✓WG115698-01 VBLK 0404	1,1	4 Apr 02 20:21
25	4	6m29954.d	1.	✓WG115698-02 20PPB LCS	1,1 SV9231	4 Apr 02 20:54
26	5	6m29955.d	1.	✓L0204023-01 A 00 826-BETXN	2,1 pH<2	4 Apr 02 21:39
27	6	6m29956.d	1.	✓L0204001-02 A 00 826-TCL	1,1	4 Apr 02 22:12
28	7	6m29957.d	1.	✓L0203590-08 A 00 826-SPE	1,1	4 Apr 02 22:44
29	8	6m29958.d	1.	✓WG115698-03 L0203590-01 A 00 826-SPE	1,1	4 Apr 02 23:17
30	9	6m29959.d	1.	✓WG115698-04 L0203590-01 MS A 00 826-SPE	1,1 SV9231	4 Apr 02 23:49
31	10	6m29960.d	1.	✓WG115698-05 L0203590-01 MSD A 00 826-SP	1,1 SV9231	5 Apr 02 00:21
32	11	6m29961.d	1.	✓L0203590-02 A 00 826-SPE	1,1 pH<2	5 Apr 02 00:54
33	12	6m29962.d	1.	✓L0203590-03 A 00 826-SPE	1,1	5 Apr 02 01:26
34	13	6m29963.d	1.	✓L0203590-04 A 00 826-SPE	1,1	5 Apr 02 01:59
35	14	6m29964.d	1.	✓L0203590-05 A 00 826-SPE	1,1	5 Apr 02 02:31
36	15	6m29965.d	1.	✓L0203590-06 A 00 826-SPE	1,1	5 Apr 02 03:03
37	16	6m29966.d	1.	✓L0203590-07 A 00 826-SPE	1,1	5 Apr 02 03:35
38	17	6m29967.d	1.	DNR: DNC L0203560-16 A D1 100X 826-TC	17,100 (4/1/02@1600)	5 Apr 02 04:07
39	18	6m29968.d	1.	✓L0203579-01 A.00 10X 826-TC	17,10 (4/3/02@1400)	5 Apr 02 04:39
40	19	6m29969.d	1.	✓L0203579-02 A 00 10X 826-TC	17,10 (4/3/02@1400)	5 Apr 02 05:11
41	20	6m29970.d	1.	✓L0203582-01 A 00 10X 826-TC	17,10 (4/2/02@1000)	5 Apr 02 05:43
42	21	6m29971.d	1.	✓L0203583-01 A 00 10X 826-TC	17,10 (4/2/02@1000)	5 Apr 02 06:15
43	22	6m29972.d	1.	✓SYSTEM BLANK	1,1	5 Apr 02 06:47

WG115618 reanalyses

L0203572-04 @ 50X: TCFM, TCE-10M15252

L0203560-16: Didn't confirm RR@10X

WG115698 reanalysis

L0203560-16: Didn't confirm RR@10X

122

VOA - GC/MS

Date: 4/2/02 Analyst: MES Method: 8260 624

Instrument: HPMS9 Work Group: WG 115463

	Analyst
System Performance Check	✓
BFB	✓
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	✓
Second Source standard % Difference	✓
Continuing Calibration / Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	✓
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Spectra of TCL Hits	✓
Surrogates	✓
Internal Standards Criteria	✓
Calculations & Correct Factors	✓
Dilutions Run	NA
Reruns	L
Excel Spreadsheets	✓
Case Narrative	
Narrative Summary	✓
Results Reporting / Data Qualifiers	✓
Client Data Package Assembly	
Check for Completeness	✓

Primary Reviewers Initials & Date Checked: mes 4/3/02

Secondary Reviewers Initials & Date Checked: _____

- _____ • Check for compliance with Method and project-specific requirements
- _____ • Check the completeness of the reported information
- _____ • Check the information for the report narrative
- _____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked: _____

Comments: _____

✓ = Checked & OK
 NA = Not Applicable

VOA - GC/MS

Date: 4-4-02 Analyst: CMS Method: 8260 624
 Instrument: HPMS6 Work Group: WG115698

	Analyst
System Performance Check	✓
BFB	✓
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	✓
Second Source standard % Difference	✓
Continuing Calibration / Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Spectra of TCL Hits	✓
Surrogates	✓
Internal Standards Criteria	✓
Calculations & Correct Factors	✓
Dilutions Run	✓
Reruns	4/5/02 CMS NA ✓
Excel Spreadsheets	✓
Case Narrative	
Narrative Summary	✓
Results Reporting / Data Qualifiers	✓
Client Data Package Assembly	
Check for Completeness	✓

Primary Reviewers Initials & Date Checked: CMS 4-5-02

Secondary Reviewers Initials & Date Checked: _____

- _____ • Check for compliance with Method and project-specific requirements
- _____ • Check the completeness of the reported information
- _____ • Check the information for the report narrative
- _____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked: _____

Comments: _____

✓ = Checked & OK
 NA = Not Applicable

Tune File : D:\HPCHEM\1\DATA\030502\9M18980.D
Tune Time : 5 Mar 2002 8:29

Daily Calibration File : D:\HPCHEM\1\DATA\030502\9M18989.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
9M18981.D	WG113899	103	110	104	109	834650	587316	345700
9M18982.D	WG113900	98	106	100	105	904422	616924	341079
9M18983.D	WG113900	100	106	101	106	866631	593979	328573
9M18984.D	WG113899	2*	2*	2*	3*	830105	573181	309689
9M18985.D	WG113899	4*	5*	4*	5*	785455	532973	295606
9M18986.D	WG113899	10*	11*	10*	10*	796304	539390	300659
9M18987.D	WG113899	19*	20*	19*	18*	849909	597912	341793
9M18988.D	WG113899	37*	39*	39*	38*	861747	600238	346512
9M18989.D	WG113899	97	96	97	97	945367	661677	382905
9M18990.D	WG113899	198*	188*	200*	202*	993477	697756	396923
9M18991.D	WG113899	390*	354*	399*	387*	1075760	758885	439817
9M18992.D	SYSTEM B	97	91	105	108	1047970	719436	392773
9M18993.D	SYSTEM B	0*	0*	0*	1*	1019832	700737	377196
9M18994.D	SYSTEM B	0*	0*	0*	1*	974700	672276	371736
9M18995.D	WG113899	4*	4*	4*	4*	990005	681328	380325
9M18996.D	WG113899	100	96	103	107	997101	707514	398463

t - fails 12hr time check * - fails criteria

Created: Wed Mar 06 09:09:48 2002 HPMS9

Tune File : D:\HPCHEM\1\DATA\040202\9M19478.D
Tune Time : 2 Apr 2002 8:00

Daily Calibration File : D:\HPCHEM\1\DATA\040202\9M19479.D

File	Sample	Surrogate Recovery %				Internal Standard Responses		
9M19480.D	WG115463	110	102	105	101	859295	624433	351177
9M19481.D	WG115463	107	98	101	95	866161	638551	370269
9M19482.D	WG115463	105	98	102	96	856017	614820	345195
9M19483.D	100PPB F	103	97	101	97	849047	595127	336022
9M19484.D	L0204001	109	106	102	97	821884	593047	335065
9M19485.D	L0203519	110	106	104	99	752513	545283	300428
9M19486.D	L0203519	109	109	101	98	751058	546740	300680
9M19487.D	L0203558	107	105	99	98	747659	540202	295702
9M19488.D	L0203558	106	101	98	92	778183	582883	352882
9M19489.D	L0203558	110	104	101	97	766312	578051	340591
9M19490.D	L0203527	110	107	104	94	747434	537798	313551
9M19491.D	L0203528	113	109	104	97	723375	523337	298723
9M19492.D	L0203528	111	113	100	96	725252	531679	303633
9M19493.D	L0203528	115	116	104	100	673118	490550	276263
9M19494.D	L0203511	46*	123*	100	104	701184	528884	311602
9M19495.D	L0203511	34*	117	100	104	745165	562747	331194
9M19496.D	L0203568	110	104	101	104	738588	578772	300315
9M19497.D	L0203558	108	100	99	98	771118	580409	313236
9M19498.D	L0203558	110	107	101	97	731304	543705	309265
9M19499.D	L0203558	109	106	100	96	717987	530275	294785

t - fails 12hr time check * - fails criteria

Created: Wed Apr 03 07:49:37 2002 HPMS9

Tune File : C:\HPCHEM\1\DATA\040402\6M29951.D

Tune Time : 4 Apr 2002 18:54

Daily Calibration File : C:\HPCHEM\1\DATA\040402\6M29952.D

DFM DCA TOL BFB FBZ CBZ
1296040 985308 622791

File	Sample	Surrogate Recovery %				Internal Standard Responses		
6M29953.D	WG115698	100	103	106	112	1178279	841573	471899
6M29954.D	WG115698	102	103	103	108	1291372	970822	603271
6M29955.D	L0204023	100	103	105	111	1156509	828004	466884
6M29956.D	L0204001	102	105	106	112	1072229	771327	445050
6M29957.D	L0203590	103	108	106	113	1018577	739384	435028
6M29958.D	L0203590	107	108	107	113	1081319	766287	436282
6M29959.D	L0203590	106	120*	102	106	1238902	929002	629287
6M29960.D	L0203590	106	118	102	106	1278113	958005	639108
6M29961.D	L0203590	104	108	96	111	1093624	789807	446670
6M29962.D	L0203590	102	107	106	112	1073511	769127	439423
6M29963.D	L0203590	102	108	106	114	1045346	750855	424597
6M29964.D	L0203590	103	108	106	114	1025727	747242	422706
6M29965.D	L0203590	103	107	105	114	1030440	748455	417985
6M29966.D	L0203590	103	106	105	113	1029057	746389	419925
6M29967.D	L0204560	101	107	106	115	991170	731048	411095
6M29968.D	L0204579	101	104	106	96	998907	749805	582096
6M29969.D	L0204579	101	107	106	96	1021156	816389	619366
6M29970.D	L0204582	100	104	107	97	1034022	751428	595505
6M29971.D	L0204583	98	100	108	108	1051226	749039	559875
6M29972.D	SYSTEM B	100	104	107	109	1069702	765366	441086

t - fails 12hr time check * - fails criteria

Created: Fri Apr 05 07:57:48 2002 HPMS6

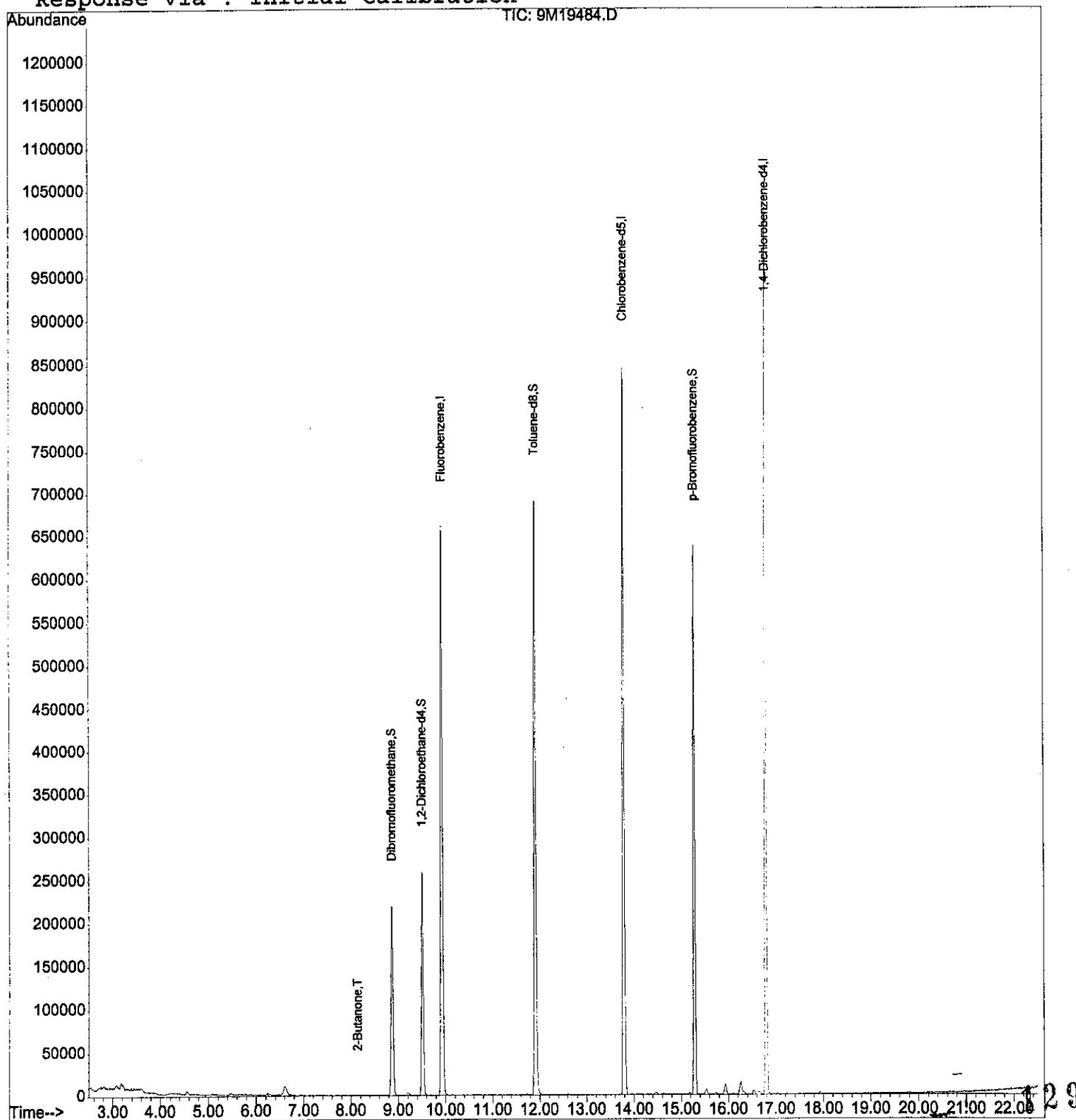
2.1.1.2 Sample Data

Data File : D:\HPCHEM\1\DATA\040202\9M19484.D
Acq On : 2 Apr 2002 11:27
Sample : L0204001-01 A 00 0.91X 826-TCL 5.52G
Misc : 7,0.91
MS Integration Params: RTEINT.P
Quant Time: Apr 2 11:54 2002

Vial: 7
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Wed Mar 06 10:09:02 2002
Response via : Initial Calibration



Data File : D:\HPCHEM\1\DATA\040202\9M19484.D
 Acq On : 2 Apr 2002 11:27
 Sample : L0204001-01 A 00 0.91X 826-TCL 5.52G
 Misc : 7,0.91
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 11:54 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	821884	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	593047	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	335065	50.00	ug/kg	0.00
System Monitoring Compounds						
28) Dibromofluoromethane	8.87	111	191263	54.4529	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	108.90%
33) 1,2-Dichloroethane-d4	9.51	65	286712	52.8574	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.72%
45) Toluene-d8	11.91	98	630648	51.1798	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	102.36%
66) p-Bromofluorobenzene	15.29	95	263535	48.7270	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	97.46%
Target Compounds						
11) Acetone	5.46	43	6561	Below Cal		Qvalue 99
23) 2-Butanone	8.14	43	107	0.8006	ug/kg#	68

Data File : d:\HPCHEM\1\DATA\040202\9M19484.D
 Acq On : 2 Apr 2002 11:27
 Sample : L0204001-01 A 00 0.91X 826-TCL 5.52G
 Misc : 7,0.91
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 11:49 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 0.91

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	821884	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	593047	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	335065	50.00	ug/kg	0.00

System Monitoring Compounds

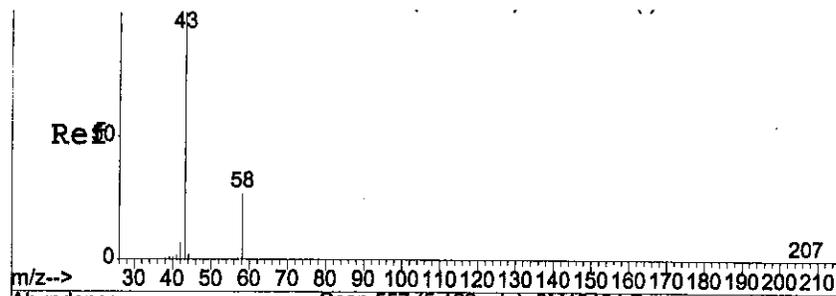
28) Dibromofluoromethane	8.87	111	191263	54.4529	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	108.90%
33) 1,2-Dichloroethane-d4	9.51	65	286712	52.8574	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.72%
45) Toluene-d8	11.91	98	630648	51.1798	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	102.36%
66) p-Bromofluorobenzene	15.29	95	263535	48.7270	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	97.46%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
11) Acetone	5.46	43	6561	Below Cal		99
23) 2-Butanone	8.14	43	107	0.7286	ug/kg#	68

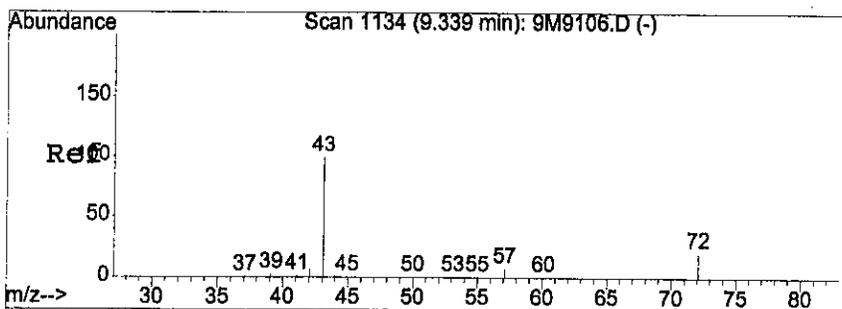
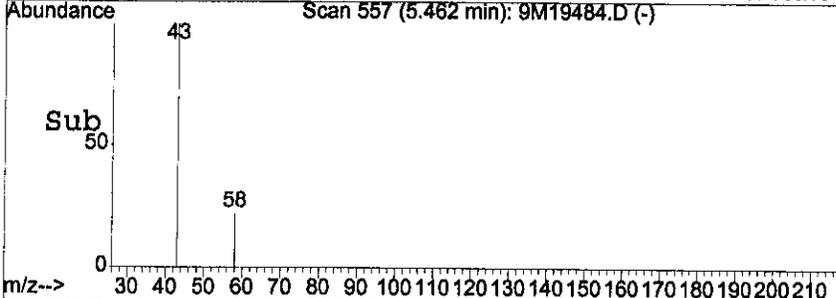
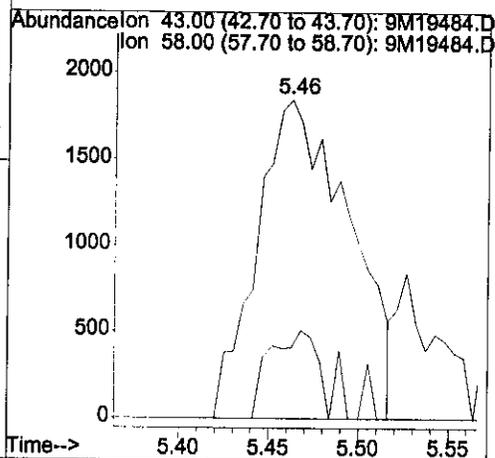
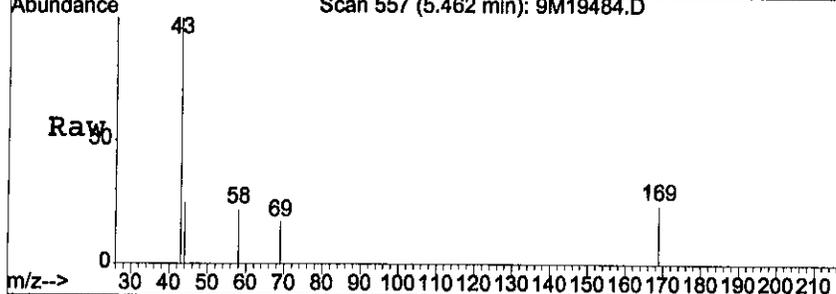
131

(#) = qualifier out of range (m) = manual integration



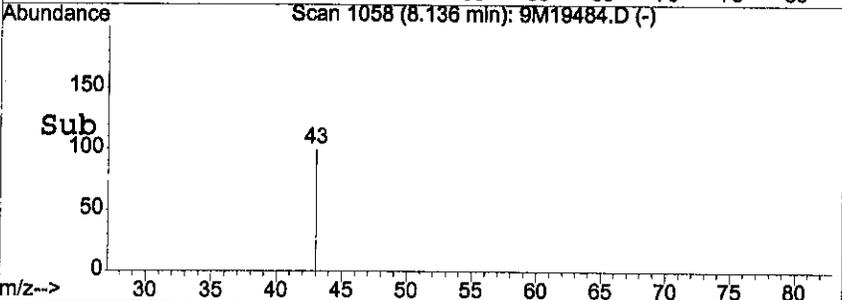
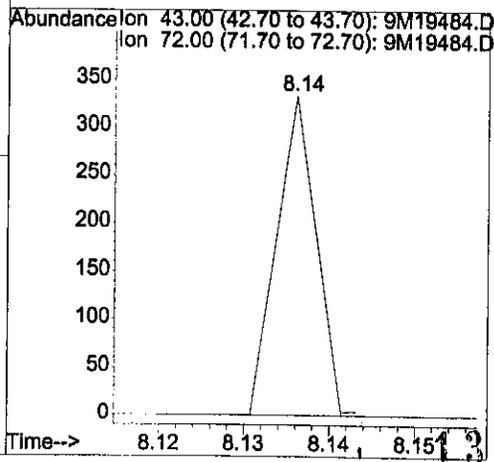
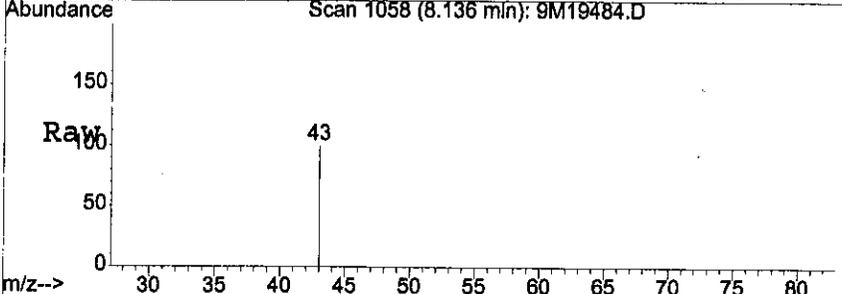
#11
Acetone
 Concen: Below Cal
 RT: 5.46 min Scan# 557
 Delta R.T. 0.00 min
 Lab File: 9M19484.D
 Acq: 2 Apr 2002 11:27

Tgt Ion	Resp	Lower	Upper
43	100		
58	14.1	11.6	17.4



#23
2-Butanone
 Concen: 0.80 ug/kg
 RT: 8.14 min Scan# 1058
 Delta R.T. 0.02 min
 Lab File: 9M19484.D
 Acq: 2 Apr 2002 11:27

Tgt Ion	Resp	Lower	Upper
43	100		
72	0.0	10.1	15.1#

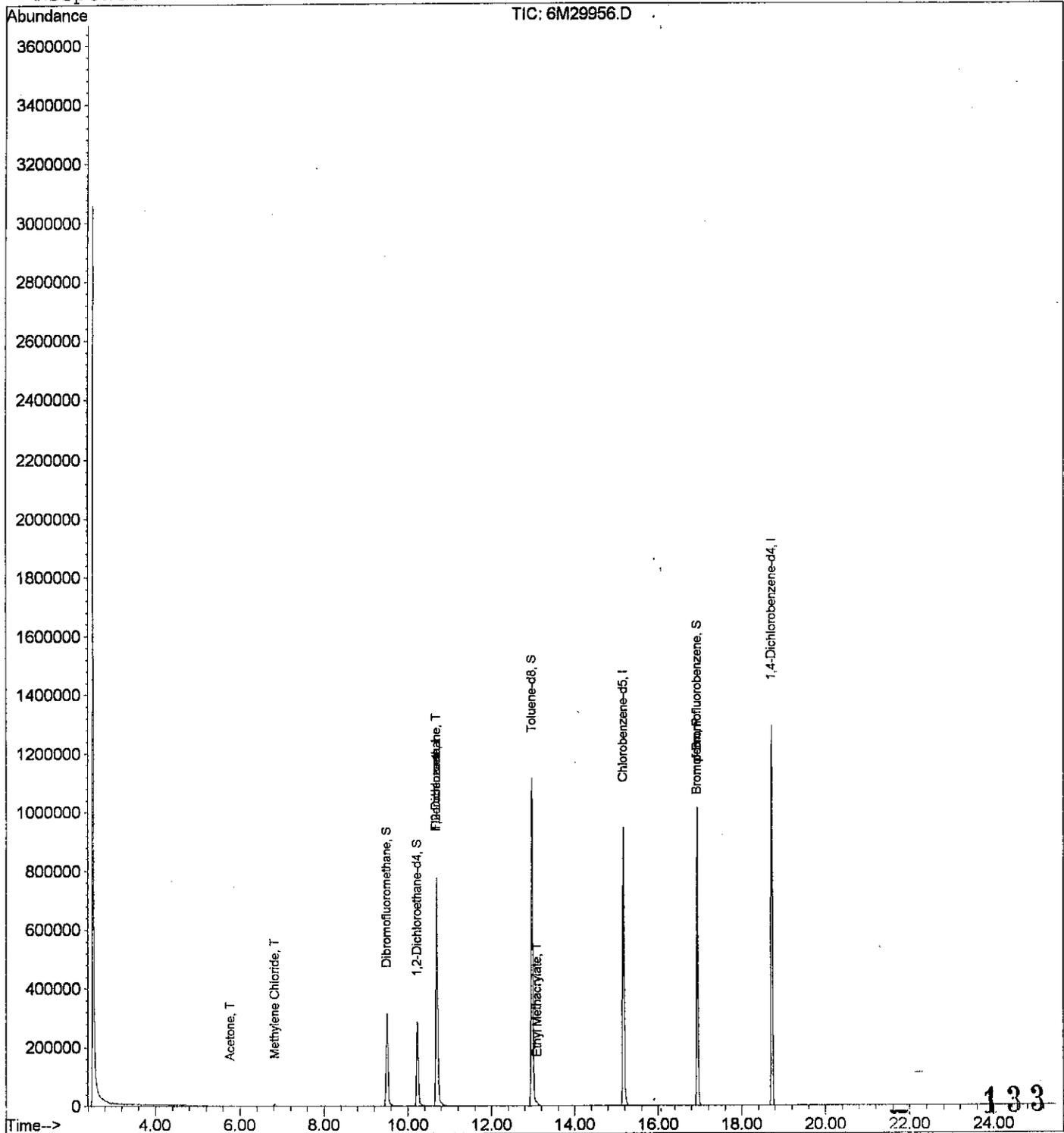


Data File : C:\HPCHEM\1\DATA\040402\6M29956.D
Acq On : 4 Apr 2002 22:12
Sample : L0204001-02 A 00 826-TCL
Misc : 1,1
MS Integration Params: rteint.p
Quant Time: Apr 4 22:37 2002

Vial: 6
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\040402\6M29956.D
 Acq On : 4 Apr 2002 22:12
 Sample : L0204001-02 A 00 826-TCL
 Misc : 1,1
 MS Integration Params: rteint.p
 Quant Time: Apr 4 22:37 2002

Vial: 6
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

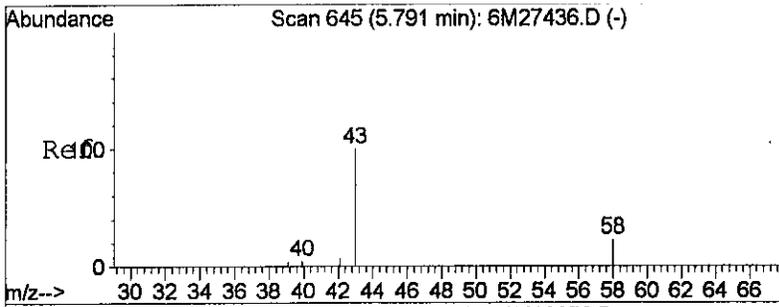
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1072229	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	771327	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	445050	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	329261	25.4702	ug/L	0.00
Spiked Amount	25.000	Range	86 - 118	Recovery	=	101.88%
33) 1,2-Dichloroethane-d4	10.22	65	339609	26.1614	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	104.64%
45) Toluene-d8	12.98	98	1093266	26.4001	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	105.60%
66) p-Bromofluorobenzene	16.94	95	460582	27.8892	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	111.56%

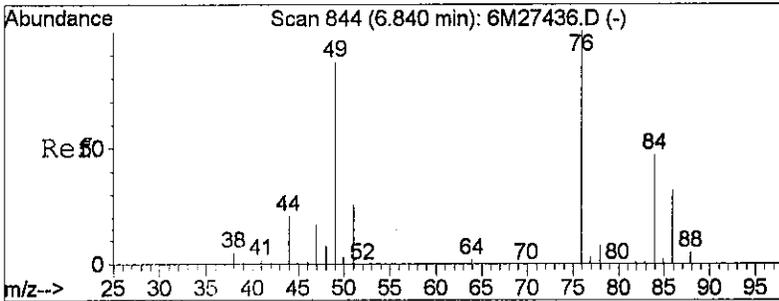
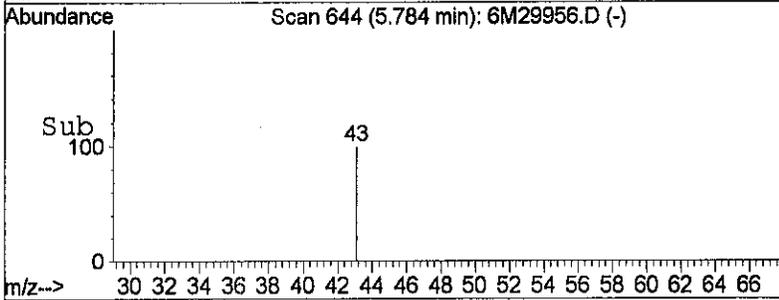
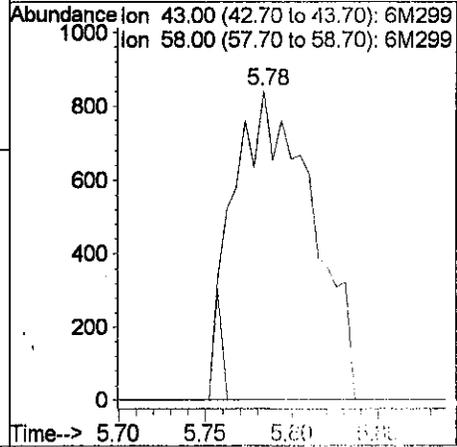
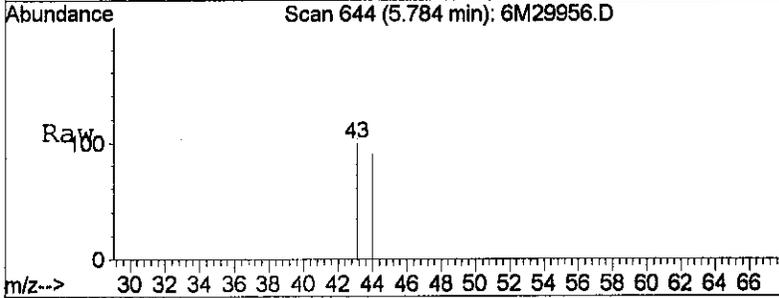
Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
11) Acetone	5.78	43	2661	1.5417	ug/L #	46
15) Methylene Chloride	6.82	84	5005	0.3862	ug/L #	73
34) 1,2-Dichloroethane	10.70	62	16221	1.0008	ug/L #	1
47) Ethyl Methacrylate	13.10	69	3420	0.4999	ug/L #	56
62) Bromoform	16.93	173	622	0.1382	ug/L #	34



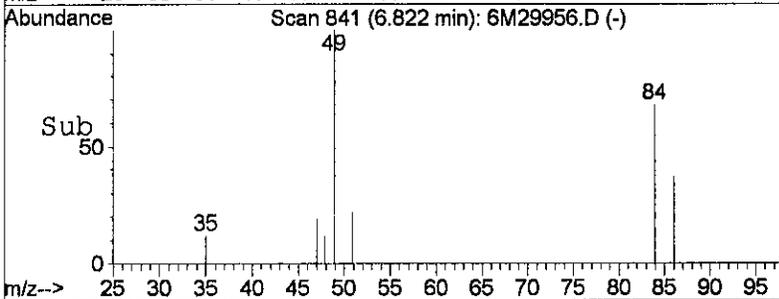
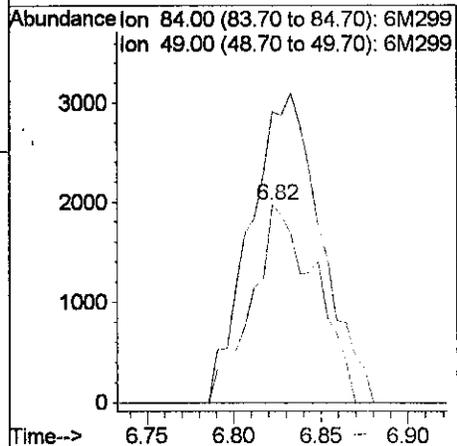
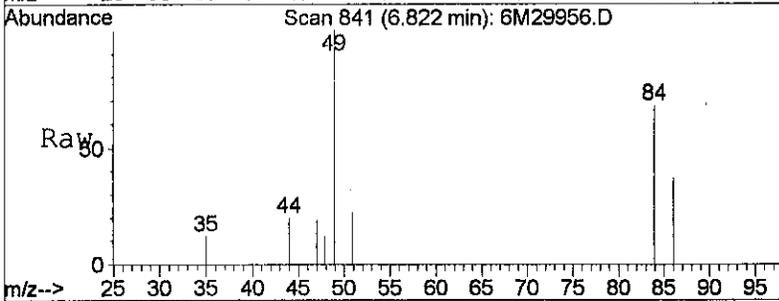
#11
 Acetone
 Concen: 1.54 ug/L
 RT: 5.78 min Scan# 644
 Delta R.T. -0.01 min
 Lab File: 6M29956.D
 Acq: 4 Apr 2002 22:12

Tgt Ion	Ratio	Lower	Upper
43	100		
58	0.0	23.0	34.4#

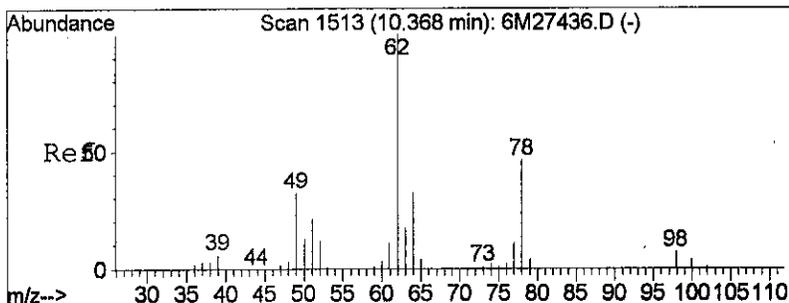


#15
 Methylene Chloride
 Concen: 0.39 ug/L
 RT: 6.82 min Scan# 841
 Delta R.T. -0.02 min
 Lab File: 6M29956.D
 Acq: 4 Apr 2002 22:12

Tgt Ion	Ratio	Lower	Upper
84	100		
49	174.3	112.8	169.2#

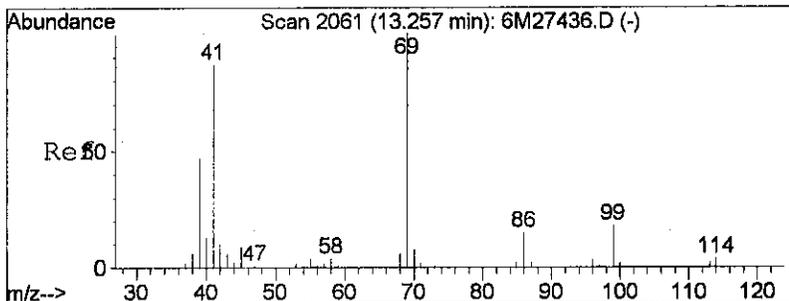
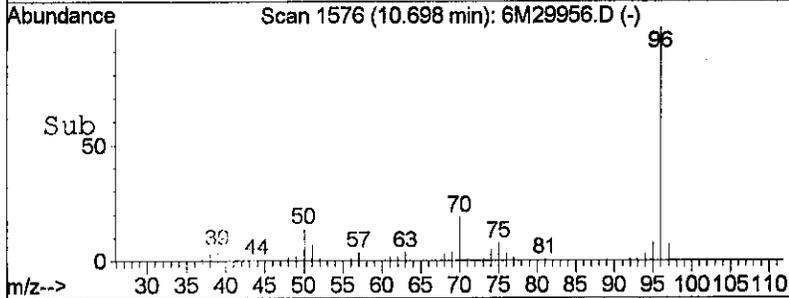
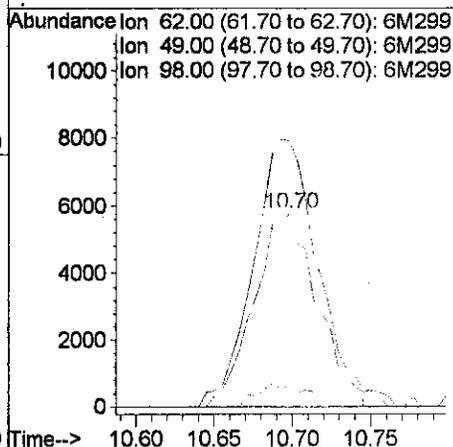
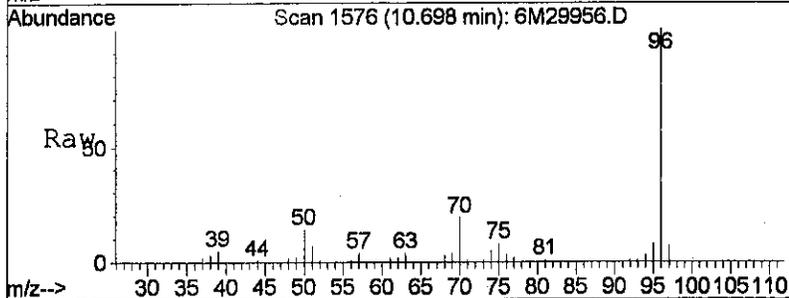


135



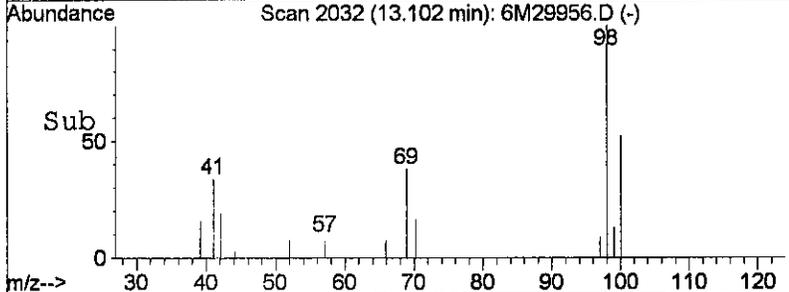
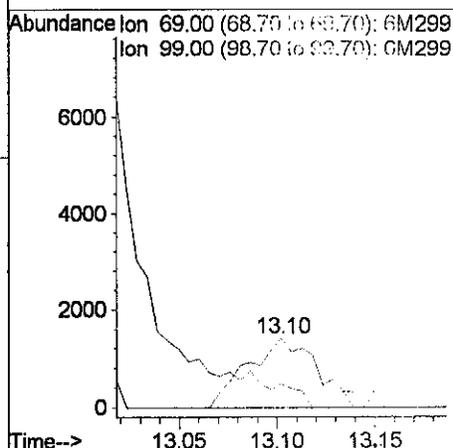
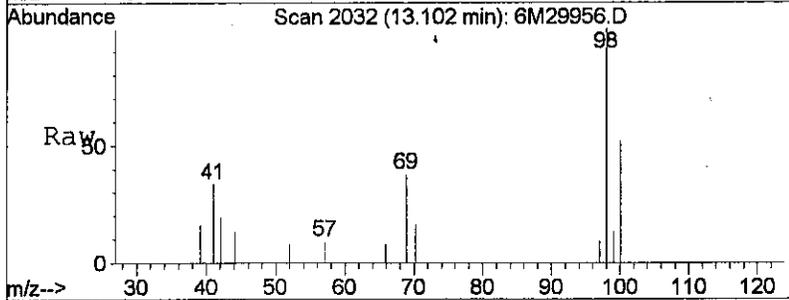
#34
 1,2-Dichloroethane
 Concen: 1.00 ug/L
 RT: 10.70 min Scan# 1576
 Delta R.T. 0.33 min
 Lab File: 6M29956.D
 Acq: 4 Apr 2002 22:12

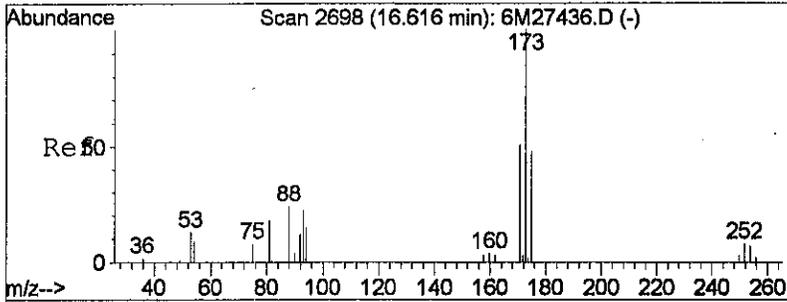
Tgt Ion	Resp	Lower	Upper
62	16221		
49	141.2	19.1	28.7#
98	9.6	8.0	12.0



#47
 Ethyl Methacrylate
 Concen: 0.50 ug/L
 RT: 13.10 min Scan# 2032
 Delta R.T. -0.16 min
 Lab File: 6M29956.D
 Acq: 4 Apr 2002 22:12

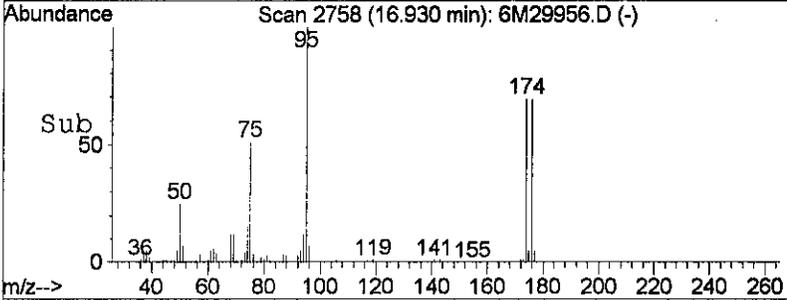
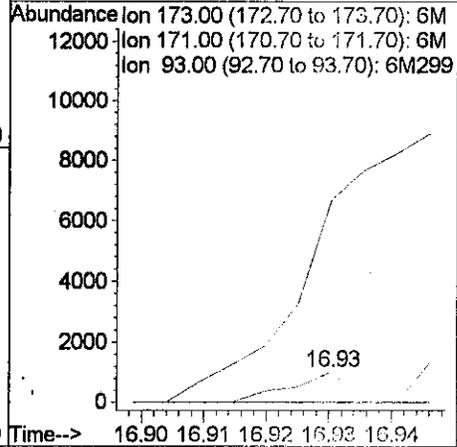
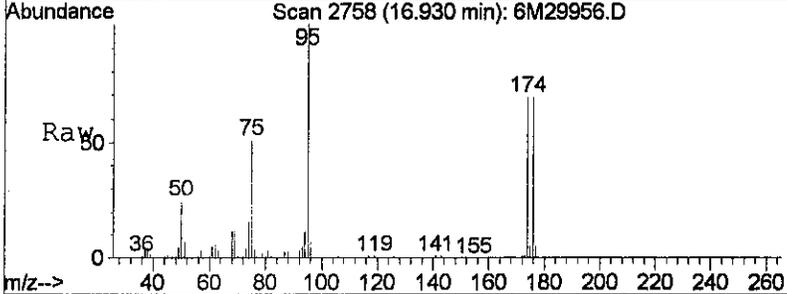
Tgt Ion	Resp	Lower	Upper
69	3420		
99	0.0	16.6	24.8#





#62
 Bromoform
 Concen: 0.14 ug/L
 RT: 16.93 min Scan# 2758
 Delta R.T. 0.32 min
 Lab File: 6M29956.D
 Acq: 4 Apr 2002 22:12

Tgt Ion	Resp	Lower	Upper
173	622	100	
171	0.0	41.3	61.9#
93	0.0	18.2	27.2#



2.1.1.3 Standards Data

Method: 8260SL.M

Title: Method 8260B Soil Analysis 03/05/2002 - HPMS 9

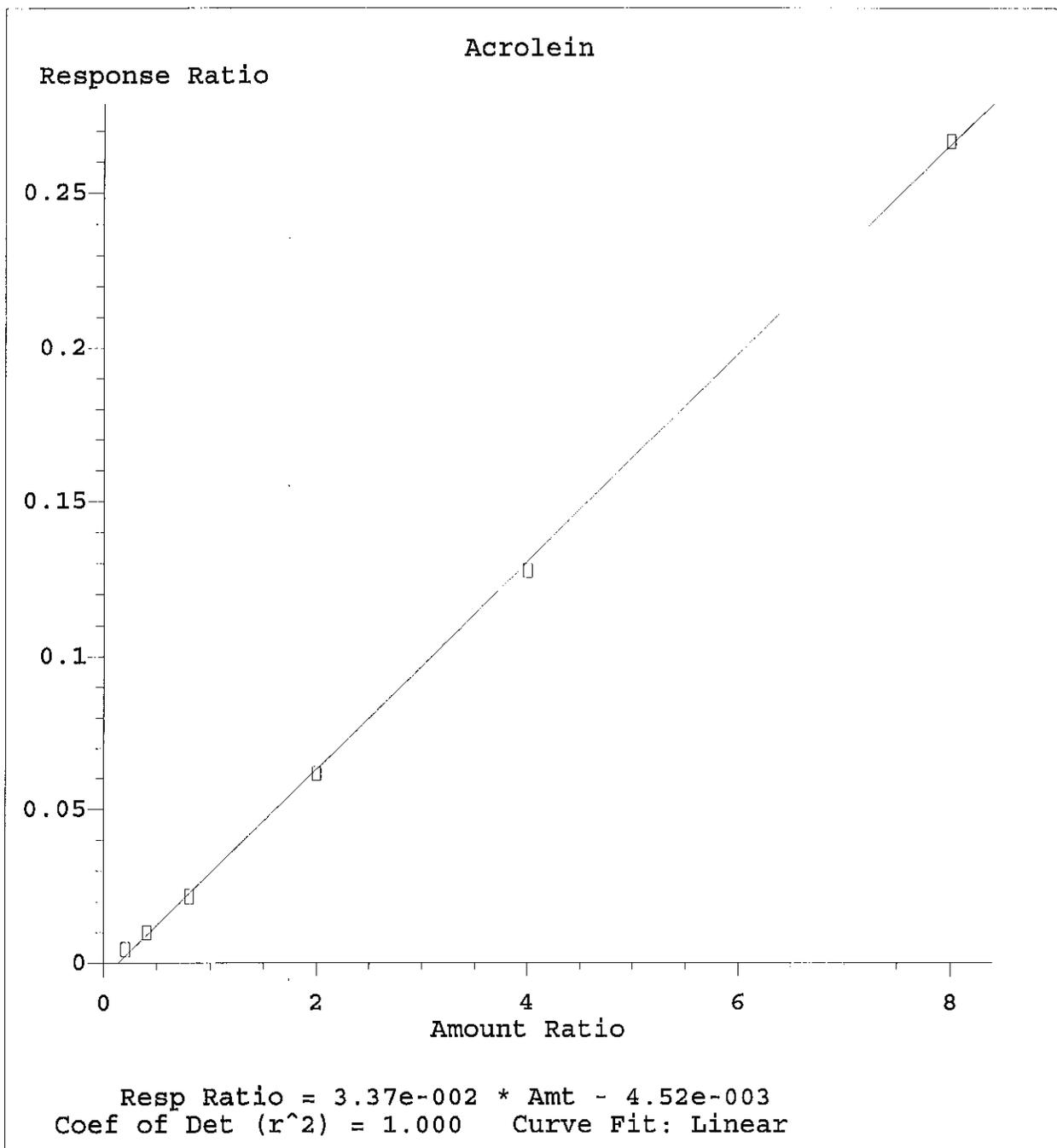
Last Calibration: Wed Mar 06 10:09:02 2002

Calibration Files

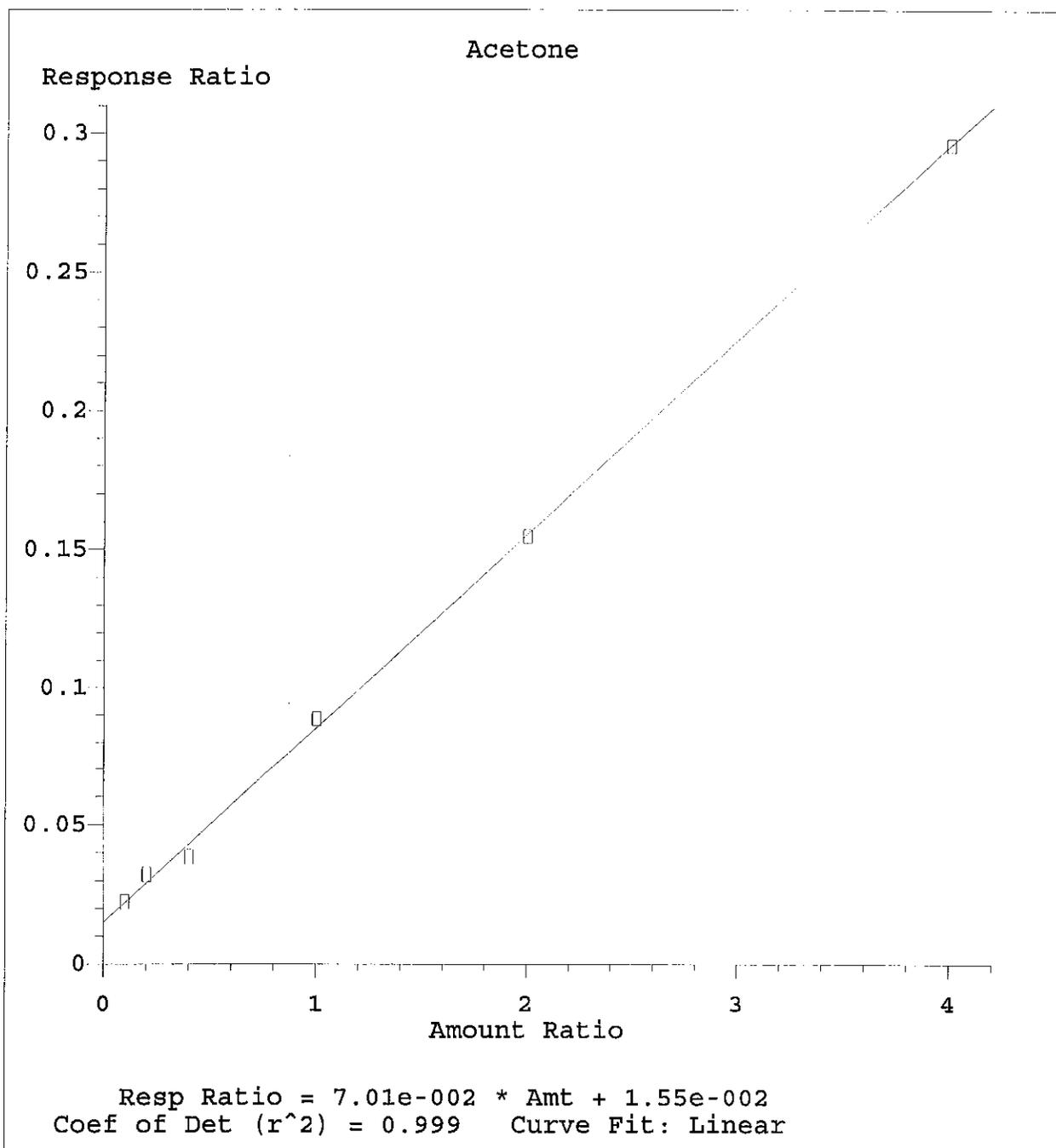
Compound	1 2 5 10 20 200 50 100								Avg	RSD	
	SM18064.D	SM18065.D	SM18066.D	SM18067.D	SM18068.D	SM18069.D	SM18068.D	SM18069.D			
I Fluorobenzene	ISTD										
T Dichlorodifluoromethane	0.465	0.493	0.452	0.426	0.468	0.380	0.415	0.406	0.438	8.580	
P Chloromethane			0.319	0.299	0.288	0.270	0.253	0.264	0.282	8.656	
C Vinyl Chloride	0.270	0.284	0.268	0.250	0.266	0.184	0.230	0.203	0.245	14.548	
T Bromomethane		0.145	0.127	0.129	0.136	0.143	0.129	0.141	0.136	5.478	
T Chloroethane	0.186	0.220	0.180	0.175	0.188	0.185	0.176	0.187	0.187	7.670	
T Trichlorofluoromethane	0.588	0.602	0.565	0.532	0.593	0.503	0.527	0.527	0.554	6.685	
T Isoprene			0.273	0.256	0.277	0.291	0.285	0.292	0.279	4.894	
T Acrolein			0.023	0.025	0.027	0.033	0.031	0.032	0.028	15.168	LR r ² =1.000
T 1,1,2-Trichloro-1,2,2-Trifluoroet		0.297	0.259	0.249	0.275	0.229	0.247	0.249	0.258	8.498	
T Acetone			0.224	0.161	0.097	0.074	0.089	0.077	0.120	49.878	LR r ² =0.999
C 1,1-Dichloroethene	0.151	0.185	0.173	0.176	0.189	0.191	0.190	0.195	0.181	7.984	
T Dimethyl Sulfide		0.209	0.182	0.195	0.207	0.232	0.220	0.227	0.210	8.482	
T Iodomethane			0.026	0.049	0.073	0.138	0.104	0.129	0.086	51.762	LR r ² =0.998
T Methylene Chloride	0.256	0.266	0.248	0.228	0.239	0.240	0.234	0.240	0.244	5.009	
T Carbon Disulfide	0.817	0.763	0.671	0.649	0.678	0.671	0.677	0.682	0.701	8.232	
T Acrylonitrile		0.083	0.073	0.109	0.077	0.088	0.081	0.085	0.085	13.555	
T Methyl Tert Butyl Ether		0.597	0.482	0.486	0.521	0.588	0.561	0.572	0.544	8.702	
T trans-1,2-Dichloroethene	0.188	0.229	0.200	0.194	0.213	0.208	0.213	0.214	0.207	6.326	
T n-Hexane		0.362	0.342	0.336	0.359	0.359	0.365	0.370	0.356	3.500	
T Vinyl Acetate		0.319	0.416	0.421	0.467	0.601	0.557	0.581	0.480	21.551	LR r ² =1.000
P 1,1-Dichloroethane	0.467	0.469	0.447	0.417	0.439	0.420	0.436	0.436	0.441	4.353	
T 2-Butanone			0.100	0.182	0.095	0.115	0.108	0.106	0.118	27.313	LR r ² =0.997
T 2,2-Dichloropropane		0.324	0.319	0.313	0.357	0.378	0.374	0.389	0.351	8.970	
T cis-1,2-Dichloroethene	0.190	0.231	0.208	0.202	0.218	0.221	0.220	0.226	0.214	6.285	
C Chloroform	0.492	0.528	0.491	0.463	0.468	0.438	0.459	0.460	0.475	5.848	
T Bromochloromethane	0.092	0.105	0.092	0.088	0.091	0.093	0.092	0.095	0.094	5.453	
S Dibromofluoromethane		0.226	0.220	0.210	0.205	0.210	0.211	0.214	0.214	3.424	
T 1,1,1-Trichloroethane	0.391	0.427	0.421	0.408	0.438	0.413	0.435	0.437	0.421	3.955	
T Cyclohexane		0.414	0.354	0.374	0.414	0.420	0.419	0.427	0.403	6.877	
T 1,1-Dichloropropene	0.294	0.354	0.317	0.314	0.344	0.344	0.350	0.356	0.334	6.858	
T Carbon Tetrachloride	0.373	0.338	0.361	0.355	0.373	0.354	0.373	0.374	0.363	3.569	
S 1,2-Dichloroethane-d4		0.349	0.366	0.336	0.323	0.298	0.322	0.316	0.336	6.849	
T 1,2-Dichloroethane	0.467	0.464	0.455	0.415	0.423	0.377	0.418	0.405	0.428	7.357	
T Benzene	0.913	0.999	0.895	0.843	0.889	0.874	0.888	0.899	0.900	5.003	
T Trichloroethene	0.193	0.231	0.196	0.189	0.205	0.215	0.210	0.218	0.207	6.783	
C 1,2-Dichloropropane	0.201	0.248	0.219	0.216	0.223	0.229	0.224	0.234	0.224	6.083	
T Bromodichloromethane	0.314	0.368	0.343	0.338	0.336	0.334	0.338	0.355	0.341	4.636	
T Dibromomethane	0.120	0.142	0.140	0.141	0.135	0.133	0.138	0.140	0.136	5.304	
T 2-Chloroethyl Vinyl Ether				0.017	0.029	0.091	0.058	0.073	0.054	57.102	LR r ² =0.993
T 4-Methyl-2-Pentanone			0.054	0.173	0.072	0.092	0.083	0.086	0.093	43.993	LR r ² =0.995
T cis-1,3-Dichloropropene		0.306	0.292	0.301	0.321	0.363	0.348	0.374	0.3295	9.8567	
T Dimethyl Disulfide		0.121	0.129	0.155	0.188	0.214	0.2	0.208	0.1734	22.077	LR r ² =1.000
I Chlorobenzene-d5	ISTD										
S Toluene-d8		1.029	1.056	1.002	1.033	1.048	1.041	1.062	1.0389	1.9649	
C Toluene	1.273	1.393	1.289	1.22	1.278	1.262	1.282	1.324	1.29	3.924	
T Ethyl Methacrylate		0.328	0.293	0.371	0.42	0.399	0.374	0.382	0.3666	11.692	
T trans-1,3-Dichloropropene		0.472	0.438	0.455	0.449	0.496	0.491	0.524	0.475	6.3822	
T 1,1,2-Trichloroethane	0.274	0.358	0.285	0.306	0.256	0.258	0.262	0.277	0.2845	11.899	
T 2-Hexanone			0.187	0.565	0.229	0.258	0.238	0.243	0.2868	48.328	LR r ² =0.993
T 1,3-Dichloropropane	0.455	0.617	0.513	0.517	0.478	0.481	0.482	0.511	0.5067	9.7758	
T Tetrachloroethene	0.28	0.318	0.269	0.266	0.275	0.27	0.275	0.282	0.2793	5.9304	

I	Dibromochloromethane	0.274	0.355	0.311	0.357	0.31	0.328	0.319	0.349	0.3253	8.6768	
T	1,2-Dibromoethane	0.257	0.336	0.281	0.273	0.265	0.279	0.272	0.293	0.2821	8.6168	
T	1-Chlorohexane		0.381	0.34	0.382	0.476	0.445	0.438	0.451	0.4162	11.666	
P	Chlorobenzene	0.907	1.119	0.902	0.89	0.837	0.818	0.827	0.876	0.897	10.734	
T	1,1,1,2-Tetrachloroethane	0.295	0.34	0.321	0.347	0.309	0.306	0.308	0.331	0.3196	5.678	
C	Ethylbenzene	0.426	0.538	0.471	0.473	0.471	0.465	0.476	0.502	0.4779	6.7281	
T	m-,p-Xylene	0.531	0.706	0.614	0.626	0.622	0.597	0.619	0.642	0.6196	7.8377	
T	o-Xylene	0.449	0.602	0.506	0.559	0.54	0.562	0.569	0.603	0.5489	9.3018	
T	Styrene	0.681	1.005	0.913	1.05	0.968	1.011	0.994	1.079	0.9625	12.906	
P	Bromoform		0.258	0.212	0.282	0.215	0.242	0.235	0.26	0.2433	10.358	
T	Isopropylbenzene		1.596	1.392	1.628	1.572	1.593	1.601	1.72	1.5861	6.1858	
I	1,4-Dichlorobenzene-d4	ISTD										
P	1,1,2,2-Tetrachloroethane		0.952	0.734	0.904	0.616	0.662	0.647	0.73	0.7491	17.346	LR r ² =0.997
S	p-Bromofluorobenzene		0.869	0.811	0.759	0.784	0.795	0.802	0.829	0.8071	4.3084	
T	1,2,3-Trichloropropane			0.247	0.293	0.21	0.211	0.215	0.235	0.2354	13.568	
T	trans-1,4-Dichloro-2-Butene			0.176	0.232	0.244	0.202	0.195	0.194	0.2073	12.407	
T	n-Propylbenzene	2.638	3.818	3.36	3.8	3.54	3.419	3.543	3.78	3.4872	11.055	
T	Bromobenzene	0.612	0.843	0.686	0.734	0.615	0.609	0.612	0.67	0.6726	12.258	
T	1,3,5-Trimethylbenzene	1.664	2.498	2.212	2.647	2.401	2.411	2.443	2.63	2.3632	13.302	
T	2-Chlorotoluene	1.94	2.686	2.23	2.45	2.065	1.964	2.063	2.202	2.2	11.642	
T	4-Chlorotoluene	1.903	2.63	2.315	2.536	2.251	2.122	2.224	2.376	2.2947	9.9885	
T	a-Methylstyrene			0.885	1.254	1.356	1.223	1.144	1.184	1.1745	13.537	
T	tert-Butylbenzene	1.68	2.609	2.341	2.655	2.315	2.329	2.265	2.479	2.3342	12.883	
T	1,2,4-Trimethylbenzene	1.932	2.924	2.569	2.978	2.525	2.485	2.557	2.737	2.5884	12.507	
T	sec-Butylbenzene	2.32	3.196	2.878	3.454	3.126	3.088	3.141	3.395	3.0747	11.512	
T	p-Isopropyltoluene		2.692	2.339	2.89	2.552	2.6	2.618	2.824	2.645	6.8854	
T	1,3-Dichlorobenzene	1.274	1.772	1.35	1.572	1.276	1.258	1.272	1.375	1.3935	13.247	
T	1,4-Dichlorobenzene	1.478	1.862	1.453	1.664	1.301	1.256	1.282	1.386	1.4603	14.353	
T	n-Butylbenzene		2.67	2.379	2.932	2.596	2.562	2.62	2.806	2.6522	6.7	
T	1,2-Dichlorobenzene		1.626	1.276	1.55	1.186	1.192	1.198	1.304	1.3332	13.562	
T	1,2-Dibromo-3-Chloropropane		0.155	0.119	0.169	0.11	0.151	0.132	0.154	0.1415	15.103	LR r ² =0.998
T	1,2,4-Trichlorobenzene		1.222	0.889	1.135	0.883	0.962	0.931	1.014	1.0052	12.839	
T	Hexachlorobutadiene	0.595	0.767	0.644	0.728	0.641	0.631	0.621	0.673	0.6624	8.7156	
T	Naphthalene	1.531	2.843	1.711	2.511	1.823	2.124	2.015	2.243	2.0999	20.521	LR r ² =0.999
T	1,2,3-Trichlorobenzene		1.207	0.88	1.127	0.838	0.896	0.863	0.953	0.9664	14.829	

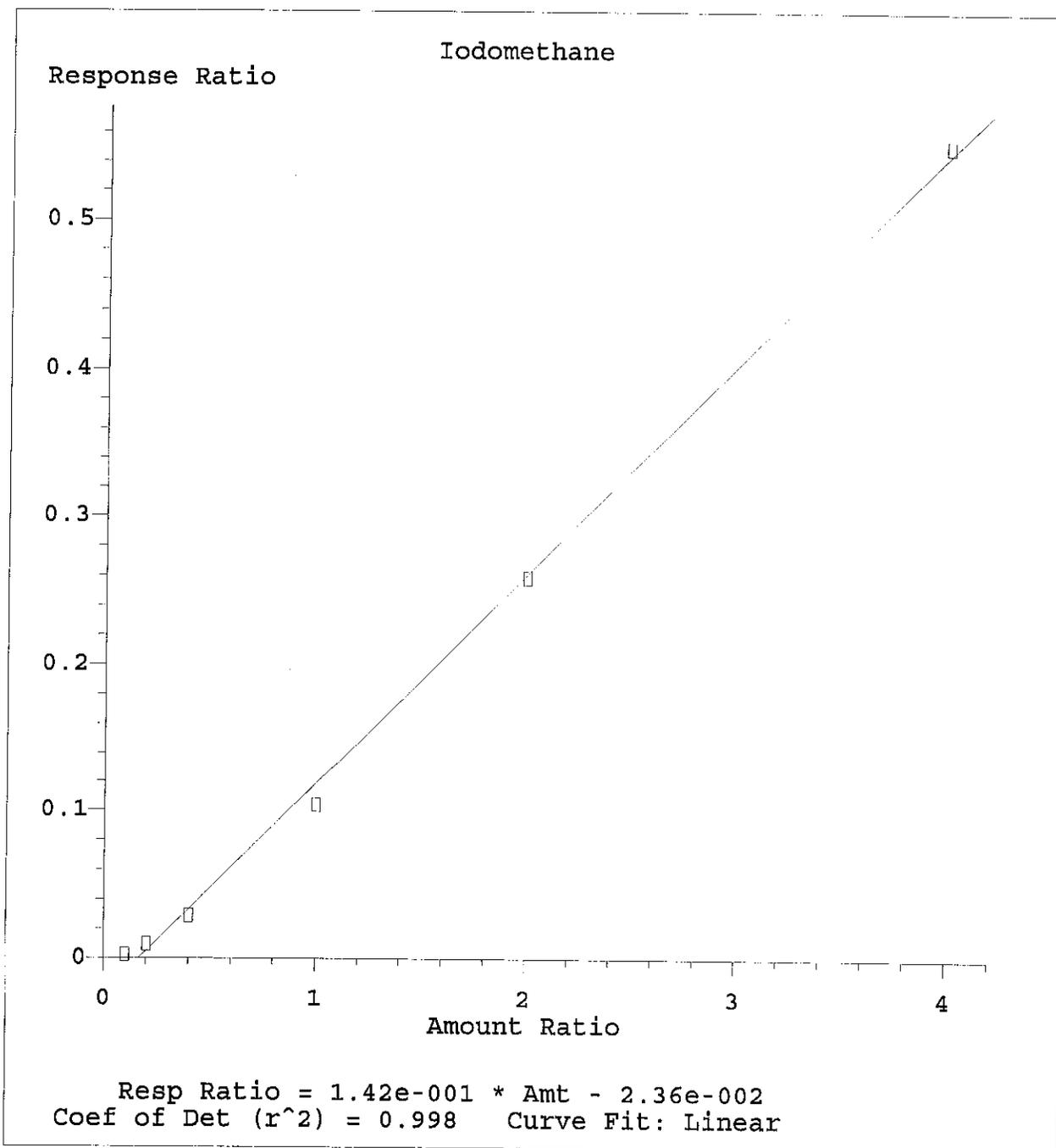
Wed Mar 06 10:09:43 2002



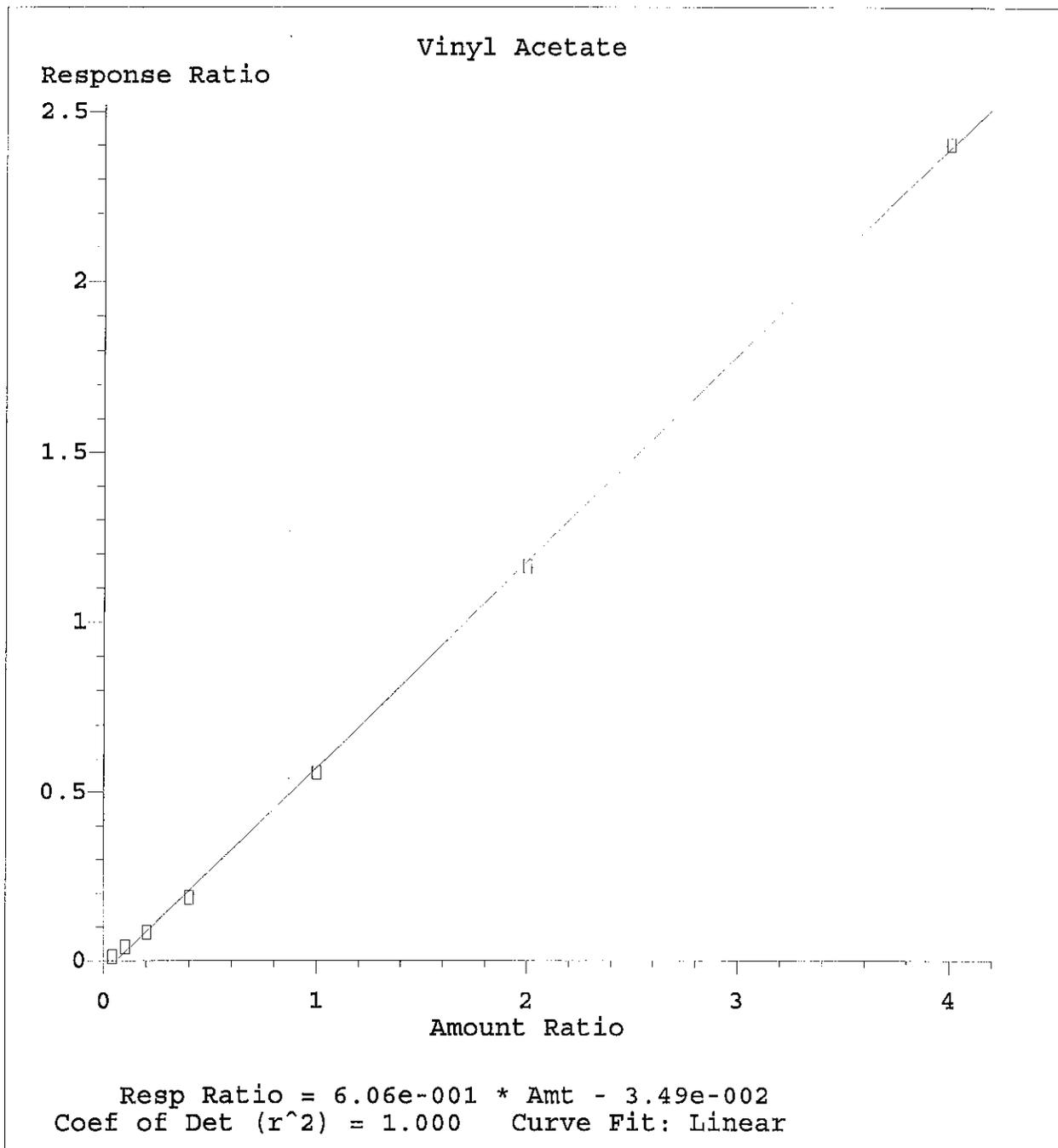
Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



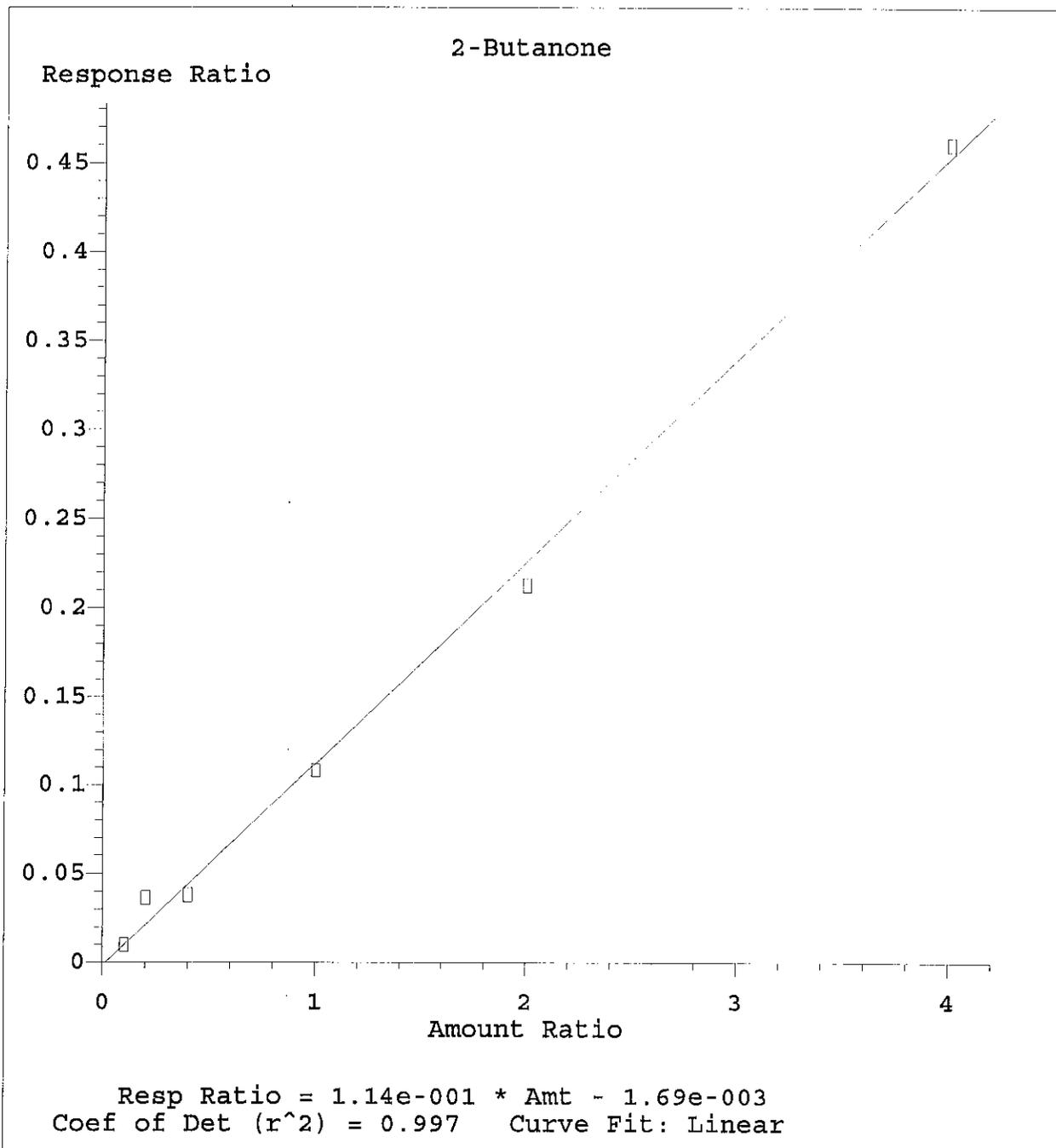
Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



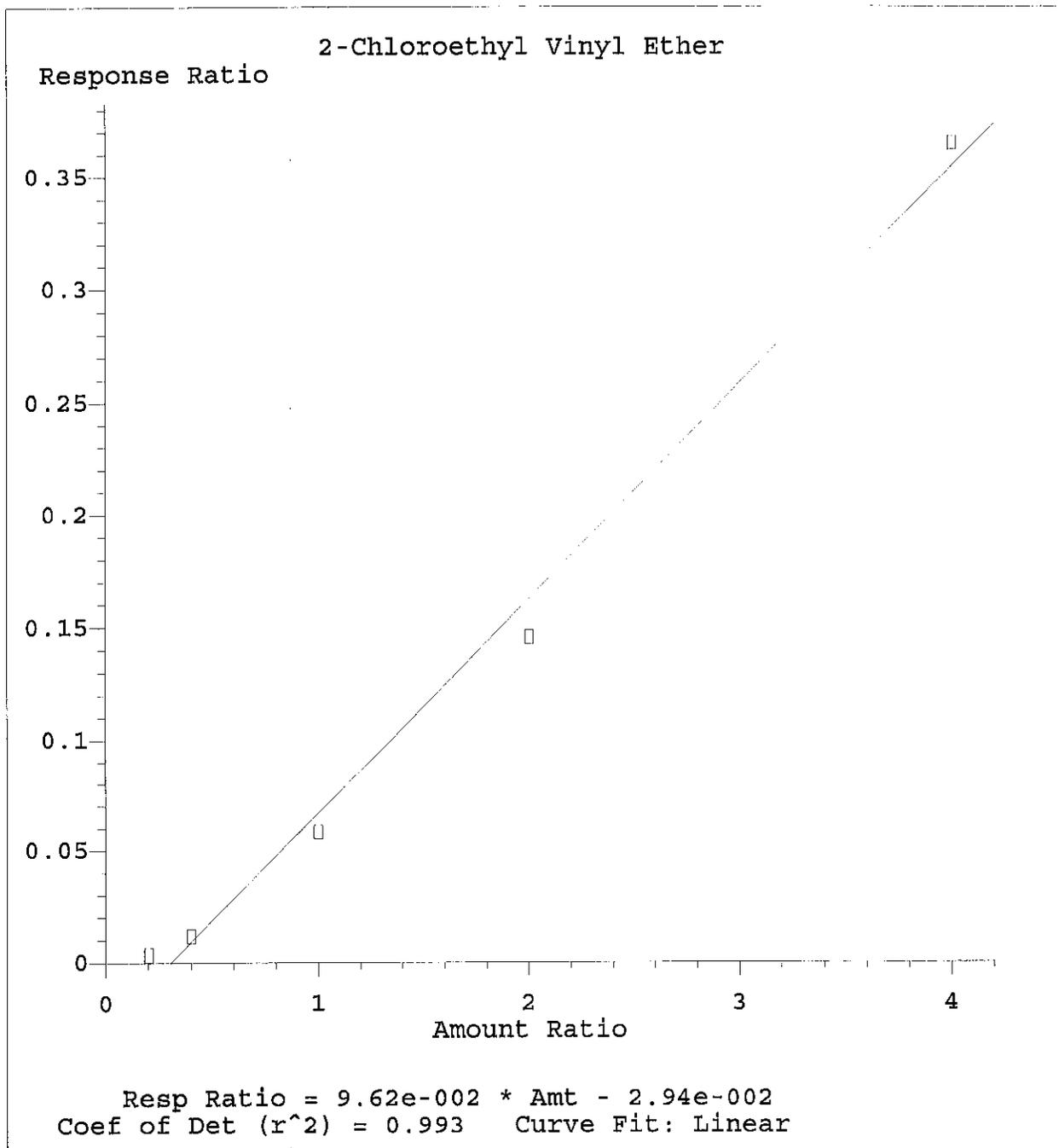
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Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002

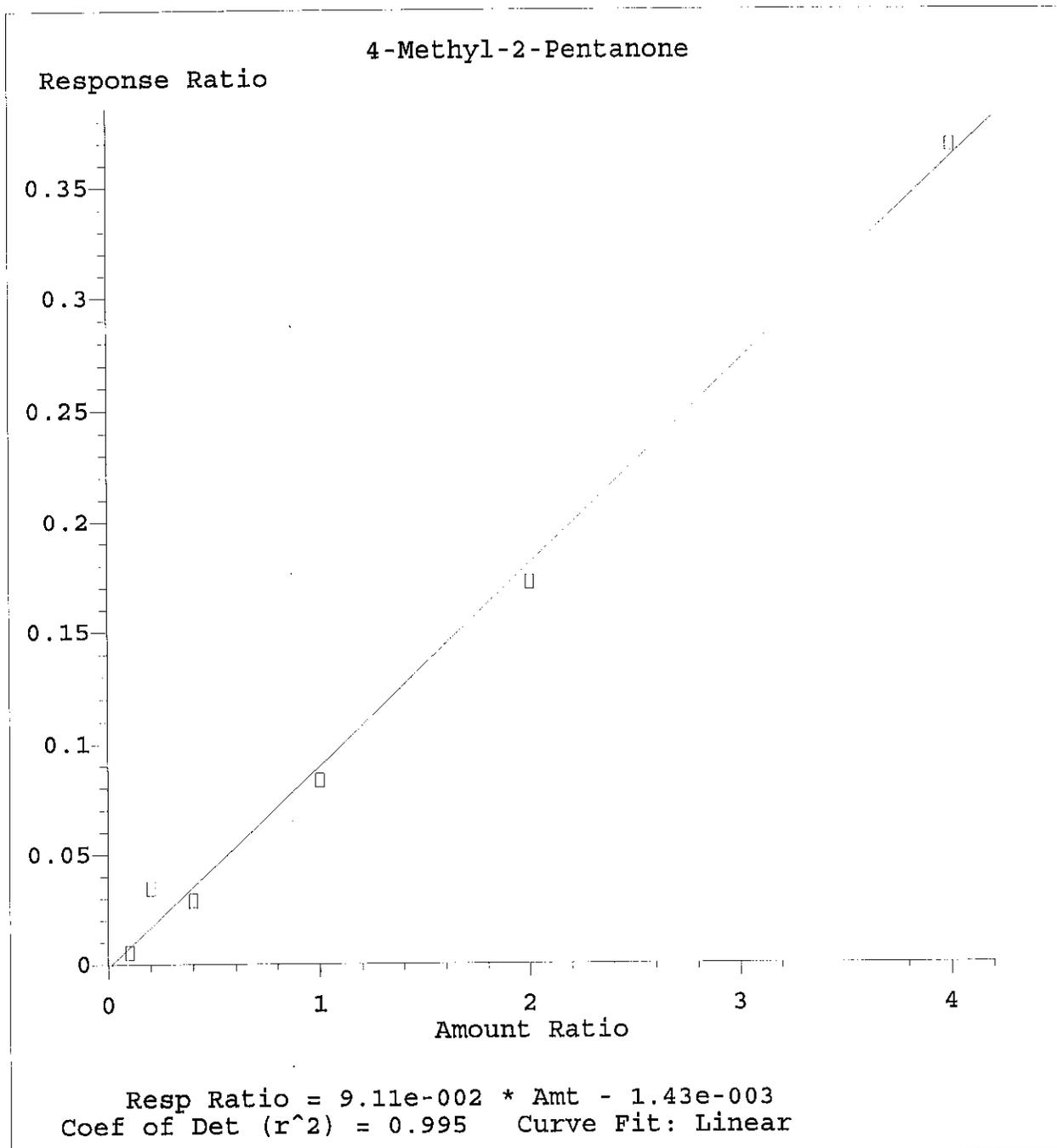


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Calibration Table Last Updated: Wed Mar 06 10:09:02 2002

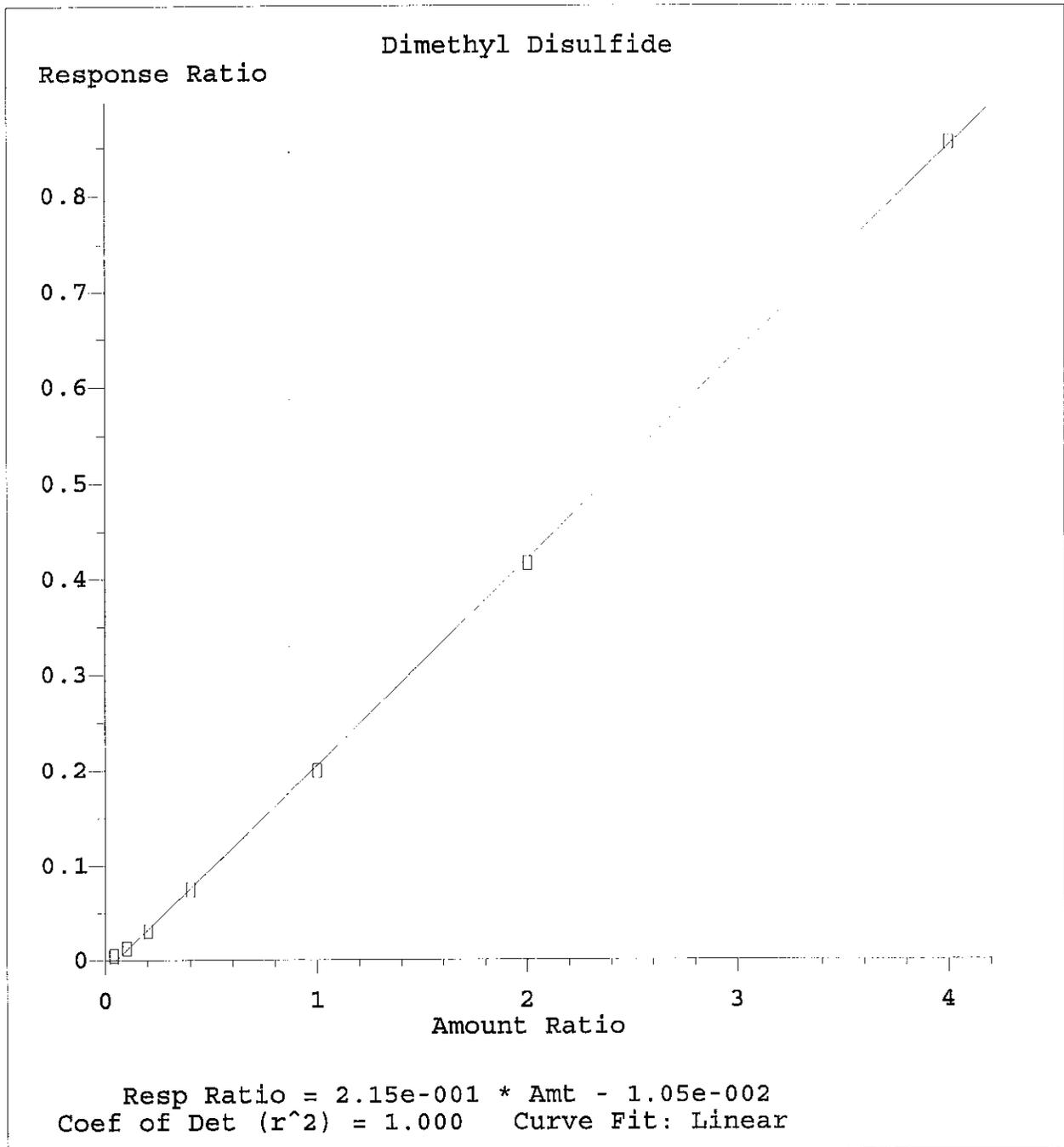


Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002

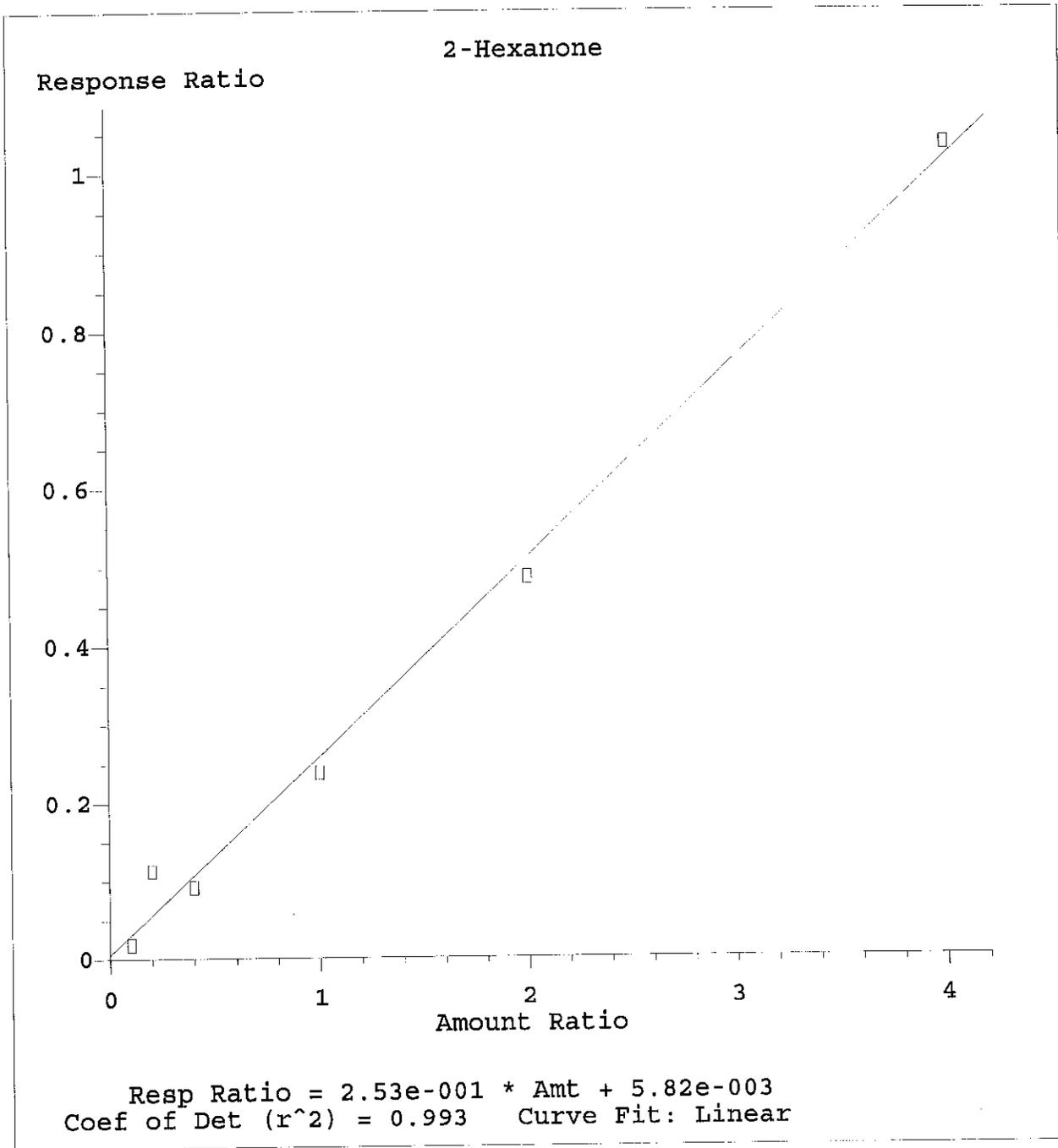
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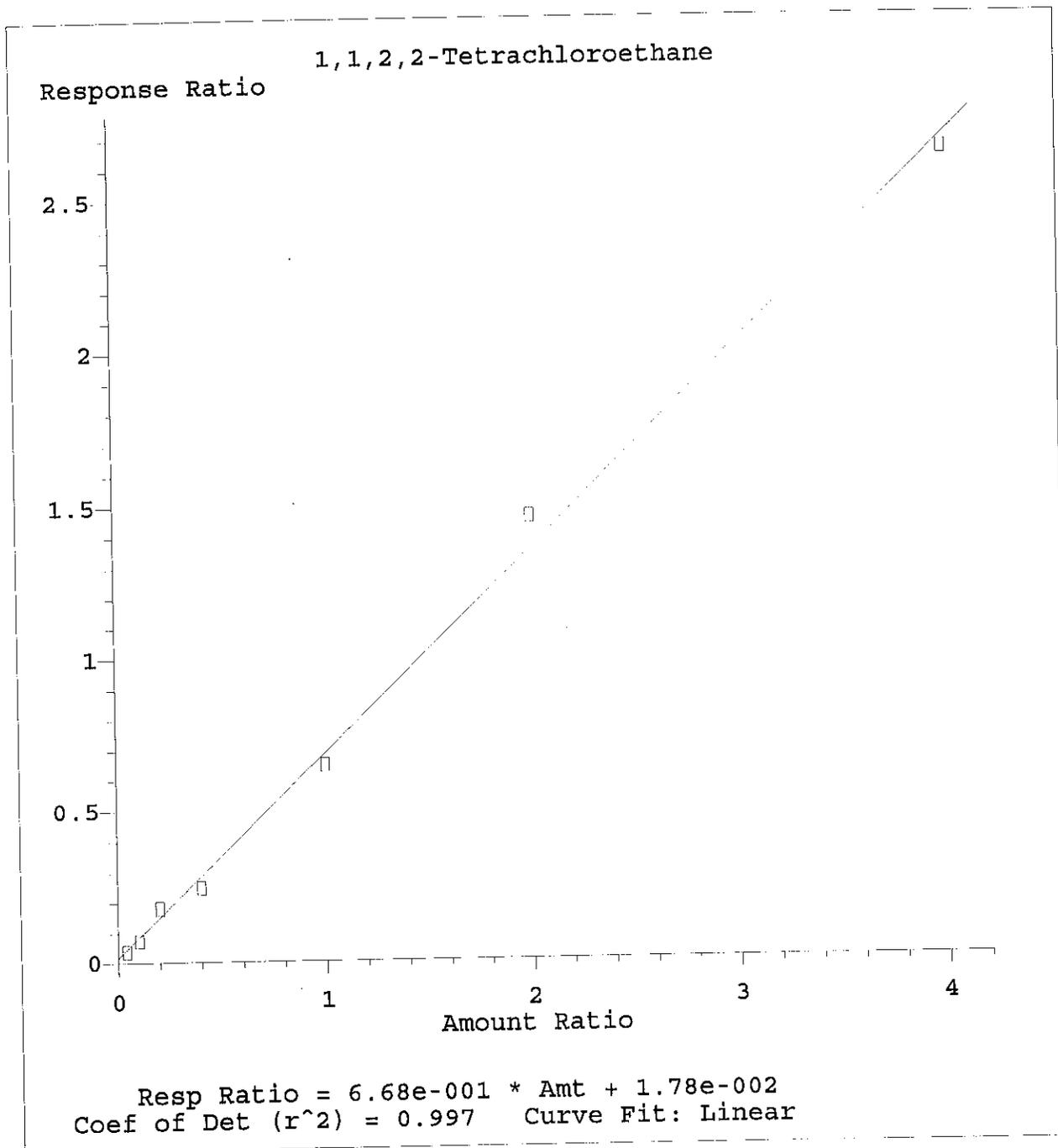
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 Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



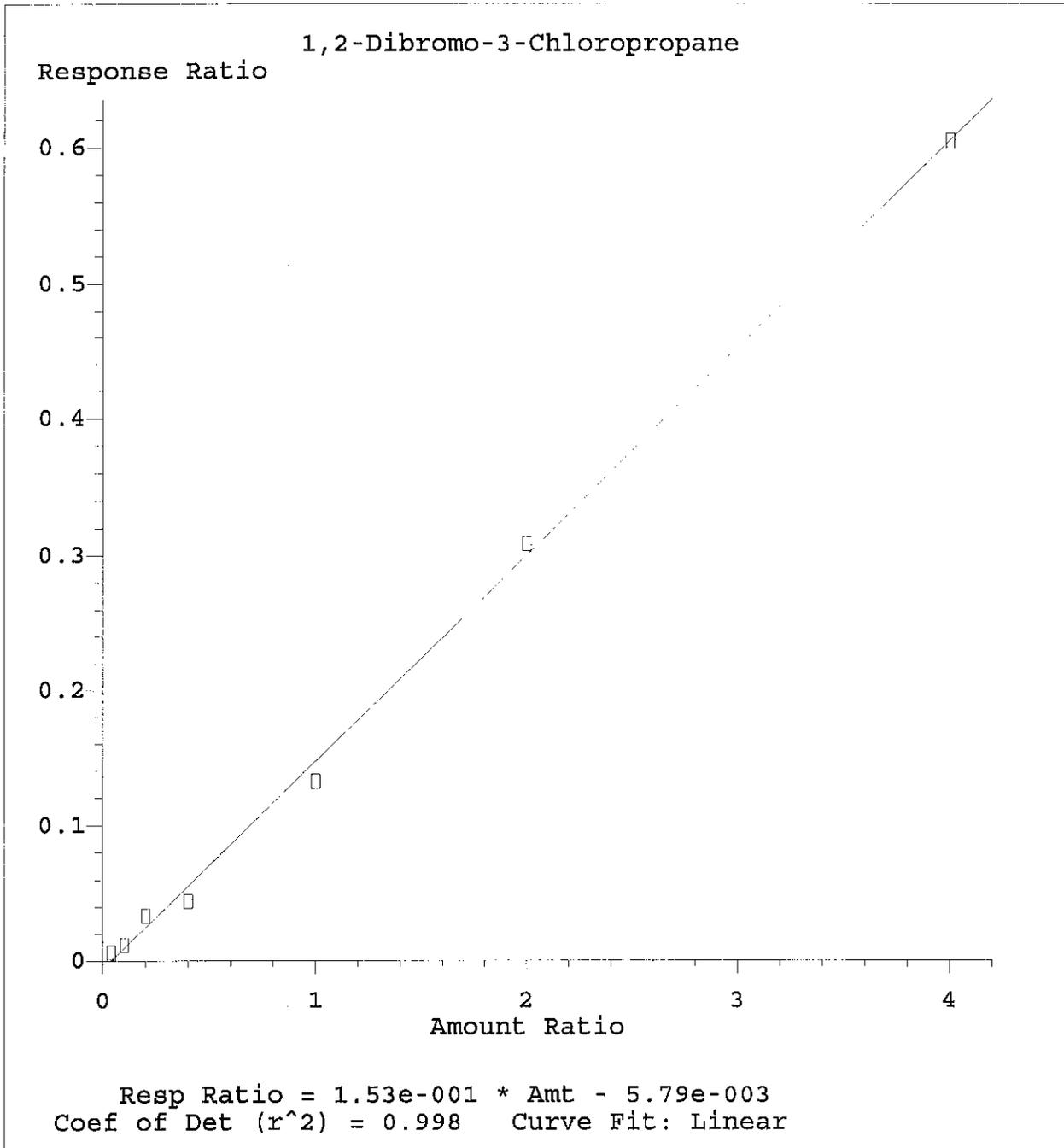
Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



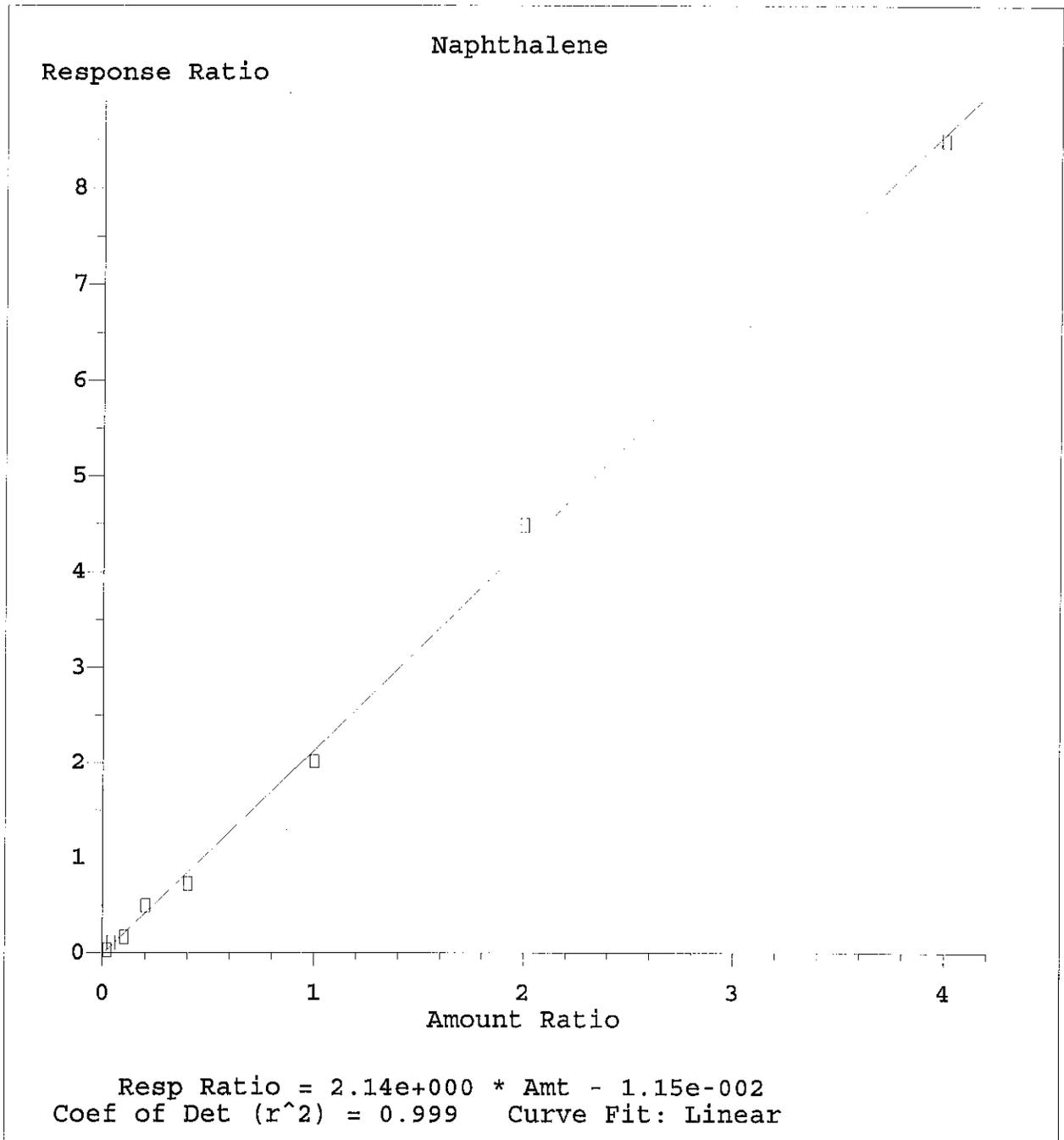
Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



Method Name: C:\HPCHEM\1\METHODS\8260SL.M
 Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002



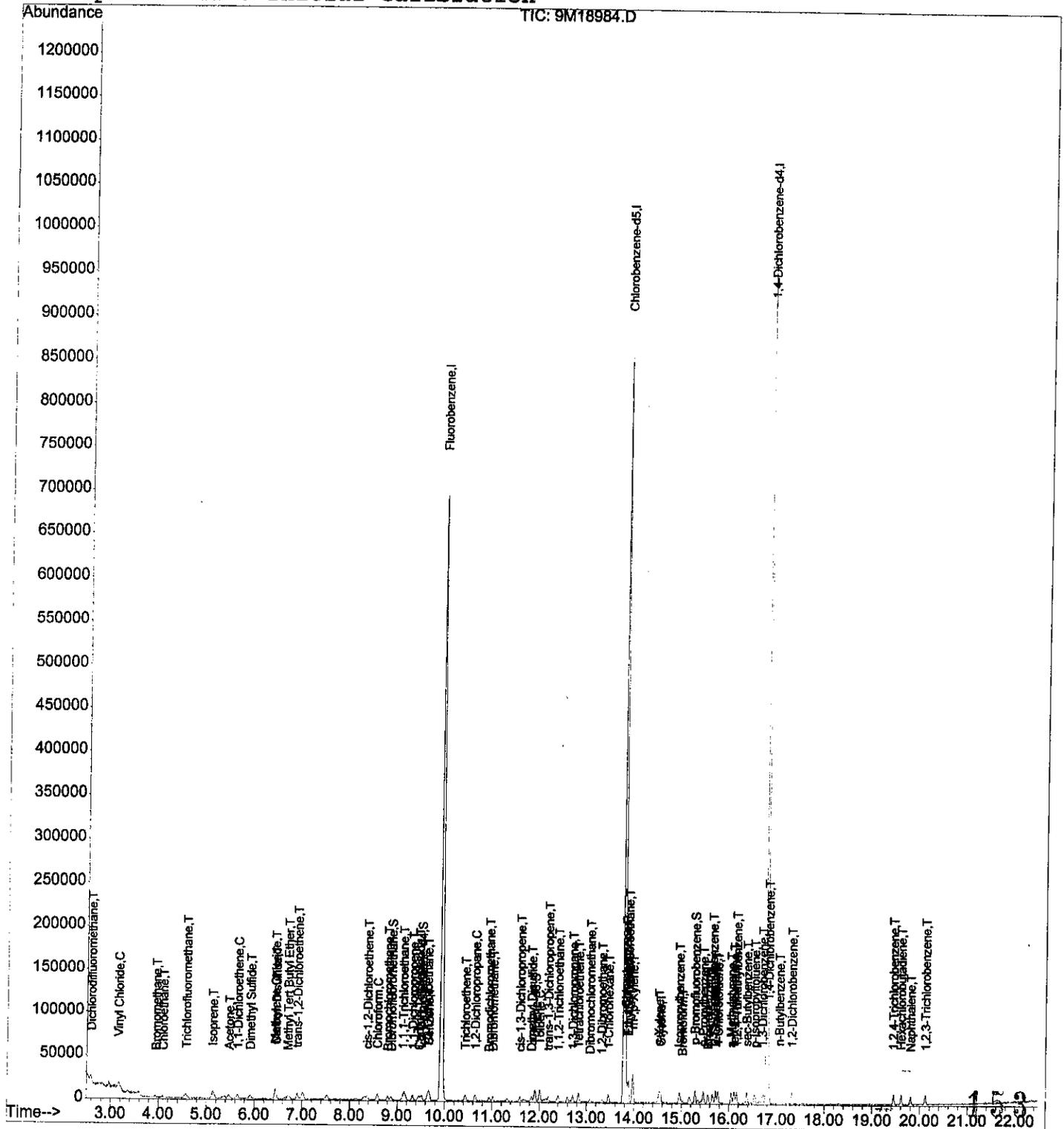
Method Name: C:\HPCHEM\1\METHODS\8260SL.M
Calibration Table Last Updated: Wed Mar 06 10:09:02 2002

Data File : D:\HPCHEM\1\DATA\030502\9M18984.D
 Acq On : 5 Mar 2002 10:46
 Sample : WG113899-02 1PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 12:52 2002

Vial: 5
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:09 2002
 Response via : Initial Calibration



Data File : D:\HPCHEM\1\DATA\030502\9M18984.D
 Acq On : 5 Mar 2002 10:46
 Sample : WG113899-02 1PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 12:52 2002

Vial: 5
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 02/20/2002 - HPMS 9
 Last Update : Thu Feb 21 09:28:28 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.93	96	830105	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	573181	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	309689	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.88	111	3270	0.8843	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	1.76%#
33) 1,2-Dichloroethane-d4	9.52	65	6441	1.1929	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	2.38%#
45) Toluene-d8	11.91	98	12240	0.9742	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	1.94%#
66) p-Bromofluorobenzene	15.29	95	7223	1.4005	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	2.80%#

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.58	85	7718	1.1421	ug/kg	100
4) Vinyl Chloride	3.16	62	4488	1.1908	ug/kg	98
5) Bromomethane	3.94	94	2400	0.8910	ug/kg	82
6) Chloroethane	4.09	64	3080	0.9842	ug/kg#	76
7) Trichlorofluoromethane	4.57	101	9760	1.1781	ug/kg	92
8) Isoprene	5.13	67	6982	1.9210	ug/kg	88
11) Acetone	5.47	43	10542	6.2578	ug/kg#	89
12) 1,1-Dichloroethene	5.66	96	2502	0.7438	ug/kg#	70
13) Dimethyl Sulfide	5.91	62	3280	0.9452	ug/kg	99
15) Methylene Chloride	6.43	84	4249	0.9589	ug/kg	96
16) Carbon Disulfide	6.45	76	13569	1.2589	ug/kg#	95
18) Methyl Tert Butyl Ether	6.70	73	9368	0.9881	ug/kg#	71
19) trans-1,2-Dichloroethene	6.90	96	3118	0.8345	ug/kg	89
25) cis-1,2-Dichloroethene	8.36	96	3160	0.8276	ug/kg	97
26) Chloroform	8.58	83	8161	1.0474	ug/kg	100
27) Bromochloromethane	8.80	128	1528	0.9022	ug/kg	94
29) 1,1,1-Trichloroethane	9.12	97	6490	0.9467	ug/kg	94
31) 1,1-Dichloropropene	9.32	75	4877	0.8194	ug/kg#	85
32) Carbon Tetrachloride	9.46	117	6197	1.1014	ug/kg#	90
34) 1,2-Dichloroethane	9.63	62	7757	1.1160	ug/kg#	86
35) Benzene	9.67	78	15164	0.9615	ug/kg	95
36) Trichloroethene	10.43	130	3208	0.8341	ug/kg	92
37) 1,2-Dichloropropane	10.64	63	3342	0.8282	ug/kg	97
38) Bromodichloromethane	10.94	83	5212	0.9618	ug/kg#	94
39) Dibromomethane	11.02	93	1988	0.8553	ug/kg	90
42) cis-1,3-Dichloropropene	11.60	75	3846	0.6630	ug/kg#	81
43) Dimethyl Disulfide	11.84	79	2144	0.7264	ug/kg	97

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030502\9M18984.D
 Acq On : 5 Mar 2002 10:46
 Sample : WG113899-02 1PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 12:52 2002

Vial: 5
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 02/20/2002 - HPMS 9
 Last Update : Thu Feb 21 09:28:28 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Toluene	12.01	91	14591	0.9378	ug/kg	97
48) trans-1,3-Dichloropropene	12.20	75	3853	0.7419	ug/kg	95
49) 1,1,2-Trichloroethane	12.41	97	3137	1.0042	ug/kg	84
51) 1,3-Dichloropropane	12.71	76	5214	0.9085	ug/kg#	81
52) Tetrachloroethene	12.83	164	3206	0.9784	ug/kg	93
53) Dibromochloromethane	13.07	129	3137	0.9360	ug/kg	99
54) 1,2-Dibromoethane	13.32	107	2950	0.9166	ug/kg	92
55) 1-Chlorohexane	13.46	91	3653	0.7621	ug/kg#	78
56) Chlorobenzene	13.83	112	10402	1.0070	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.88	131	3381	1.0042	ug/kg	96
58) Ethylbenzene	13.88	106	4880	0.8598	ug/kg	81
59) m-,p-Xylene	13.97	106	12164	1.6717	ug/kg	90
60) o-Xylene	14.52	106	5149	0.7762	ug/kg	91
61) Styrene	14.56	104	7808	0.6900	ug/kg	93
62) Bromoform	15.02	173	1736	0.7055	ug/kg#	83
63) Isopropylbenzene	14.95	105	11911	0.6527	ug/kg	99
69) n-Propylbenzene	15.46	91	16341	0.7565	ug/kg	96
70) Bromobenzene	15.56	156	3793	0.9286	ug/kg	91
71) 1,3,5-Trimethylbenzene	15.65	105	10306	0.6922	ug/kg	92
72) 2-Chlorotoluene	15.72	91	12017	0.8981	ug/kg	96
73) 4-Chlorotoluene	15.77	91	11787	0.8755	ug/kg	93
74) a-Methylstyrene	16.05	118	5000	0.7250	ug/kg	99
75) tert-Butylbenzene	16.11	119	10403	0.7247	ug/kg#	79
76) 1,2,4-Trimethylbenzene	16.16	105	11967	0.7487	ug/kg	99
77) sec-Butylbenzene	16.37	105	14367	0.7458	ug/kg	94
78) p-Isopropyltoluene	16.54	119	11231	0.6805	ug/kg	93
79) 1,3-Dichlorobenzene	16.71	146	7889	0.9369	ug/kg	99
80) 1,4-Dichlorobenzene	16.83	146	9153	1.0493	ug/kg	96
81) n-Butylbenzene	17.06	91	11471	0.7313	ug/kg	96
82) 1,2-Dichlorobenzene	17.32	146	6895	0.8638	ug/kg	89
84) 1,2,4-Trichlorobenzene	19.45	180	5181	0.8028	ug/kg	96
85) Hexachlorobutadiene	19.61	225	3686	0.9208	ug/kg	92
86) Naphthalene	19.81	128	9484	0.7082	ug/kg#	93
87) 1,2,3-Trichlorobenzene	20.12	180	4943	0.8152	ug/kg#	75

(#) = qualifier out of range (m) = manual integration
 9M18984.D 8260SL.M Tue Mar 05 12:56:23 2002

HPMS 9

Page 2

Data File : D:\HPCHEM\1\DATA\030502\9M18995.D
 Acq On : 5 Mar 2002 18:10
 Sample : WG113899-03 2PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 8:23 2002

Vial: 16
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 16:15:21 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.93	96	990005	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	681328	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	380325	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	8959	2.1299	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	4.26%#
33) 1,2-Dichloroethane-d4	9.51	65	13814	2.0829	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	4.16%#
45) Toluene-d8	11.91	98	28031	1.9717	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	3.94%#
66) p-Bromofluorobenzene	15.29	95	13215	2.1249	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	4.24%#

Target Compounds

					Qvalue	
2) Dichlorodifluoromethane	2.58	85	19508	2.2191	ug/kg	94
4) Vinyl Chloride	3.16	62	11253	2.3067	ug/kg	100
5) Bromomethane	3.94	94	5757	2.1563	ug/kg	94
6) Chloroethane	4.09	64	8728	2.4118	ug/kg	89
7) Trichlorofluoromethane	4.58	101	23824	2.1584	ug/kg#	70
8) Isoprene	5.13	67	12654	2.2923	ug/kg#	54
10) 1,1,2-Trichloro-1,2,2-Trif	5.37	101	11746m	2.3361	ug/kg	
11) Acetone	5.47	43	12487	5.2404	ug/kg#	76
12) 1,1-Dichloroethene	5.65	96	7313	2.0557	ug/kg	86
13) Dimethyl Sulfide	5.91	62	8287	2.0370	ug/kg	99
15) Methylene Chloride	6.43	84	10533	2.1726	ug/kg	95
16) Carbon Disulfide	6.45	76	30234	2.1979	ug/kg	98
17) Acrylonitrile	6.62	53	3292	1.9391	ug/kg	96
18) Methyl Tert Butyl Ether	6.70	73	23630	2.2356	ug/kg#	77
19) trans-1,2-Dichloroethene	6.90	96	9072	2.2471	ug/kg	98
20) n-Hexane	7.01	57	14324	2.0659	ug/kg#	76
21) Vinyl Acetate	7.53	43	12640	1.2583	ug/kg#	87
22) 1,1-Dichloroethane	7.53	63	18590	2.1341	ug/kg	99
23) 2-Butanone	8.13	43	4443	1.9080	ug/kg#	81
24) 2,2-Dichloropropane	8.31	77	12827	1.8689	ug/kg#	80
25) cis-1,2-Dichloroethene	8.37	96	9130	2.1962	ug/kg	94
26) Chloroform	8.59	83	20911	2.2453	ug/kg	97
27) Bromochloromethane	8.81	128	4169	2.3168	ug/kg	96
29) 1,1,1-Trichloroethane	9.12	97	16906	2.0289	ug/kg	97
30) Cyclohexane	9.16	56	16395	2.1141	ug/kg	98
31) 1,1-Dichloropropene	9.32	75	14007	2.1278	ug/kg	91
32) Carbon Tetrachloride	9.47	117	13404	1.8564	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030502\9M18995.D
 Acq On : 5 Mar 2002 18:10
 Sample : WG113899-03 2PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 8:23 2002

Vial: 16
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 16:15:21 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
34) 1,2-Dichloroethane	9.63	62	18365	2.1626	ug/kg#	95
35) Benzene	9.67	78	39568	1.7773	ug/kg	100
36) Trichloroethene	10.45	130	9134	2.2571	ug/kg	98
37) 1,2-Dichloropropane	10.65	63	9827	2.2492	ug/kg	92
38) Bromodichloromethane	10.94	83	14576	2.1883	ug/kg	97
39) Dibromomethane	11.02	93	5620	2.1033	ug/kg	96
41) 4-Methyl-2-Pentanone	11.32	58	2757	1.4917	ug/kg#	54
42) cis-1,3-Dichloropropene	11.59	75	12105	1.9806	ug/kg	97
43) Dimethyl Disulfide	11.84	79	4805	1.3329	ug/kg	96
46) Toluene	12.01	91	37954	2.1950	ug/kg	99
47) Ethyl Methacrylate	12.15	69	8939	1.7585	ug/kg#	81
48) trans-1,3-Dichloropropene	12.20	75	12872	2.1246	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	9746	2.6266	ug/kg	94
50) 2-Hexanone	12.38	43	5312	1.3592	ug/kg#	59
51) 1,3-Dichloropropane	12.70	76	16822	2.5134	ug/kg	87
52) Tetrachloroethene	12.83	164	8673	2.3251	ug/kg	95
53) Dibromochloromethane	13.08	129	9678	2.2243	ug/kg	98
54) 1,2-Dibromoethane	13.33	107	9158	2.4927	ug/kg	96
55) 1-Chlorohexane	13.46	91	10393	1.9217	ug/kg	94
56) Chlorobenzene	13.84	112	30507	2.5756	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.87	131	9257	2.1630	ug/kg	92
58) Ethylbenzene	13.88	106	14669	2.2966	ug/kg	93
59) m-,p-Xylene	13.97	106	38482	4.6940	ug/kg	97
60) o-Xylene	14.52	106	16401	2.2531	ug/kg	95
61) Styrene	14.57	104	27385	2.1498	ug/kg	87
62) Bromoform	15.02	173	7040	2.1452	ug/kg	95
63) Isopropylbenzene	14.96	105	43494	2.1761	ug/kg	98
65) 1,1,2,2-Tetrachloroethane	15.16	83	14480	2.6753	ug/kg	96
67) 1,2,3-Trichloropropane	15.35	110	4816	2.7138	ug/kg	83
68) trans-1,4-Dichloro-2-Buten	15.41	53	2144	1.3524	ug/kg#	65
69) n-Propylbenzene	15.46	91	58079	2.2546	ug/kg	96
70) Bromobenzene	15.56	156	12820	2.6236	ug/kg	97
71) 1,3,5-Trimethylbenzene	15.65	105	38006	2.1848	ug/kg	98
72) 2-Chlorotoluene	15.71	91	40857	2.5453	ug/kg	92
73) 4-Chlorotoluene	15.77	91	40013	2.3639	ug/kg	94
74) a-Methylstyrene	16.05	118	13912	1.5572	ug/kg	98
75) tert-Butylbenzene	16.11	119	39684	2.3520	ug/kg#	65
76) 1,2,4-Trimethylbenzene	16.16	105	44485	2.3256	ug/kg	100
77) sec-Butylbenzene	16.37	105	48614	2.1346	ug/kg	99
78) p-Isopropyltoluene	16.54	119	40952	2.1881	ug/kg	99
79) 1,3-Dichlorobenzene	16.72	146	26952	2.6554	ug/kg	97

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030502\9M18995.D
Acq On : 5 Mar 2002 18:10
Sample : WG113899-03 2PPB SOIL STD SV9122
Misc : 7,1
MS Integration Params: RTEINT.P
Quant Time: Mar 6 8:23 2002

Vial: 16
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Tue Mar 05 16:15:21 2002
Response via : Initial Calibration
DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
80) 1,4-Dichlorobenzene	16.83	146	28331	2.6571	ug/kg	100
81) n-Butylbenzene	17.06	91	40613	2.1457	ug/kg	99
82) 1,2-Dichlorobenzene	17.32	146	24729	2.5956	ug/kg	94
83) 1,2-Dibromo-3-Chloropropan	18.31	157	2359	2.2890	ug/kg	80
84) 1,2,4-Trichlorobenzene	19.45	180	18595	2.6058	ug/kg	98
85) Hexachlorobutadiene	19.61	225	11662	2.3605	ug/kg	97
86) Naphthalene	19.81	128	43245	2.9214	ug/kg	99
87) 1,2,3-Trichlorobenzene	20.12	180	18366	2.6860	ug/kg	98

159

(#) = qualifier out of range (m) = manual integration

9M18995.D 8260SL.M

Wed Mar 06 08:25:02 2002

HPMS 9

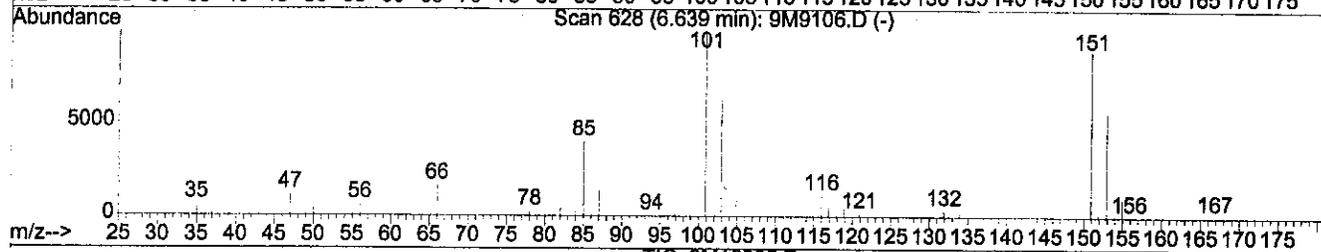
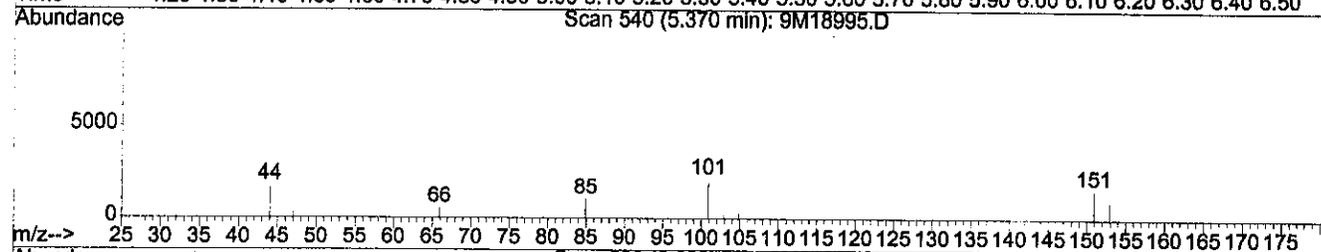
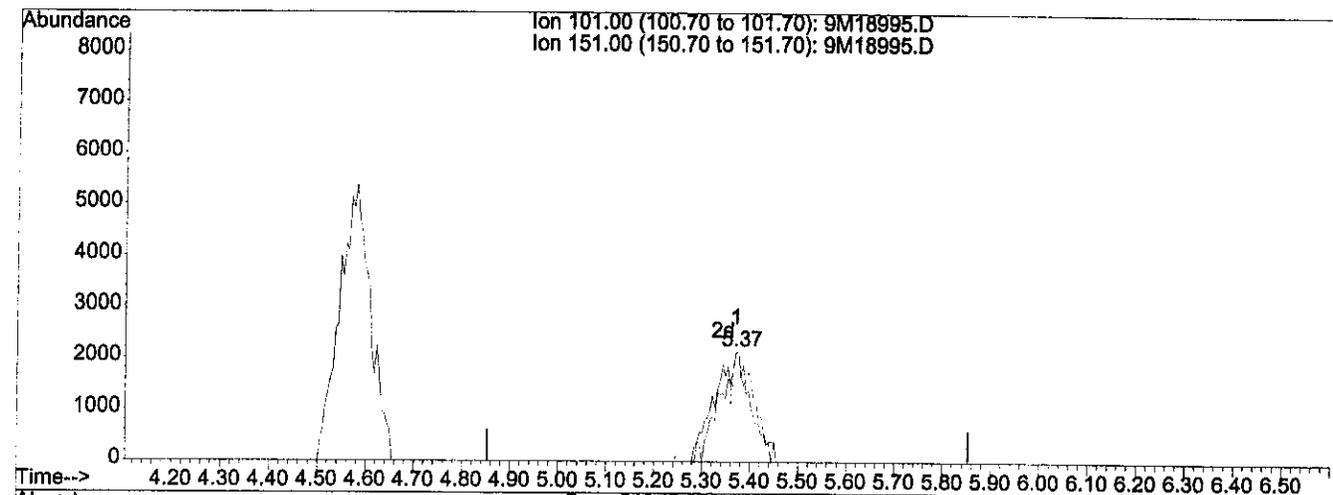
Page 3

Data File : D:\HPCHEM\1\DATA\030502\9M18995.D
 Acq On : 5 Mar 2002 18:10
 Sample : WG113899-03 2PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 8:22 2002

Vial: 16
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 16:15:21 2002
 Response via : Multiple Level Calibration



TIC: 9M18995.D

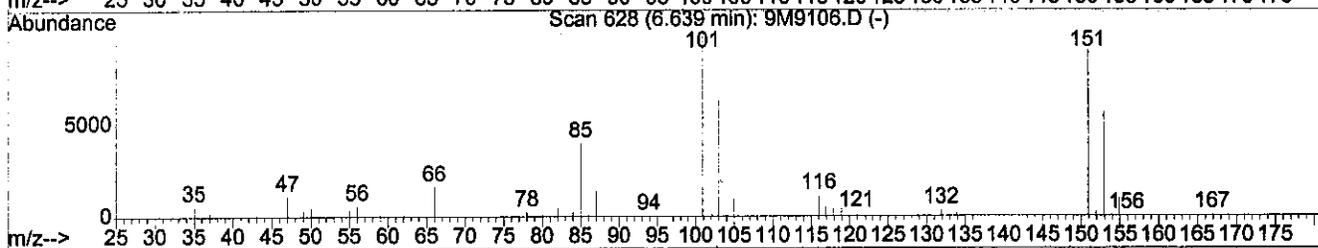
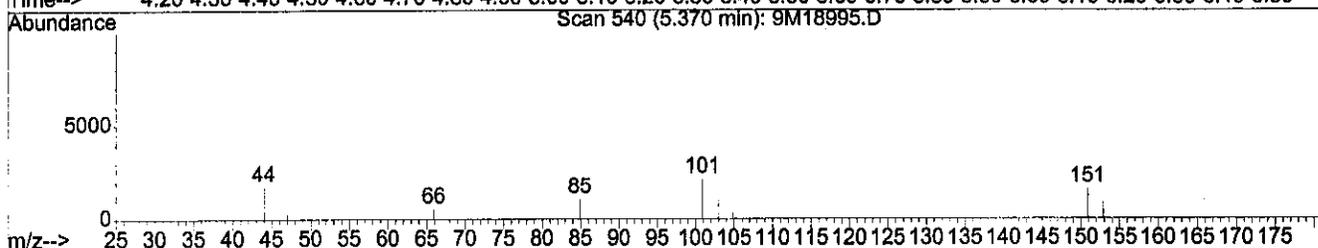
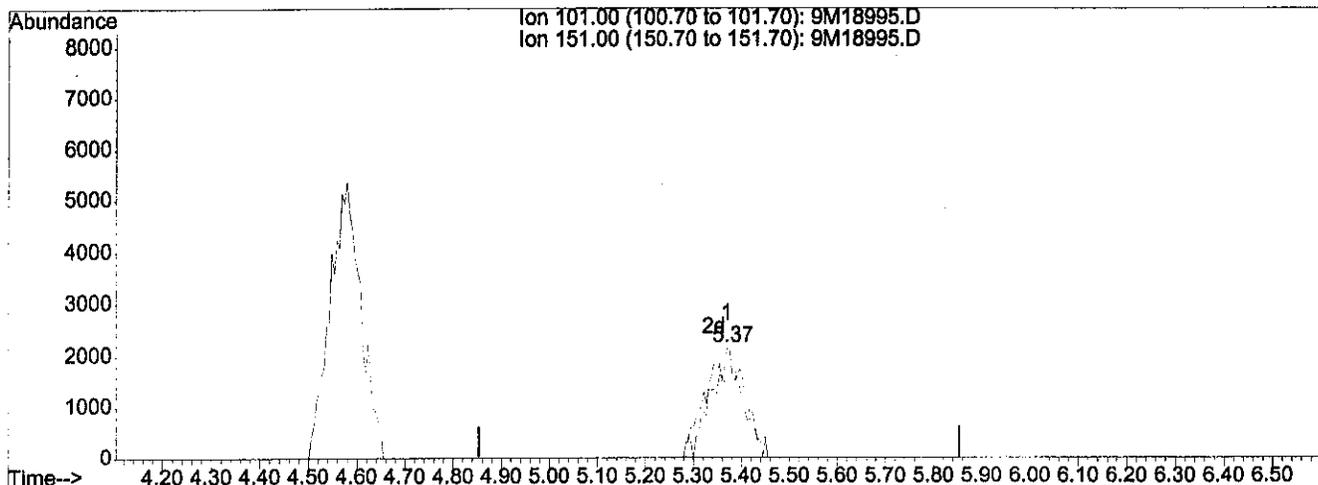
(10) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)		
5.37min	0.17ug/kg	
response	838	
Ion	Exp%	Act%
101.00	100	100
151.00	78.50	510.62#
0.00	0.00	0.00
0.00	0.00	0.00

Data File : D:\HPCHEM\1\DATA\030502\9M18995.D
 Acq On : 5 Mar 2002 18:10
 Sample : WG113899-03 2PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 8:23 2002

Vial: 16
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 16:15:21 2002
 Response via : Multiple Level Calibration



(10) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)

5.37min 2.34ug/kg m

response 11746

Ion	Exp%	Act%
101.00	100	100
151.00	78.50	36.43#
0.00	0.00	0.00
0.00	0.00	0.00

mf
 3.6.02

316102

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	796304	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	539390	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	300659	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	17558	4.9710	ug/kg	0.00
Spiked Amount	50.000					
Range	80 - 120		Recovery	=	9.94%#	
33) 1,2-Dichloroethane-d4	9.51	65	29180	5.5304	ug/kg	0.00
Spiked Amount	50.000					
Range	80 - 120		Recovery	=	11.06%#	
45) Toluene-d8	11.91	98	57046	4.8232	ug/kg	0.00
Spiked Amount	50.000					
Range	81 - 117		Recovery	=	9.64%#	
66) p-Bromofluorobenzene	15.29	95	24370	4.8228	ug/kg	0.00
Spiked Amount	50.000					
Range	74 - 121		Recovery	=	9.64%#	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.58	85	36013	5.2336	ug/kg	100
3) Chloromethane	2.96	50	25408	5.7114	ug/kg	89
4) Vinyl Chloride	3.15	62	21364	5.5994	ug/kg	99
5) Bromomethane	3.93	94	10115	3.9775	ug/kg	92
6) Chloroethane	4.08	64	14352	4.7528	ug/kg	98
7) Trichlorofluoromethane	4.57	101	44981	5.2913	ug/kg	100
8) Isoprene	5.14	67	21704	6.2250	ug/kg	88
9) Acrolein	5.34	56	3591m	14.9298	ug/kg	
10) 1,1,2-Trichloro-1,2,2-Trif	5.38	101	20588	5.0572	ug/kg#	57
11) Acetone	5.46	43	17842	11.0406	ug/kg	99
12) 1,1-Dichloroethene	5.65	96	13788	4.4418	ug/kg	97
13) Dimethyl Sulfide	5.91	62	14481	4.3895	ug/kg	92
14) Iodomethane	6.15	142	2078m	1.0684	ug/kg	
15) Methylene Chloride	6.44	84	19778	4.7920	ug/kg	94
16) Carbon Disulfide	6.45	76	53461	4.9636	ug/kg	96
17) Acrylonitrile	6.63	53	5850	4.5607	ug/kg	100
18) Methyl Tert Butyl Ether	6.70	73	38382	4.2304	ug/kg#	67
19) trans-1,2-Dichloroethene	6.90	96	15945	4.5587	ug/kg	92
20) n-Hexane	7.01	57	27252	4.8621	ug/kg#	86
21) Vinyl Acetate	7.52	43	33136	3.7922	ug/kg#	84
22) 1,1-Dichloroethane	7.53	63	35576	4.8320	ug/kg#	96
23) 2-Butanone	8.12	43	7949	4.7043	ug/kg#	88
24) 2,2-Dichloropropane	8.30	77	25397	4.3482	ug/kg#	90
25) cis-1,2-Dichloroethene	8.37	96	16525	4.5762	ug/kg	94
26) Chloroform	8.58	83	39130	5.1515	ug/kg	98
27) Bromochloromethane	8.80	128	7324	4.5406	ug/kg	90
29) 1,1,1-Trichloroethane	9.12	97	33538	5.0240	ug/kg#	50

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.16	56	28179	4.3301	ug/kg#	94
31) 1,1-Dichloropropene	9.32	75	25227	4.4710	ug/kg	100
32) Carbon Tetrachloride	9.46	117	28718	5.2086	ug/kg#	94
34) 1,2-Dichloroethane	9.63	62	36214	5.2798	ug/kg#	87
35) Benzene	9.67	78	71291	3.8018	ug/kg	98
36) Trichloroethene	10.43	130	15602	4.3437	ug/kg	89
37) 1,2-Dichloropropane	10.65	63	17408	4.5956	ug/kg	99
38) Bromodichloromethane	10.94	83	27343	5.1628	ug/kg#	94
39) Dibromomethane	11.01	93	11145	5.0166	ug/kg	96
41) 4-Methyl-2-Pentanone	11.31	58	4293	3.0065	ug/kg#	31
42) cis-1,3-Dichloropropene	11.59	75	23283	4.4269	ug/kg	100
43) Dimethyl Disulfide	11.84	79	10248	3.6195	ug/kg	87
46) Toluene	12.01	91	69535	4.8824	ug/kg	98
47) Ethyl Methacrylate	12.15	69	15831	3.9671	ug/kg#	87
48) trans-1,3-Dichloropropene	12.20	75	23611	4.9172	ug/kg	100
49) 1,1,2-Trichloroethane	12.40	97	15397	5.2846	ug/kg	97
50) 2-Hexanone	12.38	43	10079	3.7155	ug/kg#	86
51) 1,3-Dichloropropane	12.70	76	27675	5.1771	ug/kg	99
52) Tetrachloroethene	12.83	164	14510	4.7554	ug/kg	92
53) Dibromochloromethane	13.07	129	16765	5.1379	ug/kg	91
54) 1,2-Dibromoethane	13.32	107	15138	5.1070	ug/kg	89
55) 1-Chlorohexane	13.46	91	18366	4.1984	ug/kg	100
56) Chlorobenzene	13.84	112	48638	5.0311	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.87	131	17318	5.3363	ug/kg	100
58) Ethylbenzene	13.88	106	25415	4.8660	ug/kg	97
59) m-,p-Xylene	13.97	106	66284	10.0106	ug/kg	97
60) o-Xylene	14.52	106	27307	4.5289	ug/kg	94
61) Styrene	14.56	104	49223	4.7840	ug/kg	97
62) Bromoform	15.02	173	11453	4.9457	ug/kg	98
63) Isopropylbenzene	14.95	105	75103	4.6081	ug/kg	97
65) 1,1,2,2-Tetrachloroethane	15.16	83	22055	5.5142	ug/kg#	81
67) 1,2,3-Trichloropropane	15.35	110	7429	5.8047	ug/kg	86
68) trans-1,4-Dichloro-2-Buten	15.41	53	5298	4.9742	ug/kg#	86
69) n-Propylbenzene	15.46	91	101012	4.9577	ug/kg	99
70) Bromobenzene	15.56	156	20616	5.2722	ug/kg	95
71) 1,3,5-Trimethylbenzene	15.65	105	66513	4.7893	ug/kg	100
72) 2-Chlorotoluene	15.72	91	67061	5.2843	ug/kg	95
73) 4-Chlorotoluene	15.77	91	69597	5.4048	ug/kg	95
74) a-Methylstyrene	16.04	118	26614	3.9748	ug/kg	97
75) tert-Butylbenzene	16.10	119	70388	5.2673	ug/kg#	81
76) 1,2,4-Trimethylbenzene	16.16	105	77239	5.1375	ug/kg	98

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77) sec-Butylbenzene	16.38	105	86532	4.7621	ug/kg	100
78) p-Isopropyltoluene	16.54	119	70331	4.6551	ug/kg	99
79) 1,3-Dichlorobenzene	16.71	146	40581	5.0850	ug/kg	99
80) 1,4-Dichlorobenzene	16.84	146	43691	5.2546	ug/kg#	85
81) n-Butylbenzene	17.06	91	71525	4.8454	ug/kg	98
82) 1,2-Dichlorobenzene	17.32	146	38374	5.0968	ug/kg	97
83) 1,2-Dibromo-3-Chloropropan	18.31	157	3578	4.7357	ug/kg	93
84) 1,2,4-Trichlorobenzene	19.45	180	26743	4.5915	ug/kg	96
85) Hexachlorobutadiene	19.62	225	19350	4.9477	ug/kg	94
86) Naphthalene	19.81	128	51439	4.2855	ug/kg#	93
87) 1,2,3-Trichlorobenzene	20.12	180	26454	4.7599	ug/kg	100

(#) = qualifier out of range (m) = manual integration

9M18986.D 8260SL.M

Tue Mar 05 13:37:02 2002

HPMS_9

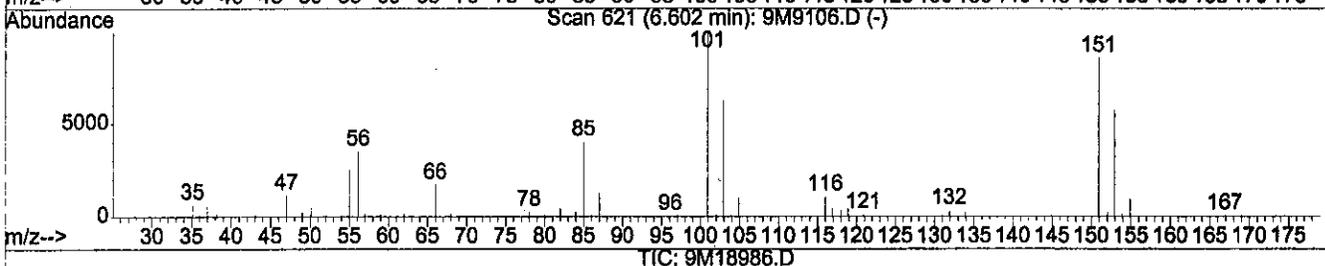
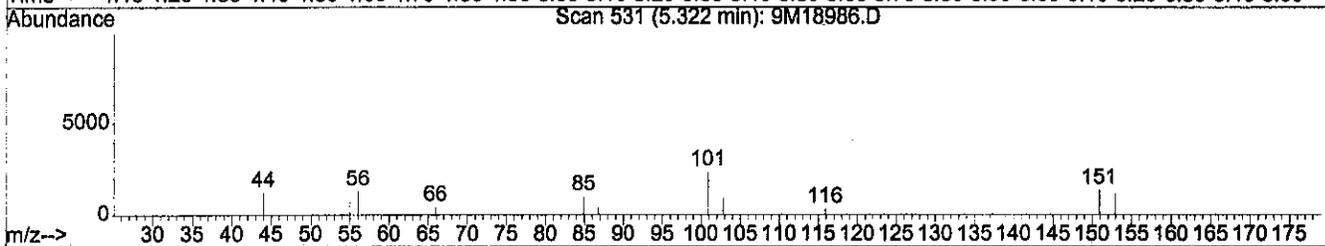
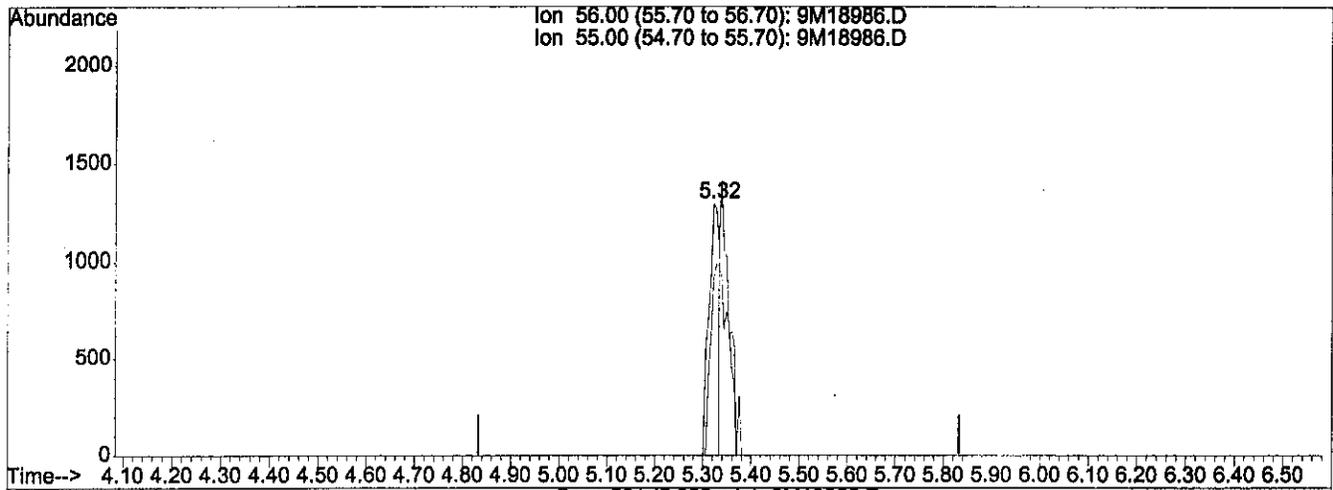
Page 3

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:22 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Single Level Calibration



TIC: 9M18986.D

(9) Acrolein (T)

5.32min 7.84ug/kg

response 1886

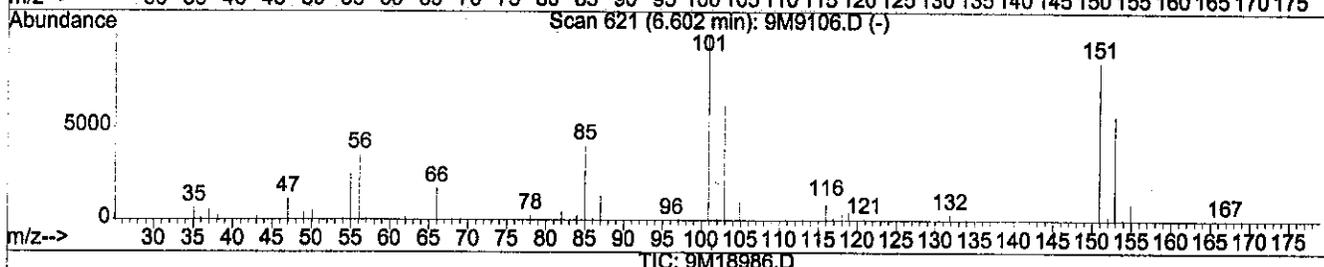
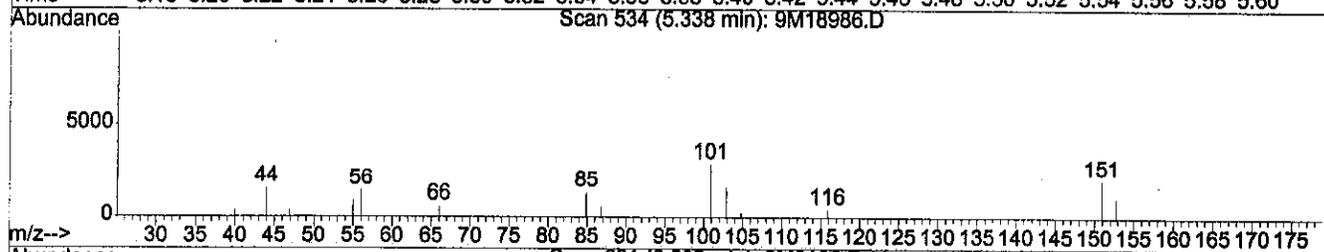
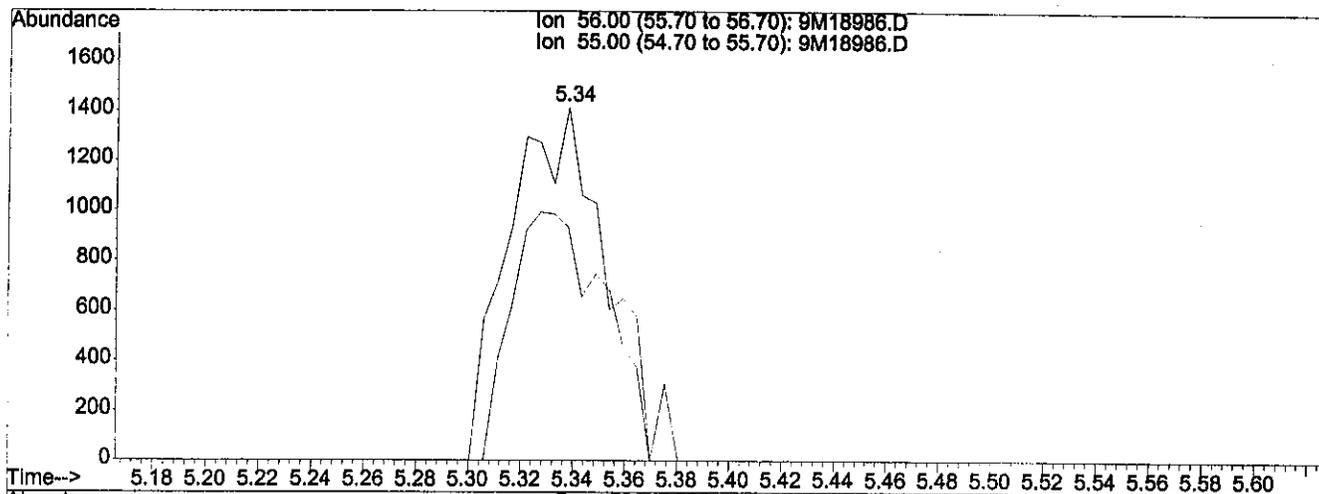
Ion	Exp%	Act%
56.00	100	100
55.00	70.30	131.76#
0.00	0.00	0.00
0.00	0.00	0.00

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Single Level Calibration



(9) Acrolein (T)

5.34min 14.93ug/kg m

response 3591

Ion	Exp%	Act%
56.00	100	100
55.00	70.30	69.20
0.00	0.00	0.00
0.00	0.00	0.00

Handwritten: 3.5.02

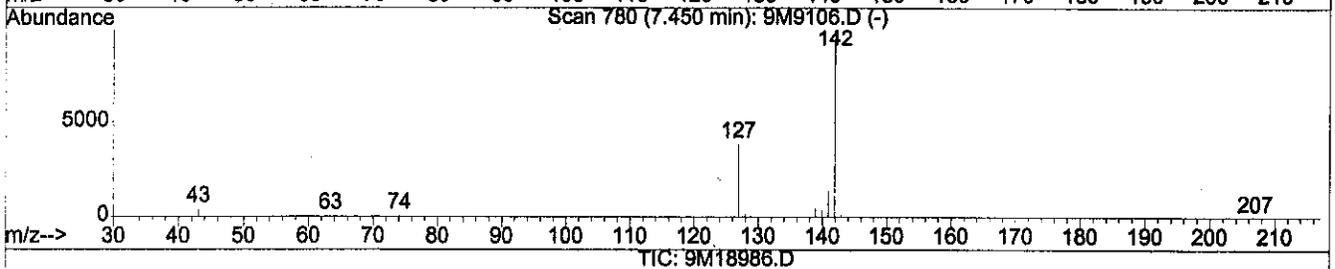
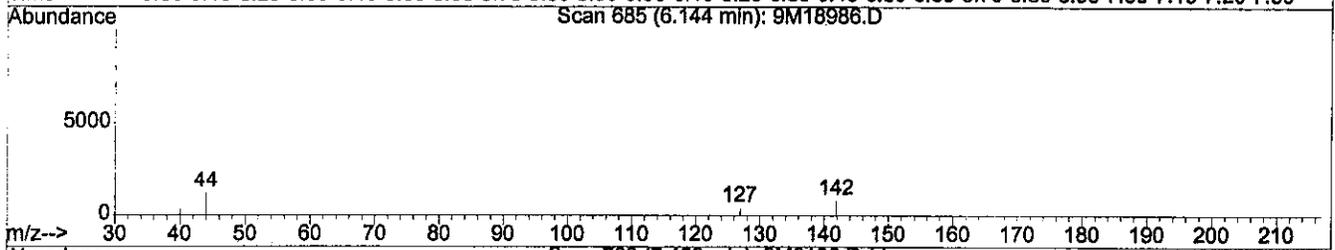
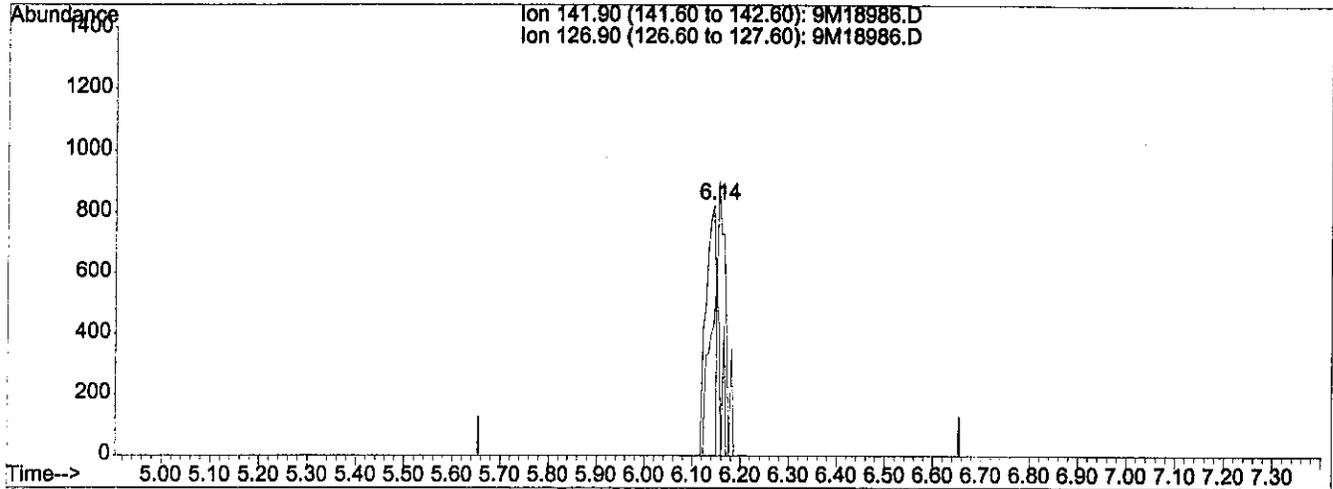
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Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Single Level Calibration



(14) Iodomethane (T)

6.14min 0.61ug/kg

response 1193

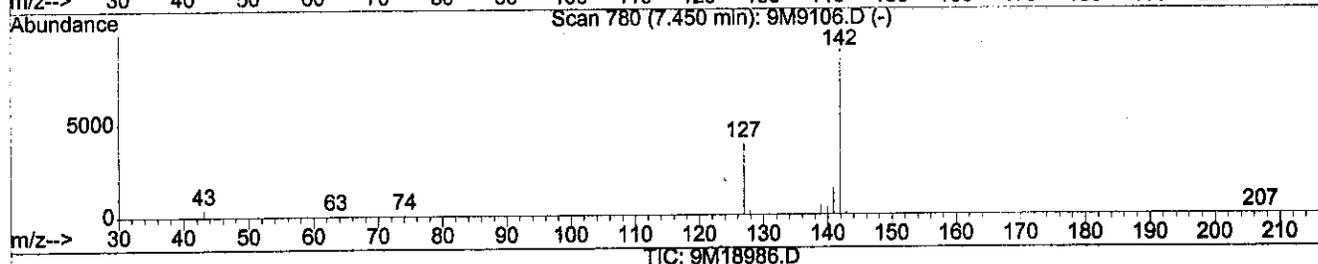
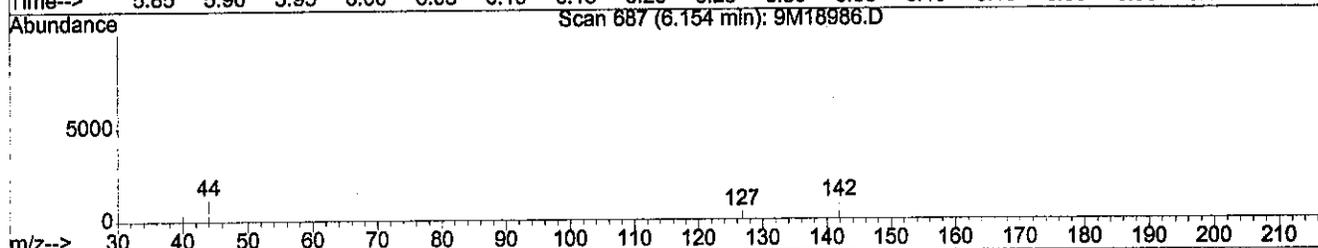
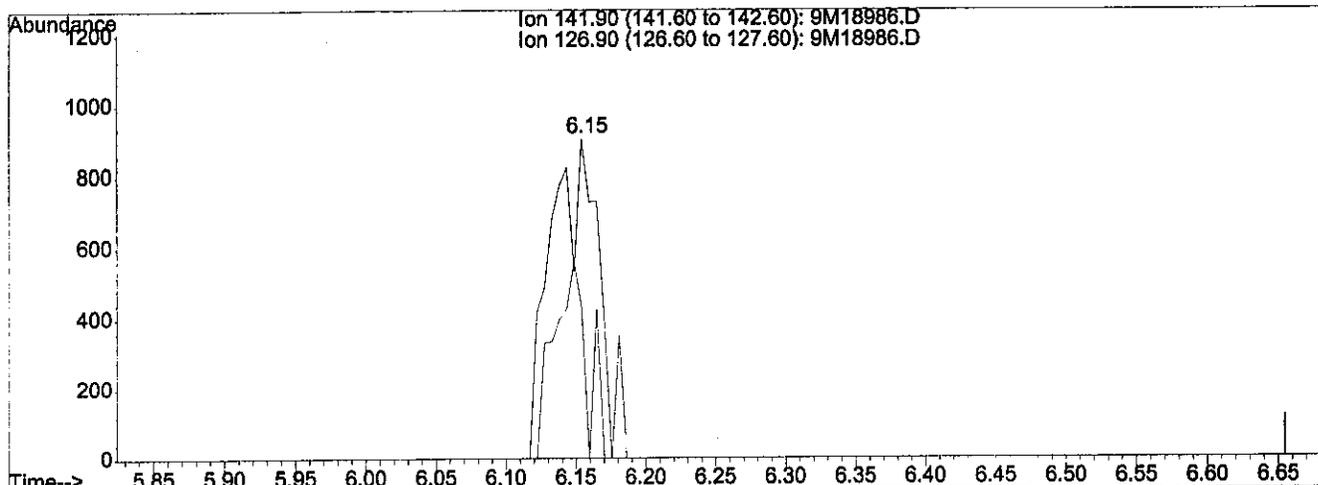
Ion	Exp%	Act%
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126.90	0.00	78.29#
0.00	0.00	0.00
0.00	0.00	0.00

Data File : D:\HPCHEM\1\DATA\030502\9M18986.D
 Acq On : 5 Mar 2002 12:59
 Sample : WG113899-04 5PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:35 2002

Vial: 7
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 12:56:57 2002
 Response via : Single Level Calibration



(14) Iodomethane (T)

6.15min 1.07ug/kg m

response 2078

Ion	Exp%	Act%
141.90	100	100
126.90	0.00	44.95#
0.00	0.00	0.00
0.00	0.00	0.00

MSR
3.5.02

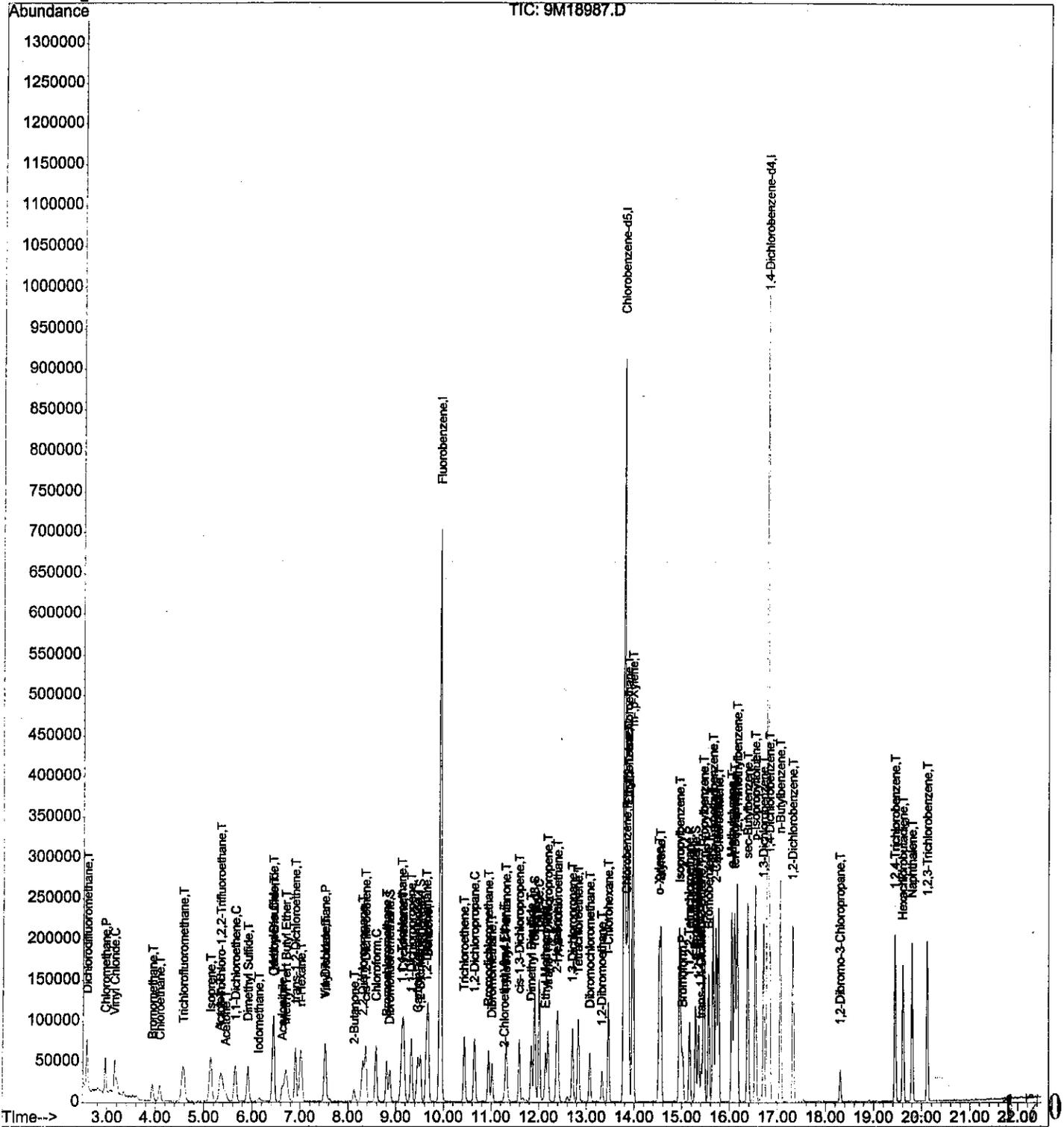
3/6/02

Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:05 2002

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:05:22 2002
 Response via : Initial Calibration



Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:05 2002

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 13:42:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.93	96	849909	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	597912	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	341793	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	35742	9.5937	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	19.18%#
33) 1,2-Dichloroethane-d4	9.51	65	57098	10.1176	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	20.24%#
45) Toluene-d8	11.91	98	119797	9.2667	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	18.54%#
66) p-Bromofluorobenzene	15.29	95	51913	9.1681	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	18.34%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.58	85	72398	9.8183	ug/kg	97
3) Chloromethane	2.96	50	50758	10.6307	ug/kg	94
4) Vinyl Chloride	3.15	62	42544	10.3399	ug/kg	99
5) Bromomethane	3.94	94	21952	8.3906	ug/kg	99
6) Chloroethane	4.09	64	29761	9.3480	ug/kg	97
7) Trichlorofluoromethane	4.58	101	90357	9.9118	ug/kg#	64
8) Isoprene	5.14	67	43497	11.2314	ug/kg	98
9) Acrolein	5.33	56	8401	28.9656	ug/kg	98
10) 1,1,2-Trichloro-1,2,2-Trif	5.36	101	42381m	9.8149	ug/kg	
11) Acetone	5.46	43	27440	14.7724	ug/kg	96
12) 1,1-Dichloroethene	5.66	96	29955	9.2916	ug/kg	94
13) Dimethyl Sulfide	5.91	62	33084	9.4924	ug/kg	92
14) Iodomethane	6.14	142	8290	4.1555	ug/kg	95
15) Methylene Chloride	6.43	84	38813	8.9962	ug/kg	100
16) Carbon Disulfide	6.45	76	110390	9.5310	ug/kg	100
17) Acrylonitrile	6.63	53	18567	13.6411	ug/kg	91
18) Methyl Tert Butyl Ether	6.70	73	82691	8.7415	ug/kg	100
19) trans-1,2-Dichloroethene	6.90	96	32897	9.0071	ug/kg	98
20) n-Hexane	7.02	57	57077	9.5434	ug/kg	99
21) Vinyl Acetate	7.52	43	71641	7.7667	ug/kg#	94
22) 1,1-Dichloroethane	7.52	63	70919	9.1425	ug/kg	99
23) 2-Butanone	8.13	43	30865	17.4506	ug/kg#	92
24) 2,2-Dichloropropane	8.31	77	53197	8.6928	ug/kg#	94
25) cis-1,2-Dichloroethene	8.37	96	34285	9.0806	ug/kg	86
26) Chloroform	8.59	83	78784	9.7540	ug/kg	98
27) Bromochloromethane	8.80	128	14998	8.9097	ug/kg	97
29) 1,1,1-Trichloroethane	9.12	97	69310	9.7762	ug/kg	98

(#) = qualifier out of range (m) = manual integration
 9M18987.D 8260SL.M Tue Mar 05 14:06:40 2002

HPMS 9

Page 1

Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:05 2002

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 13:42:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.15	56	63583	9.3031	ug/kg	99
31) 1,1-Dichloropropene	9.33	75	53309	9.0385	ug/kg	98
32) Carbon Tetrachloride	9.46	117	60344	10.1489	ug/kg	97
34) 1,2-Dichloroethane	9.64	62	70554	9.6561	ug/kg	99
35) Benzene	9.67	78	143364	7.2548	ug/kg	99
36) Trichloroethene	10.44	130	32194	8.6289	ug/kg	100
37) 1,2-Dichloropropane	10.65	63	36782	9.2850	ug/kg	99
38) Bromodichloromethane	10.94	83	57517	10.1470	ug/kg	99
39) Dibromomethane	11.01	93	23889	10.2024	ug/kg	94
40) 2-Chloroethyl Vinyl Ether	11.27	63	2863	3.2756	ug/kg#	100
41) 4-Methyl-2-Pentanone	11.32	58	29330	20.4399	ug/kg#	88
42) cis-1,3-Dichloropropene	11.59	75	51161	9.3157	ug/kg	96
43) Dimethyl Disulfide	11.84	79	26268	8.7784	ug/kg	91
46) Toluene	12.01	91	145834	9.3839	ug/kg	99
47) Ethyl Methacrylate	12.15	69	44306	10.4291	ug/kg	100
48) trans-1,3-Dichloropropene	12.19	75	54383	10.2654	ug/kg	100
49) 1,1,2-Trichloroethane	12.40	97	36602	11.3687	ug/kg	94
50) 2-Hexanone	12.37	43	67615	23.6186	ug/kg#	63
51) 1,3-Dichloropropane	12.71	76	61826	10.5187	ug/kg	97
52) Tetrachloroethene	12.83	164	31856	9.5319	ug/kg	95
53) Dibromochloromethane	13.07	129	42646	11.7157	ug/kg	97
54) 1,2-Dibromoethane	13.32	107	32645	9.9773	ug/kg	98
55) 1-Chlorohexane	13.46	91	45721	9.6975	ug/kg	97
56) Chlorobenzene	13.84	112	106476	10.0575	ug/kg	99
57) 1,1,1,2-Tetrachloroethane	13.88	131	41463	11.4529	ug/kg	99
58) Ethylbenzene	13.88	106	56590	9.9860	ug/kg	98
59) m-,p-Xylene	13.97	106	149701	20.6699	ug/kg	99
60) o-Xylene	14.53	106	66856	10.2540	ug/kg	97
61) Styrene	14.56	104	125512	11.1711	ug/kg	97
62) Bromoform	15.02	173	33671	12.9535	ug/kg	98
63) Isopropylbenzene	14.95	105	194682	11.0402	ug/kg	99
65) 1,1,2,2-Tetrachloroethane	15.16	83	61765	13.4264	ug/kg	99
67) 1,2,3-Trichloropropane	15.35	110	20053	13.5138	ug/kg	99
68) trans-1,4-Dichloro-2-Buten	15.41	53	15862	13.2701	ug/kg#	90
69) n-Propylbenzene	15.46	91	259737	11.4032	ug/kg	99
70) Bromobenzene	15.57	156	50199	11.3919	ug/kg	94
71) 1,3,5-Trimethylbenzene	15.65	105	180932	11.7052	ug/kg	100
72) 2-Chlorotoluene	15.72	91	167460	11.6813	ug/kg	98
73) 4-Chlorotoluene	15.77	91	173359	11.8855	ug/kg	98
74) a-Methylstyrene	16.05	118	85711	11.7517	ug/kg	95
75) tert-Butylbenzene	16.11	119	181507	11.9865	ug/kg	97

(#) = qualifier out of range (m) = manual integration

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HPMS_9

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Page 2

Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:05 2002

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 13:42:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	203594	12.0722	ug/kg	97
77) sec-Butylbenzene	16.38	105	236080	11.6401	ug/kg	98
78) p-Isopropyltoluene	16.54	119	197528	11.8363	ug/kg	100
79) 1,3-Dichlorobenzene	16.71	146	107466	11.9847	ug/kg	100
80) 1,4-Dichlorobenzene	16.84	146	113726	12.1443	ug/kg	93
81) n-Butylbenzene	17.06	91	200443	12.1784	ug/kg	99
82) 1,2-Dichlorobenzene	17.32	146	105938	12.5633	ug/kg	100
83) 1,2-Dibromo-3-Chloropropan	18.31	157	11534	13.2955	ug/kg	97
84) 1,2,4-Trichlorobenzene	19.45	180	77592	12.1113	ug/kg	100
85) Hexachlorobutadiene	19.62	225	49777	11.3842	ug/kg	97
86) Naphthalene	19.80	128	171615	12.9919	ug/kg	96
87) 1,2,3-Trichlorobenzene	20.11	180	77011	12.4509	ug/kg	100

(#) = qualifier out of range (m) = manual integration
 9M18987.D 8260SL.M Tue Mar 05 14:06:42 2002 HPMS 9

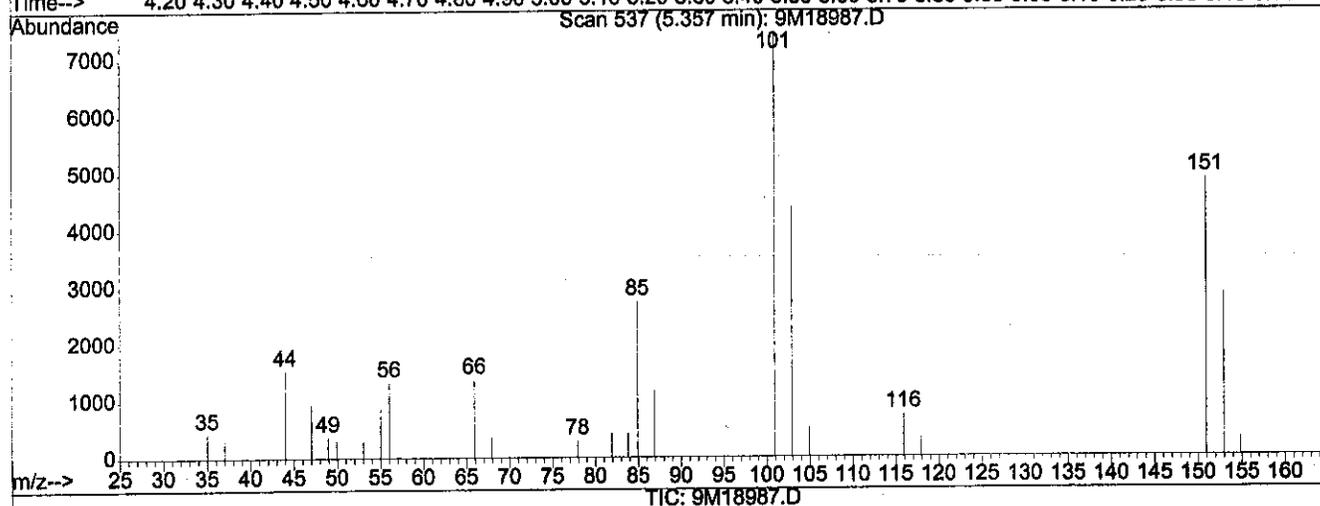
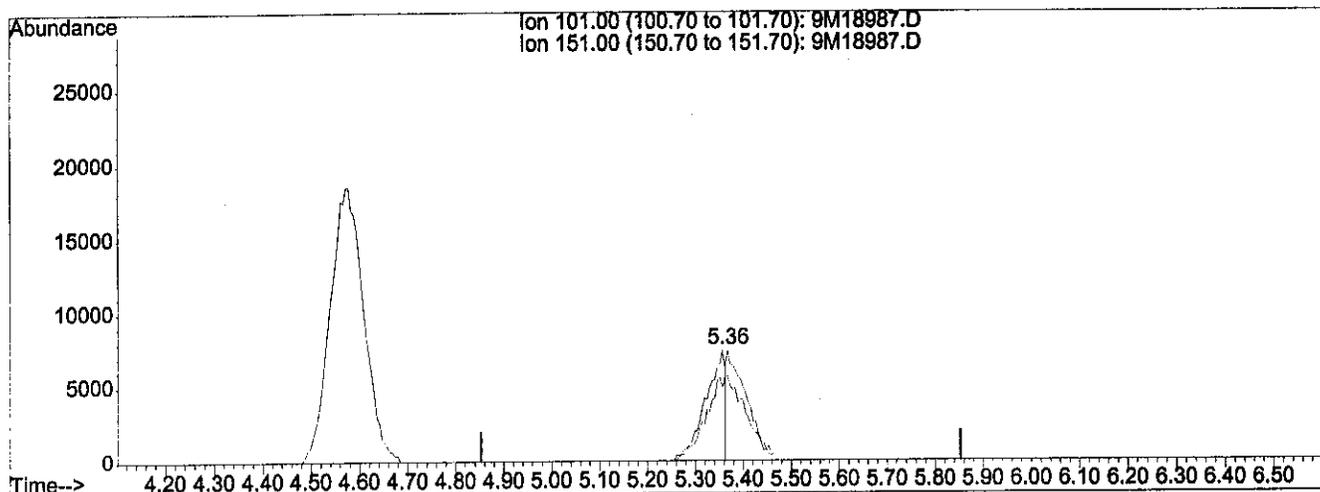
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Page 3

Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 13:56 2002

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:05:22 2002
 Response via : Multiple Level Calibration



(10) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)

5.36min 4.88ug/kg

response 21065

Ion	Exp%	Act%
101.00	100	100
151.00	7.40	67.84#
0.00	0.00	0.00
0.00	0.00	0.00

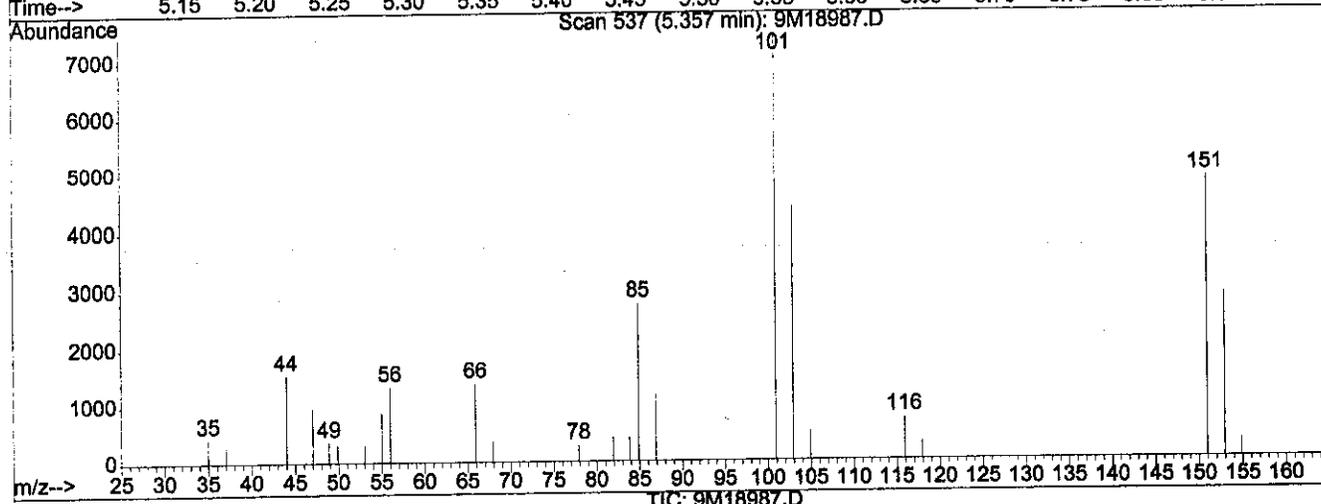
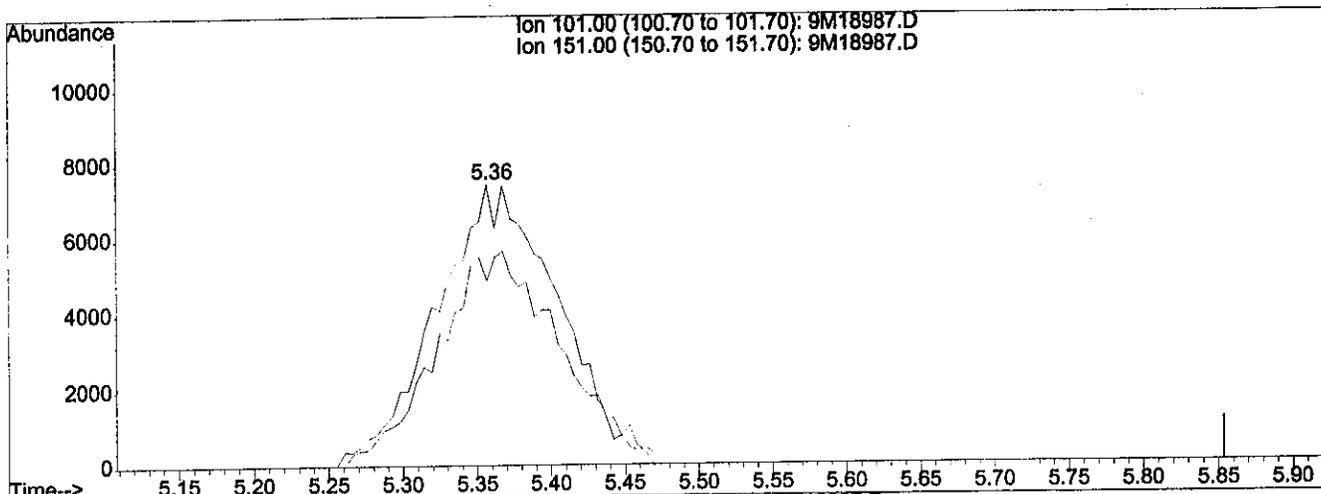
174

Data File : D:\HPCHEM\1\DATA\030502\9M18987.D
 Acq On : 5 Mar 2002 13:33
 Sample : WG113899-05 10PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:05 2002

Vial: 8
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:05:22 2002
 Response via : Multiple Level Calibration



(10) 1,1,2-Trichloro-1,2,2-Trifluoroethane (T)

5.36min 9.81ug/kg m

response 42381

Ion	Exp%	Act%
101.00	100	100
151.00	7.40	33.72#
0.00	0.00	0.00
0.00	0.00	0.00

*49
3.5.02*

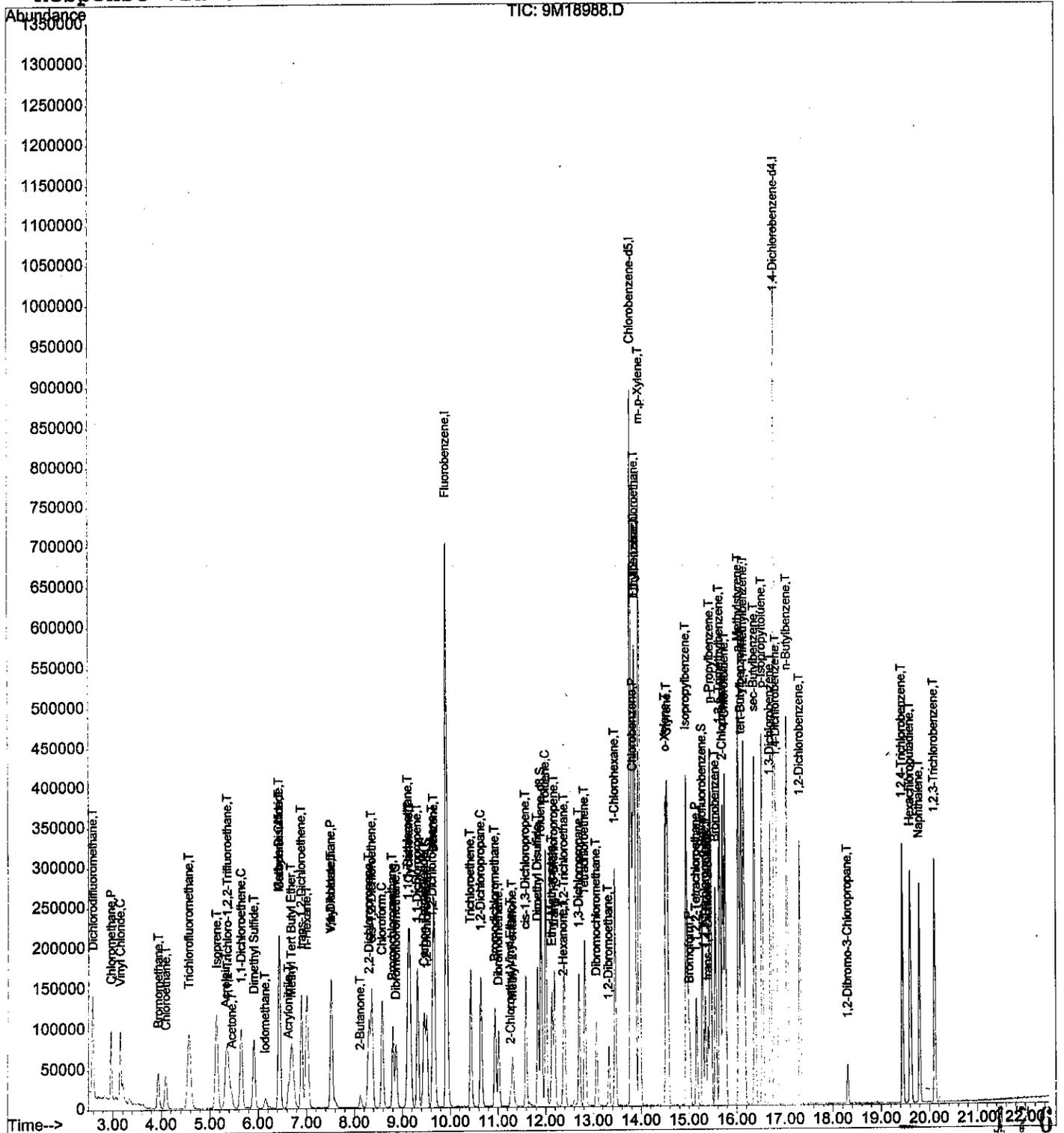
3/6/02

Data File : d:\HPCHEM\1\DATA\030502\9M18988.D
 Acq On : 5 Mar 2002 14:08
 Sample : WG113899-06 20PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:30 2002

Vial: 9
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:06:55 2002
 Response via : Initial Calibration



Data File : d:\HPCHEM\1\DATA\030502\9M18988.D
 Acq On : 5 Mar 2002 14:08
 Sample : WG113899-06 20PPB SOIL STD SV9122
 Misc : 7,1

Vial: 9
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:30 2002

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:06:55 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	861747	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	600238	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	346512	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	70602	18.7306	ug/kg	0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	37.46%#
33) 1,2-Dichloroethane-d4	9.52	65	111379	19.3356	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	38.68%#
45) Toluene-d8	11.91	98	247908	19.2963	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	38.60%#
66) p-Bromofluorobenzene	15.29	95	108689	19.0631	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	38.12%#

Target Compounds

					Qvalue
2) Dichlorodifluoromethane	2.58	85	161312	21.4682	ug/kg 100
3) Chloromethane	2.96	50	99417	20.3452	ug/kg 100
4) Vinyl Chloride	3.15	62	91528	21.7623	ug/kg 99
5) Bromomethane	3.94	94	46767	18.0892	ug/kg 97
6) Chloroethane	4.08	64	64705	20.1066	ug/kg 99
7) Trichlorofluoromethane	4.57	101	204271	21.9152	ug/kg# 53
8) Isoprene	5.13	67	95319	23.4982	ug/kg 100
9) Acrolein	5.33	56	18525	57.4548	ug/kg 100
10) 1,1,2-Trichloro-1,2,2-Trif	5.36	101	94900	21.7044	ug/kg# 26
11) Acetone	5.46	43	33344	16.4536	ug/kg 96
12) 1,1-Dichloroethene	5.65	96	64997	20.2090	ug/kg 99
13) Dimethyl Sulfide	5.91	62	71372	20.2224	ug/kg 96
14) Iodomethane	6.14	142	25163	12.9972	ug/kg 94
15) Methylene Chloride	6.43	84	82521	19.0965	ug/kg 99
16) Carbon Disulfide	6.45	76	233636	19.8691	ug/kg 100
17) Acrylonitrile	6.62	53	26710	18.0961	ug/kg 85
18) Methyl Tert Butyl Ether	6.70	73	179736	18.9490	ug/kg 99
19) trans-1,2-Dichloroethene	6.90	96	73341	20.1320	ug/kg 93
20) n-Hexane	7.01	57	123911	20.5338	ug/kg 97
21) Vinyl Acetate	7.52	43	161066	17.8690	ug/kg# 93
22) 1,1-Dichloroethane	7.52	63	151353	19.4175	ug/kg 98
23) 2-Butanone	8.12	43	32621	16.1375	ug/kg 99
24) 2,2-Dichloropropane	8.31	77	123188	20.1322	ug/kg# 76
25) cis-1,2-Dichloroethene	8.37	96	75168	19.9369	ug/kg 88
26) Chloroform	8.58	83	161395	19.7019	ug/kg 98
27) Bromochloromethane	8.80	128	31347	18.7533	ug/kg 99
29) 1,1,1-Trichloroethane	9.12	97	151061	20.9829	ug/kg 100

(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\030502\9M18988.D
 Acq On : 5 Mar 2002 14:08
 Sample : WG113899-06 20PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:30 2002

Vial: 9
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:06:55 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.15	56	142620	20.8069	ug/kg	100
31) 1,1-Dichloropropene	9.32	75	118638	20.1722	ug/kg	99
32) Carbon Tetrachloride	9.46	117	128604	21.0595	ug/kg	97
34) 1,2-Dichloroethane	9.63	62	145674	19.6381	ug/kg	99
35) Benzene	9.67	78	306399	15.4342	ug/kg	99
36) Trichloroethene	10.43	130	70560	19.0575	ug/kg	99
37) 1,2-Dichloropropane	10.64	63	76802	19.3159	ug/kg	98
38) Bromodichloromethane	10.94	83	115743	19.9832	ug/kg	99
39) Dibromomethane	11.02	93	46535	19.5341	ug/kg	96
40) 2-Chloroethyl Vinyl Ether	11.27	63	10063	11.8760	ug/kg#	57
41) 4-Methyl-2-Pentanone	11.31	58	24902	14.8927	ug/kg	95
42) cis-1,3-Dichloropropene	11.59	75	110747	20.0899	ug/kg	98
43) Dimethyl Disulfide	11.84	79	64666	21.0854	ug/kg	97
46) Toluene	12.01	91	306795	19.8459	ug/kg	100
47) Ethyl Methacrylate	12.14	69	100802	22.9785	ug/kg	99
48) trans-1,3-Dichloropropene	12.20	75	107919	20.1313	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	61418	18.6196	ug/kg	93
50) 2-Hexanone	12.37	43	54954	16.0054	ug/kg#	75
51) 1,3-Dichloropropane	12.71	76	114663	19.2689	ug/kg	97
52) Tetrachloroethene	12.83	164	66027	19.7830	ug/kg	100
53) Dibromochloromethane	13.08	129	74383	19.7040	ug/kg	98
54) 1,2-Dibromoethane	13.33	107	63580	19.3303	ug/kg	97
55) 1-Chlorohexane	13.46	91	114254	24.3306	ug/kg	94
56) Chlorobenzene	13.84	112	200883	18.8921	ug/kg	100
57) 1,1,1,2-Tetrachloroethane	13.88	131	74215	19.8834	ug/kg	98
58) Ethylbenzene	13.88	106	113073	19.8803	ug/kg	99
59) m-,p-Xylene	13.97	106	298795	41.0561	ug/kg	100
60) o-Xylene	14.53	106	129761	19.8412	ug/kg	98
61) Styrene	14.56	104	232487	20.3542	ug/kg	100
62) Bromoform	15.02	173	51504	18.3054	ug/kg	98
63) Isopropylbenzene	14.95	105	377527	21.2224	ug/kg	99
65) 1,1,2,2-Tetrachloroethane	15.16	83	85399	17.3884	ug/kg	99
67) 1,2,3-Trichloropropane	15.35	110	29160	18.3528	ug/kg	97
68) trans-1,4-Dichloro-2-Buten	15.40	53	33867	26.1264	ug/kg	98
69) n-Propylbenzene	15.46	91	490690	20.9748	ug/kg	99
70) Bromobenzene	15.56	156	85223	18.7256	ug/kg	98
71) 1,3,5-Trimethylbenzene	15.65	105	332732	20.9162	ug/kg	98
72) 2-Chlorotoluene	15.72	91	286206	19.3025	ug/kg	98
73) 4-Chlorotoluene	15.77	91	312000	20.6641	ug/kg	95
74) a-Methylstyrene	16.05	118	187963	24.3765	ug/kg	99
75) tert-Butylbenzene	16.11	119	320916	20.5275	ug/kg	99

(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\030502\9M18988.D
 Acq On : 5 Mar 2002 14:08
 Sample : WG113899-06 20PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 14:30 2002

Vial: 9
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:06:55 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	349929	20.0271	ug/kg	100
77) sec-Butylbenzene	16.38	105	433286	20.7670	ug/kg	100
78) p-Isopropyltoluene	16.54	119	353663	20.6103	ug/kg	99
79) 1,3-Dichlorobenzene	16.71	146	176852	18.9724	ug/kg	98
80) 1,4-Dichlorobenzene	16.84	146	180345	18.4282	ug/kg	97
81) n-Butylbenzene	17.06	91	359848	21.1017	ug/kg	100
82) 1,2-Dichlorobenzene	17.32	146	164425	18.6380	ug/kg	97
83) 1,2-Dibromo-3-Chloropropan	18.31	157	15303	16.3815	ug/kg	98
84) 1,2,4-Trichlorobenzene	19.45	180	122326	18.3789	ug/kg	100
85) Hexachlorobutadiene	19.61	225	88819	19.6805	ug/kg	98
86) Naphthalene	19.81	128	252676	18.2165	ug/kg	99
87) 1,2,3-Trichlorobenzene	20.12	180	116207	18.0006	ug/kg	99

(#) = qualifier out of range (m) = manual integration

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HPMS 9

Page 3

Data File : d:\HPCHEM\1\DATA\030502\9M18989.D
 Acq On : 5 Mar 2002 14:42
 Sample : WG113899-07 50PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:05 2002

Vial: 10
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:36:44 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	945367	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	661677	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	382905	50.00	ug/kg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
28) Dibromofluoromethane	8.87	111	199061	48.2642	ug/kg	0.00
Spiked Amount	50.000					
Range	80 - 120					
Recovery						96.52%
33) 1,2-Dichloroethane-d4	9.51	65	304461	47.9113	ug/kg	0.00
Spiked Amount	50.000					
Range	80 - 120					
Recovery						95.82%
45) Toluene-d8	11.91	98	689085	48.5774	ug/kg	0.00
Spiked Amount	50.000					
Range	81 - 117					
Recovery						97.16%
66) p-Bromofluorobenzene	15.29	95	307185	48.5876	ug/kg	0.00
Spiked Amount	50.000					
Range	74 - 121					
Recovery						97.18%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.58	85	392296	46.4171	ug/kg	100
3) Chloromethane	2.96	50	239573	43.6150	ug/kg	97
4) Vinyl Chloride	3.15	62	217723	46.0136	ug/kg	100
5) Bromomethane	3.93	94	122252	43.5207	ug/kg	100
6) Chloroethane	4.08	64	166004	46.4892	ug/kg	99
7) Trichlorofluoromethane	4.57	101	497796	47.2490	ug/kg	98
8) Isoprene	5.13	67	269023	57.2568	ug/kg	99
9) Acrolein	5.32	56	58204	147.9408	ug/kg	100
10) 1,1,2-Trichloro-1,2,2-Trif	5.35	101	233798	47.6393	ug/kg	98
11) Acetone	5.46	43	83752	37.6483	ug/kg	99
12) 1,1-Dichloroethene	5.65	96	179748	50.8461	ug/kg	96
13) Dimethyl Sulfide	5.91	62	208254	53.8639	ug/kg	98
14) Iodomethane	6.15	142	98150	48.5099	ug/kg	100
15) Methylene Chloride	6.43	84	221309	46.7048	ug/kg	99
16) Carbon Disulfide	6.45	76	640403	49.0702	ug/kg	99
17) Acrylonitrile	6.62	53	76635	47.5398	ug/kg	94
18) Methyl Tert Butyl Ether	6.69	73	530820	51.5174	ug/kg	100
19) trans-1,2-Dichloroethene	6.90	96	200950	50.3092	ug/kg	98
20) n-Hexane	7.01	57	344731	51.6660	ug/kg	100
21) Vinyl Acetate	7.52	43	526824	54.1097	ug/kg	99
22) 1,1-Dichloroethane	7.52	63	411951	48.1310	ug/kg	99
23) 2-Butanone	8.12	43	102183	46.0555	ug/kg	98
24) 2,2-Dichloropropane	8.31	77	353530	52.4059	ug/kg	98
25) cis-1,2-Dichloroethene	8.37	96	208142	50.5469	ug/kg	100
26) Chloroform	8.59	83	434210	48.0505	ug/kg	99
27) Bromochloromethane	8.81	128	86976	48.1133	ug/kg	100
29) 1,1,1-Trichloroethane	9.12	97	411401	51.2937	ug/kg	98

Data File : d:\HPCHEM\1\DATA\030502\9M18989.D
 Acq On : 5 Mar 2002 14:42
 Sample : WG113899-07 50PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:05 2002

Vial: 10
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:36:44 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.16	56	395996	52.3189	ug/kg	98
31) 1,1-Dichloropropene	9.32	75	331221	51.1829	ug/kg	99
32) Carbon Tetrachloride	9.46	117	352786	51.2911	ug/kg	99
34) 1,2-Dichloroethane	9.63	62	394756	48.2767	ug/kg	100
35) Benzene	9.67	78	839311	38.5487	ug/kg	100
36) Trichloroethene	10.43	130	198202	49.1268	ug/kg	98
37) 1,2-Dichloropropane	10.65	63	212231	48.9400	ug/kg	98
38) Bromodichloromethane	10.94	83	319781	49.9480	ug/kg	99
39) Dibromomethane	11.02	93	130014	49.9815	ug/kg	97
40) 2-Chloroethyl Vinyl Ether	11.27	63	55050	62.7339	ug/kg	96
41) 4-Methyl-2-Pentanone	11.31	58	78635	43.2303	ug/kg	98
42) cis-1,3-Dichloropropene	11.59	75	329293	54.8269	ug/kg	98
43) Dimethyl Disulfide	11.84	79	188896	55.0694	ug/kg	100
46) Toluene	12.01	91	848179	49.6405	ug/kg	100
47) Ethyl Methacrylate	12.14	69	247145	49.5412	ug/kg	100
48) trans-1,3-Dichloropropene	12.19	75	324650	54.9784	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	173460	47.8011	ug/kg	96
50) 2-Hexanone	12.37	43	157618	41.3094	ug/kg	98
51) 1,3-Dichloropropane	12.71	76	318881	48.6547	ug/kg	99
52) Tetrachloroethene	12.83	164	181769	49.3010	ug/kg	99
53) Dibromochloromethane	13.07	129	211261	50.2329	ug/kg	100
54) 1,2-Dibromoethane	13.33	107	180175	49.8443	ug/kg	98
55) 1-Chlorohexane	13.46	91	289564	54.7398	ug/kg	97
56) Chlorobenzene	13.84	112	547044	46.6791	ug/kg	99
57) 1,1,1,2-Tetrachloroethane	13.88	131	204003	48.9857	ug/kg	99
58) Ethylbenzene	13.88	106	315020	50.1479	ug/kg	97
59) m-,p-Xylene	13.97	106	818677	101.7844	ug/kg	99
60) o-Xylene	14.52	106	376776	52.3816	ug/kg	96
61) Styrene	14.56	104	657588	52.3161	ug/kg	100
62) Bromoform	15.02	173	155702	49.5809	ug/kg	99
63) Isopropylbenzene	14.95	105	1059021	53.8195	ug/kg	99
65) 1,1,2,2-Tetrachloroethane	15.16	83	247672	45.6751	ug/kg	99
67) 1,2,3-Trichloropropane	15.35	110	82438	46.7291	ug/kg	92
68) trans-1,4-Dichloro-2-Buten	15.41	53	74702	48.3444	ug/kg	93
69) n-Propylbenzene	15.46	91	1356642	52.1131	ug/kg	100
70) Bromobenzene	15.56	156	234282	46.6790	ug/kg	100
71) 1,3,5-Trimethylbenzene	15.65	105	935430	53.0011	ug/kg	99
72) 2-Chlorotoluene	15.72	91	790023	48.0630	ug/kg	99
73) 4-Chlorotoluene	15.77	91	851571	50.7023	ug/kg	99
74) a-Methylstyrene	16.05	118	438069	48.9574	ug/kg	100
75) tert-Butylbenzene	16.11	119	867443	50.1762	ug/kg	99

(#) = qualifier out of range (m) = manual integration
 9M18989.D 8260SL.M Tue Mar 05 15:05:30 2002

HPMS_9

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Data File : d:\HPCHEM\1\DATA\030502\9M18989.D
 Acq On : 5 Mar 2002 14:42
 Sample : WG113899-07 50PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:05 2002

Vial: 10
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 14:36:44 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	978906	50.6481	ug/kg	99
77) sec-Butylbenzene	16.38	105	1202858	51.9279	ug/kg	100
78) p-Isopropyltoluene	16.54	119	1002440	52.7581	ug/kg	99
79) 1,3-Dichlorobenzene	16.71	146	487039	47.3148	ug/kg	100
80) 1,4-Dichlorobenzene	16.84	146	490883	45.3238	ug/kg	96
81) n-Butylbenzene	17.06	91	1003354	52.8760	ug/kg	100
82) 1,2-Dichlorobenzene	17.32	146	458864	47.1890	ug/kg	100
83) 1,2-Dibromo-3-Chloropropan	18.31	157	50600	49.0244	ug/kg	97
84) 1,2,4-Trichlorobenzene	19.45	180	356340	48.9854	ug/kg	100
85) Hexachlorobutadiene	19.61	225	237845	47.3652	ug/kg	99
86) Naphthalene	19.81	128	771430	50.8900	ug/kg	100
87) 1,2,3-Trichlorobenzene	20.12	180	330607	46.9007	ug/kg	98

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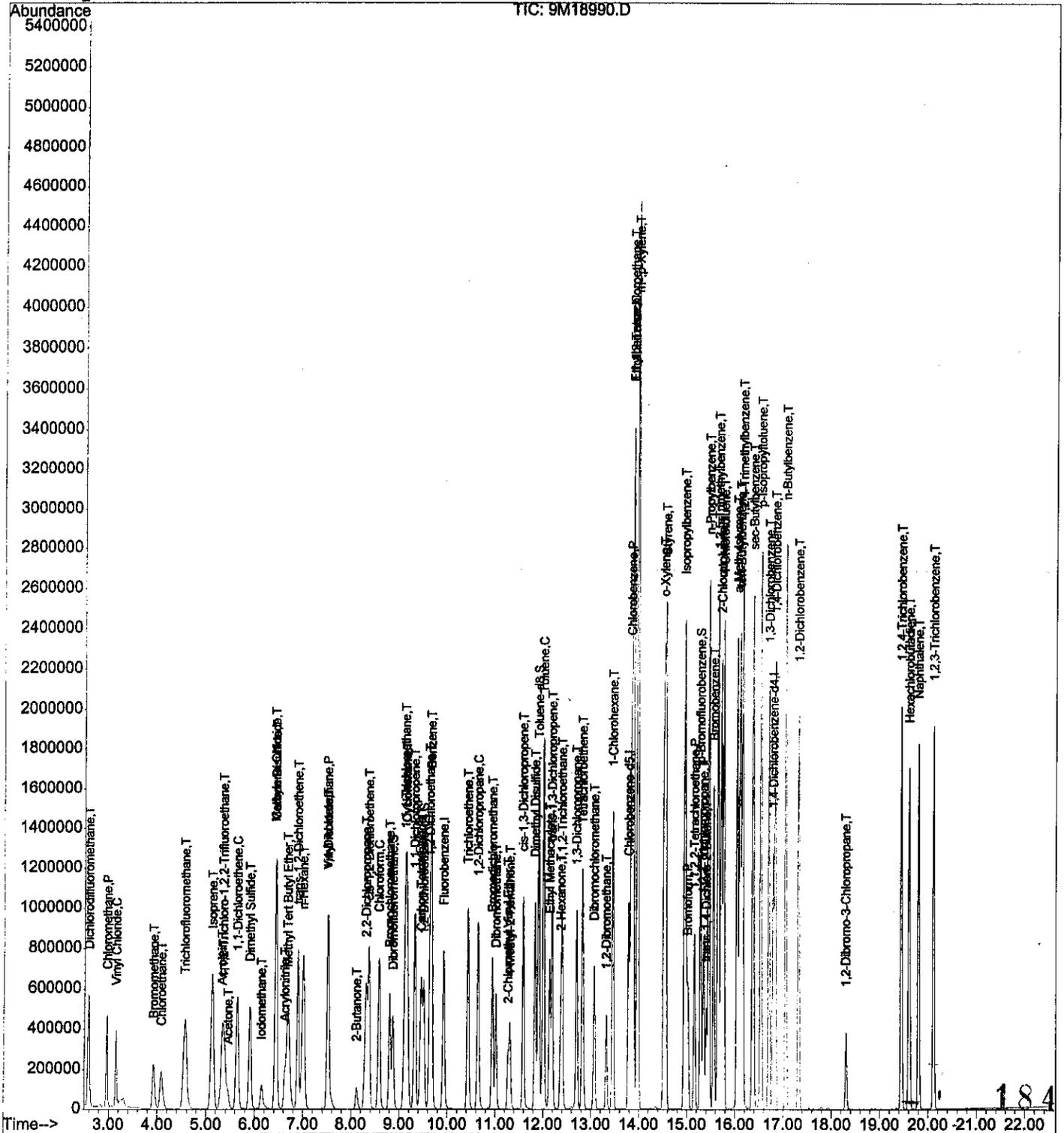
(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\030502\9M18990.D
 Acq On : 5 Mar 2002 15:17
 Sample : WG113899-08 100PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:40 2002

Vial: 11
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:09:18 2002
 Response via : Initial Calibration



Data File : d:\HPCHEM\1\DATA\030502\9M18990.D
 Acq On : 5 Mar 2002 15:17
 Sample : WG113899-08 100PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:40 2002

Vial: 11
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:09:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.92	96	993477	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	697756	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	396923	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	424961	98.8402	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	197.68%#
33) 1,2-Dichloroethane-d4	9.51	65	627223	93.9063	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	187.82%#
45) Toluene-d8	11.91	98	1481880	100.0833	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	200.16%#
66) p-Bromofluorobenzene	15.29	95	658256	100.9417	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	201.88%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.58	85	807540	90.9923	ug/kg	99
3) Chloromethane	2.96	50	524474	91.7520	ug/kg	99
4) Vinyl Chloride	3.15	62	404190	81.6580	ug/kg	99
5) Bromomethane	3.92	94	279734	98.4911	ug/kg	98
6) Chloroethane	4.08	64	371667	100.1476	ug/kg	99
7) Trichlorofluoromethane	4.56	101	1047165	94.4741	ug/kg	100
8) Isoprene	5.12	67	580444	112.9334	ug/kg	98
9) Acrolein	5.32	56	126818	273.7377	ug/kg	99
10) 1,1,2-Trichloro-1,2,2-Trif	5.36	101	495166	96.6209	ug/kg	99
11) Acetone	5.46	43	153603	64.6377	ug/kg	97
12) 1,1-Dichloroethene	5.65	96	388241	106.0199	ug/kg	98
13) Dimethyl Sulfide	5.91	62	450934	110.9094	ug/kg	98
14) Iodomethane	6.14	142	257089	130.1720	ug/kg	97
15) Methylene Chloride	6.43	84	476276	96.5533	ug/kg	98
16) Carbon Disulfide	6.45	76	1355710	98.6603	ug/kg	100
17) Acrylonitrile	6.62	53	169396	100.8837	ug/kg	98
18) Methyl Tert Butyl Ether	6.69	73	1136601	105.7350	ug/kg	100
19) trans-1,2-Dichloroethene	6.90	96	426143	102.6294	ug/kg	100
20) n-Hexane	7.01	57	735811	105.1575	ug/kg	100
21) Vinyl Acetate	7.52	43	1154934	114.4514	ug/kg	99
22) 1,1-Dichloroethane	7.52	63	866598	97.1574	ug/kg	100
23) 2-Butanone	8.11	43	211375	90.7938	ug/kg	98
24) 2,2-Dichloropropane	8.31	77	772475	109.9275	ug/kg	99
25) cis-1,2-Dichloroethene	8.37	96	448601	104.9999	ug/kg	98
26) Chloroform	8.58	83	914553	96.6800	ug/kg	100
27) Bromochloromethane	8.81	128	188513	101.0790	ug/kg	96
29) 1,1,1-Trichloroethane	9.12	97	869059	103.2557	ug/kg	98

(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\030502\9M18990.D
 Acq On : 5 Mar 2002 15:17
 Sample : WG113899-08 100PPB SOIL STD SV9122
 Misc : 7,1

Vial: 11
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:40 2002

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:09:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.16	56	848987	107.6155	ug/kg	99
31) 1,1-Dichloropropene	9.32	75	706915	104.9766	ug/kg	98
32) Carbon Tetrachloride	9.46	117	742882	102.2310	ug/kg	99
34) 1,2-Dichloroethane	9.63	62	805038	93.7996	ug/kg	99
35) Benzene	9.67	78	1787153	78.7563	ug/kg	100
36) Trichloroethene	10.43	130	433937	103.9498	ug/kg	98
37) 1,2-Dichloropropane	10.65	63	464113	103.3919	ug/kg	99
38) Bromodichloromethane	10.94	83	705092	105.0560	ug/kg	99
39) Dibromomethane	11.02	93	277912	102.4092	ug/kg	100
40) 2-Chloroethyl Vinyl Ether	11.27	63	144600	161.4640	ug/kg	99
41) 4-Methyl-2-Pentanone	11.31	58	170988	91.8517	ug/kg	100
42) cis-1,3-Dichloropropene	11.59	75	743571	119.2268	ug/kg	100
43) Dimethyl Disulfide	11.84	79	413362	114.3126	ug/kg	98
46) Toluene	12.01	91	1847539	103.3132	ug/kg	99
47) Ethyl Methacrylate	12.14	69	532518	101.6343	ug/kg	99
48) trans-1,3-Dichloropropene	12.19	75	730623	117.5432	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	386748	101.5966	ug/kg	99
50) 2-Hexanone	12.37	43	339125	85.7837	ug/kg	98
51) 1,3-Dichloropropane	12.71	76	712613	103.6763	ug/kg	97
52) Tetrachloroethene	12.83	164	392874	101.8213	ug/kg	99
53) Dibromochloromethane	13.07	129	486464	109.6797	ug/kg	100
54) 1,2-Dibromoethane	13.33	107	409270	108.2865	ug/kg	99
55) 1-Chlorohexane	13.46	91	629468	113.2459	ug/kg	97
56) Chlorobenzene	13.84	112	1222204	99.8053	ug/kg	99
57) 1,1,1,2-Tetrachloroethane	13.88	131	461890	105.4282	ug/kg	100
58) Ethylbenzene	13.88	106	700879	106.5904	ug/kg	99
59) m-,p-Xylene	13.97	106	1792281	212.7824	ug/kg	98
60) o-Xylene	14.53	106	841230	111.8841	ug/kg	99
61) Styrene	14.56	104	1506174	114.7217	ug/kg	97
62) Bromoform	15.02	173	362336	108.9463	ug/kg	99
63) Isopropylbenzene	14.95	105	2400252	116.6411	ug/kg	100
65) 1,1,2,2-Tetrachloroethane	15.16	83	579122	103.1439	ug/kg	100
67) 1,2,3-Trichloropropane	15.35	110	186455	101.8296	ug/kg	94
68) trans-1,4-Dichloro-2-Buten	15.41	53	154025	94.8236	ug/kg#	83
69) n-Propylbenzene	15.46	91	3001108	111.6167	ug/kg	100
70) Bromobenzene	15.56	156	531621	103.2467	ug/kg	97
71) 1,3,5-Trimethylbenzene	15.65	105	2087981	114.9096	ug/kg	100
72) 2-Chlorotoluene	15.72	91	1747967	103.2113	ug/kg	97
73) 4-Chlorotoluene	15.77	91	1886040	108.3671	ug/kg	99
74) a-Methylstyrene	16.05	118	940254	101.4407	ug/kg	100
75) tert-Butylbenzene	16.11	119	1967973	111.3100	ug/kg	97

(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\030502\9M18990.D
 Acq On : 5 Mar 2002 15:17
 Sample : WG113899-08 100PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 15:40 2002

Vial: 11
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:09:18 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	2172527	108.9371	ug/kg	99
77) sec-Butylbenzene	16.38	105	2695399	113.0255	ug/kg	99
78) p-Isopropyltoluene	16.54	119	2241826	114.6316	ug/kg	100
79) 1,3-Dichlorobenzene	16.71	146	1091568	102.9072	ug/kg	99
80) 1,4-Dichlorobenzene	16.84	146	1100535	98.7094	ug/kg	99
81) n-Butylbenzene	17.06	91	2227678	113.6045	ug/kg	99
82) 1,2-Dichlorobenzene	17.32	146	1035062	103.5473	ug/kg	100
83) 1,2-Dibromo-3-Chloropropan	18.31	157	122416	114.8387	ug/kg	95
84) 1,2,4-Trichlorobenzene	19.45	180	805336	107.9860	ug/kg	100
85) Hexachlorobutadiene	19.61	225	533941	103.4611	ug/kg	99
86) Naphthalene	19.80	128	1780236	114.6812	ug/kg	100
87) 1,2,3-Trichlorobenzene	20.12	180	756220	105.0501	ug/kg	99

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 (#) = qualifier out of range (m) = manual integration
 9M18990.D 8260SL.M Tue Mar 05 15:40:14 2002

HPMS_9

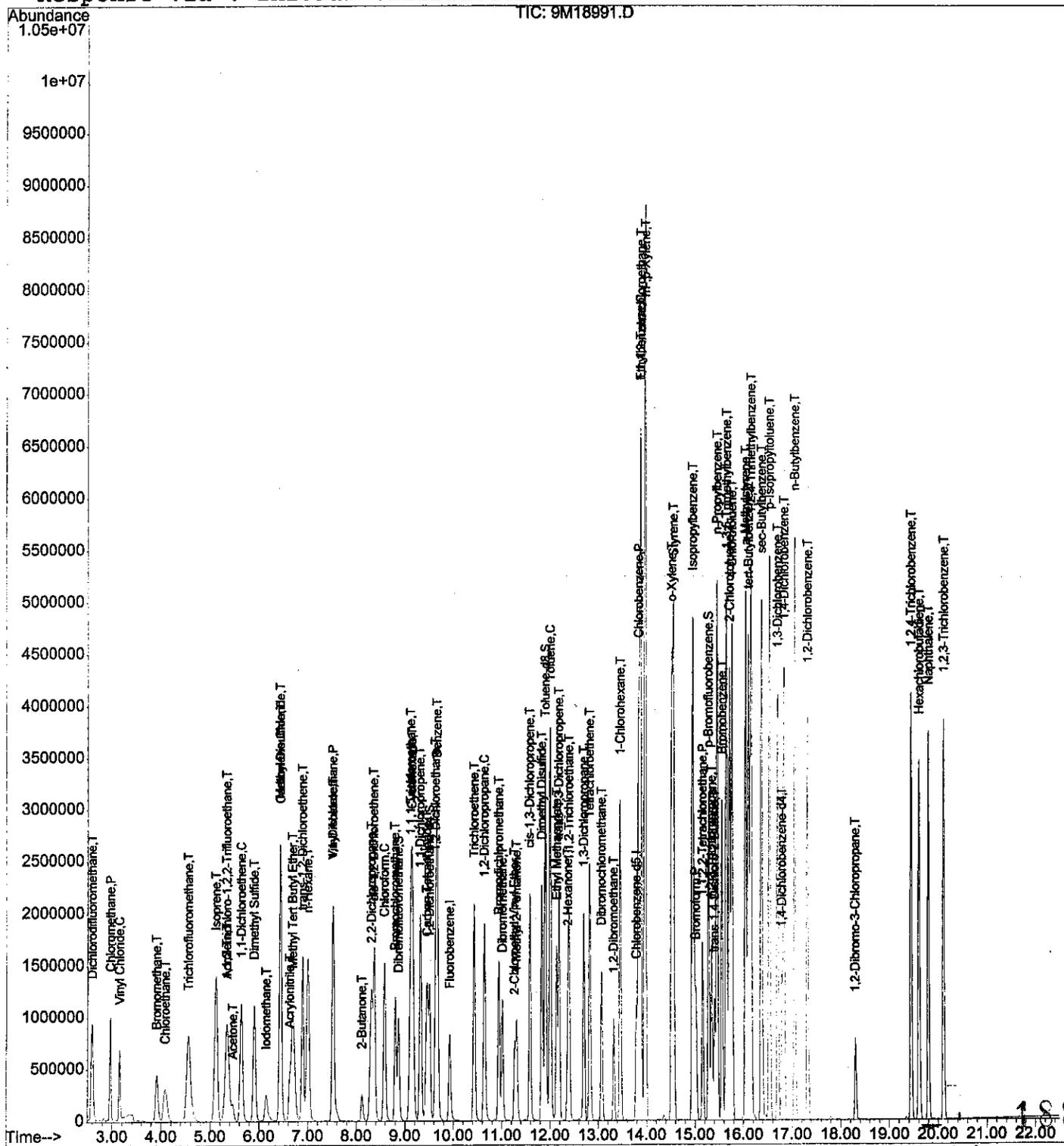
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Data File : d:\HPCHEM\1\DATA\030502\9M18991.D
 Acq On : 5 Mar 2002 15:52
 Sample : WG113899-09 200PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 16:14 2002

Vial: 12
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:42:15 2002
 Response via : Initial Calibration



Data File : d:\HPCHEM\1\DATA\030502\9M18991.D
 Acq On : 5 Mar 2002 15:52
 Sample : WG113899-09 200PPB SOIL STD SV9122
 Misc : 7,1

Vial: 12
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Mar 5 16:14 2002

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:42:15 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	1075760	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	758885	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	439817	50.00	ug/kg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
28) Dibromofluoromethane	8.87	111	901564	195.0256	ug/kg	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 390.06%#		
33) 1,2-Dichloroethane-d4	9.51	65	1281832	177.1867	ug/kg	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 354.38%#		
45) Toluene-d8	11.91	98	3182556	199.2602	ug/kg	0.00
Spiked Amount	50.000	Range 81 - 117	Recovery	= 398.52%#		
66) p-Bromofluorobenzene	15.29	95	1399007	193.4954	ug/kg	0.00
Spiked Amount	50.000	Range 74 - 121	Recovery	= 387.00%#		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.58	85	1633547	170.0453	ug/kg	99
3) Chloromethane	2.96	50	1160775	188.9040	ug/kg	99
4) Vinyl Chloride	3.15	62	790831	147.9297	ug/kg	100
5) Bromomethane	3.91	94	615371	205.7945	ug/kg	99
6) Chloroethane	4.08	64	795404	199.3465	ug/kg	100
7) Trichlorofluoromethane	4.55	101	2164106	179.8074	ug/kg	100
8) Isoprene	5.12	67	1252569	216.4087	ug/kg	98
9) Acrolein	5.33	56	286849	518.8047	ug/kg	100
10) 1,1,2-Trichloro-1,2,2-Trif	5.34	101	986575	178.0975	ug/kg	100
11) Acetone	5.47	43	318213	123.0647	ug/kg	98
12) 1,1-Dichloroethene	5.64	96	822420	209.5564	ug/kg	96
13) Dimethyl Sulfide	5.90	62	997772	225.8829	ug/kg	98
14) Iodomethane	6.14	142	592489	295.5716	ug/kg	97
15) Methylene Chloride	6.43	84	1031984	194.2389	ug/kg	97
16) Carbon Disulfide	6.44	76	2886416	193.3705	ug/kg	100
17) Acrylonitrile	6.62	53	378497	205.7878	ug/kg	99
18) Methyl Tert Butyl Ether	6.69	73	2528927	218.6500	ug/kg	100
19) trans-1,2-Dichloroethene	6.89	96	893120	200.3856	ug/kg	97
20) n-Hexane	7.00	57	1545308	204.0433	ug/kg	99
21) Vinyl Acetate	7.52	43	2585024	235.8372	ug/kg	99
22) 1,1-Dichloroethane	7.52	63	1807174	188.4289	ug/kg	99
23) 2-Butanone	8.11	43	495367	196.8411	ug/kg	99
24) 2,2-Dichloropropane	8.31	77	1626703	215.1587	ug/kg	99
25) cis-1,2-Dichloroethene	8.37	96	951905	207.7361	ug/kg	97
26) Chloroform	8.58	83	1882831	184.2275	ug/kg	99
27) Bromochloromethane	8.80	128	399450	200.6125	ug/kg	98
29) 1,1,1-Trichloroethane	9.12	97	1777689	195.0847	ug/kg	99

(#) = qualifier out of range (m) = manual integration
 9M18991.D 8260SL.M Tue Mar 05 16:14:50 2002

HPMS_9

Page 1

Data File : d:\HPCHEM\1\DATA\030502\9M18991.D
 Acq On : 5 Mar 2002 15:52
 Sample : WG113899-09 200PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 16:14 2002

Vial: 12
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:42:15 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.15	56	1806198	212.7061	ug/kg	100
31) 1,1-Dichloropropene	9.32	75	1482304	204.7136	ug/kg	99
32) Carbon Tetrachloride	9.46	117	1525000	193.1384	ug/kg	100
34) 1,2-Dichloroethane	9.63	62	1623238	174.6667	ug/kg	99
35) Benzene	9.67	78	3760488	154.0376	ug/kg	100
36) Trichloroethene	10.44	130	923266	206.6381	ug/kg	99
37) 1,2-Dichloropropane	10.64	63	985201	204.6526	ug/kg	96
38) Bromodichloromethane	10.94	83	1438965	197.5251	ug/kg	100
39) Dibromomethane	11.02	93	571569	195.1890	ug/kg	99
40) 2-Chloroethyl Vinyl Ether	11.27	63	392825	408.9018	ug/kg	99
41) 4-Methyl-2-Pentanone	11.31	58	396411	197.4656	ug/kg	99
42) cis-1,3-Dichloropropene	11.59	75	1563599	232.5689	ug/kg	99
43) Dimethyl Disulfide	11.83	79	919787	234.7477	ug/kg	98
46) Toluene	12.01	91	3831527	197.3736	ug/kg	100
47) Ethyl Methacrylate	12.14	69	1211966	213.7094	ug/kg	99
48) trans-1,3-Dichloropropene	12.19	75	1506672	221.9725	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	782528	188.0982	ug/kg	100
50) 2-Hexanone	12.37	43	784441	181.7380	ug/kg	94
51) 1,3-Dichloropropane	12.71	76	1461331	194.8238	ug/kg	97
52) Tetrachloroethene	12.83	164	819468	195.7489	ug/kg	99
53) Dibromochloromethane	13.07	129	996738	204.7865	ug/kg	99
54) 1,2-Dibromoethane	13.33	107	847570	205.8258	ug/kg	100
55) 1-Chlorohexane	13.46	91	1350298	223.5800	ug/kg	97
56) Chlorobenzene	13.84	112	2483034	186.6276	ug/kg	100
57) 1,1,1,2-Tetrachloroethane	13.88	131	928493	193.6456	ug/kg	100
58) Ethylbenzene	13.88	106	1412556	197.3585	ug/kg	98
59) m-,p-Xylene	13.97	106	3622358	394.6783	ug/kg	97
60) o-Xylene	14.52	106	1707119	208.7944	ug/kg	98
61) Styrene	14.56	104	3067772	214.5807	ug/kg	97
62) Bromoform	15.03	173	733390	199.7365	ug/kg	99
63) Isopropylbenzene	14.96	105	4835991	215.5982	ug/kg	100
65) 1,1,2,2-Tetrachloroethane	15.16	83	1164680	185.1064	ug/kg	100
67) 1,2,3-Trichloropropane	15.35	110	371933	180.4234	ug/kg	95
68) trans-1,4-Dichloro-2-Buten	15.41	53	355050	195.5525	ug/kg	97
69) n-Propylbenzene	15.46	91	6014182	200.6173	ug/kg	100
70) Bromobenzene	15.56	156	1071920	187.4530	ug/kg	96
71) 1,3,5-Trimethylbenzene	15.65	105	4240764	209.4450	ug/kg	99
72) 2-Chlorotoluene	15.72	91	3455625	184.0358	ug/kg	95
73) 4-Chlorotoluene	15.77	91	3734045	190.7981	ug/kg	99
74) a-Methylstyrene	16.05	118	2152297	209.2681	ug/kg	96
75) tert-Butylbenzene	16.11	119	4098004	209.3076	ug/kg	97

(#) = qualifier out of range (m) = manual integration
 030502.D 8260SL.M Tue Mar 05 16:14:51 2002

HPMS 9

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 Page 2

Data File : d:\HPCHEM\1\DATA\030502\9M18991.D
 Acq On : 5 Mar 2002 15:52
 Sample : WG113899-09 200PPB SOIL STD SV9122
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Mar 5 16:14 2002

Vial: 12
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Tue Mar 05 15:42:15 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	4372505	196.6633	ug/kg	99
77) sec-Butylbenzene	16.38	105	5433049	204.6754	ug/kg	100
78) p-Isopropyltoluene	16.54	119	4574951	210.0203	ug/kg	100
79) 1,3-Dichlorobenzene	16.71	146	2212713	187.2755	ug/kg	99
80) 1,4-Dichlorobenzene	16.84	146	2210055	177.9611	ug/kg	98
81) n-Butylbenzene	17.06	91	4506581	205.5256	ug/kg	99
82) 1,2-Dichlorobenzene	17.33	146	2096990	188.6108	ug/kg	98
83) 1,2-Dibromo-3-Chloropropan	18.31	157	266078	222.3733	ug/kg	95
84) 1,2,4-Trichlorobenzene	19.45	180	1692705	204.2337	ug/kg	99
85) Hexachlorobutadiene	19.61	225	1109833	193.2580	ug/kg	99
86) Naphthalene	19.81	128	3736073	216.7525	ug/kg	100
87) 1,2,3-Trichlorobenzene	20.12	180	1577160	197.8728	ug/kg	100

(#) = qualifier out of range (m) = manual integration
 0M18991.D 8260SL.M Tue Mar 05 16:14:52 2002

HPMS 9

Page 3

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 I	Fluorobenzene	1.000	1.000	0.0	119	0.00
2 T	Dichlorodifluoromethane	0.438	0.419	4.3	106	0.00
3 P	Chloromethane	0.282	0.249	11.7	103	0.00
4 C	Vinyl Chloride	0.245	0.218	11.0	97	0.00
5 T	Bromomethane	0.136	0.134	1.5	118	0.02
6 T	Chloroethane	0.187	0.181	3.2	115	0.02
7 T	Trichlorofluoromethane	0.554	0.529	4.5	106	0.02
8 T	Isoprene	0.279	0.012	95.7#	5#	0.00
9 T	Acrolein	0.028	0.000	100.0#	0#	-5.33#
10 T	1,1,2-Trichloro-1,2,2-Trifl	0.258	0.000	100.0#	0#	-5.35#
11 T	Acetone	0.120	0.105	12.5	129	0.00
12 C	1,1-Dichloroethene	0.181	0.205	-13.3	129	0.00
13 T	Dimethyl Sulfide	0.210	0.000	100.0#	0#	-5.91#
14 T	Iodomethane	0.086	0.139	-61.6#	227#	0.00
15 T	Methylene Chloride	0.244	0.220	9.8	109	0.00
16 T	Carbon Disulfide	0.701	0.767	-9.4	134	0.00
17 T	Acrylonitrile	0.085	0.003	96.5#	4#	0.06
18 T	Methyl Tert Butyl Ether	0.544	0.524	3.7	119	0.00
19 T	trans-1,2-Dichloroethene	0.207	0.228	-10.1	127	0.00
20 T	n-Hexane	0.356	0.331	7.0	109	0.01
21 T	Vinyl Acetate	0.480	0.379	21.0	96	0.00
22 P	1,1-Dichloroethane	0.441	0.446	-1.1	121	0.00
23 T	2-Butanone	0.118	0.118	0.0	148	0.00
24 T	2,2-Dichloropropane	0.351	0.359	-2.3	119	0.00
25 T	cis-1,2-Dichloroethene	0.214	0.231	-7.9	126	0.00
26 C	Chloroform	0.475	0.460	3.2	117	0.00
27 T	Bromochloromethane	0.094	0.099	-5.3	129	0.00
28 S	Dibromofluoromethane	0.214	0.549	156.5#	318#	0.00
29 T	1,1,1-Trichloroethane	0.421	0.431	-2.4	117	0.00
30 T	Cyclohexane	0.403	0.000	100.0#	0#	-0.01
31 T	1,1-Dichloropropene	0.334	0.336	-0.6	116	0.00
32 T	Carbon Tetrachloride	0.363	0.356	1.9	113	0.00
33 S	1,2-Dichloroethane-d4	0.330	0.804	143.6#	295#	0.00
34 T	1,2-Dichloroethane	0.428	0.408	4.7	115	0.00
35 T	Benzene	0.900	0.905	-0.6	121	0.00
36 T	Trichloroethene	0.207	0.224	-8.2	130	0.00
37 C	1,2-Dichloropropane	0.224	0.219	2.2	117	0.00
38 T	Bromodichloromethane	0.341	0.333	2.3	118	0.00
39 T	Dibromomethane	0.136	0.137	-0.7	121	0.00
40 T	2-Chloroethyl Vinyl Ether	0.054	0.051	5.6	208#	0.00
41 T	4-Methyl-2-Pentanone	0.093	0.087	6.5	143	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area	Dev (min)
42 T	cis-1,3-Dichloropropene	0.329	0.340	-3.3	126	0.00
43 T	Dimethyl Disulfide	0.173	0.000	100.0#	0#	0.07
44 I	Chlorobenzene-d5	1.000	1.000	0.0	121	0.00
45 S	Toluene-d8	1.039	2.705	-160.3#	317#	0.00
46 C	Toluene	1.290	1.316	-2.0	125	0.00
47 T	Ethyl Methacrylate	0.367	0.000	100.0#	0#	-12.15#
48 T	trans-1,3-Dichloropropene	0.475	0.453	4.6	122	0.00
49 T	1,1,2-Trichloroethane	0.284	0.262	7.7	124	0.00
50 T	2-Hexanone	0.287	0.241	16.0	128	0.00
51 T	1,3-Dichloropropane	0.507	0.474	6.5	120	0.00
52 T	Tetrachloroethene	0.279	0.287	-2.9	126	0.00
53 T	Dibromochloromethane	0.325	0.290	10.8	113	0.00
54 T	1,2-Dibromoethane	0.282	0.270	4.3	123	0.00
55 T	1-Chlorohexane	0.416	0.401	3.6	102	0.00
56 P	Chlorobenzene	0.897	0.823	8.2	119	0.00
57 T	1,1,1,2-Tetrachloroethane	0.320	0.296	7.5	116	0.00
58 C	Ethylbenzene	0.478	0.484	-1.3	124	0.00
59 T	m-,p-Xylene	0.620	0.618	0.3	120	0.00
60 T	o-Xylene	0.549	0.576	-4.9	129	0.00
61 T	Styrene	0.963	0.936	2.8	117	0.00
62 P	Bromoform	0.243	0.196	19.3	110	0.00
63 T	Isopropylbenzene	1.586	1.514	4.5	116	0.00
64 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	117	0.00
65 P	1,1,2,2-Tetrachloroethane	0.749	0.647	13.6	123	0.00
66 S	p-Bromofluorobenzene	0.807	2.206	-173.4#	329#	0.00
67 T	1,2,3-Trichloropropane	0.235	0.220	6.4	122	0.00
68 T	trans-1,4-Dichloro-2-Butene	0.207	0.020	90.3#	9#	0.05
69 T	n-Propylbenzene	3.487	3.501	-0.4	116	0.00
70 T	Bromobenzene	0.673	0.652	3.1	124	0.00
71 T	1,3,5-Trimethylbenzene	2.363	2.415	-2.2	118	0.00
72 T	2-Chlorotoluene	2.200	2.094	4.8	119	0.00
73 T	4-Chlorotoluene	2.295	2.082	9.3	108	0.00
74 T	a-Methylstyrene	1.175	0.002	99.8#	0#	0.00
75 T	tert-Butylbenzene	2.334	2.261	3.1	114	0.00
76 T	1,2,4-Trimethylbenzene	2.588	2.503	3.3	116	0.00
77 T	sec-Butylbenzene	3.075	3.227	-4.9	121	0.00
78 T	p-Isopropyltoluene	2.645	2.464	6.8	113	0.00
79 T	1,3-Dichlorobenzene	1.393	1.296	7.0	119	0.00
80 T	1,4-Dichlorobenzene	1.460	1.320	9.6	119	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev	Area%	Dev (min)
81 T	n-Butylbenzene	2.652	2.656	-0.2	120	0.00
82 T	1,2-Dichlorobenzene	1.333	1.209	9.3	119	0.00
83 T	1,2-Dibromo-3-Chloropropane	0.142	0.123	13.4	131	0.00
84 T	1,2,4-Trichlorobenzene	1.005	0.954	5.1	126	0.00
85 T	Hexachlorobutadiene	0.662	0.631	4.7	115	0.00
86 T	Naphthalene	2.100	2.035	3.1	130	0.00
87 T	1,2,3-Trichlorobenzene	0.966	0.908	6.0	127	0.00

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

Compound	Amount	Calc.	%Dev	Area	Dev (min)
1 I Fluorobenzene	50.000	50.000	0.0	119	0.00
2 T Dichlorodifluoromethane	20.000	19.147	4.3	106	0.00
3 P Chloromethane	20.000	17.675	11.6	103	0.00
4 C Vinyl Chloride	20.000	17.803	11.0	97	0.00
5 T Bromomethane	20.000	19.785	1.1	118	0.02
6 T Chloroethane	20.000	19.379	3.1	115	0.02
7 T Trichlorofluoromethane	20.000	19.080	4.6	106	0.02
8 T Isoprene	20.000	0.853	95.7#	5	0.00
9 T Acrolein	40.000	0.000	100.0#	0	-5.33#
10 T 1,1,2-Trichloro-1,2,2-Trifl	20.000	0.000	100.0#	0	-5.35#
11 T Acetone	20.000	18.929	5.4	129	0.00
12 C 1,1-Dichloroethene	20.000	22.653	-13.3	129	0.00
13 T Dimethyl Sulfide	20.000	0.000	100.0#	0	-5.91#
14 T Iodomethane	20.000	27.850	<u>-39.3#</u>	227	0.00
15 T Methylene Chloride	20.000	18.009	10.0	109	0.00
16 T Carbon Disulfide	20.000	21.878	-9.4	134	0.00
17 T Acrylonitrile	20.000	0.627	96.9#	4	0.06
18 T Methyl Tert Butyl Ether	20.000	19.254	3.7	119	0.00
19 T trans-1,2-Dichloroethene	20.000	22.019	-10.1	127	0.00
20 T n-Hexane	20.000	18.584	7.1	109	0.01
21 T Vinyl Acetate	20.000	15.370	23.2	96	0.00
22 P 1,1-Dichloroethane	20.000	20.219	-1.1	121	0.00
23 T 2-Butanone	20.000	21.462	-7.3	148	0.00
24 T 2,2-Dichloropropane	20.000	20.503	-2.5	119	0.00
25 T cis-1,2-Dichloroethene	20.000	21.567	-7.8	126	0.00
26 C Chloroform	20.000	19.379	3.1	117	0.00
27 T Bromochloromethane	20.000	21.179	-5.9	129	0.00
28 S Dibromofluoromethane	20.000	51.385	-156.9#	318	0.00
29 T 1,1,1-Trichloroethane	20.000	20.472	-2.4	117	0.00
30 T Cyclohexane	20.000	0.013	99.9#	0	-0.01
31 T 1,1-Dichloropropene	20.000	20.086	-0.4	116	0.00
32 T Carbon Tetrachloride	20.000	19.654	1.7	113	0.00
33 S 1,2-Dichloroethane-d4	20.000	48.714	143.6#	295	0.00
34 T 1,2-Dichloroethane	20.000	19.083	4.6	115	0.00
35 T Benzene	20.000	20.113	-0.6	121	0.00
36 T Trichloroethene	20.000	21.611	-8.1	130	0.00
37 C 1,2-Dichloropropane	20.000	19.515	2.4	117	0.00
38 T Bromodichloromethane	20.000	19.522	2.4	118	0.00
39 T Dibromomethane	20.000	20.205	-1.0	121	0.00
40 T 2-Chloroethyl Vinyl Ether	20.000	25.898	<u>-29.5#</u>	208	0.00
41 T 4-Methyl-2-Pentanone	20.000	19.847	0.8	143	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area#	Dev (min)
42 T	cis-1,3-Dichloropropene	20.000	20.631	-3.2	126	0.00
43 T	Dimethyl Disulfide	20.000	2.451	87.7#	0	0.07
44 I	Chlorobenzene-d5	50.000	50.000	0.0	121	0.00
45 S	Toluene-d8	20.000	52.068	-160.3#	317	0.00
46 C	Toluene	20.000	20.409	-2.0	125	0.00
47 T	Ethyl Methacrylate	20.000	0.000	100.0#	0	-12.15#
48 T	trans-1,3-Dichloropropene	20.000	19.067	4.7	122	0.00
49 T	1,1,2-Trichloroethane	20.000	18.391	8.0	124	0.00
50 T	2-Hexanone	20.000	17.941	10.3	128	0.00
51 T	1,3-Dichloropropane	20.000	18.723	6.4	120	0.00
52 T	Tetrachloroethene	20.000	20.549	-2.7	126	0.00
53 T	Dibromochloromethane	20.000	17.827	10.9	113	0.00
54 T	1,2-Dibromoethane	20.000	19.139	4.3	123	0.00
55 T	1-Chlorohexane	20.000	19.263	3.7	102	0.00
56 P	Chlorobenzene	20.000	18.340	8.3	119	0.00
57 T	1,1,1,2-Tetrachloroethane	20.000	18.501	7.5	116	0.00
58 C	Ethylbenzene	20.000	20.257	-1.3	124	0.00
59 T	m-,p-Xylene	40.000	39.921	0.2	120	0.00
60 T	o-Xylene	20.000	20.998	-5.0	129	0.00
61 T	Styrene	20.000	19.458	2.7	117	0.00
62 P	Bromoform	20.000	16.096	19.5	110	0.00
63 T	Isopropylbenzene	20.000	19.093	4.5	116	0.00
64 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	117	0.00
65 P	1,1,2,2-Tetrachloroethane	20.000	18.043	9.8	123	0.00
66 S	p-Bromofluorobenzene	20.000	54.674	-173.4#	329	0.00
67 T	1,2,3-Trichloropropane	20.000	18.649	6.8	122	0.00
68 T	trans-1,4-Dichloro-2-Butene	20.000	1.904	90.5#	9	0.05
69 T	n-Propylbenzene	20.000	20.078	-0.4	116	0.00
70 T	Bromobenzene	20.000	19.398	3.0	124	0.00
71 T	1,3,5-Trimethylbenzene	20.000	20.438	-2.2	118	0.00
72 T	2-Chlorotoluene	20.000	19.037	4.8	119	0.00
73 T	4-Chlorotoluene	20.000	18.143	9.3	108	0.00
74 T	a-Methylstyrene	20.000	0.036	99.8#	0	0.00
75 T	tert-Butylbenzene	20.000	19.373	3.1	114	0.00
76 T	1,2,4-Trimethylbenzene	20.000	19.341	3.3	116	0.00
77 T	sec-Butylbenzene	20.000	20.988	-4.9	121	0.00
78 T	p-Isopropyltoluene	20.000	18.632	6.8	113	0.00
79 T	1,3-Dichlorobenzene	20.000	18.606	7.0	119	0.00
80 T	1,4-Dichlorobenzene	20.000	18.081	9.6	119	0.00

196

(#) = Out of Range

Wed Mar 06 12:43:52 2002

HPMS 9

Page 2

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

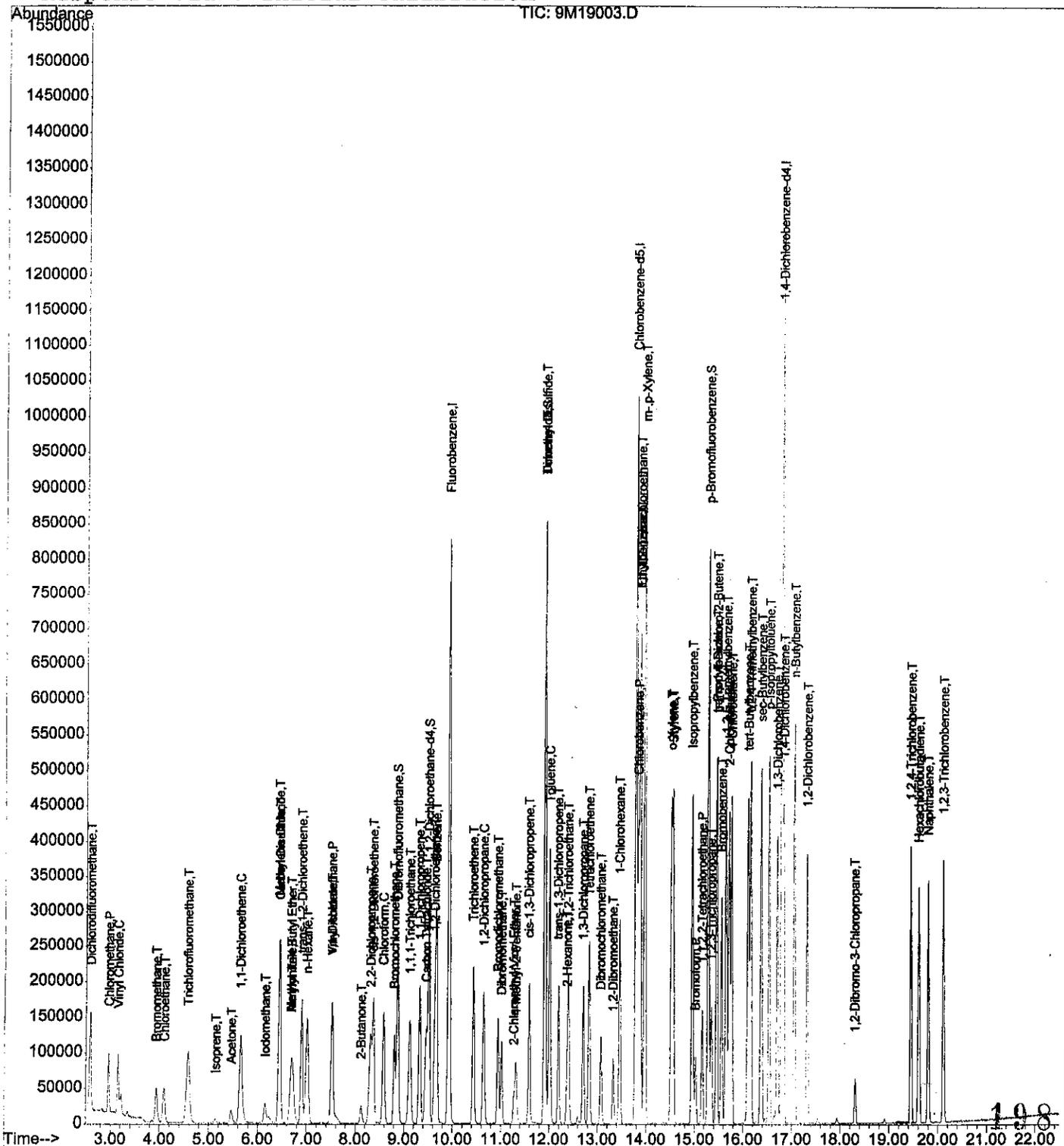
Compound		Amount	Calc.	%Dev	Area%	Dev(min)
81 T	n-Butylbenzene	20.000	20.026	-0.1	120	0.00
82 T	1,2-Dichlorobenzene	20.000	18.132	9.3	119	0.00
83 T	1,2-Dibromo-3-Chloropropane	20.000	18.048	9.8	131	0.00
84 T	1,2,4-Trichlorobenzene	20.000	18.986	5.1	126	0.00
85 T	Hexachlorobutadiene	20.000	19.060	4.7	115	0.00
86 T	Naphthalene	20.000	19.252	3.7	130	0.00
87 T	1,2,3-Trichlorobenzene	20.000	18.796	6.0	127	0.00

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 12:43 2002

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration



Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 12:43 2002

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	1023007	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	726084	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	405150	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	224654	51.3849	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.76%
33) 1,2-Dichloroethane-d4	9.52	65	328896	48.7136	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.42%
45) Toluene-d8	11.91	98	785522	52.0682	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	104.14%
66) p-Bromofluorobenzene	15.29	95	357547	54.6736	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	109.34%

Target Compounds

					Qvalue	
2) Dichlorodifluoromethane	2.58	85	171615	19.1465	ug/kg	94
3) Chloromethane	2.96	50	102057	17.6754	ug/kg	96
4) Vinyl Chloride	3.15	62	89065	17.8031	ug/kg	99
5) Bromomethane	3.94	94	54957	19.7851	ug/kg	94
6) Chloroethane	4.09	64	74168	19.3792	ug/kg#	88
7) Trichlorofluoromethane	4.58	101	216418	19.0799	ug/kg#	62
8) Isoprene	5.13	67	4867	0.8532	ug/kg#	52
11) Acetone	5.46	43	42980	18.9285	ug/kg#	74
12) 1,1-Dichloroethene	5.65	96	84005	22.6531	ug/kg	91
14) Iodomethane	6.15	142	57029	27.8505	ug/kg	100
15) Methylene Chloride	6.43	84	89890	18.0090	ug/kg	98
16) Carbon Disulfide	6.45	76	313885	21.8776	ug/kg	98
17) Acrylonitrile	6.69	53	1096	0.6275	ug/kg#	24
18) Methyl Tert Butyl Ether	6.69	73	214293	19.2539	ug/kg#	70
19) trans-1,2-Dichloroethene	6.90	96	93370	22.0190	ug/kg	100
20) n-Hexane	7.02	57	135435	18.5843	ug/kg#	71
21) Vinyl Acetate	7.52	43	154929	15.3697	ug/kg#	88
22) 1,1-Dichloroethane	7.53	63	182614	20.2189	ug/kg#	98
23) 2-Butanone	8.12	43	48205	21.4617	ug/kg#	81
24) 2,2-Dichloropropane	8.31	77	147059	20.5029	ug/kg#	75
25) cis-1,2-Dichloroethene	8.37	96	94616	21.5673	ug/kg	94
26) Chloroform	8.58	83	188332	19.3793	ug/kg	98
27) Bromochloromethane	8.81	128	40525	21.1790	ug/kg	98
29) 1,1,1-Trichloroethane	9.13	97	176481	20.4721	ug/kg	99
31) 1,1-Dichloropropene	9.32	75	137298	20.0862	ug/kg	90
32) Carbon Tetrachloride	9.46	117	145866	19.6538	ug/kg	99
34) 1,2-Dichloroethane	9.63	62	167082	19.0833	ug/kg#	98

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
 Acq On : 6 Mar 2002 12:10
 Sample : WG113899-10 20PPB ALT SOURCE
 Misc : 7,1 SV9106
 MS Integration Params: RTEINT.P
 Quant Time: Mar 6 12:43 2002

Vial: 6
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35) Benzene	9.67	78	370422	20.1125	ug/kg	99
36) Trichloroethene	10.44	130	91557	21.6110	ug/kg	98
37) 1,2-Dichloropropane	10.65	63	89551	19.5145	ug/kg	96
38) Bromodichloromethane	10.94	83	136159	19.5223	ug/kg	98
39) Dibromomethane	11.02	93	56190	20.2049	ug/kg	95
40) 2-Chloroethyl Vinyl Ether	11.27	63	20922	25.8981	ug/kg	99
41) 4-Methyl-2-Pentanone	11.31	58	35514	19.8472	ug/kg#	29
42) cis-1,3-Dichloropropene	11.59	75	139073	20.6312	ug/kg	99
43) Dimethyl Disulfide	11.91	79	102	2.4511	ug/kg#	1
46) Toluene	12.01	91	382318	20.4090	ug/kg	98
48) trans-1,3-Dichloropropene	12.20	75	131512	19.0667	ug/kg	99
49) 1,1,2-Trichloroethane	12.40	97	75970	18.3910	ug/kg	93
50) 2-Hexanone	12.37	43	70076	17.9405	ug/kg#	66
51) 1,3-Dichloropropane	12.70	76	137768	18.7226	ug/kg	93
52) Tetrachloroethene	12.83	164	83348	20.5488	ug/kg	95
53) Dibromochloromethane	13.08	129	84208	17.8271	ug/kg	96
54) 1,2-Dibromoethane	13.33	107	78396	19.1386	ug/kg	96
55) 1-Chlorohexane	13.46	91	116431	19.2630	ug/kg	97
56) Chlorobenzene	13.84	112	238898	18.3398	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.88	131	85859	18.5005	ug/kg	93
58) Ethylbenzene	13.88	106	140575	20.2572	ug/kg	96
59) m-,p-Xylene	13.97	106	359181	39.9209	ug/kg	99
60) o-Xylene	14.53	106	167382	20.9982	ug/kg	96
61) Styrene	14.57	104	271975	19.4582	ug/kg	94
62) Bromoform	15.02	173	56877	16.0964	ug/kg	94
63) Isopropylbenzene	14.95	105	439743	19.0926	ug/kg	98
65) 1,1,2,2-Tetrachloroethane	15.16	83	104822	18.0427	ug/kg#	95
67) 1,2,3-Trichloropropane	15.35	110	35573	18.6494	ug/kg#	83
68) trans-1,4-Dichloro-2-Buten	15.46	53	3197	1.9037	ug/kg#	1
69) n-Propylbenzene	15.46	91	567328	20.0776	ug/kg	96
70) Bromobenzene	15.56	156	105719	19.3976	ug/kg	100
71) 1,3,5-Trimethylbenzene	15.65	105	391364	20.4379	ug/kg	99
72) 2-Chlorotoluene	15.72	91	339371	19.0370	ug/kg	97
73) 4-Chlorotoluene	15.77	91	337355	18.1435	ug/kg	97
75) tert-Butylbenzene	16.11	119	366420	19.3729	ug/kg	89
76) 1,2,4-Trimethylbenzene	16.16	105	405640	19.3406	ug/kg	99
77) sec-Butylbenzene	16.38	105	522918	20.9885	ug/kg	98
78) p-Isopropyltoluene	16.54	119	399328	18.6322	ug/kg	99
79) 1,3-Dichlorobenzene	16.71	146	210083	18.6056	ug/kg	99
80) 1,4-Dichlorobenzene	16.84	146	213953	18.0810	ug/kg	94
81) n-Butylbenzene	17.06	91	430370	20.0260	ug/kg	100

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\030602\9M19003.D
Acq On : 6 Mar 2002 12:10
Sample : WG113899-10 20PPB ALT SOURCE
Misc : 7,1 SV9106
MS Integration Params: RTEINT.P
Quant Time: Mar 6 12:43 2002

Vial: 6
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Wed Mar 06 10:09:02 2002
Response via : Initial Calibration
DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82) 1,2-Dichlorobenzene	17.32	146	195868	18.1317	ug/kg	96
83) 1,2-Dibromo-3-Chloropropan	18.31	157	19988	18.0480	ug/kg	86
84) 1,2,4-Trichlorobenzene	19.45	180	154646	18.9856	ug/kg	100
85) Hexachlorobutadiene	19.61	225	102296	19.0598	ug/kg	98
86) Naphthalene	19.81	128	329713	19.2521	ug/kg	100
87) 1,2,3-Trichlorobenzene	20.12	180	147186	18.7965	ug/kg	98

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(#) = qualifier out of range (m) = manual integration

9M19003.D 8260SL.M

Wed Mar 06 12:43:38 2002

HPMS_9

Page 3

Calibration Table Report

Method: 8260BWT.M

Title: Method 8260B_WATER - ICAL 3/21/02 - HPMS6

Last Calibration: Fri Mar 22 07:56:52 2002

AVE % RSD=12.9%

Calibration Files

0.4 1 2 5 10 200 20 50 100
 6M29668.D 6M29667.D 6M29666.D 6M29665.D 6M29664.D 6M29671.D 6M29663.D 6M29662.D 6M29670.D

Compound										Avg	%RSD
I Fluorobenzene	ISTD										
T Dichlorodifluoromethane	0.466	0.481	0.470	0.418	0.367	0.427	0.443	0.366	0.430	10.4	
P Chloromethane	0.324	0.314	0.304	0.269	0.246	0.269	0.272	0.249	0.281	10.4	
C Vinyl Chloride	0.261	0.256	0.230	0.190	0.146	0.178	0.175	0.159	0.199	22.1	
T Bromomethane	0.115	0.128	0.132	0.113	0.122	0.115	0.121	0.123	0.121	5.5	
T Chloroethane	0.131	0.138	0.131	0.114	0.110	0.117	0.122	0.119	0.123	7.8	
T Trichlorofluoromethane	0.323	0.311	0.315	0.273	0.271	0.286	0.304	0.288	0.296	6.7	
T Isoprene	0.165	0.201	0.217	0.214	0.249	0.233	0.252	0.254	0.223	13.7	
T Acrolein	0.011	0.013	0.016	0.016	0.017	0.017	0.016	0.017	0.015	14.1	
T 1,1,2-Trichloro-1,2,2-Trifluoroethane	0.377	0.351	0.369	0.329	0.315	0.342	0.359	0.335	0.347	6.0	
T Acetone			0.054	0.044	0.035	0.037	0.034	0.037	0.040	19.1	
C 1,1-Dichloroethene	0.259	0.244	0.243	0.263	0.245	0.268	0.261	0.278	0.274	5.0	
T Dimethyl Sulfide			0.226	0.224	0.262	0.237	0.248	0.264	0.244	7.1	
T Iodomethane		0.138	0.153	0.168	0.160	0.240	0.177	0.193	0.229	19.9	
T Methylene Chloride	0.358	0.320	0.325	0.309	0.283	0.271	0.283	0.287	0.302	9.2	
T Carbon Disulfide	0.817	0.788	0.845	0.889	0.835	0.853	0.861	0.913	0.900	4.7	
T Acrylonitrile			0.042	0.039	0.053	0.049	0.048	0.055	0.048	12.9	
T Methyl Tert Butyl Ether		0.268	0.325	0.376	0.386	0.468	0.412	0.393	0.463	17.3	
T trans-1,2-Dichloroethene	0.324	0.272	0.278	0.307	0.287	0.299	0.300	0.321	0.320	6.3	
T n-Hexane			0.309	0.387	0.384	0.394	0.424	0.461	0.417	11.9	
T Vinyl Acetate		0.227	0.269	0.294	0.361	0.350	0.365	0.373	0.377	17.2	
P 1,1-Dichloroethane	0.668	0.614	0.607	0.597	0.564	0.554	0.584	0.612	0.609	5.5	
T 2-Butanone			0.039	0.044	0.041	0.049	0.044	0.040	0.047	8.4	
T 2,2-Dichloropropane	0.389	0.336	0.360	0.390	0.387	0.451	0.421	0.468	0.457	11.2	
T cis-1,2-Dichloroethene	0.261	0.234	0.271	0.293	0.291	0.304	0.309	0.326	0.325	10.5	
C Chloroform	0.745	0.565	0.588	0.578	0.543	0.537	0.555	0.573	0.573	10.7	
T Bromochloromethane	0.204	0.160	0.166	0.162	0.159	0.157	0.161	0.162	0.165	8.6	
S Dibromofluoromethane		0.316	0.298	0.296	0.298	0.299	0.291	0.298	0.315	3.1	
T 1,1,1-Trichloroethane	0.556	0.476	0.477	0.496	0.474	0.490	0.498	0.534	0.530	5.9	
T Cyclohexane			0.471	0.475	0.484	0.521	0.557	0.536	0.507	7.0	
T 1,1-Dichloropropene		0.300	0.362	0.401	0.390	0.417	0.424	0.455	0.450	12.6	
T Carbon Tetrachloride	0.416	0.362	0.372	0.399	0.393	0.459	0.434	0.480	0.483	10.6	
S 1,2-Dichloroethane-d4		0.336	0.315	0.307	0.301	0.283	0.287	0.287	0.306	5.8	
T 1,2-Dichloroethane	0.423	0.389	0.384	0.382	0.362	0.345	0.366	0.368	0.382	5.8	
T Benzene	1.052	1.002	1.086	1.133	1.088	1.063	1.153	1.187	1.163	5.5	
T Trichloroethene	0.308	0.295	0.307	0.301	0.294	0.317	0.309	0.337	0.339	5.3	
C 1,2-Dichloropropane	0.284	0.246	0.262	0.270	0.266	0.278	0.276	0.290	0.298	5.7	
T Bromodichloromethane	0.345	0.275	0.288	0.301	0.297	0.349	0.319	0.348	0.370	10.3	
T Dibromomethane	0.142	0.110	0.118	0.126	0.122	0.125	0.123	0.122	0.133	7.2	
T 2-Chloroethyl Vinyl Ether			0.035	0.049	0.060	0.102	0.075	0.079	0.103	35.8	
T 4-Methyl-2-Pentanone			0.028	0.033	0.047	0.038	0.037	0.045	0.038	18.5	
T cis-1,3-Dichloropropene		0.198	0.229	0.282	0.299	0.381	0.343	0.375	0.402	23.8	
T Dimethyl Disulfide			0.072	0.094	0.200	0.131	0.167	0.202	0.144	37.9	
I Chlorobenzene-d5	ISTD										
S Toluene-d8			1.163	1.296	1.391	1.344	1.361	1.420	1.421	6.8	
C Toluene	1.050	1.193	1.350	1.554	1.559	1.446	1.631	1.662	1.596	14.6	
T Ethyl Methacrylate			0.167	0.198	0.259	0.223	0.222	0.263	0.222	16.4	
T trans-1,3-Dichloropropene		0.250	0.271	0.341	0.373	0.428	0.405	0.412	0.449	20.0	
T 1,1,2-Trichloroethane	0.241	0.219	0.227	0.235	0.230	0.226	0.239	0.226	0.239	3.2	
T 2-Hexanone			0.276	0.214	0.113	0.178	0.119	0.113	0.169	39.6	
T 1,3-Dichloropropane	0.357	0.332	0.343	0.382	0.390	0.395	0.401	0.391	0.418	7.5	
T Tetrachloroethene	0.367	0.315	0.332	0.345	0.337	0.328	0.348	0.360	0.347	9.0	
T Dibromochloromethane	0.220	0.192	0.211	0.249	0.269	0.334	0.292	0.303	0.342	20.1	

T	1,2-Dibromoethane	0.186	0.171	0.180	0.199	0.209	0.235	0.218	0.215	0.240	0.206	11.6
T	1-Chlorohexane	0.186	0.223	0.293	0.420	0.455	0.513	0.506	0.552	0.542	0.410	34.4
P	Chlorobenzene	1.490	1.262	1.202	1.189	1.153	1.027	1.175	1.175	1.143	1.202	10.4
T	1,1,1,2-Tetrachloroethane	0.355	0.312	0.336	0.366	0.379	0.345	0.394	0.392	0.395	0.364	8.0
C	Ethylbenzene	0.554	0.517	0.557	0.584	0.588	0.510	0.602	0.612	0.581	0.567	6.3
T	m,p-Xylene	0.673	0.664	0.730	0.784	0.796	0.627	0.791	0.792	0.736	0.732	8.8
T	o-Xylene		0.380	0.477	0.631	0.679	0.667	0.718	0.753	0.736	0.630	21.1
T	Styrene		0.711	0.942	1.171	1.256	1.169	1.293	1.315	1.308	1.146	18.7
T	Bromoform		0.086	0.103	0.125	0.146	0.192	0.160	0.163	0.192	0.146	26.7
T	Isopropylbenzene		1.047	1.321	1.715	1.859	1.760	1.962	2.063	1.985	1.714	20.7
I	1,4-Dichlorobenzene-d4	ISTD										
P	1,1,2,2-Tetrachloroethane	0.395	0.368	0.401	0.396	0.387	0.402	0.394	0.376	0.412	0.392	3.5
S	p-Bromofluorobenzene				0.805	0.865	0.968	0.925	0.984	1.020	0.928	8.7
T	1,2,3-Trichloropropane		0.108	0.120	0.135	0.130	0.134	0.136	0.127	0.140	0.129	8.0
T	trans-1,4-Dichloro-2-Butene				0.079	0.085	0.110	0.094	0.095	0.111	0.096	13.7
T	n-Propylbenzene		2.427	3.199	3.827	3.773	3.404	4.074	4.292	3.961	3.620	16.5
T	Bromobenzene	0.700	0.698	0.774	0.795	0.776	0.755	0.799	0.808	0.811	0.768	5.6
T	1,3,5-Trimethylbenzene		1.711	2.280	2.726	2.728	2.538	2.923	3.099	2.894	2.612	16.9
T	2-Chlorotoluene	1.967	2.241	2.493	2.511	2.462	2.261	2.527	2.635	2.560	2.406	8.7
T	4-Chlorotoluene	1.927	2.303	2.595	2.765	2.619	2.238	2.728	2.788	2.564	2.503	11.5
T	a-Methylstyrene				1.202	1.320	1.402	1.447	1.610	1.546	1.421	10.5
T	tert-Butylbenzene		1.852	2.360	2.556	2.529	2.359	2.633	2.773	2.637	2.462	11.5
T	1,2,4-Trimethylbenzene		2.335	2.855	3.106	3.067	2.626	3.143	3.259	3.038	2.929	10.5
T	sec-Butylbenzene		2.305	2.798	3.284	3.317	3.093	3.546	3.779	3.512	3.204	14.7
T	p-Isopropyltoluene		1.860	2.481	2.957	3.024	2.810	3.224	3.457	3.212	2.878	17.6
T	1,3-Dichlorobenzene		1.537	1.636	1.675	1.648	1.517	1.679	1.715	1.672	1.635	4.3
T	1,4-Dichlorobenzene		1.859	1.843	1.781	1.676	1.484	1.700	1.700	1.649	1.712	7.0
T	n-Butylbenzene		1.798	2.217	2.643	2.632	2.440	2.798	3.022	2.760	2.539	15.1
T	1,2-Dichlorobenzene		1.280	1.395	1.414	1.374	1.310	1.415	1.421	1.428	1.380	4.0
T	1,2-Dibromo-3-Chloropropane			0.030	0.038	0.040	0.070	0.046	0.049	0.065	0.048	30.0
T	1,2,4-Trichlorobenzene		0.472	0.533	0.631	0.679	0.833	0.762	0.828	0.870	0.701	21.0
T	Hexachlorobutadiene	0.433	0.419	0.438	0.418	0.407	0.464	0.428	0.497	0.469	0.441	6.6
T	Naphthalene		0.427	0.505	0.777	0.935	1.256	1.107	1.161	1.323	0.936	36.2
T	1,2,3-Trichlorobenzene		0.401	0.465	0.563	0.564	0.652	0.611	0.627	0.683	0.57073	16.8

Fri Mar 22 07:58:33 2002

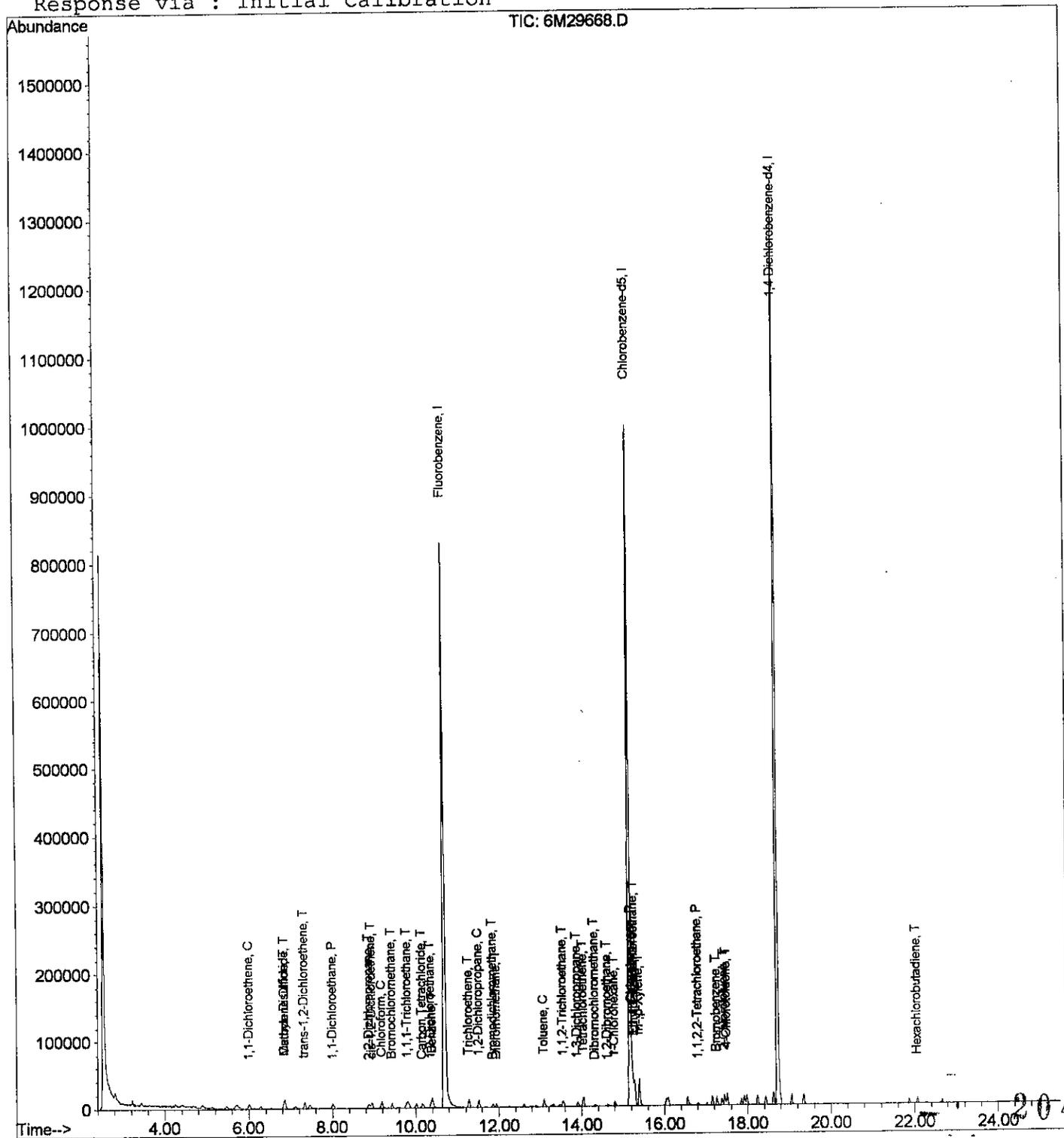
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Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:06 2002

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:06 2002

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1167352	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	858886	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	496682	25.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
28) Dibromofluoromethane	0.00	111	0	0.0000	ug/L	
Spiked Amount 25.000	Range 86 - 118		Recovery	=	0.00%#	
33) 1,2-Dichloroethane-d4	0.00	65	0	0.0000	ug/L	
Spiked Amount 25.000	Range 80 - 120		Recovery	=	0.00%#	
45) Toluene-d8	0.00	98	0	0.0000	ug/L	
Spiked Amount 25.000	Range 88 - 110		Recovery	=	0.00%#	
66) p-Bromofluorobenzene	16.81	95	599	0.0325	ug/L	-0.13
Spiked Amount 25.000	Range 86 - 115		Recovery	=	0.12%#	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
12) 1,1-Dichloroethene	5.99	96	4839m	0.3993	ug/L	
15) Methylene Chloride	6.84	84	6679	0.4733	ug/L	96
16) Carbon Disulfide	6.85	76	15258	0.3819	ug/L	# 92
19) trans-1,2-Dichloroethene	7.33	96	6045	0.4305	ug/L	97
22) 1,1-Dichloroethane	8.00	63	12481	0.4447	ug/L	92
24) 2,2-Dichloropropane	8.88	77	7271m	0.3830	ug/L	
25) cis-1,2-Dichloroethene	8.94	96	4871	0.3592	ug/L	99
26) Chloroform	9.19	83	13917	0.5102	ug/L	97
27) Bromochloromethane	9.43	130	3805	0.4897	ug/L	99
29) 1,1,1-Trichloroethane	9.79	97	10393	0.4421	ug/L	90
32) Carbon Tetrachloride	10.16	117	7770	0.3943	ug/L	# 92
34) 1,2-Dichloroethane	10.36	62	7893	0.4473	ug/L	# 89
35) Benzene	10.40	78	19651	0.3815	ug/L	# 81
36) Trichloroethene	11.27	130	5753	0.3952	ug/L	88
37) 1,2-Dichloropropane	11.52	63	5296	0.4133	ug/L	100
38) Bromodichloromethane	11.87	83	6438	0.4290	ug/L	88
39) Dibromomethane	11.94	93	2655	0.4561	ug/L	95
46) Toluene	13.09	91	14435	0.2900	ug/L	96
49) 1,1,2-Trichloroethane	13.55	97	3312	0.4169	ug/L	96
51) 1,3-Dichloropropane	13.91	76	4904	0.3768	ug/L	# 73
52) Tetrachloroethene	14.05	164	5041	0.4290	ug/L	98
53) Dibromochloromethane	14.33	129	3023	0.3283	ug/L	# 71
54) 1,2-Dibromoethane	14.63	107	2552	0.3608	ug/L	87
55) 1-Chlorohexane	14.81	91	2554	0.1813	ug/L	# 72
56) Chlorobenzene	15.23	112	20471	0.4959	ug/L	100
57) 1,1,1,2-Tetrachloroethane	15.28	131	4875	0.3899	ug/L	# 47
58) Ethylbenzene	15.28	106	7617	0.3909	ug/L	76

205

(#) = qualifier out of range (m) = manual integration
 6M29668.D 8260BWT.M Fri Mar 22 08:06:30 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
Acq On : 22 Mar 2002 3:48
Sample : WG114932-08 0.4PPB STD
Misc : 1,1 SV9206

Vial: 12
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

MS Integration Params: rteint.p
Quant Time: Mar 22 8:06 2002

Quant Results File: 8260BWT.RES

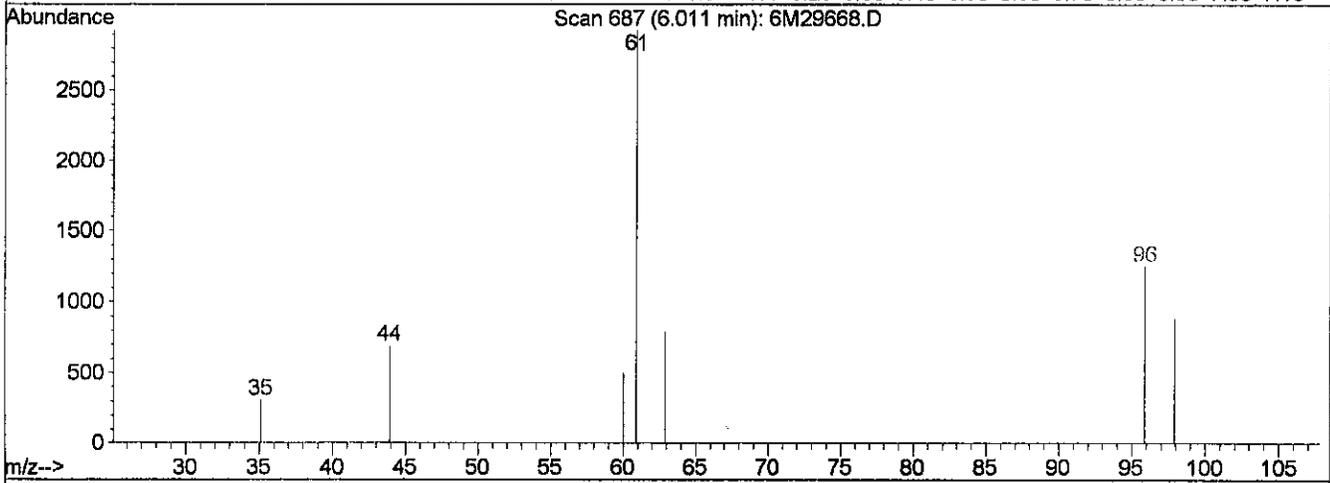
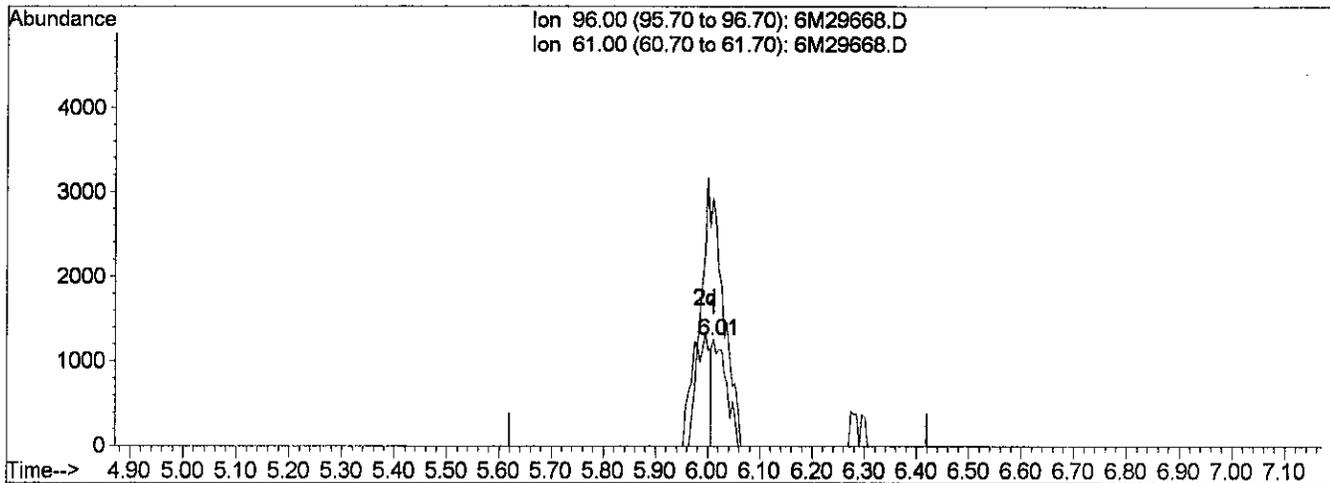
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Title : Method 8260B_WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration
DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
59) m-,p-Xylene	15.40	106	18488	0.7347	ug/L	82
65) 1,1,2,2-Tetrachloroethane	16.81	83	3139	0.4027	ug/L	99
70) Bromobenzene	17.26	156	5562	0.3644	ug/L	95
72) 2-Chlorotoluene	17.45	91	15633	0.3270	ug/L	95
73) 4-Chlorotoluene	17.51	91	15314	0.3080	ug/L	96
85) Hexachlorobutadiene	22.08	225	3444	0.3927	ug/L #	47

Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 MSaint@metiMarPa2am8:03t2002.p

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(12) 1,1-Dichloroethene (C)

6.01min 0.19ug/L

response 2316

Ion	Exp%	Act%
96.00	100	100
61.00	174.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

3-22-02 CMS

3/22/02 CMS

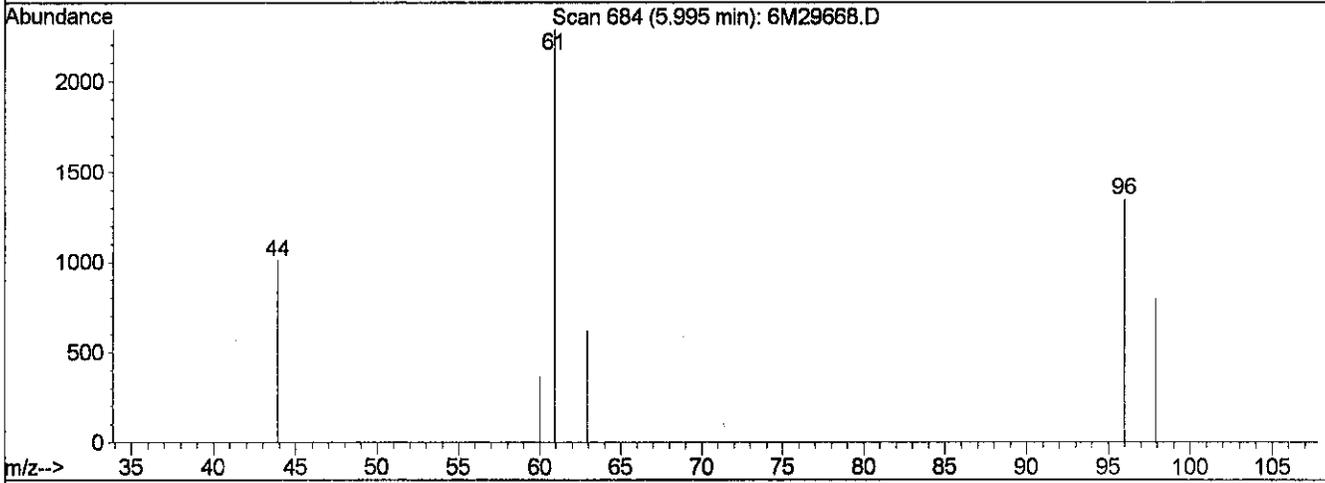
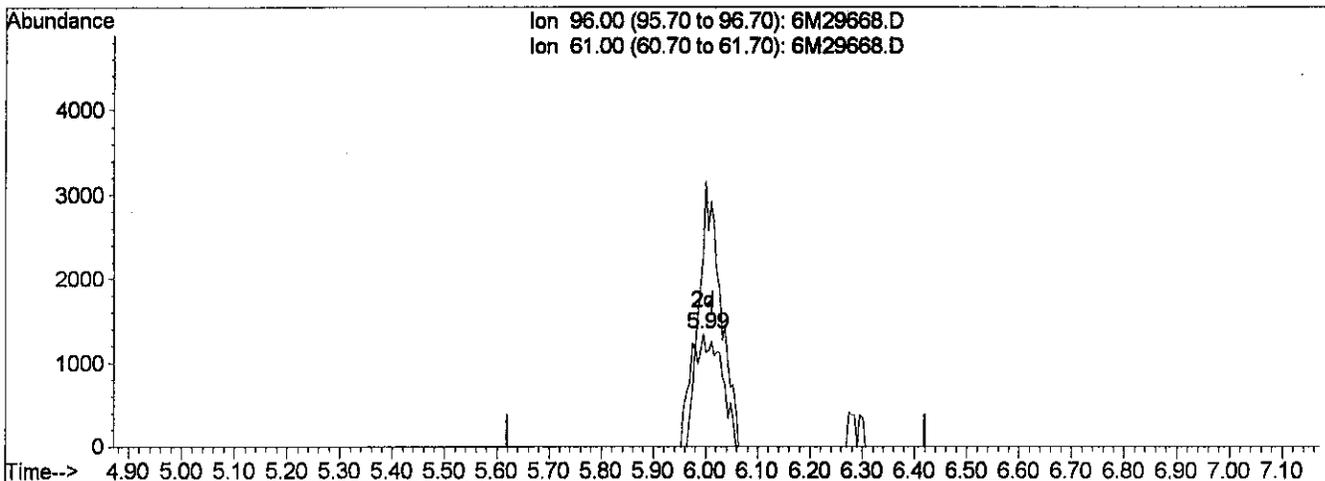
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207

Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 Quant Results File: temp.res

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(12) 1,1-Dichloroethene (C)

5.99min 0.40ug/L m

response 4839

Ion	Exp%	Act%
96.00	100	100
61.00	174.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

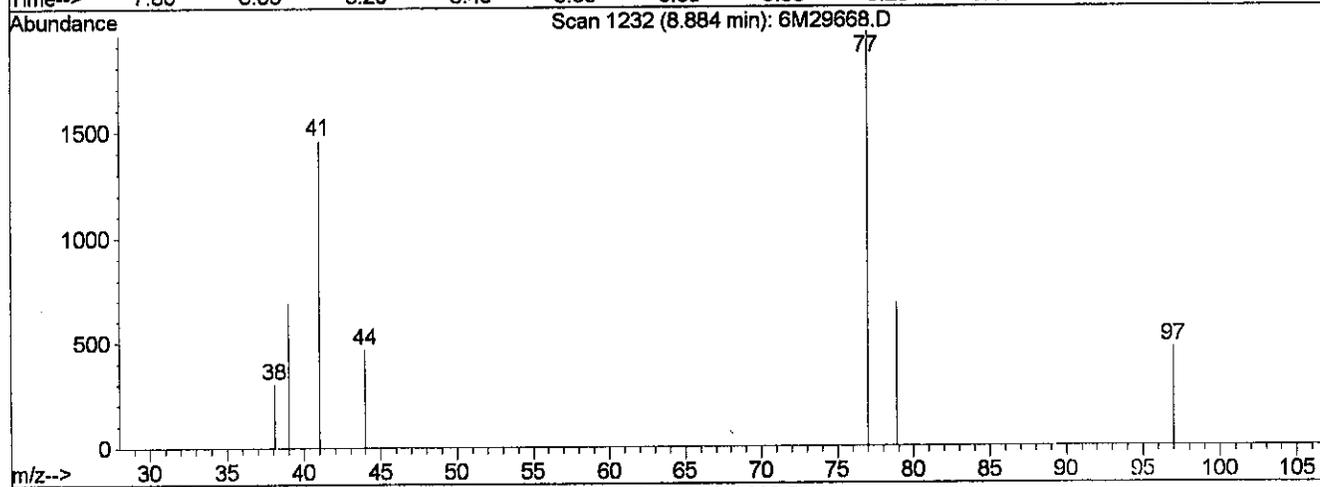
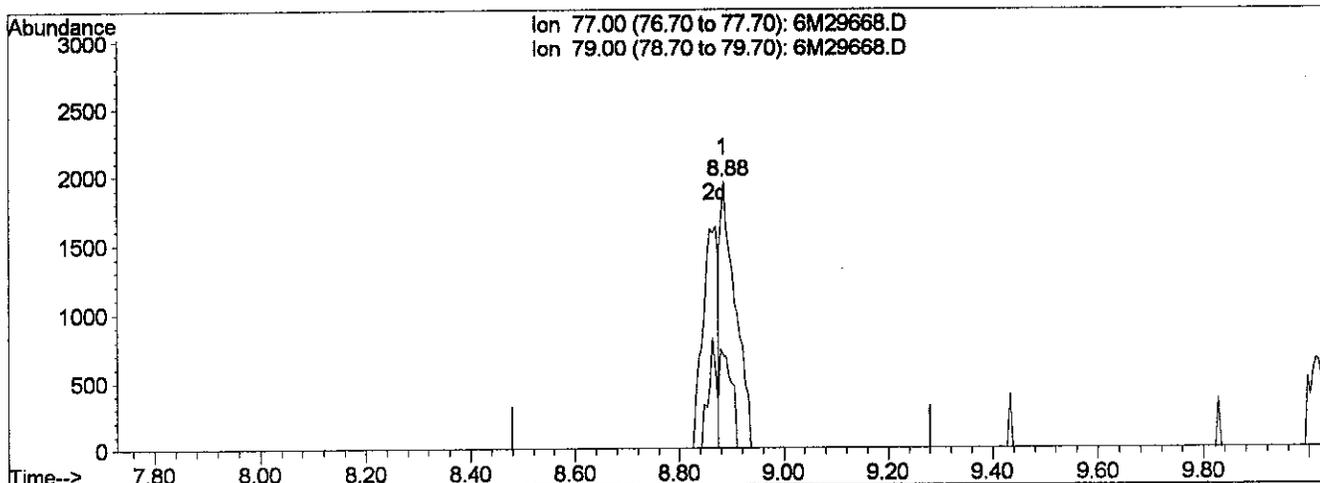
3-22-02 cms
 am 3/22/02
 #2

208

Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 Msamnt@metiMarPaZam8:03t2002.p

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



TIC: 6M29668.D

(24) 2,2-Dichloropropane (T)

8.88min 0.21ug/L

response 3959

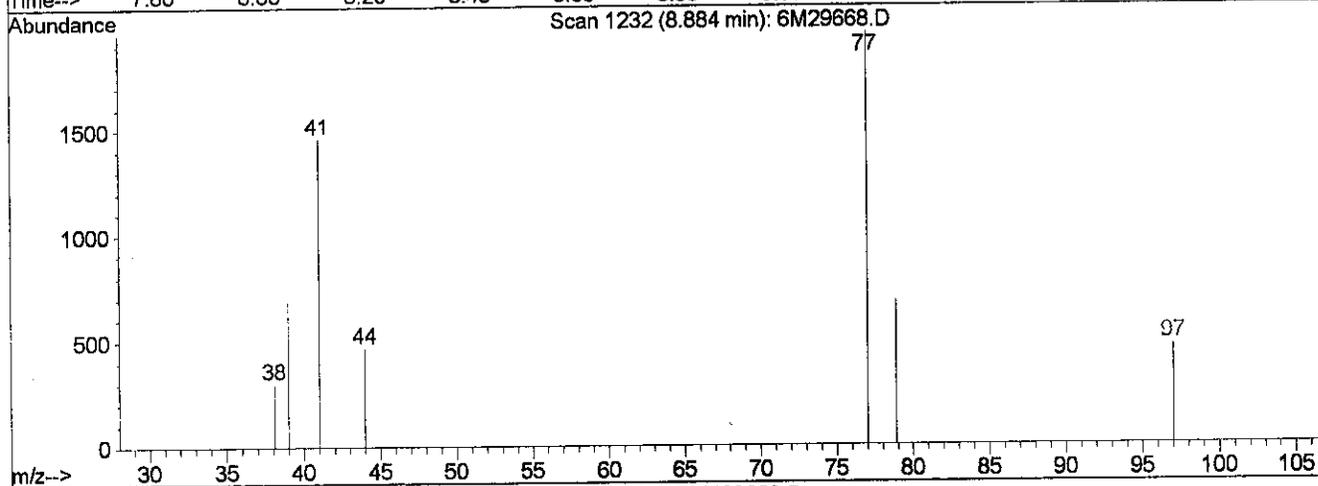
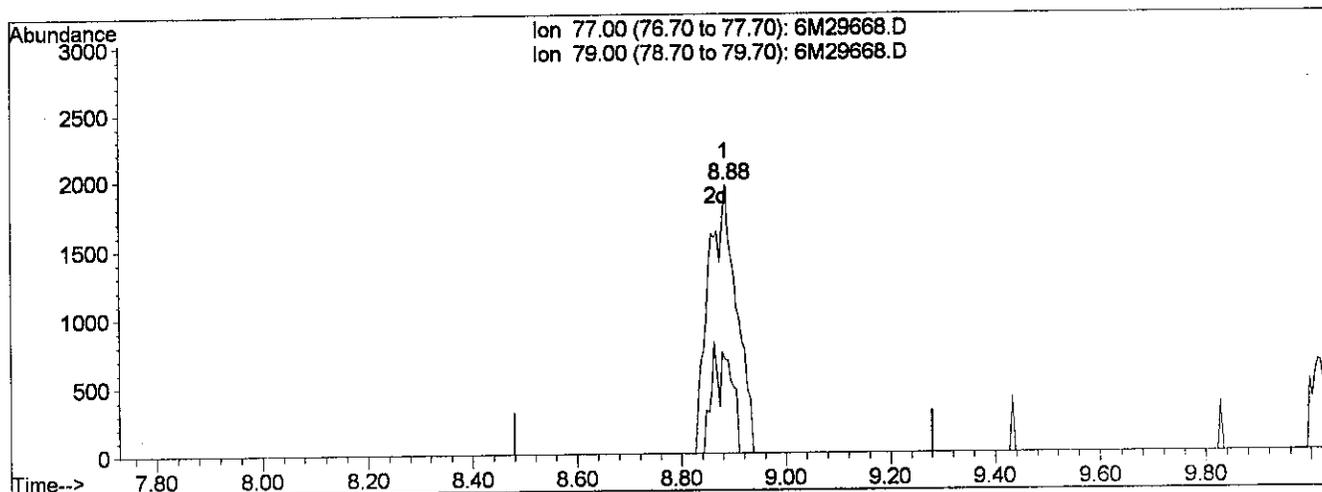
Ion	Exp%	Act%
77.00	100	100
79.00	32.50	28.64
0.00	0.00	0.00
0.00	0.00	0.00

209

Data File : C:\HPCHEM\1\DATA\032102\6M29668.D
 Acq On : 22 Mar 2002 3:48
 Sample : WG114932-08 0.4PPB STD
 Misc : 1,1 SV9206
 Mar 22 08:04:19

Vial: 12
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(24) 2,2-Dichloropropane (T)

8.88min 0.38ug/L m

response 7271

Ion	Exp%	Act%
77.00	100	100
79.00	32.50	15.60#
0.00	0.00	0.00
0.00	0.00	0.00

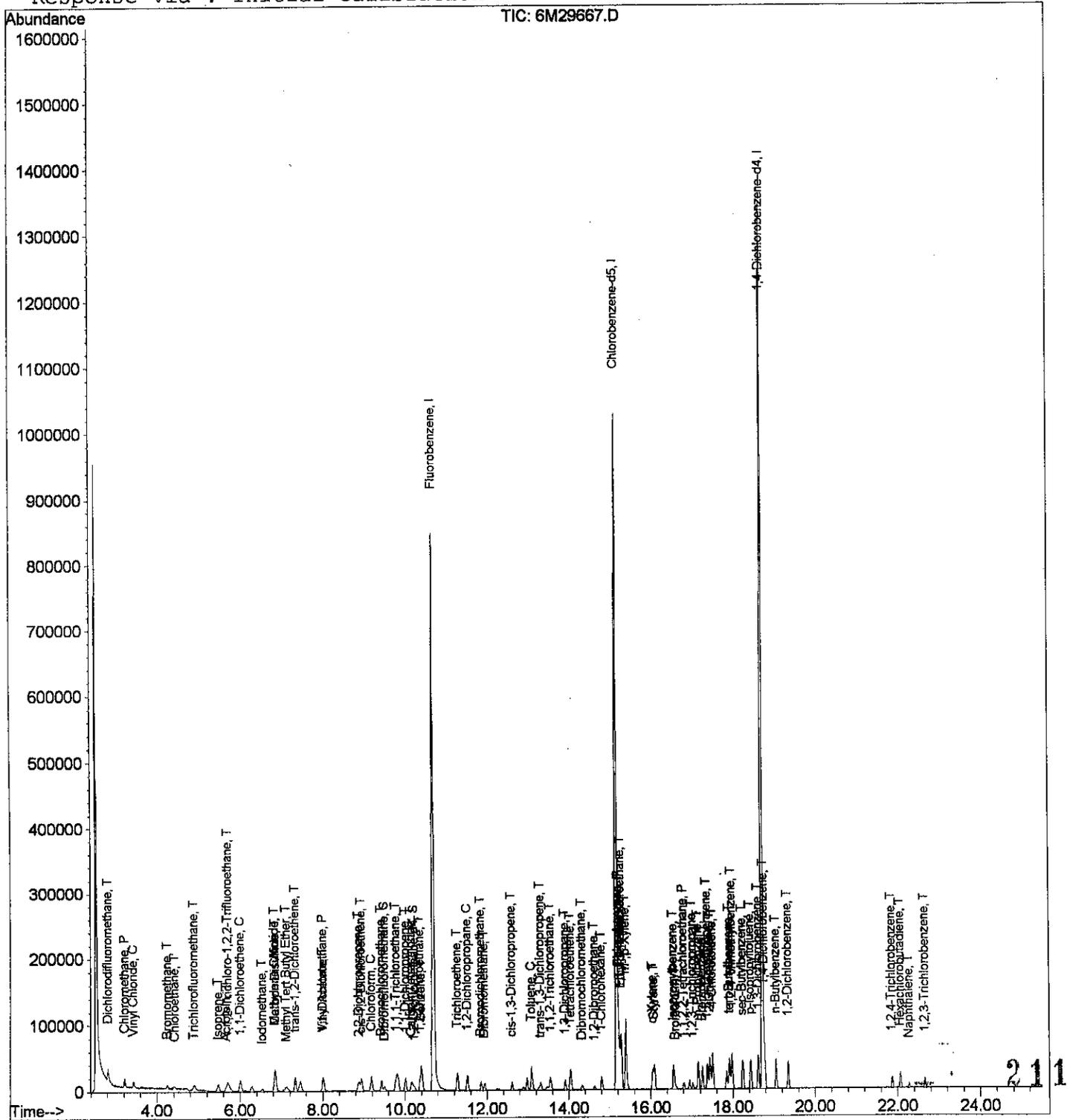
3-22-02 CMS
 ~ 3/22/02
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Data File : C:\HPCHEM\1\DATA\032102\6M29667.D
 Acq On : 22 Mar 2002 3:16
 Sample : WG114932-07 1PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:17 2002

Vial: 11
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29667.D
 Acq On : 22 Mar 2002 3:16
 Sample : WG114932-07 1PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:17 2002

Vial: 11
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	10.70	96	1218470	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	897251	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	517760	25.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
28) Dibromofluoromethane	9.51	111	7702	0.5243	ug/L	0.00
Spiked Amount	25.000	Range 86 - 118	Recovery	=	2.08%#	
33) 1,2-Dichloroethane-d4	10.23	65	8178	0.5544	ug/L	0.00
Spiked Amount	25.000	Range 80 - 120	Recovery	=	2.20%#	
45) Toluene-d8	0.00	98	0d	0.0000	ug/L	
Spiked Amount	25.000	Range 88 - 110	Recovery	=	0.00%#	
66) p-Bromofluorobenzene	0.00	95	0d	0.0000	ug/L	
Spiked Amount	25.000	Range 86 - 115	Recovery	=	0.00%#	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.82	85	22705	1.0839	ug/L	99
3) Chloromethane	3.22	50	15777	1.1524	ug/L	97
4) Vinyl Chloride	3.43	62	12744	1.3109	ug/L	99
5) Bromomethane	4.25	94	5588	0.9455	ug/L	91
6) Chloroethane	4.42	64	6362	1.0639	ug/L #	89
7) Trichlorofluoromethane	4.89	101	15742	1.0897	ug/L #	94
8) Isoprene	5.48	67	8055	0.7408	ug/L	93
9) Acrolein	5.66	56	1096	1.4694	ug/L #	80
10) 1,1,2-Trichloro-1,2,2-Trif	5.70	101	18369	1.0857	ug/L #	67
12) 1,1-Dichloroethene	6.01	96	11892	0.9401	ug/L	92
14) Iodomethane	6.53	142	6744	0.7589	ug/L	93
15) Methylene Chloride	6.83	84	15601	1.0593	ug/L	96
16) Carbon Disulfide	6.85	76	38427	0.9215	ug/L	98
18) Methyl Tert Butyl Ether	7.12	73	13062	0.6936	ug/L #	74
19) trans-1,2-Dichloroethene	7.33	96	13248	0.9040	ug/L	97
21) Vinyl Acetate	8.00	43	11052	0.6937	ug/L #	76
22) 1,1-Dichloroethane	8.00	63	29905	1.0208	ug/L	93
24) 2,2-Dichloropropane	8.87	77	16390	0.8271	ug/L #	73
25) cis-1,2-Dichloroethene	8.94	96	11410	0.8061	ug/L	92
26) Chloroform	9.18	83	27533	0.9671	ug/L	99
27) Bromochloromethane	9.44	130	7815	0.9636	ug/L #	80
29) 1,1,1-Trichloroethane	9.78	97	23210	0.9459	ug/L	90
31) 1,1-Dichloropropene	10.02	75	14633	0.7509	ug/L	90
32) Carbon Tetrachloride	10.16	117	17661	0.8586	ug/L #	95
34) 1,2-Dichloroethane	10.36	62	18962	1.0295	ug/L #	95
35) Benzene	10.40	78	48855	0.9087	ug/L	100
36) Trichloroethene	11.28	130	14373	0.9459	ug/L	94

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(#) = qualifier out of range (m) = manual integration
 6M29667.D 8260BWT.M Fri Mar 22 08:17:52 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29667.D
 Acq On : 22 Mar 2002 3:16
 Sample : WG114932-07 1PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:17 2002

Vial: 11
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) 1,2-Dichloropropane	11.52	63	11985	0.8960	ug/L	90
38) Bromodichloromethane	11.85	83	13391	0.8549	ug/L	99
39) Dibromomethane	11.93	93	5381	0.8855	ug/L	94
42) cis-1,3-Dichloropropene	12.61	75	9630	0.6301	ug/L	92
46) Toluene	13.09	91	42810	0.8232	ug/L	92
48) trans-1,3-Dichloropropene	13.31	75	8982	0.6833	ug/L #	88
49) 1,1,2-Trichloroethane	13.56	97	7871	0.9483	ug/L	95
51) 1,3-Dichloropropane	13.91	76	11926	0.8771	ug/L #	81
52) Tetrachloroethene	14.05	164	11303	0.9208	ug/L #	86
53) Dibromochloromethane	14.33	129	6878	0.7150	ug/L	97
54) 1,2-Dibromoethane	14.63	107	6152	0.8327	ug/L	100
55) 1-Chlorohexane	14.79	91	7990	0.5430	ug/L #	79
56) Chlorobenzene	15.23	112	45277	1.0499	ug/L #	81
57) 1,1,1,2-Tetrachloroethane	15.27	131	11211	0.8584	ug/L #	46
58) Ethylbenzene	15.29	106	18559	0.9117	ug/L	86
59) m-,p-Xylene	15.40	106	47655	1.8128	ug/L	83
60) o-Xylene	16.04	106	13629	0.6028	ug/L	90
61) Styrene	16.09	104	25524	0.6207	ug/L	97
62) Bromoform	16.61	173	3088	0.5896	ug/L #	83
63) Isopropylbenzene	16.55	105	37588	0.6111	ug/L	94
65) 1,1,2,2-Tetrachloroethane	16.81	83	7621	0.9378	ug/L	99
67) 1,2,3-Trichloropropane	17.03	110	2240	0.8405	ug/L	92
69) n-Propylbenzene	17.16	91	50270	0.6706	ug/L #	92
70) Bromobenzene	17.26	156	14448	0.9080	ug/L	97
71) 1,3,5-Trimethylbenzene	17.38	105	35435	0.6549	ug/L	94
72) 2-Chlorotoluene	17.45	91	46409	0.9313	ug/L	94
73) 4-Chlorotoluene	17.51	91	47688	0.9200	ug/L	98
75) tert-Butylbenzene	17.92	119	38347	0.7520	ug/L	96
76) 1,2,4-Trimethylbenzene	17.99	105	48362	0.7974	ug/L	98
77) sec-Butylbenzene	18.24	105	47742	0.7194	ug/L	93
78) p-Isopropyltoluene	18.44	119	38521	0.6462	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	31836	0.9402	ug/L	98
80) 1,4-Dichlorobenzene	18.78	146	38505	1.0863	ug/L	96
81) n-Butylbenzene	19.06	91	37246	0.7083	ug/L	92
82) 1,2-Dichlorobenzene	19.35	146	26516	0.9280	ug/L	99
84) 1,2,4-Trichlorobenzene	21.87	180	9776	0.6733	ug/L	94
85) Hexachlorobutadiene	22.07	225	8672	0.9485	ug/L #	43
86) Naphthalene	22.28	128	8846	0.4561	ug/L	100
87) 1,2,3-Trichlorobenzene	22.65	180	8297	0.7019	ug/L	96

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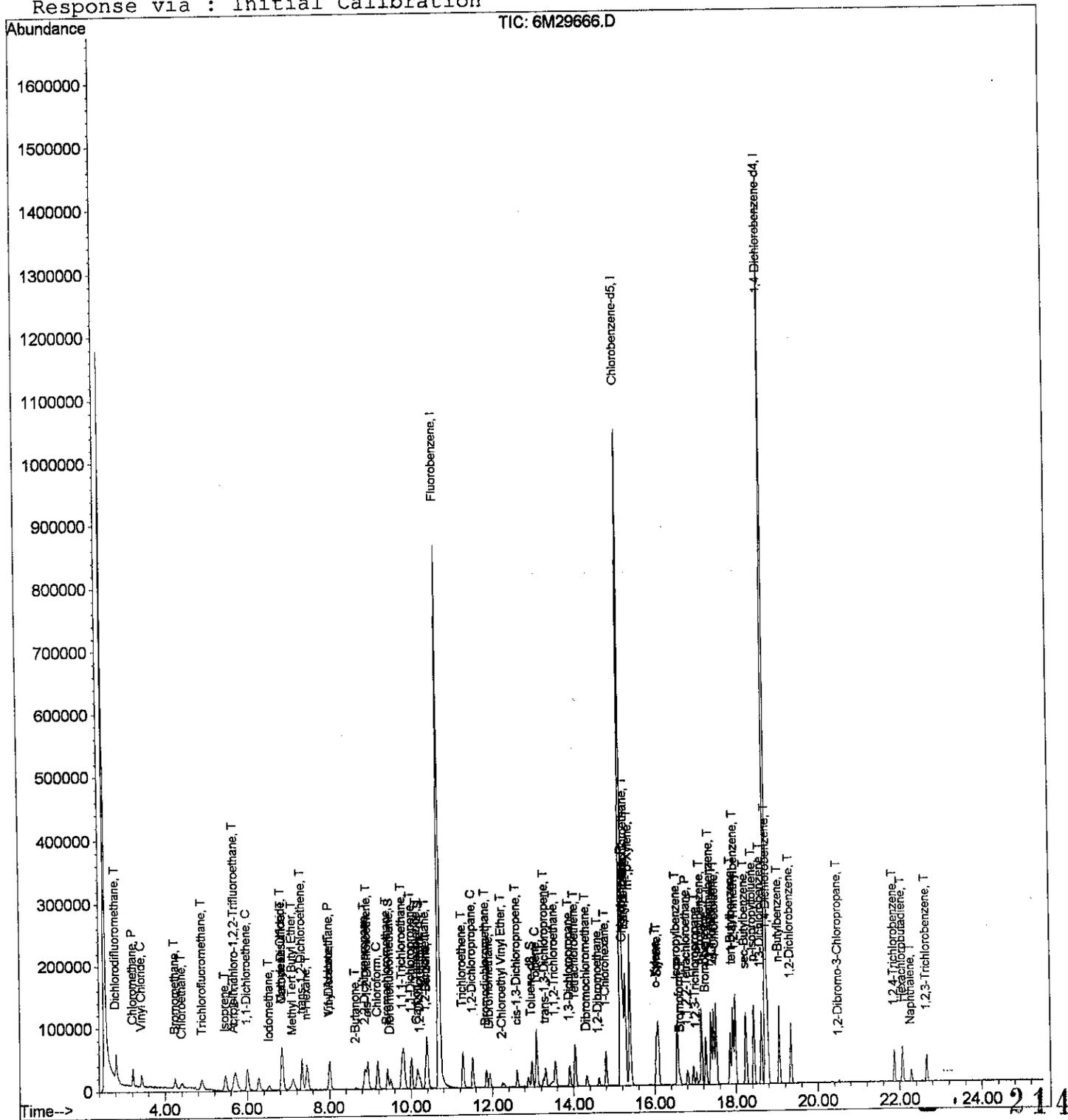
(#) = qualifier out of range (m) = manual integration
 6M29667.D 8260BWT.M Fri Mar 22 08:17:53 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29666.D
 Acq On : 22 Mar 2002 2:44
 Sample : WG114932-06 2PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:20 2002

Vial: 10
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29666.D
 Acq On : 22 Mar 2002 2:44
 Sample : WG114932-06 2PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:20 2002

Vial: 10
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.69	96	1259853	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.18	117	937608	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	536514	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	15001	0.9876	ug/L	0.00
Spiked Amount	25.000	Range 86 - 118	Recovery	=	3.96%#	
33) 1,2-Dichloroethane-d4	10.22	65	15877	1.0409	ug/L	0.00
Spiked Amount	25.000	Range 80 - 120	Recovery	=	4.16%#	
45) Toluene-d8	12.98	98	43607	0.8663	ug/L	0.00
Spiked Amount	25.000	Range 88 - 110	Recovery	=	3.48%#	
66) p-Bromofluorobenzene	0.00	95	0d	0.0000	ug/L	
Spiked Amount	25.000	Range 86 - 115	Recovery	=	0.00%#	

Target Compounds

					Qvalue
2) Dichlorodifluoromethane	2.82	85	48508	2.2396	ug/L 100
3) Chloromethane	3.22	50	31642	2.2354	ug/L 99
4) Vinyl Chloride	3.42	62	25798	2.5666	ug/L 98
5) Bromomethane	4.24	94	12921	2.1144	ug/L 99
6) Chloroethane	4.41	64	13928	2.2527	ug/L 100
7) Trichlorofluoromethane	4.90	101	31379	2.1008	ug/L 99
8) Isoprene	5.47	67	20261	1.8021	ug/L 97
9) Acrolein	5.66	56	2554	3.3117	ug/L # 77
10) 1,1,2-Trichloro-1,2,2-Trif	5.69	101	35383	2.0227	ug/L 99
12) 1,1-Dichloroethene	6.00	96	24539	1.8762	ug/L 86
14) Iodomethane	6.53	142	15451	1.6815	ug/L # 65
15) Methylene Chloride	6.83	84	32798	2.1537	ug/L 96
16) Carbon Disulfide	6.85	76	85158	1.9750	ug/L 99
18) Methyl Tert Butyl Ether	7.11	73	32778	1.6833	ug/L 97
19) trans-1,2-Dichloroethene	7.33	96	28021	1.8492	ug/L 89
20) n-Hexane	7.45	57	31109	1.5571	ug/L 95
21) Vinyl Acetate	8.00	43	27083	1.6440	ug/L # 93
22) 1,1-Dichloroethane	8.00	63	61217	2.0209	ug/L 95
23) 2-Butanone	8.66	43	3961	1.8033	ug/L # 55
24) 2,2-Dichloropropane	8.88	77	36268	1.7701	ug/L 98
25) cis-1,2-Dichloroethene	8.94	96	27301	1.8653	ug/L 94
26) Chloroform	9.18	83	59225	2.0120	ug/L 99
27) Bromochloromethane	9.42	130	16779	2.0010	ug/L 90
29) 1,1,1-Trichloroethane	9.79	97	48027	1.8930	ug/L 88
31) 1,1-Dichloropropene	10.01	75	36509	1.8119	ug/L 98
32) Carbon Tetrachloride	10.16	117	37465	1.7615	ug/L 99
34) 1,2-Dichloroethane	10.37	62	38659	2.0300	ug/L # 83

(#) = qualifier out of range (m) = manual integration
 6M29666.D 8260BWT.M Fri Mar 22 08:20:08 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29666.D

Vial: 10

Acq On : 22 Mar 2002 2:44

Operator: CMS

Sample : WG114932-06 2PPB STD

Inst : HPMS6

Misc : 1,1 SV9206

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Mar 22 8:20 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35) Benzene	10.40	78	109417	1.9684	ug/L	100
36) Trichloroethene	11.28	130	30906	1.9672	ug/L	99
37) 1,2-Dichloropropane	11.52	63	26368	1.9065	ug/L	94
38) Bromodichloromethane	11.86	83	28985	1.7896	ug/L	97
39) Dibromomethane	11.94	93	11912	1.8959	ug/L	97
40) 2-Chloroethyl Vinyl Ether	12.24	63	3560	0.9833	ug/L	94
42) cis-1,3-Dichloropropene	12.61	75	23041	1.4580	ug/L	93
46) Toluene	13.09	91	101262	1.8633	ug/L	99
48) trans-1,3-Dichloropropene	13.31	75	20340	1.4807	ug/L	96
49) 1,1,2-Trichloroethane	13.55	97	17032	1.9638	ug/L	97
51) 1,3-Dichloropropane	13.91	76	25754	1.8125	ug/L	83
52) Tetrachloroethene	14.05	164	24893	1.9406	ug/L	94
53) Dibromochloromethane	14.33	129	15853	1.5771	ug/L	96
54) 1,2-Dibromoethane	14.62	107	13517	1.7508	ug/L	96
55) 1-Chlorohexane	14.81	91	21956	1.4280	ug/L #	72
56) Chlorobenzene	15.23	112	90138	2.0002	ug/L #	81
57) 1,1,1,2-Tetrachloroethane	15.28	131	25204	1.8466	ug/L #	46
58) Ethylbenzene	15.29	106	41767	1.9634	ug/L	92
59) m-,p-Xylene	15.40	106	109438	3.9839	ug/L	86
60) o-Xylene	16.05	106	35754	1.5134	ug/L	93
61) Styrene	16.09	104	70648	1.6441	ug/L	99
62) Bromoform	16.63	173	7734	1.4132	ug/L #	94
63) Isopropylbenzene	16.56	105	99058	1.5411	ug/L	97
65) 1,1,2,2-Tetrachloroethane	16.80	83	17219	2.0448	ug/L	100
67) 1,2,3-Trichloropropane	17.03	110	5155	1.8668	ug/L	90
69) n-Propylbenzene	17.16	91	137305	1.7675	ug/L	95
70) Bromobenzene	17.26	156	33218	2.0146	ug/L	100
71) 1,3,5-Trimethylbenzene	17.39	105	97869	1.7456	ug/L	95
72) 2-Chlorotoluene	17.45	91	107023m	2.0725	ug/L	
73) 4-Chlorotoluene	17.51	91	111394	2.0738	ug/L	100
75) tert-Butylbenzene	17.92	119	101293	1.9169	ug/L	99
76) 1,2,4-Trimethylbenzene	17.98	105	122541	1.9497	ug/L	97
77) sec-Butylbenzene	18.24	105	120073	1.7461	ug/L	94
78) p-Isopropyltoluene	18.44	119	106494	1.7241	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	70203	2.0008	ug/L	100
80) 1,4-Dichlorobenzene	18.77	146	79105	2.1536	ug/L	99
81) n-Butylbenzene	19.05	91	95171	1.7467	ug/L	94
82) 1,2-Dichlorobenzene	19.35	146	59877	2.0222	ug/L	98
83) 1,2-Dibromo-3-Chloropropan	20.51	157	1283	1.2373	ug/L #	77
84) 1,2,4-Trichlorobenzene	21.87	180	22890	1.5214	ug/L	99
85) Hexachlorobutadiene	22.07	225	18811	1.9856	ug/L #	316

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\032102\6M29666.D
Acq On : 22 Mar 2002 2:44
Sample : WG114932-06 2PPB STD
Misc : 1,1 SV9206
MS Integration Params: rteint.p
Quant Time: Mar 22 8:20 2002

Vial: 10
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration
DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
86) Naphthalene	22.28	128	21658	1.0778	ug/L #	88
87) 1,2,3-Trichlorobenzene	22.66	180	19968	1.6303	ug/L	97

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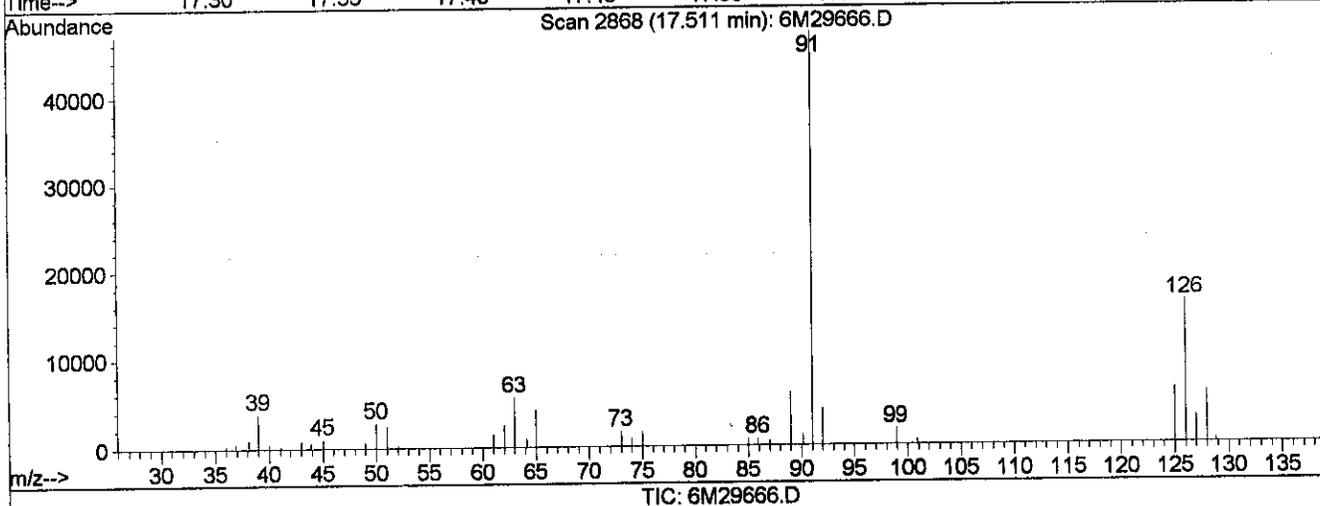
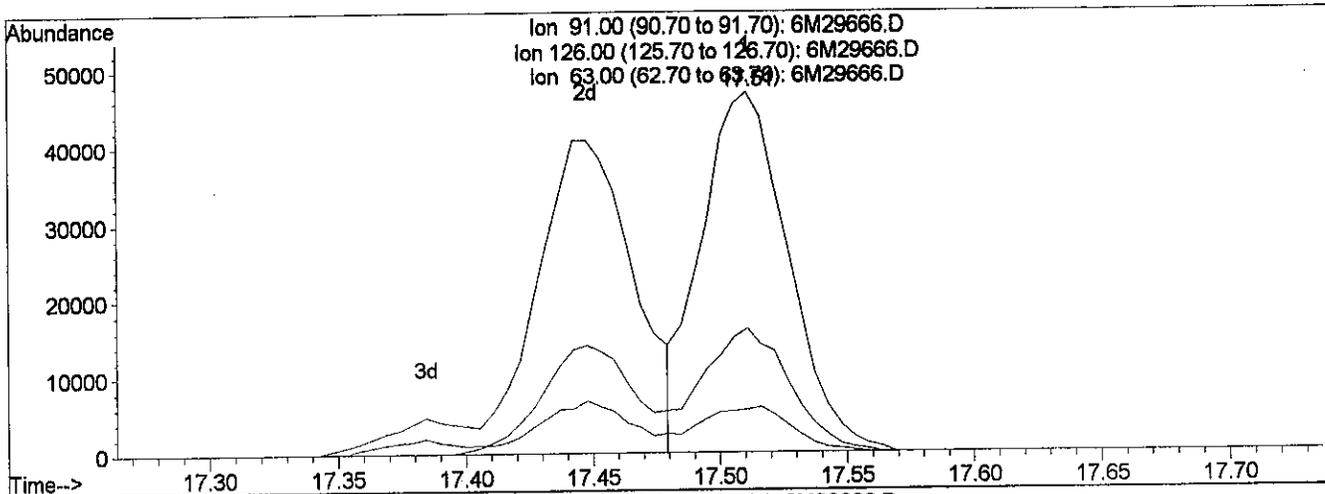
(#) = qualifier out of range (m) = manual integration
6M29666.D 8260BWT.M Fri Mar 22 08:20:10 2002

Page 3

Data File : C:\HPCHEM\1\DATA\032102\6M29666.D
 Acq On : 22 Mar 2002 2:44
 Sample : WG114932-06 2PPB STD
 Misc : 1,1 SV9206
 MetaTime: Mar 22 08:18:34 2002

Vial: 10
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(72) 2-Chlorotoluene (T)

17.51min 2.16ug/L

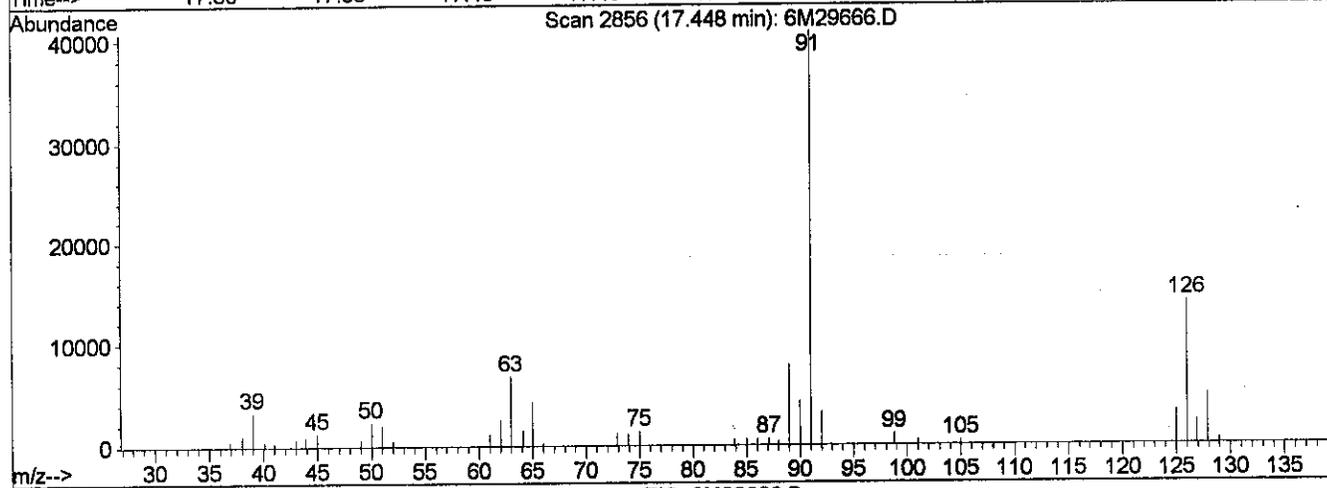
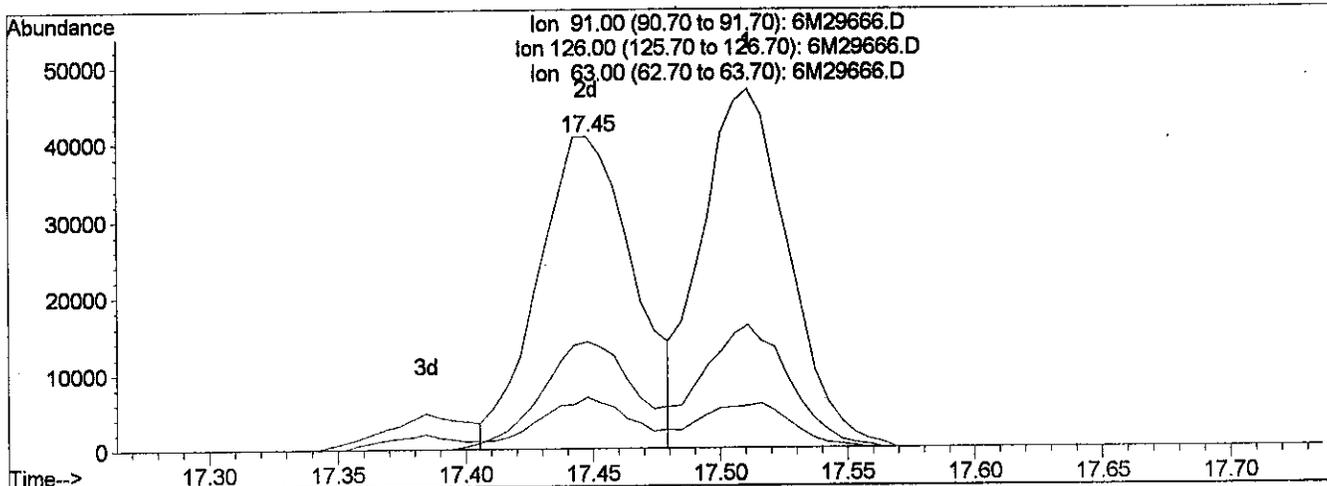
response 111394

Ion	Exp%	Act%
91.00	100	100
126.00	35.30	35.71
63.00	14.10	12.52
0.00	0.00	0.00

Data File : C:\HPCHEM\1\DATA\032102\6M29666.D
 Acq On : 22 Mar 2002 2:44
 Sample : WG114932-06 2PPB STD
 Misc : 1,1 SV9206
 Name: 032102\6M29666.D

Vial: 10
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(72) 2-Chlorotoluene (T)

17.45min 2.07ug/L m

response 107023

Ion	Exp%	Act%
91.00	100	100
126.00	35.30	37.17
63.00	14.10	13.04
0.00	0.00	0.00

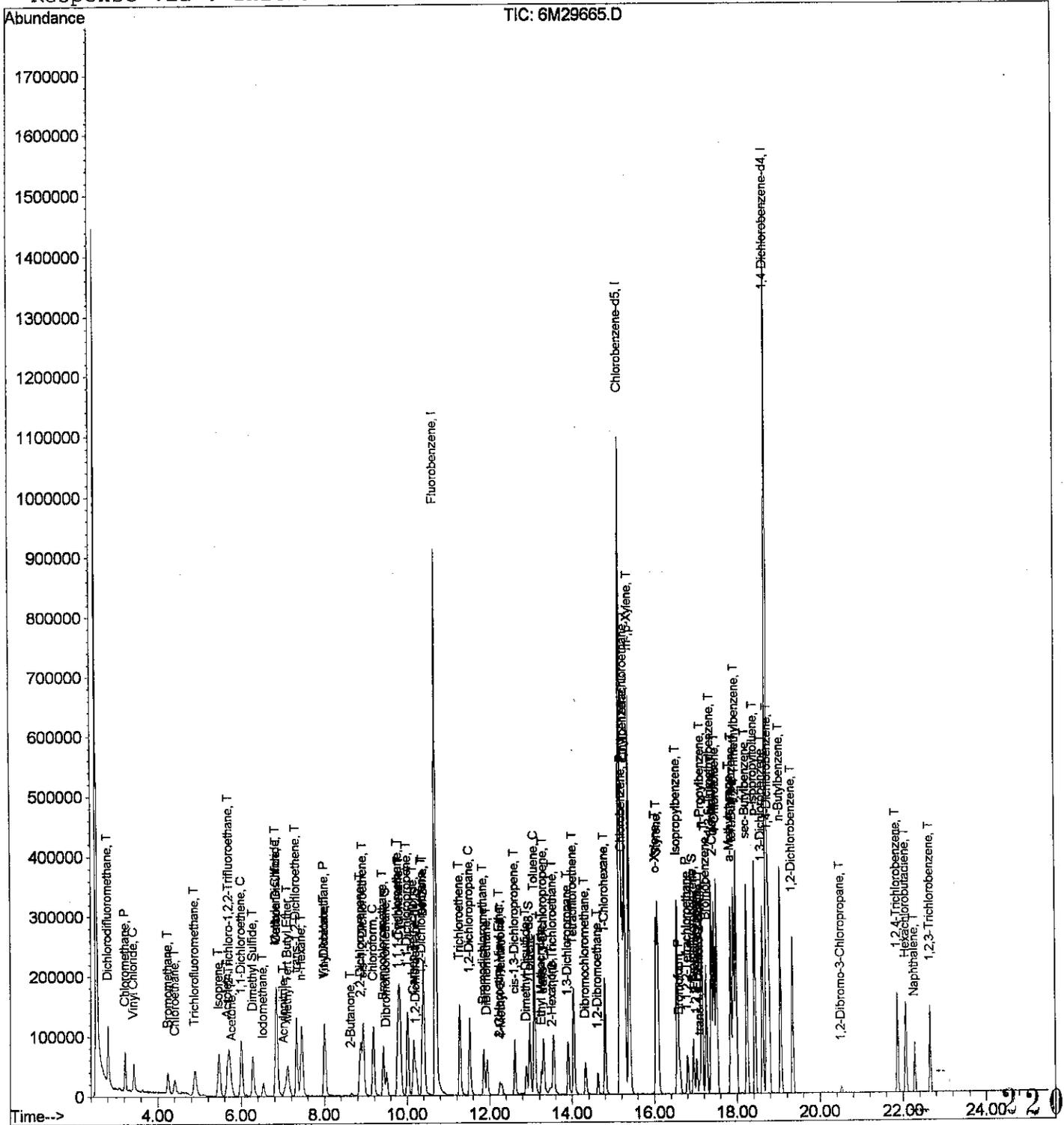
3-22-02 cms
 3/22/02
 #1

Data File : C:\HPCHEM\1\DATA\032102\6M29665.D
 Acq On : 22 Mar 2002 2:12
 Sample : WG114932-05 5PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:21 2002

Vial: 9
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29665.D
 Acq On : 22 Mar 2002 2:12
 Sample : WG114932-05 5PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:21 2002

Vial: 9
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1308357	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	962392	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	571931	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	38746	2.4563	ug/L	0.00
Spiked Amount	25.000	Range	86 - 118	Recovery	=	9.84%#
33) 1,2-Dichloroethane-d4	10.23	65	40162	2.5355	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	10.16%#
45) Toluene-d8	12.97	98	124685	2.4131	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	9.64%#
66) p-Bromofluorobenzene	16.94	95	46056	2.1701	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	8.68%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.81	85	123090	5.4723	ug/L	97
3) Chloromethane	3.22	50	79465	5.4058	ug/L	99
4) Vinyl Chloride	3.42	62	60147	5.7621	ug/L	99
5) Bromomethane	4.24	94	34632	5.4571	ug/L	97
6) Chloroethane	4.41	64	34184	5.3239	ug/L	99
7) Trichlorofluoromethane	4.88	101	82497m	5.3183	ug/L	
8) Isoprene	5.48	67	56691	4.8553	ug/L	98
9) Acrolein	5.67	56	8291	10.3521	ug/L	95
10) 1,1,2-Trichloro-1,2,2-Trif	5.71	101	96664	5.3209	ug/L	97
11) Acetone	5.79	43	14134	6.7110	ug/L	# 81
12) 1,1-Dichloroethene	6.00	96	68872	5.0707	ug/L	95
13) Dimethyl Sulfide	6.29	62	59160	4.6415	ug/L	# 1
14) Iodomethane	6.52	142	43994	4.6104	ug/L	98
15) Methylene Chloride	6.84	84	80784	5.1081	ug/L	94
16) Carbon Disulfide	6.86	76	232748	5.1978	ug/L	99
17) Acrylonitrile	7.03	53	11072	4.4135	ug/L	96
18) Methyl Tert Butyl Ether	7.12	73	98310	4.8614	ug/L	# 76
19) trans-1,2-Dichloroethene	7.33	96	80278	5.1014	ug/L	97
20) n-Hexane	7.45	57	101284	4.8818	ug/L	97
21) Vinyl Acetate	8.00	43	76990	4.5002	ug/L	98
22) 1,1-Dichloroethane	8.01	63	156259	4.9672	ug/L	98
23) 2-Butanone	8.65	43	11525	5.0525	ug/L	92
24) 2,2-Dichloropropane	8.88	77	102126	4.7997	ug/L	99
25) cis-1,2-Dichloroethene	8.94	96	76661	5.0437	ug/L	98
26) Chloroform	9.19	83	151361	4.9514	ug/L	99
27) Bromochloromethane	9.43	130	42446	4.8743	ug/L	# 81
29) 1,1,1-Trichloroethane	9.78	97	129760	4.9249	ug/L	90

(#) = qualifier out of range (m) = manual integration

6M29665.D 8260BWT.M Fri Mar 22 08:21:33 2002

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Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29665.D

Vial: 9

Acq On : 22 Mar 2002 2:12

Operator: CMS

Sample : WG114932-05 5PPB STD

Inst : HPMS6

Misc : 1,1 SV9206

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Mar 22 8:21 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.83	56	123332	4.6454	ug/L	95
31) 1,1-Dichloropropene	10.02	75	104856	5.0110	ug/L	96
32) Carbon Tetrachloride	10.16	117	104486	4.7305	ug/L	99
34) 1,2-Dichloroethane	10.36	62	100089	5.0609	ug/L #	84
35) Benzene	10.41	78	296512	5.1365	ug/L	99
36) Trichloroethene	11.28	130	78691	4.8230	ug/L	95
37) 1,2-Dichloropropene	11.52	63	70691	4.9217	ug/L	97
38) Bromodichloromethane	11.86	83	78809	4.6856	ug/L	98
39) Dibromomethane	11.93	93	32888	5.0405	ug/L	99
40) 2-Chloroethyl Vinyl Ether	12.24	63	12742	3.3890	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	7386	3.7097	ug/L #	52
42) cis-1,3-Dichloropropene	12.61	75	73888	4.5022	ug/L	98
43) Dimethyl Disulfide	12.89	79	18889	2.5004	ug/L	98
46) Toluene	13.09	91	299082	5.3615	ug/L	96
47) Ethyl Methacrylate	13.26	69	32144	3.7657	ug/L	96
48) trans-1,3-Dichloropropene	13.31	75	65709	4.6603	ug/L	99
49) 1,1,2-Trichloroethane	13.55	97	45295	5.0880	ug/L	99
50) 2-Hexanone	13.52	43	53050	8.1699	ug/L #	44
51) 1,3-Dichloropropane	13.91	76	73555	5.0432	ug/L	90
52) Tetrachloroethene	14.04	164	66343	5.0387	ug/L	97
53) Dibromochloromethane	14.33	129	47933	4.6456	ug/L	97
54) 1,2-Dibromoethane	14.62	107	38319	4.8354	ug/L	97
55) 1-Chlorohexane	14.80	91	80931	5.1282	ug/L	82
56) Chlorobenzene	15.23	112	228871	4.9479	ug/L	98
57) 1,1,1,2-Tetrachloroethane	15.28	131	70495	5.0320	ug/L	99
58) Ethylbenzene	15.28	106	112441	5.1495	ug/L	89
59) m-,p-Xylene	15.39	106	301633	10.6977	ug/L	87
60) o-Xylene	16.05	106	121507	5.0108	ug/L	95
61) Styrene	16.09	104	225434	5.1112	ug/L	100
62) Bromoform	16.62	173	24096	4.2895	ug/L	100
63) Isopropylbenzene	16.56	105	330114	5.0034	ug/L	95
65) 1,1,2,2-Tetrachloroethane	16.80	83	45315	5.0479	ug/L	98
67) 1,2,3-Trichloropropane	17.03	110	15388	5.2273	ug/L	97
68) trans-1,4-Dichloro-2-Buten	17.10	53	9031	4.1227	ug/L #	53
69) n-Propylbenzene	17.15	91	437780	5.2865	ug/L	95
70) Bromobenzene	17.26	156	90966	5.1752	ug/L	98
71) 1,3,5-Trimethylbenzene	17.38	105	311843	5.2177	ug/L	96
72) 2-Chlorotoluene	17.44	91	287203	5.2172	ug/L	97
73) 4-Chlorotoluene	17.51	91	316279	5.5235	ug/L	98
74) a-Methylstyrene	17.85	118	137495	4.2289	ug/L	100
75) tert-Butylbenzene	17.92	119	292350	5.1900	ug/L	99

(#) = qualifier out of range (m) = manual integration

6M29665.D 8260BWT.M

Fri Mar 22 08:21:34 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29665.D
 Acq On : 22 Mar 2002 2:12
 Sample : WG114932-05 5PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:21 2002

Vial: 9
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

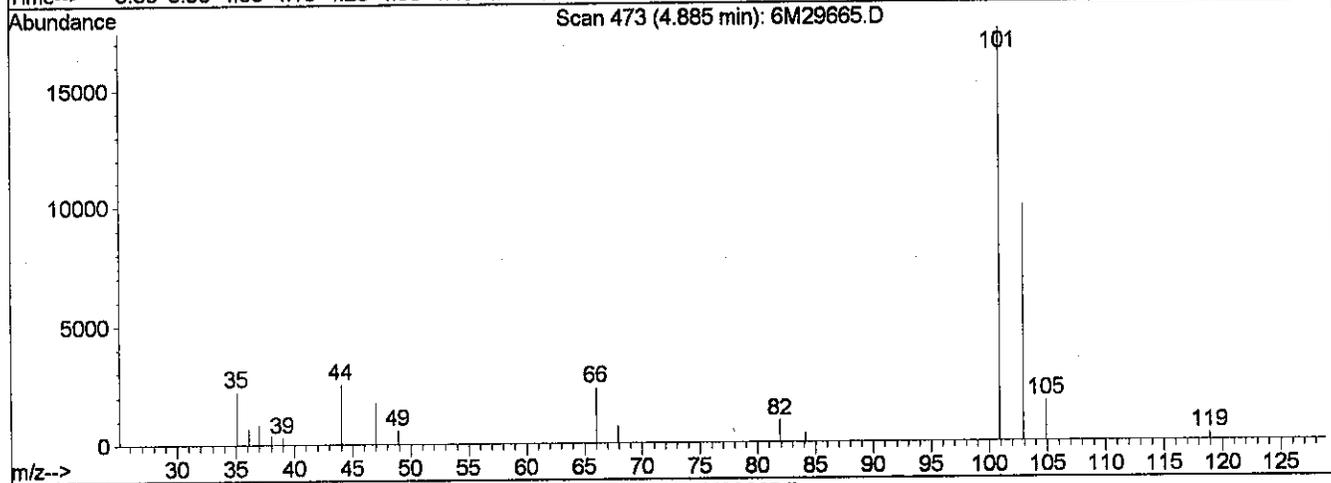
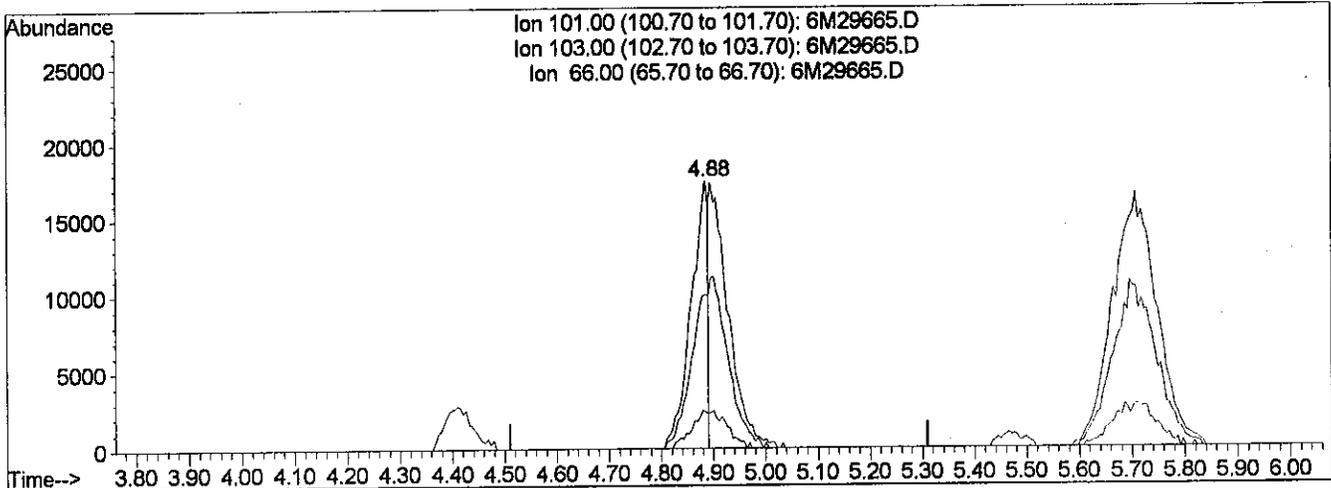
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	355321	5.3034	ug/L	96
77) sec-Butylbenzene	18.24	105	375687	5.1251	ug/L	96
78) p-Isopropyltoluene	18.44	119	338256	5.1373	ug/L	96
79) 1,3-Dichlorobenzene	18.62	146	191555	5.1213	ug/L	100
80) 1,4-Dichlorobenzene	18.77	146	203776	5.2042	ug/L	95
81) n-Butylbenzene	19.05	91	302267	5.2041	ug/L	95
82) 1,2-Dichlorobenzene	19.34	146	161726	5.1238	ug/L	100
83) 1,2-Dibromo-3-Chloropropan	20.52	157	4394	3.9752	ug/L #	77
84) 1,2,4-Trichlorobenzene	21.87	180	72153	4.4986	ug/L	97
85) Hexachlorobutadiene	22.07	225	47849	4.7379	ug/L #	35
86) Naphthalene	22.28	128	88883	4.1491	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	64365	4.9297	ug/L	98

(#) = qualifier out of range (m) = manual integration
 6M29665.D 8260BWT.M Fri Mar 22 08:21:34 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29665.D
 Acq On : 22 Mar 2002 2:12
 Sample : WG114932-05 5PPB STD
 Misc : 1,1 SV9206
 Sample Name: Mar 22 08:21:09

Vial: 9
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(7) Trichlorofluoromethane (T)

4.88min 2.52ug/L

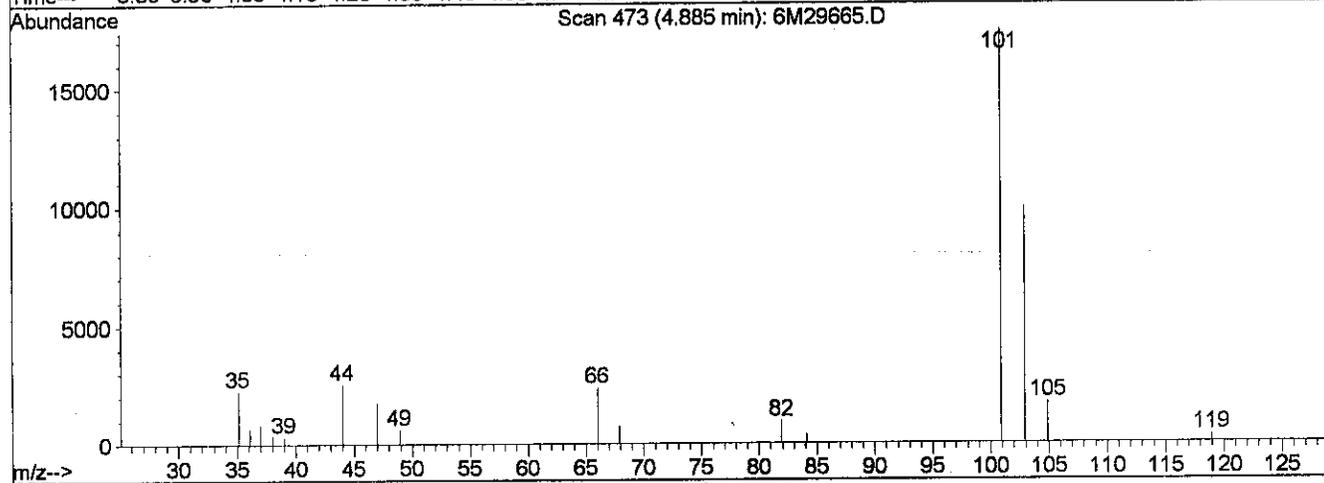
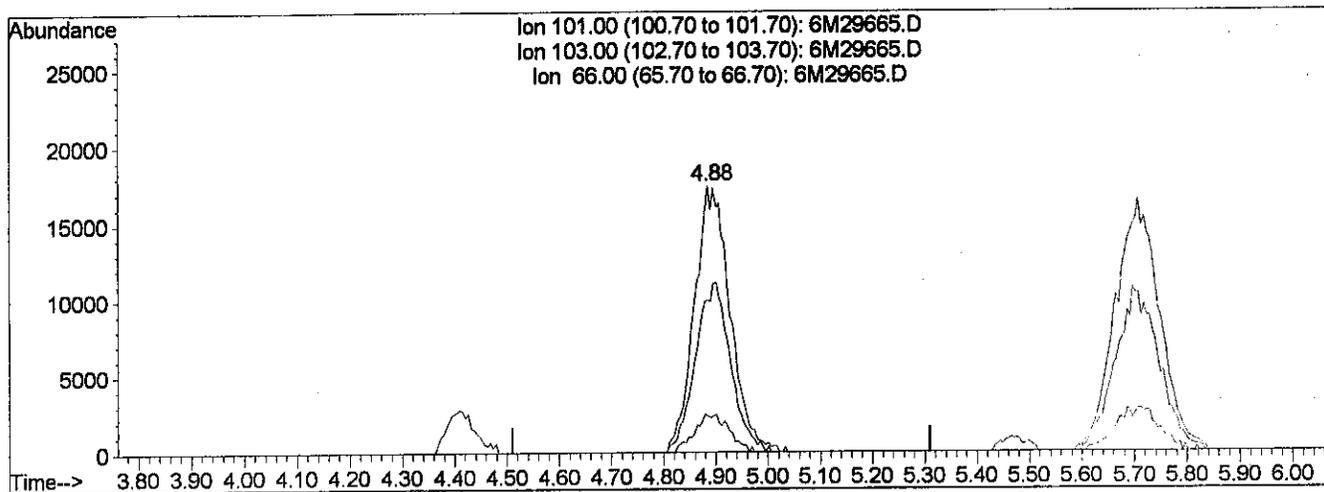
response 39164

Ion	Exp%	Act%
101.00	100	100
103.00	65.40	132.67#
66.00	11.60	28.82#
0.00	0.00	0.00

Data File : C:\HPCHEM\1\DATA\032102\6M29665.D
 Acq On : 22 Mar 2002 2:12
 Sample : WG114932-05 5PPB STD
 Misc : 1,1 SV9206
 Mar 22 08:21:16 .p

Vial: 9
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration



(7) Trichlorofluoromethane (T)

4.88min 5.32ug/L m

response 82497

Ion	Exp%	Act%
101.00	100	100
103.00	65.40	62.98
66.00	11.60	13.68
0.00	0.00	0.00

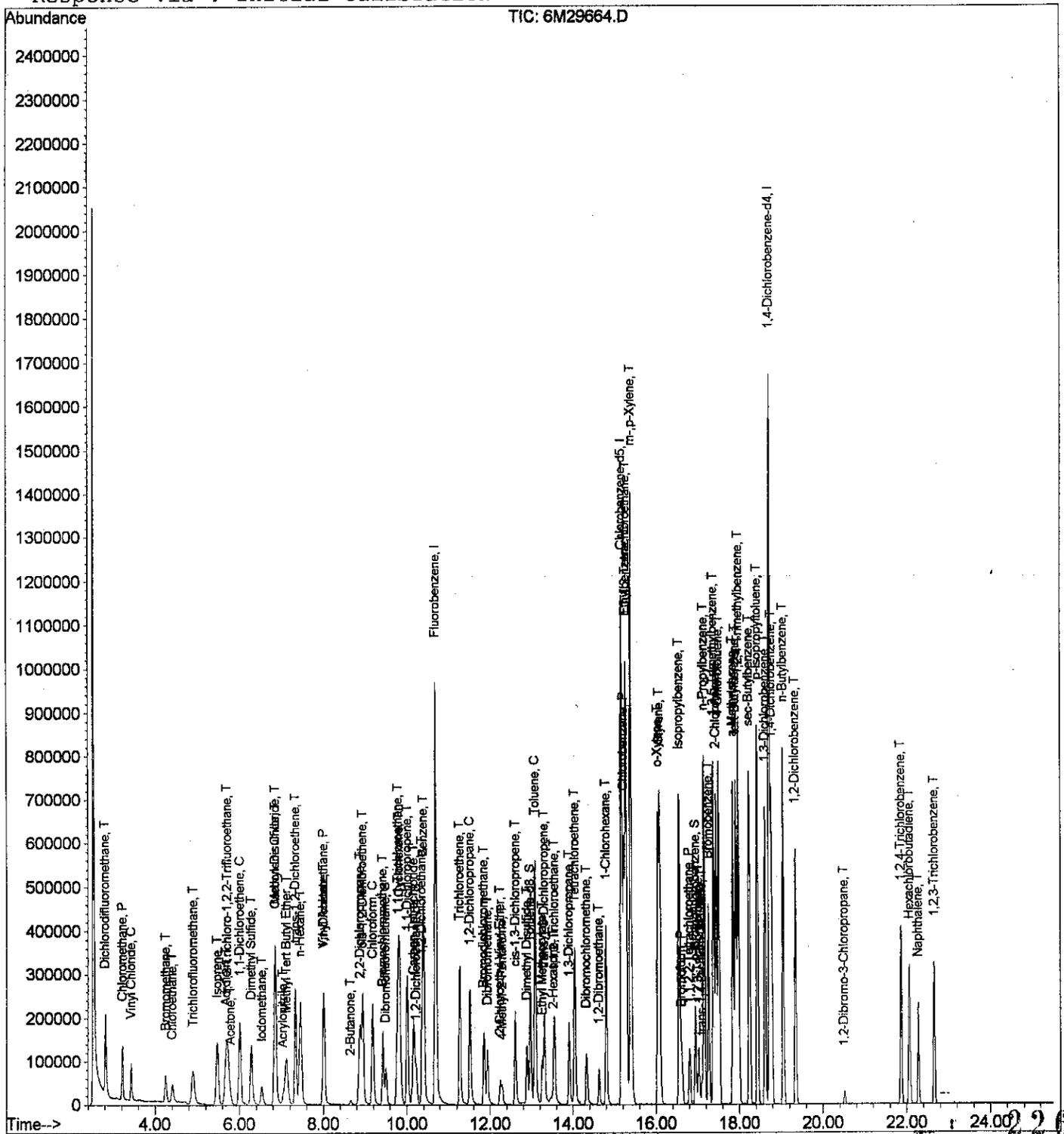
3-22-02 CMS
 CMS 3/22/02
 #2

Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1420970	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	1014424	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	645247	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	84784	4.9489	ug/L	0.00
Spiked Amount	25.000	Range 86 - 118	Recovery	=	19.80%#	
33) 1,2-Dichloroethane-d4	10.23	65	85603	4.9759	ug/L	0.00
Spiked Amount	25.000	Range 80 - 120	Recovery	=	19.92%#	
45) Toluene-d8	12.98	98	282141	5.1804	ug/L	0.00
Spiked Amount	25.000	Range 88 - 110	Recovery	=	20.72%#	
66) p-Bromofluorobenzene	16.95	95	111591	4.6606	ug/L	0.00
Spiked Amount	25.000	Range 86 - 115	Recovery	=	18.64%#	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.81	85	237473	9.7208	ug/L	97
3) Chloromethane	3.22	50	153126	9.5913	ug/L	99
4) Vinyl Chloride	3.42	62	107872	9.5151	ug/L	98
5) Bromomethane	4.24	94	64423	9.3469	ug/L	100
6) Chloroethane	4.40	64	64536	9.2544	ug/L	97
7) Trichlorofluoromethane	4.90	101	155033	9.2024	ug/L #	97
8) Isoprene	5.47	67	121415	9.5746	ug/L	100
9) Acrolein	5.67	56	18147	20.8626	ug/L	89
10) 1,1,2-Trichloro-1,2,2-Trif	5.71	101	186906	9.4730	ug/L	98
11) Acetone	5.79	43	25195	11.0149	ug/L	97
12) 1,1-Dichloroethene	6.00	96	139344	9.4462	ug/L	92
13) Dimethyl Sulfide	6.28	62	127288	9.1951	ug/L #	1
14) Iodomethane	6.53	142	90725	8.7541	ug/L	98
15) Methylene Chloride	6.84	84	160990	9.3730	ug/L	94
16) Carbon Disulfide	6.86	76	474496	9.7568	ug/L	99
17) Acrylonitrile	7.03	53	22304	8.1862	ug/L	93
18) Methyl Tert Butyl Ether	7.11	73	219341	9.9867	ug/L	98
19) trans-1,2-Dichloroethene	7.33	96	163029	9.5390	ug/L	96
20) n-Hexane	7.45	57	218161	9.6818	ug/L	100
21) Vinyl Acetate	8.00	43	205088	11.0377	ug/L	98
22) 1,1-Dichloroethane	8.01	63	320847	9.3909	ug/L	96
23) 2-Butanone	8.66	43	23391	9.4419	ug/L #	82
24) 2,2-Dichloropropane	8.88	77	219701	9.5072	ug/L	99
25) cis-1,2-Dichloroethene	8.95	96	165398	10.0194	ug/L	97
26) Chloroform	9.18	83	308581	9.2944	ug/L	99
27) Bromochloromethane	9.43	130	90593	9.5788	ug/L	87
29) 1,1,1-Trichloroethane	9.79	97	269314	9.4114	ug/L	91

(#) = qualifier out of range (m) = manual integration
 6M29664.D 8260BWT.M Fri Mar 22 08:23:28 2002

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Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.83	56	270086	9.3668	ug/L	97
31) 1,1-Dichloropropene	10.01	75	221756	9.7577	ug/L	98
32) Carbon Tetrachloride	10.16	117	223463	9.3152	ug/L	99
34) 1,2-Dichloroethane	10.36	62	205717	9.5774	ug/L #	82
35) Benzene	10.40	78	618437	9.8641	ug/L	100
36) Trichloroethene	11.28	130	166865	9.4167	ug/L	95
37) 1,2-Dichloropropane	11.52	63	151324	9.7006	ug/L	97
38) Bromodichloromethane	11.85	83	168972	9.2500	ug/L	98
39) Dibromomethane	11.94	93	69089	9.7495	ug/L	99
40) 2-Chloroethyl Vinyl Ether	12.25	63	34025	8.3324	ug/L	99
41) 4-Methyl-2-Pentanone	12.29	58	18800	8.6942	ug/L	96
42) cis-1,3-Dichloropropene	12.61	75	169830	9.5281	ug/L	100
43) Dimethyl Disulfide	12.89	79	53157	6.4790	ug/L	99
46) Toluene	13.09	91	632752	10.7613	ug/L	97
47) Ethyl Methacrylate	13.25	69	80157	8.9088	ug/L	100
48) trans-1,3-Dichloropropene	13.31	75	151437	10.1896	ug/L	99
49) 1,1,2-Trichloroethane	13.56	97	93247	9.9372	ug/L	99
50) 2-Hexanone	13.52	43	86592m	12.6515	ug/L	
51) 1,3-Dichloropropane	13.91	76	158368	10.3014	ug/L	92
52) Tetrachloroethene	14.05	164	136854	9.8609	ug/L	96
53) Dibromochloromethane	14.33	129	109316	10.0513	ug/L	97
54) 1,2-Dibromoethane	14.63	107	84825	10.1549	ug/L	98
55) 1-Chlorohexane	14.80	91	184542	11.0938	ug/L	89
56) Chlorobenzene	15.23	112	467669	9.5918	ug/L	83
57) 1,1,1,2-Tetrachloroethane	15.28	131	153881	10.4208	ug/L	94
58) Ethylbenzene	15.28	106	238400	10.3581	ug/L	88
59) m-,p-Xylene	15.40	106	646361	21.7480	ug/L	85
60) o-Xylene	16.04	106	275443	10.7762	ug/L	93
61) Styrene	16.09	104	509469	10.9586	ug/L	99
62) Bromoform	16.62	173	59218	10.0011	ug/L	99
63) Isopropylbenzene	16.56	105	754166	10.8442	ug/L	97
65) 1,1,2,2-Tetrachloroethane	16.80	83	99836	9.8577	ug/L	100
67) 1,2,3-Trichloropropane	17.02	110	33543	10.0999	ug/L	97
68) trans-1,4-Dichloro-2-Buten	17.09	53	21906	8.8639	ug/L #	69
69) n-Propylbenzene	17.15	91	973851	10.4237	ug/L	96
70) Bromobenzene	17.26	156	200204	10.0958	ug/L	100
71) 1,3,5-Trimethylbenzene	17.38	105	704023	10.4411	ug/L	96
72) 2-Chlorotoluene	17.45	91	635536	10.2331	ug/L	98
73) 4-Chlorotoluene	17.51	91	675949	10.4635	ug/L	98
74) a-Methylstyrene	17.85	118	340655	9.2869	ug/L	100
75) tert-Butylbenzene	17.92	119	652656	10.2700	ug/L	98

(#) = qualifier out of range (m) = manual integration
 6M29664.D 8260BWT.M Fri Mar 22 08:23:29 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

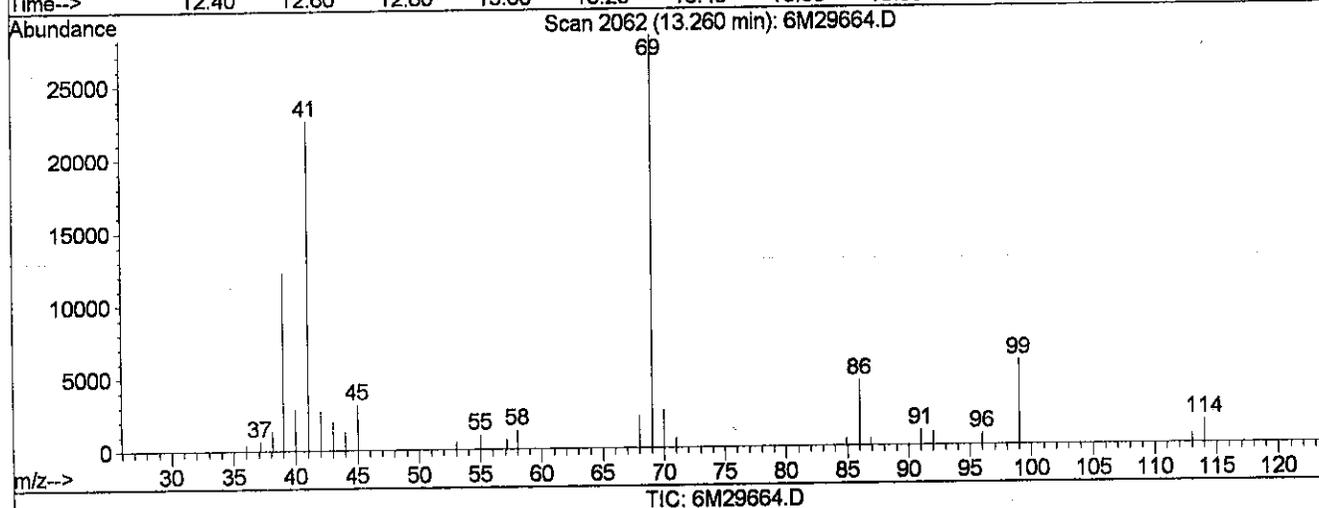
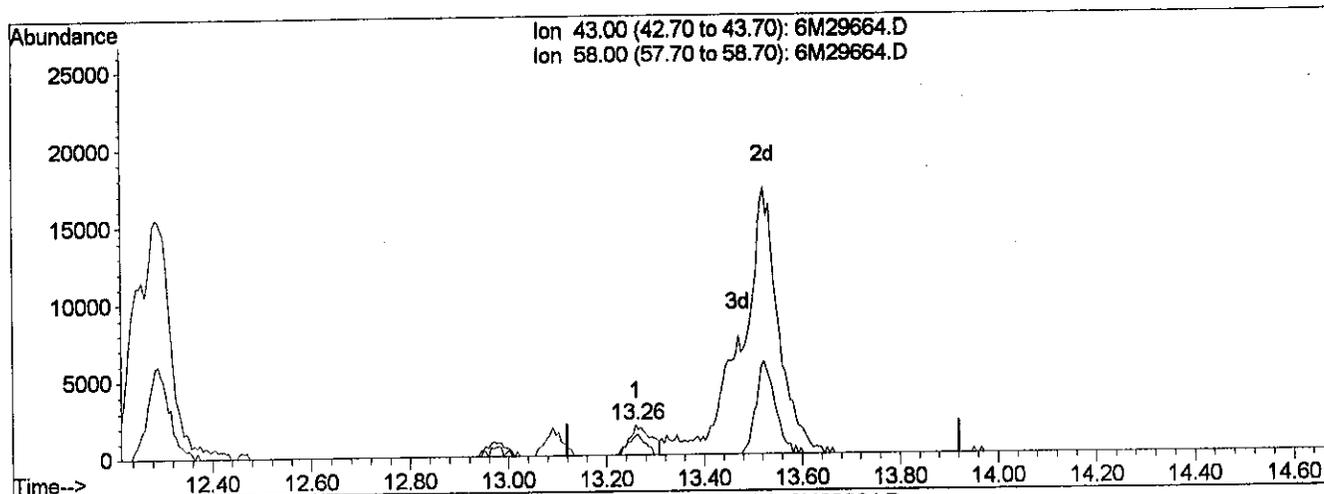
Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	791529	10.4717	ug/L	96
77) sec-Butylbenzene	18.24	105	856045	10.3511	ug/L	96
78) p-Isopropyltoluene	18.43	119	780395	10.5055	ug/L	96
79) 1,3-Dichlorobenzene	18.62	146	425429	10.0816	ug/L	98
80) 1,4-Dichlorobenzene	18.78	146	432668	9.7942	ug/L	98
81) n-Butylbenzene	19.05	91	679308	10.3666	ug/L	96
82) 1,2-Dichlorobenzene	19.34	146	354636	9.9589	ug/L	100
83) 1,2-Dibromo-3-Chloropropan	20.52	157	10391	8.3324	ug/L	87
84) 1,2,4-Trichlorobenzene	21.88	180	175172	9.6808	ug/L	98
85) Hexachlorobutadiene	22.07	225	104996	9.2151	ug/L #	39
86) Naphthalene	22.28	128	241444	9.9902	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	145558	9.8814	ug/L	98

Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 Mar 22 08:23:05 2002

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Single Level Calibration



(50) 2-Hexanone (T)

13.26min 0.88ug/L

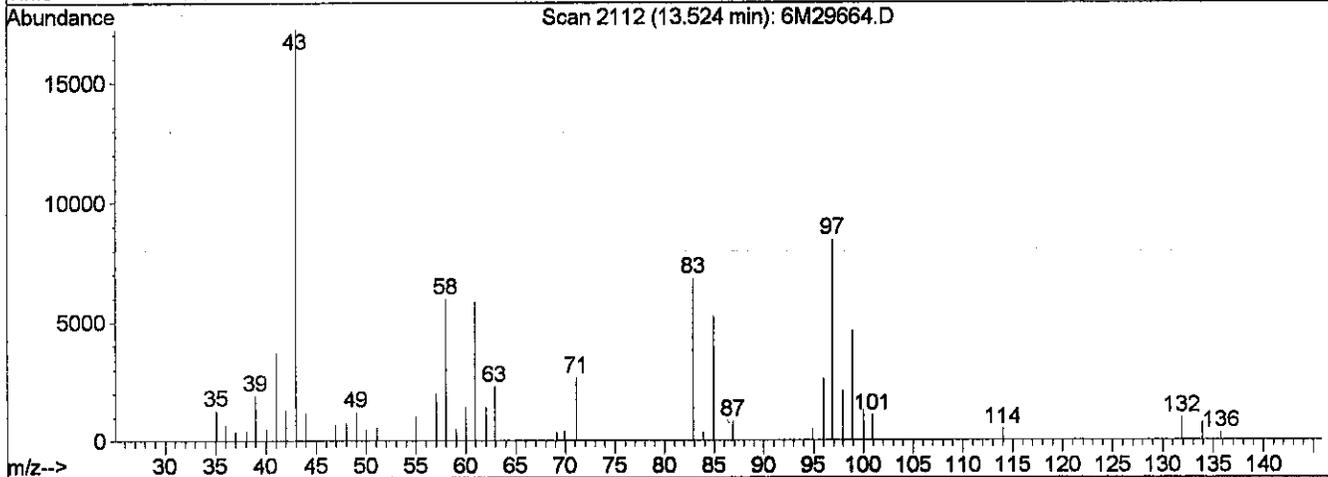
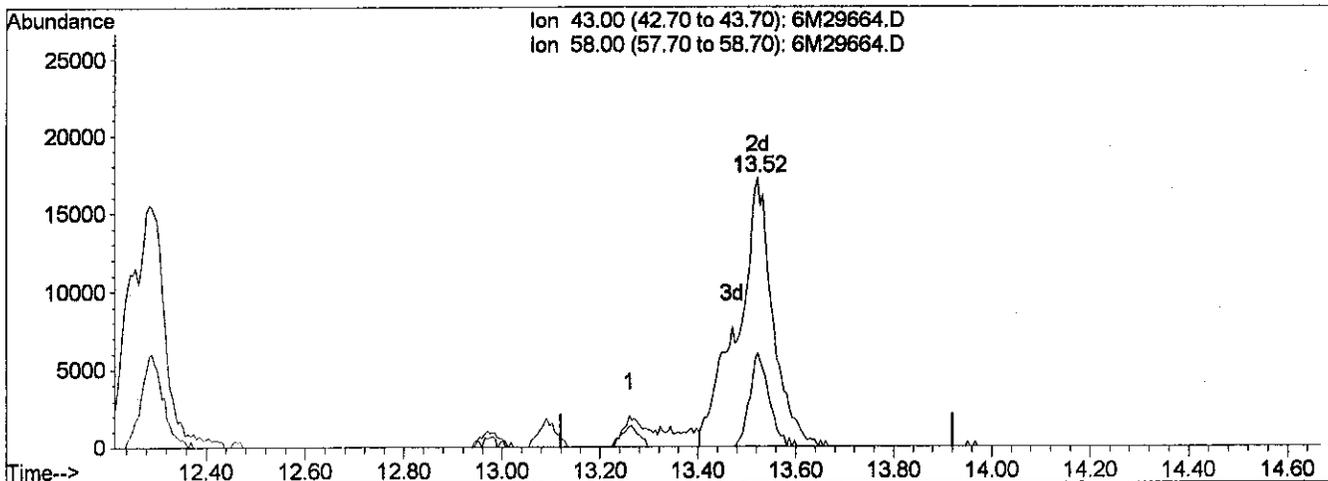
response 5998

Ion	Exp%	Act%
43.00	100	100
58.00	51.80	54.07
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\HPCHEM\1\DATA\032102\6M29664.D
 Acq On : 22 Mar 2002 1:40
 Sample : WG114932-04 10PPB STD
 Misc : 1,1 SV9206
 Mar 22 08:23:15 p

Vial: 8
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Single Level Calibration



(50) 2-Hexanone (T)

13.52min 12.65ug/L m

response 86592

Ion	Exp%	Act%
43.00	100	100
58.00	51.80	3.75#
0.00	0.00	0.00
0.00	0.00	0.00

3-22-02 cms
 ~ 3/22/02
 # 1

Data File : C:\HPCHEM\1\DATA\032102\6M29663.D

Vial: 7

Acq On : 22 Mar 2002 1:08

Operator: CMS

Sample : WG114932-03 20PPB STD

Inst : HPMS6

Misc : 1,1 SV9206

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Mar 22 8:23 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.69	96	1464466	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	1070793	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	659133	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	170338	9.6474	ug/L	-0.01
Spiked Amount	25.000	Range 86 - 118	Recovery	=	38.60%#	
33) 1,2-Dichloroethane-d4	10.23	65	168317	9.4933	ug/L	0.00
Spiked Amount	25.000	Range 80 - 120	Recovery	=	37.96%#	
45) Toluene-d8	12.98	98	582899	10.1393	ug/L	0.00
Spiked Amount	25.000	Range 88 - 110	Recovery	=	40.56%#	
66) p-Bromofluorobenzene	16.94	95	243853	9.9700	ug/L	0.00
Spiked Amount	25.000	Range 86 - 115	Recovery	=	39.88%#	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.81	85	500523	19.8801	ug/L	98
3) Chloromethane	3.22	50	315608	19.1814	ug/L	100
4) Vinyl Chloride	3.42	62	208687	17.8610	ug/L	98
5) Bromomethane	4.25	94	135213	19.0349	ug/L	99
6) Chloroethane	4.41	64	137130	19.0803	ug/L	96
7) Trichlorofluoromethane	4.89	101	335215	19.3065	ug/L	98
8) Isoprene	5.47	67	273322	20.9135	ug/L	99
9) Acrolein	5.66	56	40344	45.0036	ug/L	92
10) 1,1,2-Trichloro-1,2,2-Trif	5.71	101	400124	19.6773	ug/L	99
11) Acetone	5.78	43	43576	18.4849	ug/L	98
12) 1,1-Dichloroethene	6.00	96	305519	20.0961	ug/L	94
13) Dimethyl Sulfide	6.28	62	277836	19.4744	ug/L #	1
14) Iodomethane	6.53	142	207056	19.3855	ug/L	97
15) Methylene Chloride	6.83	84	331932	18.7514	ug/L	94
16) Carbon Disulfide	6.85	76	1008382	20.1190	ug/L	100
17) Acrylonitrile	7.03	53	57927	20.6295	ug/L	99
18) Methyl Tert Butyl Ether	7.11	73	483209	21.3473	ug/L	98
19) trans-1,2-Dichloroethene	7.33	96	350947	19.9243	ug/L	95
20) n-Hexane	7.45	57	496856	21.3950	ug/L	99
21) Vinyl Acetate	8.00	43	427582	22.3288	ug/L	99
22) 1,1-Dichloroethane	8.00	63	683895	19.4224	ug/L	97
23) 2-Butanone	8.65	43	51745	20.2667	ug/L	95
24) 2,2-Dichloropropane	8.87	77	493637	20.7268	ug/L	99
25) cis-1,2-Dichloroethene	8.94	96	362284	21.2945	ug/L	97
26) Chloroform	9.18	83	650676	19.0161	ug/L	99
27) Bromochloromethane	9.42	130	188739	19.3634	ug/L	85
29) 1,1,1-Trichloroethane	9.78	97	583678	19.7912	ug/L	91

(#) = qualifier out of range (m) = manual integration

6M29663.D 8260BWT.M

Fri Mar 22 08:23:55 2002

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Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29663.D
 Acq On : 22 Mar 2002 1:08
 Sample : WG114932-03 20PPB STD
 Misc : 1,1 SV9206

Vial: 7
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.82	56	610297	20.5370	ug/L	97
31) 1,1-Dichloropropene	10.01	75	496177	21.1844	ug/L	99
32) Carbon Tetrachloride	10.16	117	508625	20.5726	ug/L	100
34) 1,2-Dichloroethane	10.36	62	429225	19.3896	ug/L #	82
35) Benzene	10.40	78	1350880	20.9067	ug/L	100
36) Trichloroethene	11.28	130	362306	19.8387	ug/L	94
37) 1,2-Dichloropropane	11.52	63	323547	20.1250	ug/L	99
38) Bromodichloromethane	11.85	83	373807	19.8555	ug/L	99
39) Dibromomethane	11.94	93	144021	19.7200	ug/L	95
40) 2-Chloroethyl Vinyl Ether	12.24	63	87842	20.8726	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	44908	20.1511	ug/L	93
42) cis-1,3-Dichloropropene	12.61	75	402364	21.9036	ug/L	99
43) Dimethyl Disulfide	12.89	79	153354	18.1364	ug/L	99
46) Toluene	13.09	91	1397573	22.5174	ug/L	97
47) Ethyl Methacrylate	13.26	69	190823	20.0919	ug/L	99
48) trans-1,3-Dichloropropene	13.31	75	346851	22.1096	ug/L	98
49) 1,1,2-Trichloroethane	13.55	97	204344	20.6302	ug/L	99
50) 2-Hexanone	13.53	43	152140	21.0582	ug/L #	64
51) 1,3-Dichloropropane	13.90	76	343569	21.1717	ug/L	96
52) Tetrachloroethene	14.04	164	297877	20.3334	ug/L	98
53) Dibromochloromethane	14.33	129	250294	21.8024	ug/L	99
54) 1,2-Dibromoethane	14.63	107	186442	21.1451	ug/L	99
55) 1-Chlorohexane	14.80	91	433327	24.6782	ug/L	91
56) Chlorobenzene	15.23	112	1006845	19.5631	ug/L	84
57) 1,1,1,2-Tetrachloroethane	15.28	131	337803	21.6718	ug/L	96
58) Ethylbenzene	15.28	106	515490	21.2181	ug/L	89
59) m-,p-Xylene	15.39	106	1355609	43.2109	ug/L	86
60) o-Xylene	16.04	106	614778	22.7859	ug/L	94
61) Styrene	16.08	104	1108055	22.5794	ug/L	99
62) Bromoform	16.62	173	136947	21.9108	ug/L	99
63) Isopropylbenzene	16.56	105	1680495	22.8919	ug/L	96
65) 1,1,2,2-Tetrachloroethane	16.80	83	207681	20.0742	ug/L	99
67) 1,2,3-Trichloropropane	17.02	110	71627	21.1127	ug/L	98
68) trans-1,4-Dichloro-2-Buten	17.09	53	49610	19.6509	ug/L #	72
69) n-Propylbenzene	17.15	91	2148296	22.5101	ug/L	96
70) Bromobenzene	17.26	156	421138	20.7896	ug/L	99
71) 1,3,5-Trimethylbenzene	17.38	105	1541462	22.3792	ug/L	97
72) 2-Chlorotoluene	17.44	91	1332393	21.0017	ug/L	98
73) 4-Chlorotoluene	17.51	91	1438296	21.7954	ug/L	98
74) a-Methylstyrene	17.84	118	763028	20.3633	ug/L	100
75) tert-Butylbenzene	17.91	119	1388437	21.3877	ug/L	98

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(#) = qualifier out of range (m) = manual integration
 032102.D 8260BWT.M Fri Mar 22 08:23:56 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29663.D
 Acq On : 22 Mar 2002 1:08
 Sample : WG114932-03 20PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:23 2002

Vial: 7
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

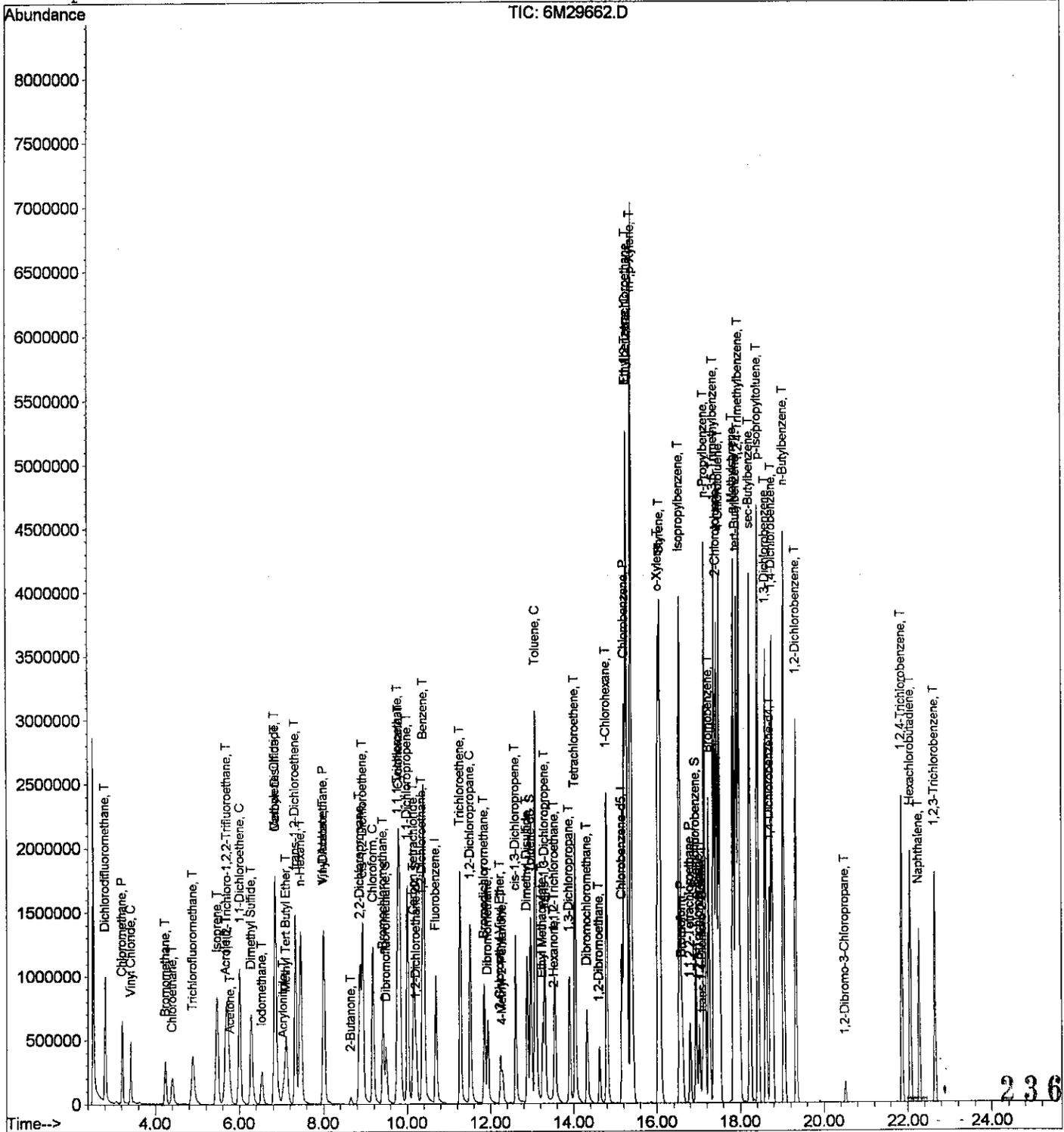
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	1657097	21.4610	ug/L	96
77) sec-Butylbenzene	18.24	105	1869724	22.1320	ug/L	96
78) p-Isopropyltoluene	18.43	119	1700016	22.4032	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	885360	20.5389	ug/L	99
80) 1,4-Dichlorobenzene	18.77	146	896569	19.8679	ug/L	100
81) n-Butylbenzene	19.05	91	1475467	22.0421	ug/L	96
82) 1,2-Dichlorobenzene	19.34	146	745944	20.5062	ug/L	99
83) 1,2-Dibromo-3-Chloropropan	20.52	157	24232	19.0220	ug/L	90
84) 1,2,4-Trichlorobenzene	21.87	180	401899	21.7427	ug/L	97
85) Hexachlorobutadiene	22.07	225	225700	19.3915	ug/L #	39
86) Naphthalene	22.28	128	583896	23.6507	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	322268	21.4168	ug/L	98

Data File : C:\HPCHEM\1\DATA\032102\6M29662.D
 Acq On : 22 Mar 2002 00:36
 Sample : WG114932-02 50PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:25 2002

Vial: 6
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29662.D
 Acq On : 22 Mar 2002 00:36
 Sample : WG114932-02 50PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:25 2002

Vial: 6
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1428571	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	1082281	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	647997	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	426194	24.7448	ug/L	-0.01
Spiked Amount	25.000	Range	86 - 118	Recovery	=	98.96%
33) 1,2-Dichloroethane-d4	10.23	65	409861	23.6976	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	94.80%
45) Toluene-d8	12.97	98	1537306	26.4569	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	105.84%
66) p-Bromofluorobenzene	16.94	95	637378	26.5071	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	106.04%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.81	85	1264802	51.4984	ug/L	98
3) Chloromethane	3.21	50	775810	48.3355	ug/L	99
4) Vinyl Chloride	3.41	62	500949	43.9522	ug/L	99
5) Bromomethane	4.24	94	345103	49.8032	ug/L	99
6) Chloroethane	4.40	64	349542	49.8573	ug/L	97
7) Trichlorofluoromethane	4.89	101	868135	51.2561	ug/L	99
8) Isoprene	5.46	67	719327	56.4231	ug/L	100
9) Acrolein	5.67	56	90399	103.3735	ug/L	99
10) 1,1,2-Trichloro-1,2,2-Trif	5.70	101	1025934	51.7211	ug/L	98
11) Acetone	5.78	43	95923	41.7129	ug/L	100
12) 1,1-Dichloroethene	6.00	96	794761	53.5905	ug/L	94
13) Dimethyl Sulfide	6.28	62	708694	50.9228	ug/L	# 1
14) Iodomethane	6.53	142	552023	52.9814	ug/L	99
15) Methylene Chloride	6.84	84	809019	46.8512	ug/L	95
16) Carbon Disulfide	6.85	76	2607768	53.3368	ug/L	99
17) Acrylonitrile	7.03	53	137187	50.0839	ug/L	96
18) Methyl Tert Butyl Ether	7.11	73	1121907	50.8092	ug/L	100
19) trans-1,2-Dichloroethene	7.33	96	915862	53.3027	ug/L	96
20) n-Hexane	7.45	57	1317844	58.1733	ug/L	99
21) Vinyl Acetate	8.00	43	1065717	57.0512	ug/L	99
22) 1,1-Dichloroethane	8.01	63	1749831	50.9433	ug/L	97
23) 2-Butanone	8.66	43	114397	45.9312	ug/L	97
24) 2,2-Dichloropropane	8.88	77	1336209	57.5144	ug/L	100
25) cis-1,2-Dichloroethene	8.95	96	931615	56.1347	ug/L	96
26) Chloroform	9.18	83	1636887	49.0404	ug/L	100
27) Bromochloromethane	9.43	130	461431	48.5293	ug/L	85
29) 1,1,1-Trichloroethane	9.78	97	1525815	53.0370	ug/L	91

(#) = qualifier out of range (m) = manual integration
 6M29662.D 8260BWT.M Fri Mar 22 08:25:32 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29662.D

Vial: 6

Acq On : 22 Mar 2002 00:36

Operator: CMS

Sample : WG114932-02 50PPB STD

Inst : HPMS6

Misc : 1,1 SV9206

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Mar 22 8:25 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.82	56	1591143	54.8887	ug/L	98
31) 1,1-Dichloropropene	10.01	75	1298985	56.8540	ug/L	98
32) Carbon Tetrachloride	10.16	117	1370185	56.8131	ug/L	100
34) 1,2-Dichloroethane	10.36	62	1051442	48.6909	ug/L #	83
35) Benzene	10.40	78	3392652	53.8252	ug/L	100
36) Trichloroethene	11.28	130	961955	53.9971	ug/L	95
37) 1,2-Dichloropropane	11.52	63	829885	52.9167	ug/L	100
38) Bromodichloromethane	11.86	83	994457	54.1498	ug/L	98
39) Dibromomethane	11.94	93	349439	49.0489	ug/L	96
40) 2-Chloroethyl Vinyl Ether	12.24	63	224679	54.7287	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	105172	48.3786	ug/L	95
42) cis-1,3-Dichloropropene	12.61	75	1071845	59.8145	ug/L	100
43) Dimethyl Disulfide	12.89	79	477102	57.8422	ug/L	97
46) Toluene	13.09	91	3597853	57.3527	ug/L	98
47) Ethyl Methacrylate	13.26	69	479897	49.9924	ug/L	100
48) trans-1,3-Dichloropropene	13.31	75	892193	56.2681	ug/L	100
49) 1,1,2-Trichloroethane	13.55	97	488596	48.8042	ug/L	100
50) 2-Hexanone	13.52	43	257519	35.2658	ug/L #	81
51) 1,3-Dichloropropane	13.91	76	846630	51.6180	ug/L	97
52) Tetrachloroethene	14.04	164	778929	52.6061	ug/L	98
53) Dibromochloromethane	14.33	129	655185	56.4655	ug/L	99
54) 1,2-Dibromoethane	14.62	107	464766	52.1514	ug/L	100
55) 1-Chlorohexane	14.80	91	1195646	67.3700	ug/L	94
56) Chlorobenzene	15.23	112	2542670	48.8798	ug/L	98
57) 1,1,1,2-Tetrachloroethane	15.28	131	849555	53.9247	ug/L	99
58) Ethylbenzene	15.28	106	1324759	53.9497	ug/L	91
59) m-,p-Xylene	15.39	106	3429798	108.1665	ug/L	86
60) o-Xylene	16.04	106	1629030	59.7369	ug/L	95
61) Styrene	16.08	104	2846490	57.3888	ug/L	99
62) Bromoform	16.62	173	353119	55.8975	ug/L	99
63) Isopropylbenzene	16.55	105	4465001	60.1773	ug/L	97
65) 1,1,2,2-Tetrachloroethane	16.80	83	487762	47.9568	ug/L	100
67) 1,2,3-Trichloropropane	17.02	110	164367	49.2813	ug/L	96
68) trans-1,4-Dichloro-2-Buten	17.10	53	123190	49.6352	ug/L #	71
69) n-Propylbenzene	17.15	91	5562876	59.2903	ug/L	96
70) Bromobenzene	17.26	156	1047377	52.5926	ug/L	99
71) 1,3,5-Trimethylbenzene	17.38	105	4016241	59.3106	ug/L	97
72) 2-Chlorotoluene	17.45	91	3414511	54.7458	ug/L	98
73) 4-Chlorotoluene	17.51	91	3613377	55.6967	ug/L	98
74) a-Methylstyrene	17.85	118	2086391	56.6373	ug/L	98
75) tert-Butylbenzene	17.92	119	3594019	56.3143	ug/L	98

(#) = qualifier out of range (m) = manual integration

6M29662.D 8260BWT.M

Fri Mar 22 08:25:33 2002

Page 2

Data File : C:\HPCHEM\1\DATA\032102\6M29662.D
 Acq On : 22 Mar 2002 00:36
 Sample : WG114932-02 50PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:25 2002

Vial: 6
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

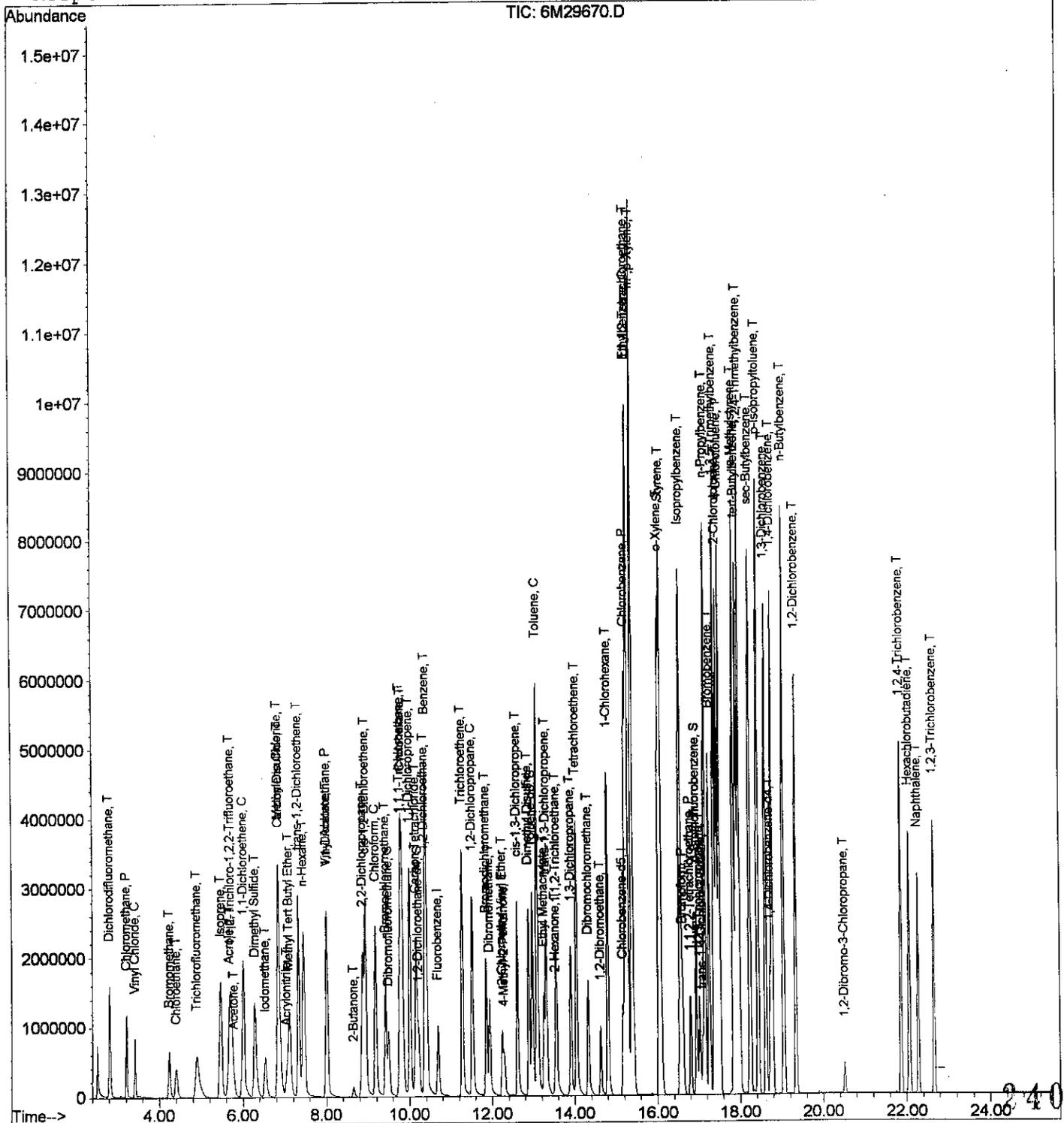
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	4223994	55.6450	ug/L	97
77) sec-Butylbenzene	18.24	105	4897239	58.9651	ug/L	97
78) p-Isopropyltoluene	18.43	119	4479618	60.0479	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	2223185	52.4604	ug/L	99
80) 1,4-Dichlorobenzene	18.77	146	2202610	49.6485	ug/L	99
81) n-Butylbenzene	19.05	91	3916615	59.5160	ug/L	97
82) 1,2-Dichlorobenzene	19.34	146	1842187	51.5126	ug/L	99
83) 1,2-Dibromo-3-Chloropropan	20.51	157	62979	50.2877	ug/L	92
84) 1,2,4-Trichlorobenzene	21.87	180	1073653	59.0829	ug/L	98
85) Hexachlorobutadiene	22.07	225	644612	56.3350	ug/L #	38
86) Naphthalene	22.27	128	1504577	61.9903	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.65	180	812935	54.9532	ug/L	98

Data File : C:\HPCHEM\1\DATA\032102\6M29670.D
 Acq On : 22 Mar 2002 4:52
 Sample : WG114932-10 100PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 14
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B_WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29670.D
 Acq On : 22 Mar 2002 4:52
 Sample : WG114932-10 100PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 14
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.69	96	1433947	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	1106070	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	673878	25.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
28) Dibromofluoromethane	9.50	111	904581	52.3231	ug/L	-0.01
Spiked Amount 25.000	Range 86 - 118		Recovery = 209.28%#			
33) 1,2-Dichloroethane-d4	10.23	65	876689	50.4988	ug/L	0.00
Spiked Amount 25.000	Range 80 - 120		Recovery = 202.00%#			
45) Toluene-d8	12.98	98	3143724	52.9395	ug/L	0.00
Spiked Amount 25.000	Range 88 - 110		Recovery = 211.76%#			
66) p-Bromofluorobenzene	16.94	95	1374748	54.9769	ug/L	0.00
Spiked Amount 25.000	Range 86 - 115		Recovery = 219.92%#			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.81	85	2099120	85.1485	ug/L	97
3) Chloromethane	3.21	50	1428095	88.6413	ug/L	100
4) Vinyl Chloride	3.41	62	910901	79.6210	ug/L	100
5) Bromomethane	4.24	94	706137	101.5234	ug/L	99
6) Chloroethane	4.40	64	681795	96.8839	ug/L	96
7) Trichlorofluoromethane	4.89	101	1651912	97.1658	ug/L	99
8) Isoprene	5.46	67	1459733	114.0703	ug/L	100
9) Acrolein	5.66	56	193585	220.5394	ug/L	94
10) 1,1,2-Trichloro-1,2,2-Trif	5.70	101	1920584	96.4606	ug/L	98
11) Acetone	5.79	43	214539	92.9444	ug/L	97
12) 1,1-Dichloroethene	6.00	96	1571263	105.5525	ug/L	94
13) Dimethyl Sulfide	6.28	62	1513946	108.3760	ug/L	# 1
14) Iodomethane	6.53	142	1313965	125.6374	ug/L	100
15) Methylene Chloride	6.84	84	1644340	94.8686	ug/L	95
16) Carbon Disulfide	6.86	76	5161153	105.1655	ug/L	99
17) Acrylonitrile	7.03	53	316539	115.1279	ug/L	99
18) Methyl Tert Butyl Ether	7.10	73	2658107	119.9298	ug/L	99
19) trans-1,2-Dichloroethene	7.33	96	1832918	106.2749	ug/L	97
20) n-Hexane	7.45	57	2389681	105.0917	ug/L	98
21) Vinyl Acetate	8.00	43	2161888	115.2988	ug/L	99
22) 1,1-Dichloroethane	8.01	63	3494473	101.3541	ug/L	97
23) 2-Butanone	8.65	43	272001	108.8008	ug/L	100
24) 2,2-Dichloropropane	8.88	77	2622761	112.4682	ug/L	99
25) cis-1,2-Dichloroethene	8.94	96	1864049	111.8977	ug/L	96
26) Chloroform	9.18	83	3285043	98.0493	ug/L	99
27) Bromochloromethane	9.43	130	949125	99.4466	ug/L	84
29) 1,1,1-Trichloroethane	9.78	97	3040117	105.2777	ug/L	92

(#) = qualifier out of range (m) = manual integration
 Fri Mar 22 08:26:11 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29670.D
 Acq On : 22 Mar 2002 4:52
 Sample : WG114932-10 100PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 14
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.82	56	3072760	105.6018	ug/L	98
31) 1,1-Dichloropropene	10.01	75	2580622	112.5253	ug/L	98
32) Carbon Tetrachloride	10.16	117	2772509	114.5278	ug/L	99
34) 1,2-Dichloroethane	10.36	62	2192929	101.1709	ug/L #	84
35) Benzene	10.40	78	6669690	105.4194	ug/L	100
36) Trichloroethene	11.27	130	1943321	108.6747	ug/L	95
37) 1,2-Dichloropropane	11.52	63	1711733	108.7376	ug/L	99
38) Bromodichloromethane	11.85	83	2125016	115.2768	ug/L	100
39) Dibromomethane	11.94	93	765259	107.0127	ug/L	96
40) 2-Chloroethyl Vinyl Ether	12.24	63	593109	143.9315	ug/L	98
41) 4-Methyl-2-Pentanone	12.29	58	259938	119.1218	ug/L	97
42) cis-1,3-Dichloropropene	12.61	75	2304552	128.1237	ug/L	99
43) Dimethyl Disulfide	12.89	79	1158723	139.9529	ug/L	97
46) Toluene	13.09	91	7059155	110.1083	ug/L	98
47) Ethyl Methacrylate	13.26	69	1161871	118.4327	ug/L	100
48) trans-1,3-Dichloropropene	13.31	75	1985050	122.4989	ug/L	99
49) 1,1,2-Trichloroethane	13.55	97	1056911	103.3007	ug/L	99
50) 2-Hexanone	13.52	43	500321	67.0425	ug/L	97
51) 1,3-Dichloropropane	13.91	76	1847708	110.2296	ug/L	99
52) Tetrachloroethene	14.05	164	1537164	101.5818	ug/L	97
53) Dibromochloromethane	14.33	129	1513095	127.5976	ug/L	99
54) 1,2-Dibromoethane	14.63	107	1062718	116.6829	ug/L	100
55) 1-Chlorohexane	14.80	91	2399036	132.2690	ug/L	96
56) Chlorobenzene	15.23	112	5055012	95.0866	ug/L	97
57) 1,1,1,2-Tetrachloroethane	15.28	131	1747394	108.5286	ug/L	99
58) Ethylbenzene	15.28	106	2570099	102.4140	ug/L	93
59) m-,p-Xylene	15.39	106	6509960	200.8908	ug/L	90
60) o-Xylene	16.04	106	3254404	116.7730	ug/L	96
61) Styrene	16.09	104	5788059	114.1847	ug/L	99
62) Bromoform	16.62	173	851328	131.8639	ug/L	100
63) Isopropylbenzene	16.56	105	8783598	115.8353	ug/L	98
65) 1,1,2,2-Tetrachloroethane	16.80	83	1111428	105.0789	ug/L	100
67) 1,2,3-Trichloropropane	17.02	110	376053	108.4198	ug/L	96
68) trans-1,4-Dichloro-2-Buten	17.10	53	300402	116.3882	ug/L	85
69) n-Propylbenzene	17.15	91	10676993	109.4270	ug/L	97
70) Bromobenzene	17.26	156	2185102	105.5078	ug/L	99
71) 1,3,5-Trimethylbenzene	17.38	105	7801848	110.7902	ug/L	98
72) 2-Chlorotoluene	17.45	91	6899828	106.3781	ug/L	98
73) 4-Chlorotoluene	17.51	91	6910165	102.4228	ug/L	99
74) a-Methylstyrene	17.85	118	4168099	108.8019	ug/L	100
75) tert-Butylbenzene	17.92	119	7106851	107.0798	ug/L	- 98

(#) = qualifier out of range (m) = manual integration
 6M29670.D 8260BWT.M Fri Mar 22 08:26:12 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29670.D
Acq On : 22 Mar 2002 4:52
Sample : WG114932-10 100PPB STD
Misc : 1,1 SV9206
MS Integration Params: rteint.p
Quant Time: Mar 22 8:26 2002

Vial: 14
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration
DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	8188268	103.7258	ug/L	98
77) sec-Butylbenzene	18.24	105	9467923	109.6201	ug/L	98
78) p-Isopropyltoluene	18.44	119	8658445	111.6062	ug/L	98
79) 1,3-Dichlorobenzene	18.62	146	4507268	102.2731	ug/L	99
80) 1,4-Dichlorobenzene	18.77	146	4445158	96.3490	ug/L	99
81) n-Butylbenzene	19.05	91	7440361	108.7198	ug/L	98
82) 1,2-Dichlorobenzene	19.35	146	3850463	103.5344	ug/L	99
83) 1,2-Dibromo-3-Chloropropan	20.52	157	174964	134.3403	ug/L	97
84) 1,2,4-Trichlorobenzene	21.87	180	2345890	124.1358	ug/L	98
85) Hexachlorobutadiene	22.07	225	1262957	106.1354	ug/L #	38
86) Naphthalene	22.28	128	3565796	141.2724	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	1839969	119.6022	ug/L	98

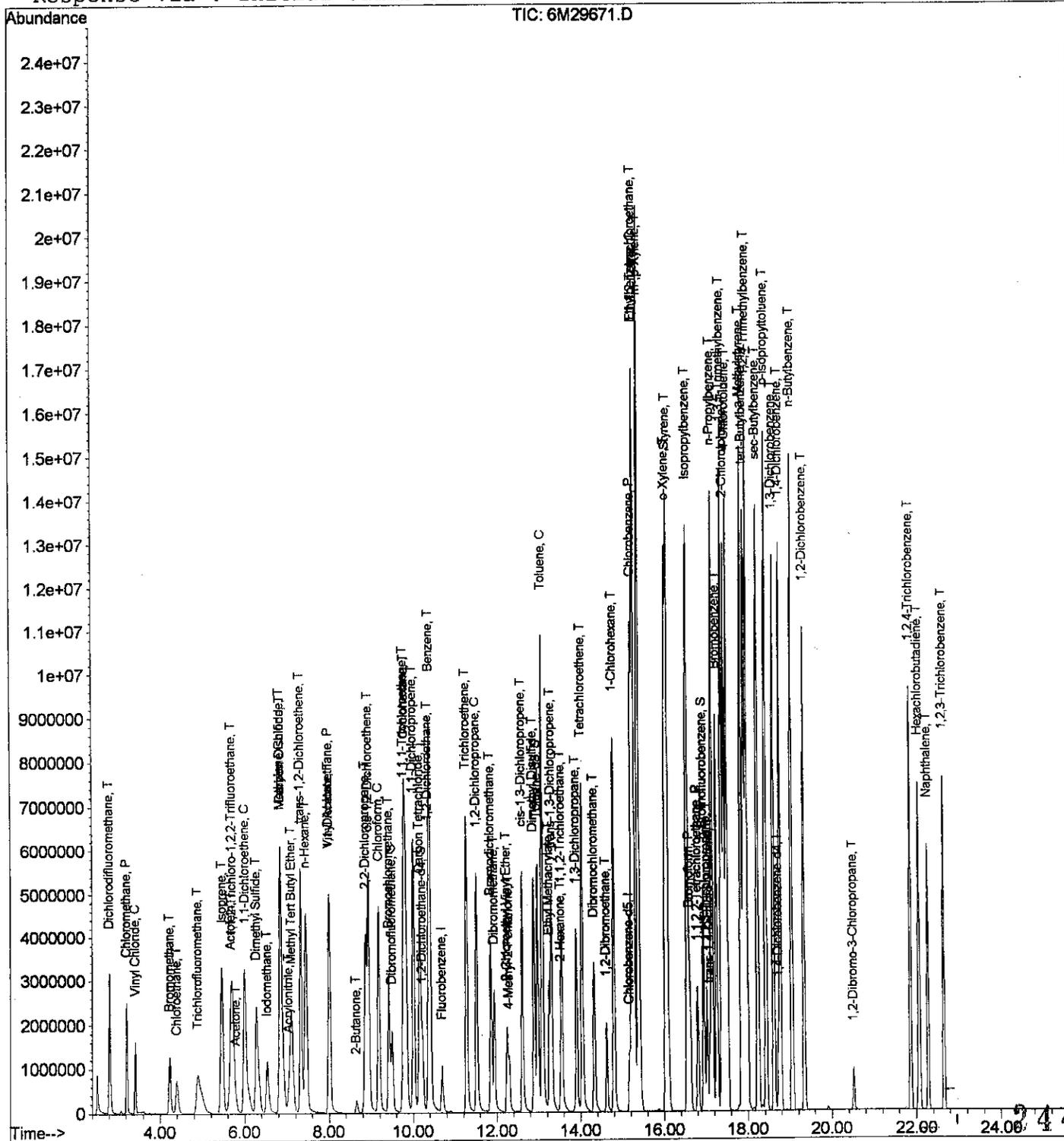
(#) = qualifier out of range (m) = manual integration
6M29670.D 8260BWT.M Fri Mar 22 08:26:13 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29671.D
 Acq On : 22 Mar 2002 5:24
 Sample : WG114932-11 200PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 15
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29671.D
 Acq On : 22 Mar 2002 5:24
 Sample : WG114932-11 200PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 15
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1503285	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	1142127	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.73	152	699705	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	1795288	99.0540	ug/L	-0.01
Spiked Amount	25.000	Range	86 - 118	Recovery	=	396.20%#
33) 1,2-Dichloroethane-d4	10.23	65	1699447	93.3759	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	373.52%#
45) Toluene-d8	12.98	98	6140528	100.1404	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	400.56%#
66) p-Bromofluorobenzene	16.94	95	2708117	104.3016	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	417.20%#

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.81	85	4415987	170.8675	ug/L	98
3) Chloromethane	3.21	50	2963726	175.4725	ug/L	100
4) Vinyl Chloride	3.41	62	1759595	146.7104	ug/L	100
5) Bromomethane	4.23	94	1470268	201.6348	ug/L	100
6) Chloroethane	4.39	64	1327255	179.9053	ug/L	97
7) Trichlorofluoromethane	4.90	101	3257810	182.7866	ug/L	98
8) Isoprene	5.46	67	2991190	222.9642	ug/L	99
9) Acrolein	5.67	56	403984	439.0059	ug/L	94
10) 1,1,2-Trichloro-1,2,2-Trif	5.69	101	3792924	181.7116	ug/L	99
11) Acetone	5.79	43	420263	173.6720	ug/L	97
12) 1,1-Dichloroethene	6.00	96	3222829	206.5137	ug/L	96
13) Dimethyl Sulfide	6.28	62	3152306	215.2498	ug/L	# 1
14) Iodomethane	6.53	142	2889256	263.5197	ug/L	99
15) Methylene Chloride	6.83	84	3264657	179.6636	ug/L	98
16) Carbon Disulfide	6.85	76	10255906	199.3390	ug/L	100
17) Acrylonitrile	7.03	53	642337	222.8477	ug/L	98
18) Methyl Tert Butyl Ether	7.10	73	5627749	242.2039	ug/L	98
19) trans-1,2-Dichloroethene	7.33	96	3601271	199.1751	ug/L	97
20) n-Hexane	7.45	57	4733224	198.5535	ug/L	97
21) Vinyl Acetate	8.00	43	4206870	214.0141	ug/L	100
22) 1,1-Dichloroethane	8.01	63	6658378	184.2127	ug/L	98
23) 2-Butanone	8.65	43	588997	224.7327	ug/L	98
24) 2,2-Dichloropropane	8.88	77	5418657	221.6432	ug/L	100
25) cis-1,2-Dichloroethene	8.94	96	3654374	209.2515	ug/L	98
26) Chloroform	9.18	83	6459100	183.8939	ug/L	100
27) Bromochloromethane	9.42	130	1892252	189.1199	ug/L	85
29) 1,1,1-Trichloroethane	9.78	97	5892398	194.6389	ug/L	94

(#) = qualifier out of range (m) = manual integration

6M29671.D 8260BWT.M Fri Mar 22 08:26:40 2002

Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29671.D
 Acq On : 22 Mar 2002 5:24
 Sample : WG114932-11 200PPB STD
 Misc : 1,1 SV9206
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Vial: 15
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.82	56	5817759	190.7174	ug/L	98
31) 1,1-Dichloropropene	10.01	75	5018281	208.7240	ug/L	99
32) Carbon Tetrachloride	10.16	117	5518604	217.4499	ug/L	100
34) 1,2-Dichloroethane	10.36	62	4146125	182.4590	ug/L #	83
35) Benzene	10.40	78	12781130	192.6975	ug/L	100
36) Trichloroethene	11.28	130	3815460	203.5273	ug/L	97
37) 1,2-Dichloropropane	11.52	63	3337779	202.2522	ug/L	99
38) Bromodichloromethane	11.86	83	4201812	217.4243	ug/L	100
39) Dibromomethane	11.94	93	1508658	201.2377	ug/L	97
40) 2-Chloroethyl Vinyl Ether	12.24	63	1226721	283.9611	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	559235	244.4600	ug/L	95
42) cis-1,3-Dichloropropene	12.61	75	4582089	242.9955	ug/L	99
43) Dimethyl Disulfide	12.89	79	2410902	277.7625	ug/L	97
46) Toluene	13.09	91	13212127	199.5761	ug/L	99
47) Ethyl Methacrylate	13.26	69	2364819	233.4425	ug/L	100
48) trans-1,3-Dichloropropene	13.31	75	3913833	233.9005	ug/L	100
49) 1,1,2-Trichloroethane	13.55	97	2061594	195.1355	ug/L	100
50) 2-Hexanone	13.52	43	1029379	133.5811	ug/L	99
51) 1,3-Dichloropropane	13.91	76	3609889	208.5580	ug/L	99
52) Tetrachloroethene	14.04	164	2993749	191.5929	ug/L	95
53) Dibromochloromethane	14.33	129	3051617	249.2153	ug/L	99
54) 1,2-Dibromoethane	14.63	107	2144533	228.0291	ug/L	99
55) 1-Chlorohexane	14.80	91	4684336	250.1138	ug/L	100
56) Chlorobenzene	15.23	112	9386427	170.9880	ug/L	96
57) 1,1,1,2-Tetrachloroethane	15.28	131	3151122	189.5339	ug/L	100
58) Ethylbenzene	15.28	106	4662904	179.9426	ug/L	98
59) m-,p-Xylene	15.39	106	11452515	342.2559	ug/L	96
60) o-Xylene	16.04	106	6094695	211.7831	ug/L	99
61) Styrene	16.09	104	10683377	204.1040	ug/L	100
62) Bromoform	16.62	173	1751520	262.7316	ug/L	100
63) Isopropylbenzene	16.56	105	16079983	205.3630	ug/L	100
65) 1,1,2,2-Tetrachloroethane	16.80	83	2249695	204.8444	ug/L	100
67) 1,2,3-Trichloropropane	17.02	110	752814	209.0323	ug/L	96
68) trans-1,4-Dichloro-2-Buten	17.10	53	616359	229.9885	ug/L	91
69) n-Propylbenzene	17.15	91	19055192	188.0855	ug/L	100
70) Bromobenzene	17.26	156	4226673	196.5522	ug/L	99
71) 1,3,5-Trimethylbenzene	17.39	105	14207724	194.3098	ug/L	100
72) 2-Chlorotoluene	17.45	91	12653709	187.8876	ug/L	99
73) 4-Chlorotoluene	17.51	91	12528699	178.8465	ug/L	98
74) a-Methylstyrene	17.85	118	7848990	197.3233	ug/L	100
75) tert-Butylbenzene	17.92	119	13204533	191.6107	ug/L	99

246

(#) = qualifier out of range (m) = manual integration
 6M29671.D 8260BWT.M Fri Mar 22 08:26:41 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29671.D
 Acq On : 22 Mar 2002 5:24
 Sample : WG114932-11 200PPB STD
 Misc : 1,1 SV9206

Vial: 15
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

MS Integration Params: rteint.p
 Quant Time: Mar 22 8:26 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	14700313	179.3442	ug/L	99
77) sec-Butylbenzene	18.24	105	17313126	193.0533	ug/L	100
78) p-Isopropyltoluene	18.44	119	15732084	195.2994	ug/L	100
79) 1,3-Dichlorobenzene	18.62	146	8493963	185.6200	ug/L	99
80) 1,4-Dichlorobenzene	18.78	146	8305096	173.3688	ug/L	99
81) n-Butylbenzene	19.05	91	13660379	192.2400	ug/L	99
82) 1,2-Dichlorobenzene	19.35	146	7332063	189.8734	ug/L	99
83) 1,2-Dibromo-3-Chloropropan	20.52	157	392929	290.5615	ug/L	99
84) 1,2,4-Trichlorobenzene	21.87	180	4662458	237.6132	ug/L	98
85) Hexachlorobutadiene	22.07	225	2595394	210.0590	ug/L #	38
86) Naphthalene	22.28	128	7029350	268.2145	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	3651305	228.5826	ug/L	98

(#) = qualifier out of range (m) = manual integration
 Fri Mar 22 08:26:41 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 I	Fluorobenzene	1.000	1.000	0.0	98	0.00
2 T	Dichlorodifluoromethane	0.430	0.325	24.4#	75	-0.02
3 P	Chloromethane	0.281	0.224	20.3#	81	-0.02
4 C	Vinyl Chloride	0.199	0.152	23.6#	84	-0.02
5 T	Bromomethane	0.121	0.116	4.1	98	-0.02
6 T	Chloroethane	0.123	0.109	11.4	91	-0.02
7 T	Trichlorofluoromethane	0.296	0.264	10.8	90	-0.02
8 T	Isoprene	0.223	0.000	100.0#	0#	-5.49#
9 T	Acrolein	0.015	0.000	100.0#	0#	-5.68#
10 T	1,1,2-Trichloro-1,2,2-Trifl	0.347	0.000	100.0#	0#	-5.73#
11 T	Acetone	0.040	0.039	2.5	102	0.00
12 C	1,1-Dichloroethene	0.260	0.259	0.4	97	-0.01
13 T	Dimethyl Sulfide	0.244	0.000	100.0#	0#	-6.30#
14 T	Iodomethane	0.182	0.343	-88.5#	190	-0.01
15 T	Methylene Chloride	0.302	0.262	13.2	91	0.00
16 T	Carbon Disulfide	0.856	0.832	2.8	95	-0.01
17 T	Acrylonitrile	0.048	0.000	100.0#	0#	-7.04#
18 T	Methyl Tert Butyl Ether	0.386	0.423	-9.6	101	0.00
19 T	trans-1,2-Dichloroethene	0.301	0.313	-4.0	102	-0.02
20 T	n-Hexane	0.396	0.344	13.1	79	-0.03
21 T	Vinyl Acetate	0.327	0.197	39.8#	53	0.00
22 P	1,1-Dichloroethane	0.601	0.590	1.8	99	-0.01
23 T	2-Butanone	0.044	0.044	0.0	99	0.00
24 T	2,2-Dichloropropane	0.407	0.385	5.4	90	0.00
25 T	cis-1,2-Dichloroethene	0.290	0.319	-10.0	101	0.00
26 C	Chloroform	0.584	0.570	2.4	101	0.00
27 T	Bromochloromethane	0.166	0.167	-0.6	102	0.00
28 S	Dibromofluoromethane	0.301	0.665	-120.9#	224#	0.00
29 T	1,1,1-Trichloroethane	0.503	0.527	-4.8	104	0.00
30 T	Cyclohexane	0.507	0.002	99.6#	0#	-0.03
31 T	1,1-Dichloropropene	0.400	0.421	-5.2	97	0.00
32 T	Carbon Tetrachloride	0.422	0.458	-8.5	103	0.00
33 S	1,2-Dichloroethane-d4	0.303	0.660	-117.8#	225#	0.00
34 T	1,2-Dichloroethane	0.378	0.389	-2.9	104	0.00
35 T	Benzene	1.103	1.192	-8.1	101	-0.01
36 T	Trichloroethene	0.312	0.334	-7.1	106	0.00
37 C	1,2-Dichloropropane	0.274	0.279	-1.8	99	0.00
38 T	Bromodichloromethane	0.321	0.346	-7.8	106	0.00
39 T	Dibromomethane	0.125	0.135	-8.0	107	0.00
40 T	2-Chloroethyl Vinyl Ether	0.072	0.089	-23.6#	116	0.00
41 T	4-Methyl-2-Pentanone	0.038	0.044	-15.8	112	0.00

(#) = Out of Range

6M29674.D 8260BWT.M Fri Mar 22 08:27:58 2002

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Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
42 T	cis-1,3-Dichloropropene	0.314	0.359	-14.3	102	0.00
43 T	Dimethyl Disulfide	0.144	0.000	100.0#	0#	-12.89#
44 I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
45 S	Toluene-d8	1.342	3.182	-137.1#	234#	0.00
46 C	Toluene	1.449	1.682	-16.1	103	0.00
47 T	Ethyl Methacrylate	0.222	0.000	100.0#	0#	-13.26#
48 T	trans-1,3-Dichloropropene	0.366	0.412	-12.6	102	0.00
49 T	1,1,2-Trichloroethane	0.231	0.237	-2.6	99	0.00
50 T	2-Hexanone	0.169	0.094	44.4#	53	0.00
51 T	1,3-Dichloropropane	0.379	0.414	-9.2	103	0.00
52 T	Tetrachloroethene	0.342	0.356	-4.1	102	0.00
53 T	Dibromochloromethane	0.268	0.299	-11.6	103	0.00
54 T	1,2-Dibromoethane	0.206	0.232	-12.6	107	0.00
55 T	1-Chlorohexane	0.410	0.488	-19.0	97	0.00
56 P	Chlorobenzene	1.202	1.179	1.9	101	0.00
57 T	1,1,1,2-Tetrachloroethane	0.364	0.401	-10.2	102	0.00
58 C	Ethylbenzene	0.567	0.625	-10.2	104	0.00
59 T	m-,p-Xylene	0.732	0.794	-8.5	101	0.00
60 T	o-Xylene	0.630	0.749	-18.9	105	0.00
61 T	Styrene	1.146	1.305	-13.9	101	0.00
62 P	Bromoform	0.146	0.152	-4.1	95	0.01
63 T	Isopropylbenzene	1.714	1.939	-13.1	99	0.00
64 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00
65 P	1,1,2,2-Tetrachloroethane	0.392	0.410	-4.6	103	0.00
66 S	p-Bromofluorobenzene	0.928	2.375	-155.9#	254#	0.00
67 T	1,2,3-Trichloropropane	0.129	0.144	-11.6	105	0.00
68 T	trans-1,4-Dichloro-2-Butene	0.096	0.000	100.0#	0#	-17.09#
69 T	n-Propylbenzene	3.620	4.027	-11.2	98	0.00
70 T	Bromobenzene	0.768	0.840	-9.4	104	0.00
71 T	1,3,5-Trimethylbenzene	2.612	2.967	-13.6	100	0.00
72 T	2-Chlorotoluene	2.406	2.671	-11.0	105	0.00
73 T	4-Chlorotoluene	2.503	2.652	-6.0	96	0.00
74 T	a-Methylstyrene	1.421	0.000	100.0#	0#	-17.84#
75 T	tert-Butylbenzene	2.462	2.529	-2.7	95	0.00
76 T	1,2,4-Trimethylbenzene	2.929	3.124	-6.7	98	0.00
77 T	sec-Butylbenzene	3.204	3.610	-12.7	101	0.00
78 T	p-Isopropyltoluene	2.878	3.078	-6.9	95	0.00
79 T	1,3-Dichlorobenzene	1.635	1.717	-5.0	101	0.00
80 T	1,4-Dichlorobenzene	1.712	1.736	-1.4	101	0.00

(#) = Out of Range

Fri Mar 22 08:28:01 2002

Page 2

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81 T	n-Butylbenzene	2.539	2.840	-11.9	100	0.00
82 T	1,2-Dichlorobenzene	1.380	1.456	-5.5	102	0.00
83 T	1,2-Dibromo-3-Chloropropane	0.048	0.049	-2.1	105	0.00
84 T	1,2,4-Trichlorobenzene	0.701	0.796	-13.6	103	0.00
85 T	Hexachlorobutadiene	0.441	0.423	4.1	98	0.00
86 T	Naphthalene	0.936	1.157	-23.6#	103	0.00
87 T	1,2,3-Trichlorobenzene	0.571	0.626	-9.6	101	0.00

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Fluorobenzene	25.000	25.000	0.0	98	0.00
2 T	Dichlorodifluoromethane	20.000	15.119	24.4#	75	-0.02
3 P	Chloromethane	20.000	15.928	20.4#	81	-0.02
4 C	Vinyl Chloride	20.000	15.271	23.6#	84	-0.02
5 T	Bromomethane	20.000	19.076	4.6	98	-0.02
6 T	Chloroethane	20.000	17.803	11.0	91	-0.02
7 T	Trichlorofluoromethane	20.000	17.823	10.9	90	-0.02
8 T	Isoprene	20.000	0.000	100.0#	0	-5.49#
9 T	Acrolein	40.000	0.000	100.0#	0	-5.68#
10 T	1,1,2-Trichloro-1,2,2-Trifl	20.000	0.000	100.0#	0	-5.73#
11 T	Acetone	20.000	19.182	4.1	102	0.00
12 C	1,1-Dichloroethene	20.000	19.956	0.2	97	-0.01
13 T	Dimethyl Sulfide	20.000	0.000	100.0#	0	-6.30#
14 T	Iodomethane	20.000	37.594	-88.0#	190	-0.01
15 T	Methylene Chloride	20.000	17.366	13.2	91	0.00
16 T	Carbon Disulfide	20.000	19.446	2.8	95	-0.01
17 T	Acrylonitrile	20.000	0.000	100.0#	0	-7.04#
18 T	Methyl Tert Butyl Ether	20.000	21.893	-9.5	101	0.00
19 T	trans-1,2-Dichloroethene	20.000	20.828	-4.1	102	-0.02
20 T	n-Hexane	20.000	17.330	13.4	79	-0.03
21 T	Vinyl Acetate	20.000	12.066	39.7#	53	0.00
22 P	1,1-Dichloroethane	20.000	19.647	1.8	99	-0.01
23 T	2-Butanone	20.000	20.392	-2.0	99	0.00
24 T	2,2-Dichloropropane	20.000	18.958	5.2	90	0.00
25 T	cis-1,2-Dichloroethene	20.000	21.947	-9.7	101	0.00
26 C	Chloroform	20.000	19.520	2.4	101	0.00
27 T	Bromochloromethane	20.000	20.086	-0.4	102	0.00
28 S	Dibromofluoromethane	10.000	22.062	-120.6#	224	0.00
29 T	1,1,1-Trichloroethane	20.000	20.921	-4.6	104	0.00
30 T	Cyclohexane	20.000	0.060	99.7#	0	-0.03
31 T	1,1-Dichloropropene	20.000	21.043	-5.2	97	0.00
32 T	Carbon Tetrachloride	20.000	21.701	-8.5	103	0.00
33 S	1,2-Dichloroethane-d4	10.000	21.808	-118.1#	225	0.00
34 T	1,2-Dichloroethane	20.000	20.604	-3.0	104	0.00
35 T	Benzene	20.000	21.613	-8.1	101	-0.01
36 T	Trichloroethene	20.000	21.416	-7.1	106	0.00
37 C	1,2-Dichloropropane	20.000	20.359	-1.8	99	0.00
38 T	Bromodichloromethane	20.000	21.513	-7.6	106	0.00
39 T	Dibromomethane	20.000	21.576	-7.9	107	0.00
40 T	2-Chloroethyl Vinyl Ether	20.000	24.739	-23.7#	116	0.00
41 T	4-Methyl-2-Pentanone	20.000	22.940	-14.7	112	0.00

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42 T	cis-1,3-Dichloropropene	20.000	22.866	-14.3	102	0.00
43 T	Dimethyl Disulfide	20.000	0.000	100.0#	0	-12.89#
44 I	Chlorobenzene-d5	25.000	25.000	0.0	100	0.00
45 S	Toluene-d8	10.000	23.710	-137.1#	234	0.00
46 C	Toluene	20.000	23.208	-16.0	103	0.00
47 T	Ethyl Methacrylate	20.000	0.000	100.0#	0	-13.26#
48 T	trans-1,3-Dichloropropene	20.000	22.510	-12.6	102	0.00
49 T	1,1,2-Trichloroethane	20.000	20.472	-2.4	99	0.00
50 T	2-Hexanone	20.000	11.127	<u>44.4#</u>	53	0.00
51 T	1,3-Dichloropropane	20.000	21.850	-9.3	103	0.00
52 T	Tetrachloroethene	20.000	20.800	-4.0	102	0.00
53 T	Dibromochloromethane	20.000	22.347	-11.7	103	0.00
54 T	1,2-Dibromoethane	20.000	22.521	-12.6	107	0.00
55 T	1-Chlorohexane	20.000	23.828	-19.1	97	0.00
56 P	Chlorobenzene	20.000	19.628	1.9	101	0.00
57 T	1,1,1,2-Tetrachloroethane	20.000	22.018	-10.1	102	0.00
58 C	Ethylbenzene	20.000	22.027	-10.1	104	0.00
59 T	m-,p-Xylene	40.000	43.376	-8.4	101	0.00
60 T	o-Xylene	20.000	23.786	-18.9	105	0.00
61 T	Styrene	20.000	22.784	-13.9	101	0.00
62 P	Bromoform	20.000	20.827	-4.1	95	0.01
63 T	Isopropylbenzene	20.000	22.621	-13.1	99	0.00
64 I	1,4-Dichlorobenzene-d4	25.000	25.000	0.0	99	0.00
65 P	1,1,1,2-Tetrachloroethane	20.000	20.906	-4.5	103	0.00
66 S	p-Bromofluorobenzene	10.000	25.601	-156.0#	254	0.00
67 T	1,2,3-Trichloropropane	20.000	22.350	-11.8	105	0.00
68 T	trans-1,4-Dichloro-2-Butene	20.000	0.000	100.0#	0	-17.09#
69 T	n-Propylbenzene	20.000	22.249	-11.2	98	0.00
70 T	Bromobenzene	20.000	21.878	-9.4	104	0.00
71 T	1,3,5-Trimethylbenzene	20.000	22.716	-13.6	100	0.00
72 T	2-Chlorotoluene	20.000	22.203	-11.0	105	0.00
73 T	4-Chlorotoluene	20.000	21.195	-6.0	96	0.00
74 T	a-Methylstyrene	20.000	0.000	100.0#	0	-17.84#
75 T	tert-Butylbenzene	20.000	20.546	-2.7	95	0.00
76 T	1,2,4-Trimethylbenzene	20.000	21.333	-6.7	98	0.00
77 T	sec-Butylbenzene	20.000	22.531	-12.7	101	0.00
78 T	p-Isopropyltoluene	20.000	21.390	-7.0	95	0.00
79 T	1,3-Dichlorobenzene	20.000	21.006	-5.0	101	0.00
80 T	1,4-Dichlorobenzene	20.000	20.283	-1.4	101	0.00

(#) = Out of Range

6M29674.D 8260BWT.M

Fri Mar 22 08:28:09 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D Vial: 18
 Acq On : 22 Mar 2002 7:06 Operator: CMS
 Sample : WG114932-12 20PPB ALT SOURCE Inst : HPMS6
 Misc : 1,1 SV9139 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

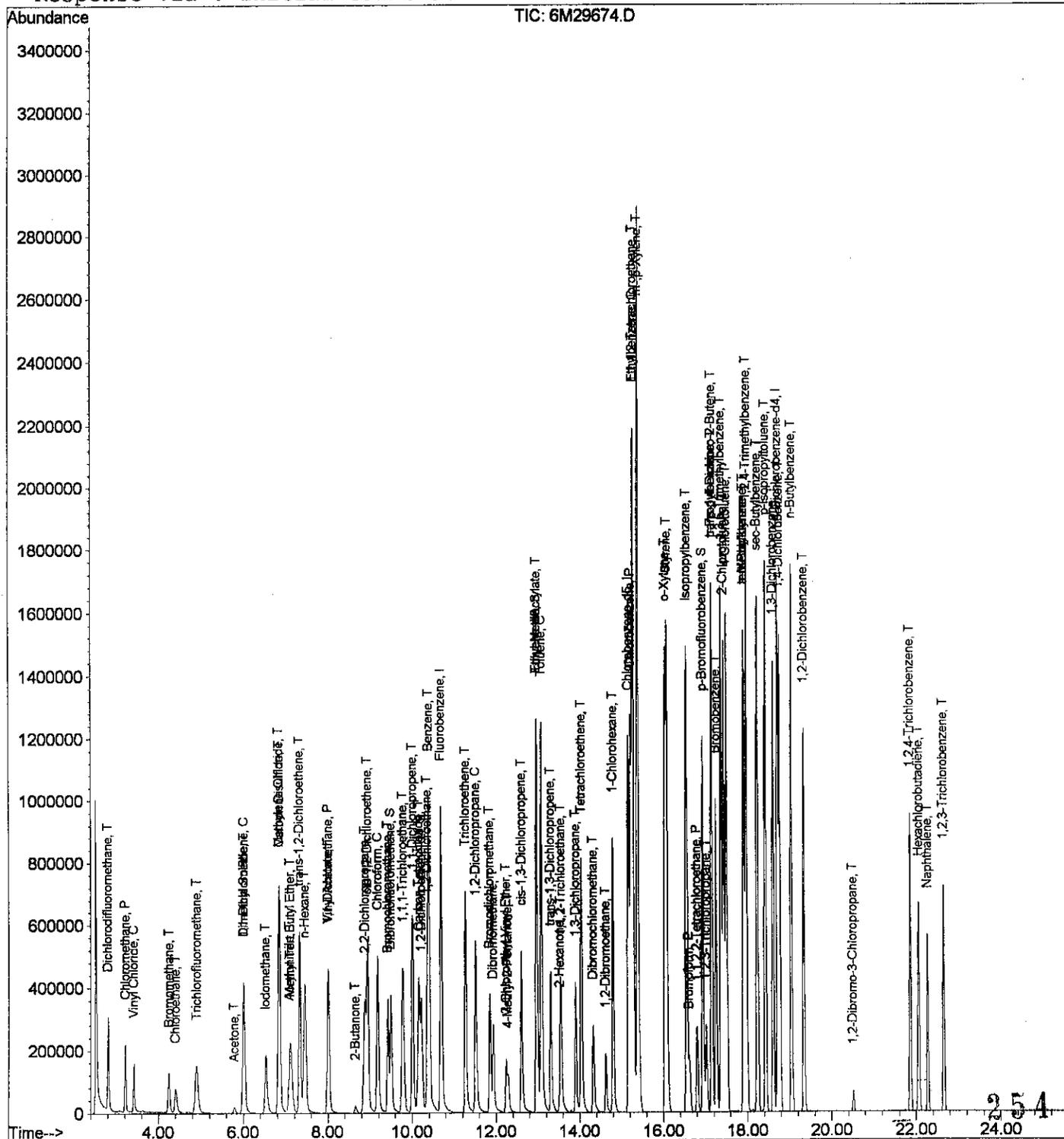
	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81 T	n-Butylbenzene	20.000	22.373	-11.9	100	0.00
82 T	1,2-Dichlorobenzene	20.000	21.102	-5.5	102	0.00
83 T	1,2-Dibromo-3-Chloropropane	20.000	20.226	-1.1	105	0.00
84 T	1,2,4-Trichlorobenzene	20.000	22.718	-13.6	103	0.00
85 T	Hexachlorobutadiene	20.000	19.156	4.2	98	0.00
86 T	Naphthalene	20.000	24.702	-23.5#	103	0.00
87 T	1,2,3-Trichlorobenzene	20.000	21.937	-9.7	101	0.00

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:27 2002

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Mar 22 8:27 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	10.69	96	1435499	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.18	117	1072902	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	652444	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	381832	22.0622	ug/L	0.00
Spiked Amount	25.000	Range	86 - 118	Recovery	=	88.24%
33) 1,2-Dichloroethane-d4	10.22	65	379010	21.8080	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	87.24%
45) Toluene-d8	12.98	98	1365754	23.7099	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	94.84%
66) p-Bromofluorobenzene	16.94	95	619821	25.6013	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	102.40%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.81	85	373133	15.1194	ug/L	98
3) Chloromethane	3.22	50	256887	15.9276	ug/L	100
4) Vinyl Chloride	3.42	62	174894	15.2708	ug/L	99
5) Bromomethane	4.25	94	132826	19.0761	ug/L	100
6) Chloroethane	4.40	64	125422	17.8034	ug/L	98
7) Trichlorofluoromethane	4.89	101	303329	17.8226	ug/L	98
11) Acetone	5.79	43	44324	19.1816	ug/L	96
12) 1,1-Dichloroethene	6.01	96	297393	19.9563	ug/L	93
13) Dimethyl Sulfide	6.01	62	42489	3.0383	ug/L #	27
14) Iodomethane	6.53	142	393593	37.5935	ug/L	99
15) Methylene Chloride	6.83	84	301324	17.3658	ug/L	94
16) Carbon Disulfide	6.86	76	955379	19.4461	ug/L	99
17) Acrylonitrile	7.09	53	3704	1.3457	ug/L #	12
18) Methyl Tert Butyl Ether	7.10	73	485758	21.8930	ug/L	98
19) trans-1,2-Dichloroethene	7.33	96	359614	20.8283	ug/L	97
20) n-Hexane	7.45	57	394493	17.3300	ug/L	99
21) Vinyl Acetate	8.00	43	226484	12.0659	ug/L	99
22) 1,1-Dichloroethane	8.01	63	678109	19.6467	ug/L	97
23) 2-Butanone	8.65	43	51034	20.3916	ug/L	95
24) 2,2-Dichloropropane	8.88	77	442578	18.9579	ug/L	100
25) cis-1,2-Dichloroethene	8.94	96	366008	21.9475	ug/L	98
26) Chloroform	9.18	83	654718	19.5204	ug/L	99
27) Bromochloromethane	9.43	130	191911	20.0861	ug/L	86
29) 1,1,1-Trichloroethane	9.78	97	604784	20.9207	ug/L	91
31) 1,1-Dichloropropene	10.01	75	483108	21.0426	ug/L	97
32) Carbon Tetrachloride	10.17	117	525900	21.7006	ug/L	98
34) 1,2-Dichloroethane	10.36	62	447091	20.6043	ug/L #	255

(#) = qualifier out of range (m) = manual integration

6M29674.D 8260BWT.M Fri Mar 22 08:27:12 2002

Page 1

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D
 Acq On : 22 Mar 2002 7:06
 Sample : WG114932-12 20PPB ALT SOURCE
 Misc : 1,1 SV9139
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:27 2002

Vial: 18
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35) Benzene	10.40	78	1368873	21.6127	ug/L	100
36) Trichloroethene	11.28	130	383384	21.4165	ug/L	95
37) 1,2-Dichloropropane	11.52	63	320841	20.3594	ug/L	99
38) Bromodichloromethane	11.86	83	396996	21.5128	ug/L	99
39) Dibromomethane	11.94	93	154461	21.5762	ug/L	98
40) 2-Chloroethyl Vinyl Ether	12.24	63	102054	24.7390	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	50111	22.9396	ug/L	94
42) cis-1,3-Dichloropropene	12.61	75	411734	22.8660	ug/L	100
46) Toluene	13.09	91	1443284	23.2082	ug/L	97
47) Ethyl Methacrylate	12.98	69	4110	0.4319	ug/L	# 1
48) trans-1,3-Dichloropropene	13.31	75	353823	22.5097	ug/L	98
49) 1,1,2-Trichloroethane	13.56	97	203179	20.4723	ug/L	98
50) 2-Hexanone	13.53	43	80547	11.1269	ug/L	95
51) 1,3-Dichloropropane	13.91	76	355269	21.8497	ug/L	98
52) Tetrachloroethene	14.05	164	305308	20.7997	ug/L	98
53) Dibromochloromethane	14.33	129	257050	22.3469	ug/L	98
54) 1,2-Dibromoethane	14.63	107	198967	22.5213	ug/L	98
55) 1-Chlorohexane	14.80	91	419216	23.8277	ug/L	91
56) Chlorobenzene	15.23	112	1012169	19.6279	ug/L	83
57) 1,1,1,2-Tetrachloroethane	15.28	131	343870	22.0176	ug/L	99
58) Ethylbenzene	15.28	106	536188	22.0267	ug/L	89
59) m-,p-Xylene	15.39	106	1363460	43.3757	ug/L	86
60) o-Xylene	16.05	106	643026	23.7860	ug/L	93
61) Styrene	16.09	104	1120282	22.7837	ug/L	99
62) Bromoform	16.62	173	130431	20.8273	ug/L	100
63) Isopropylbenzene	16.56	105	1663907	22.6214	ug/L	96
65) 1,1,2,2-Tetrachloroethane	16.81	83	214089	20.9058	ug/L	100
67) 1,2,3-Trichloropropane	17.03	110	75054	22.3497	ug/L	97
68) trans-1,4-Dichloro-2-Buten	17.16	53	11016	4.4083	ug/L	# 1
69) n-Propylbenzene	17.15	91	2101868	22.2494	ug/L	96
70) Bromobenzene	17.26	156	438679	21.8775	ug/L	99
71) 1,3,5-Trimethylbenzene	17.38	105	1548796	22.7162	ug/L	97
72) 2-Chlorotoluene	17.44	91	1394284	22.2026	ug/L	98
73) 4-Chlorotoluene	17.51	91	1384464	21.1947	ug/L	98
74) a-Methylstyrene	17.92	118	20050	0.5406	ug/L	# 1
75) tert-Butylbenzene	17.92	119	1320282	20.5464	ug/L	98
76) 1,2,4-Trimethylbenzene	17.98	105	1630488	21.3329	ug/L	96
77) sec-Butylbenzene	18.24	105	1884111	22.5310	ug/L	97
78) p-Isopropyltoluene	18.43	119	1606624	21.3895	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	896301	21.0058	ug/L	99
80) 1,4-Dichlorobenzene	18.77	146	906032	20.2834	ug/L	100

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(#) = qualifier out of range (m) = manual integration
 6M29674.D 8260BWT.M Fri Mar 22 08:27:13 2002

Data File : C:\HPCHEM\1\DATA\032102\6M29674.D Vial: 18
 Acq On : 22 Mar 2002 7:06 Operator: CMS
 Sample : WG114932-12 20PPB ALT SOURCE Inst : HPMS6
 Misc : 1,1 SV9139 Multiplr: 1.00
 MS Integration Params: rteint.p
 Quant Time: Mar 22 8:27 2002 Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81) n-Butylbenzene	19.05	91	1482431	22.3732	ug/L	97
82) 1,2-Dichlorobenzene	19.35	146	759839	21.1024	ug/L	99
83) 1,2-Dibromo-3-Chloropropan	20.52	157	25504	20.2257	ug/L	90
84) 1,2,4-Trichlorobenzene	21.87	180	415664	22.7180	ug/L	98
85) Hexachlorobutadiene	22.07	225	220697	19.1561	ug/L #	38
86) Naphthalene	22.28	128	603666	24.7022	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	326740	21.9366	ug/L	98

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Ical Date: 5 Mar 2002 14:42 Ical Filename: 9M18989.D
CCV Date: 2 Apr 2002 8:34 CCV Filename: 9M19479.D

Instrument: HPMS_9

	Fluorbenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Ret. Time	Response	Ret. Time	Response	Ret. Time	Response
Ical	9.93	945367	13.79	661677	16.80	382905
CCV	9.93	857159	13.79	641700	16.80	372186
	Pass	Pass	Pass	Pass	Pass	Pass

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I Fluorobenzene	1.000	1.000	0.0	91	0.00
2 T Dichlorodifluoromethane	0.438	0.445	-1.6	97	0.00
3 P Chloromethane	0.282	0.288✓	-2.1	103	0.00
4 C Vinyl Chloride	0.245	0.255	✓-4.1	101	0.00
5 T Bromomethane	0.136	0.207	-52.2#	145	0.02
6 T Chloroethane	0.187	0.198	-5.9	102	0.01
7 T Trichlorofluoromethane	0.554	0.592	-6.9	102	0.02
8 T Isoprene	0.279	0.302	-8.2	96	0.01
9 T Acrolein	0.028	0.030	-7.1	87	0.00
10 T 1,1,2-Trichloro-1,2,2-Trifl	0.258	0.281	-8.9	103	0.02
11 T Acetone	0.120	0.093	22.5	95	-0.01
12 C 1,1-Dichloroethene	0.181	0.176	✓2.8	84	0.00
13 T Dimethyl Sulfide	0.210	0.227	-8.1	93	0.00
14 T Iodomethane	0.086	0.169	-96.5#	147	-0.01
15 T Methylene Chloride	0.244	0.236	3.3	92	0.00
16 T Carbon Disulfide	0.701	0.757	-8.0	101	0.00
17 T Acrylonitrile	0.085	0.086	-1.2	96	0.00
18 T Methyl Tert Butyl Ether	0.544	0.630	-15.8	102	0.00
19 T trans-1,2-Dichloroethene	0.207	0.223	-7.7	95	0.00
20 T n-Hexane	0.356	0.409	-14.9	102	0.00
21 T Vinyl Acetate	0.480	0.617	-28.5#	100	0.00
22 P 1,1-Dichloroethane	0.441	0.455✓	-3.2	95	0.00
23 T 2-Butanone	0.118	0.106	10.2	89	0.00
24 T 2,2-Dichloropropane	0.351	0.440	-25.4#	107	0.00
25 T cis-1,2-Dichloroethene	0.214	0.240	-12.1	99	0.00
26 C Chloroform	0.475	0.493	✓-3.8	97	0.00
27 T Bromochloromethane	0.094	0.108	-14.9	106	0.00
28 S Dibromofluoromethane	0.214	0.250	-16.8	108	0.00
29 T 1,1,1-Trichloroethane	0.421	0.465	-10.5	97	0.00
30 T Cyclohexane	0.403	0.449	-11.4	97	0.00
31 T 1,1-Dichloropropene	0.334	0.363	-8.7	94	0.00
32 T Carbon Tetrachloride	0.363	0.416	-14.6	101	0.00
33 S 1,2-Dichloroethane-d4	0.330	0.352	-6.7	99	0.00
34 T 1,2-Dichloroethane	0.428	0.416	2.8	90	0.00
35 T Benzene	0.900	0.932	-3.6	95	0.00
36 T Trichloroethene	0.207	0.246	-18.8	107	0.00
37 C 1,2-Dichloropropane	0.224	0.243	✓-8.5	98	0.00
38 T Bromodichloromethane	0.341	0.368	-7.9	99	0.00
39 T Dibromomethane	0.136	0.152	-11.8	100	0.00
40 T 2-Chloroethyl Vinyl Ether	0.054	0.106	-96.3#	166	0.00
41 T 4-Methyl-2-Pentanone	0.093	0.087	6.5	94	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
42 T	cis-1,3-Dichloropropene	0.329	0.398	-21.0	104	0.00
43 T	Dimethyl Disulfide	0.173	0.213	-23.1	97	0.00
44 I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00
45 S	Toluene-d8	1.039	1.157	-11.4	108	0.00
46 C	Toluene	1.290	1.340	-3.9	101	0.00
47 T	Ethyl Methacrylate	0.367	0.373	-1.6	97	-0.01
48 T	trans-1,3-Dichloropropene	0.475	0.546	-14.9	108	0.00
49 T	1,1,2-Trichloroethane	0.284	0.289	-1.8	107	0.00
50 T	2-Hexanone	0.287	0.229	20.2	93	0.00
51 T	1,3-Dichloropropane	0.507	0.515	-1.6	104	0.00
52 T	Tetrachloroethene	0.279	0.303	-8.6	107	0.00
53 T	Dibromochloromethane	0.325	0.368	-13.2	112	0.00
54 T	1,2-Dibromoethane	0.282	0.301	-6.7	107	0.00
55 T	1-Chlorohexane	0.416	0.471	-13.2	104	0.00
56 P	Chlorobenzene	0.897	0.949	-5.8	111	0.00
57 T	1,1,1,2-Tetrachloroethane	0.320	0.370	-15.6	116	0.00
58 C	Ethylbenzene	0.478	0.520	-8.8	106	0.00
59 T	m-,p-Xylene	0.620	0.660	-6.5	104	0.00
60 T	o-Xylene	0.549	0.618	-12.6	105	0.00
61 T	Styrene	0.963	1.092	-13.4	107	0.00
62 P	Bromoform	0.243	0.299	-23.0	123	0.00
63 T	Isopropylbenzene	1.586	1.737	-9.5	105	0.00
64 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00
65 P	1,1,1,2-Tetrachloroethane	0.749	0.720	3.9	108	0.00
66 S	p-Bromofluorobenzene	0.807	0.849	-5.2	103	0.00
67 T	1,2,3-Trichloropropane	0.235	0.247	-5.1	112	0.00
68 T	trans-1,4-Dichloro-2-Butene	0.207	0.193	6.8	96	0.00
69 T	n-Propylbenzene	3.487	3.734	-7.1	102	0.00
70 T	Bromobenzene	0.673	0.765	-13.7	122	0.00
71 T	1,3,5-Trimethylbenzene	2.363	2.591	-9.6	103	0.00
72 T	2-Chlorotoluene	2.200	2.184	0.7	103	0.00
73 T	4-Chlorotoluene	2.295	2.365	-3.1	103	0.00
74 T	a-Methylstyrene	1.175	1.194	-1.6	101	0.00
75 T	tert-Butylbenzene	2.334	2.618	-12.2	112	0.00
76 T	1,2,4-Trimethylbenzene	2.588	2.712	-4.8	103	0.00
77 T	sec-Butylbenzene	3.075	3.322	-8.0	103	0.00
78 T	p-Isopropyltoluene	2.645	2.841	-7.4	105	0.00
79 T	1,3-Dichlorobenzene	1.393	1.450	-4.1	111	0.00
80 T	1,4-Dichlorobenzene	1.460	1.466	-0.4	111	0.00

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(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
81 T	n-Butylbenzene	2.652	2.693	-1.5	100	0.00
82 T	1,2-Dichlorobenzene	1.333	1.371	-2.9	111	0.00
83 T	1,2-Dibromo-3-Chloropropane	0.142	0.171	-20.4	126	0.00
84 T	1,2,4-Trichlorobenzene	1.005	1.097	-9.2	115	0.00
85 T	Hexachlorobutadiene	0.662	0.758	-14.5	119	0.00
86 T	Naphthalene	2.100	2.199	-4.7	106	0.00
87 T	1,2,3-Trichlorobenzene	0.966	1.038	-7.5	117	0.00

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
1 I	Fluorobenzene	50.000	50.000	0.0	91	0.00
2 T	Dichlorodifluoromethane	50.000	50.750	-1.5	97	0.00
3 P	Chloromethane	50.000	50.941	-1.9	103	0.00
4 C	Vinyl Chloride	50.000	52.213	-4.4	101	0.00
5 T	Bromomethane	50.000	76.068	-52.1#	145	0.02
6 T	Chloroethane	50.000	52.860	-5.7	102	0.01
7 T	Trichlorofluoromethane	50.000	53.427	-6.9	102	0.02
8 T	Isoprene	50.000	54.162	-8.3	96	0.01
9 T	Acrolein	100.000	94.645	5.4	87	0.00
10 T	1,1,2-Trichloro-1,2,2-Trifl	50.000	54.455	-8.9	103	0.02
11 T	Acetone	50.000	55.459	-10.9	95	-0.01
12 C	1,1-Dichloroethene	50.000	48.455	3.1	84	0.00
13 T	Dimethyl Sulfide	50.000	54.000	-8.0	93	0.00
14 T	Iodomethane	50.000	67.522	-35.0#	147	-0.01
15 T	Methylene Chloride	50.000	48.439	3.1	92	0.00
16 T	Carbon Disulfide	50.000	53.966	-7.9	101	0.00
17 T	Acrylonitrile	50.000	50.483	-1.0	96	0.00
18 T	Methyl Tert Butyl Ether	50.000	57.946	-15.9	102	0.00
19 T	trans-1,2-Dichloroethene	50.000	53.733	-7.5	95	0.00
20 T	n-Hexane	50.000	57.460	-14.9	102	0.00
21 T	Vinyl Acetate	50.000	53.756	-7.5	100	0.00
22 P	1,1-Dichloroethane	50.000	51.503	-3.0	95	0.00
23 T	2-Butanone	50.000	47.309	5.4	89	0.00
24 T	2,2-Dichloropropane	50.000	62.779	-25.6#	107	0.00
25 T	cis-1,2-Dichloroethene	50.000	55.871	-11.7	99	0.00
26 C	Chloroform	50.000	51.946	-3.9	97	0.00
27 T	Bromochloromethane	50.000	57.742	-15.5	106	0.00
28 S	Dibromofluoromethane	50.000	58.513	-17.0	108	0.00
29 T	1,1,1-Trichloroethane	50.000	55.198	-10.4	97	0.00
30 T	Cyclohexane	50.000	55.749	-11.5	97	0.00
31 T	1,1-Dichloropropene	50.000	54.381	-8.8	94	0.00
32 T	Carbon Tetrachloride	50.000	57.366	-14.7	101	0.00
33 S	1,2-Dichloroethane-d4	50.000	53.290	-6.6	99	0.00
34 T	1,2-Dichloroethane	50.000	48.583	2.8	90	0.00
35 T	Benzene	50.000	51.788	-3.6	95	0.00
36 T	Trichloroethene	50.000	59.495	-19.0	107	0.00
37 C	1,2-Dichloropropane	50.000	54.079	-8.2	98	0.00
38 T	Bromodichloromethane	50.000	54.039	-8.1	99	0.00
39 T	Dibromomethane	50.000	56.069	-12.1	100	0.00
40 T	2-Chloroethyl Vinyl Ether	50.000	70.611	-41.2#	166	0.00
41 T	4-Methyl-2-Pentanone	50.000	48.380	3.2	94	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
42 T	cis-1,3-Dichloropropene	50.000	60.463	-20.9	104	0.00
43 T	Dimethyl Disulfide	50.000	51.884	-3.8	97	0.00
44 I	Chlorobenzene-d5	50.000	50.000	0.0	97	0.00
45 S	Toluene-d8	50.000	55.690	-11.4	108	0.00
46 C	Toluene	50.000	51.948	-3.9	101	0.00
47 T	Ethyl Methacrylate	50.000	50.886	-1.8	97	-0.01
48 T	trans-1,3-Dichloropropene	50.000	57.430	-14.9	108	0.00
49 T	1,1,2-Trichloroethane	50.000	50.798	-1.6	107	0.00
50 T	2-Hexanone	50.000	44.222	11.6	93	0.00
51 T	1,3-Dichloropropane	50.000	50.836	-1.7	104	0.00
52 T	Tetrachloroethene	50.000	54.303	-8.6	107	0.00
53 T	Dibromochloromethane	50.000	56.523	-13.0	112	0.00
54 T	1,2-Dibromoethane	50.000	53.440	-6.9	107	0.00
55 T	1-Chlorohexane	50.000	56.604	-13.2	104	0.00
56 P	Chlorobenzene	50.000	52.911	-5.8	111	0.00
57 T	1,1,1,2-Tetrachloroethane	50.000	57.885	-15.8	116	0.00
58 C	Ethylbenzene	50.000	54.448	-8.9	106	0.00
59 T	m-,p-Xylene	100.000	106.596	-6.6	104	0.00
60 T	o-Xylene	50.000	56.294	-12.6	105	0.00
61 T	Styrene	50.000	56.732	-13.5	107	0.00
62 P	Bromoform	50.000	61.366	-22.7	123	0.00
63 T	Isopropylbenzene	50.000	54.754	-9.5	105	0.00
64 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	97	0.00
65 P	1,1,2,2-Tetrachloroethane	50.000	52.620	-5.2	108	0.00
66 S	p-Bromofluorobenzene	50.000	52.572	-5.1	103	0.00
67 T	1,2,3-Trichloropropane	50.000	52.552	-5.1	112	0.00
68 T	trans-1,4-Dichloro-2-Butene	50.000	46.496	7.0	96	0.00
69 T	n-Propylbenzene	50.000	53.537	-7.1	102	0.00
70 T	Bromobenzene	50.000	56.894	-13.8	122	0.00
71 T	1,3,5-Trimethylbenzene	50.000	54.812	-9.6	103	0.00
72 T	2-Chlorotoluene	50.000	49.644	0.7	103	0.00
73 T	4-Chlorotoluene	50.000	51.543	-3.1	103	0.00
74 T	a-Methylstyrene	50.000	50.841	-1.7	101	0.00
75 T	tert-Butylbenzene	50.000	56.079	-12.2	112	0.00
76 T	1,2,4-Trimethylbenzene	50.000	52.396	-4.8	103	0.00
77 T	sec-Butylbenzene	50.000	54.023	-8.0	103	0.00
78 T	p-Isopropyltoluene	50.000	53.711	-7.4	105	0.00
79 T	1,3-Dichlorobenzene	50.000	52.014	-4.0	111	0.00
80 T	1,4-Dichlorobenzene	50.000	50.206	-0.4	111	0.00

(#) = Out of Range

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
Acq On : 2 Apr 2002 8:34
Sample : WG115462-02 50PPB SOIL STD 8260B
Misc : 7,1 SV9218
MS Integration Params: RTEINT.P

Vial: 2
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Wed Mar 06 10:09:02 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
81 T	n-Butylbenzene	50.000	50.775	-1.5	100	0.00
82 T	1,2-Dichlorobenzene	50.000	51.404	-2.8	111	0.00
83 T	1,2-Dibromo-3-Chloropropane	50.000	58.024	-16.0	126	0.00
84 T	1,2,4-Trichlorobenzene	50.000	54.585	-9.2	115	0.00
85 T	Hexachlorobutadiene	50.000	57.186	-14.4	119	0.00
86 T	Naphthalene	50.000	51.559	-3.1	106	0.00
87 T	1,2,3-Trichlorobenzene	50.000	53.693	-7.4	117	0.00

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Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 13:50 2002

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	857159	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	641700	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	372186	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.87	111	214344	58.5127	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	117.02%
33) 1,2-Dichloroethane-d4	9.51	65	301466	53.2902	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.58%
45) Toluene-d8	11.91	98	742527	55.6905	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	111.38%
66) p-Bromofluorobenzene	15.29	95	315828	52.5715	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	105.14%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.58	85	381138	50.7498	ug/kg	93
3) Chloromethane	2.96	50	246446	50.9407	ug/kg	100
4) Vinyl Chloride	3.15	62	218863	52.2129	ug/kg	96
5) Bromomethane	3.93	94	177040	76.0682	ug/kg	92
6) Chloroethane	4.09	64	169508	52.8599	ug/kg#	90
7) Trichlorofluoromethane	4.57	101	507765	53.4273	ug/kg#	61
8) Isoprene	5.14	67	258865	54.1624	ug/kg#	39
9) Acrolein	5.33	56	50793	94.6448	ug/kg	97
10) 1,1,2-Trichloro-1,2,2-Trif	5.37	101	240798	54.4553	ug/kg#	24
11) Acetone	5.45	43	79885	55.4586	ug/kg#	72
12) 1,1-Dichloroethene	5.65	96	150555	48.4547	ug/kg	87
13) Dimethyl Sulfide	5.91	62	194656	53.9995	ug/kg	100
14) Iodomethane	6.14	142	144611	67.5224	ug/kg	100
15) Methylene Chloride	6.43	84	202579	48.4385	ug/kg	93
16) Carbon Disulfide	6.45	76	648742	53.9657	ug/kg	99
17) Acrylonitrile	6.62	53	73882	50.4826	ug/kg	95
18) Methyl Tert Butyl Ether	6.69	73	540377	57.9460	ug/kg#	71
19) trans-1,2-Dichloroethene	6.90	96	190911	53.7327	ug/kg	98
20) n-Hexane	7.01	57	350858	57.4597	ug/kg#	69
21) Vinyl Acetate	7.52	43	528809	53.7564	ug/kg#	85
22) 1,1-Dichloroethane	7.52	63	389758	51.5033	ug/kg#	98
23) 2-Butanone	8.11	43	90779	47.3089	ug/kg#	74
24) 2,2-Dichloropropane	8.31	77	377289	62.7790	ug/kg#	76
25) cis-1,2-Dichloroethene	8.37	96	205370	55.8709	ug/kg	92
26) Chloroform	8.58	83	422985	51.9465	ug/kg	97
27) Bromochloromethane	8.81	128	92575	57.7421	ug/kg	90
29) 1,1,1-Trichloroethane	9.12	97	398698	55.1983	ug/kg	98

(#) = qualifier out of range (m) = manual integration

9M19479.D 8260SL.M

Wed Apr 03 13:50:28 2002

HPMS_9

Page 1

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 13:50 2002

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.15	56	385238	55.7493	ug/kg#	92
31) 1,1-Dichloropropene	9.32	75	311454	54.3807	ug/kg#	89
32) Carbon Tetrachloride	9.46	117	356734	57.3661	ug/kg	100
34) 1,2-Dichloroethane	9.63	62	356402	48.5825	ug/kg#	99
35) Benzene	9.67	78	799168	51.7875	ug/kg	99
36) Trichloroethene	10.43	130	211194	59.4953	ug/kg	96
37) 1,2-Dichloropropane	10.65	63	207933	54.0790	ug/kg	98
38) Bromodichloromethane	10.94	83	315796	54.0392	ug/kg#	98
39) Dibromomethane	11.01	93	130650	56.0691	ug/kg	92
40) 2-Chloroethyl Vinyl Ether	11.27	63	91231	70.6109	ug/kg	99
41) 4-Methyl-2-Pentanone	11.31	58	74298	48.3799	ug/kg#	20
42) cis-1,3-Dichloropropene	11.59	75	341497	60.4625	ug/kg	96
43) Dimethyl Disulfide	11.84	79	182693	51.8845	ug/kg	99
46) Toluene	12.01	91	860041	51.9482	ug/kg	98
47) Ethyl Methacrylate	12.14	69	239416	50.8858	ug/kg#	84
48) trans-1,3-Dichloropropene	12.19	75	350084	57.4297	ug/kg	98
49) 1,1,2-Trichloroethane	12.40	97	185452	50.7983	ug/kg	95
50) 2-Hexanone	12.37	43	147192	44.2223	ug/kg#	72
51) 1,3-Dichloropropane	12.70	76	330598	50.8362	ug/kg	86
52) Tetrachloroethene	12.83	164	194662	54.3035	ug/kg	93
53) Dibromochloromethane	13.08	129	235964	56.5232	ug/kg	97
54) 1,2-Dibromoethane	13.33	107	193462	53.4399	ug/kg	97
55) 1-Chlorohexane	13.46	91	302369	56.6041	ug/kg	92
56) Chlorobenzene	13.84	112	609134	52.9115	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.88	131	237418	57.8850	ug/kg	92
58) Ethylbenzene	13.88	106	333929	54.4478	ug/kg	92
59) m-,p-Xylene	13.97	106	847616	106.5961	ug/kg	99
60) o-Xylene	14.53	106	396581	56.2937	ug/kg	95
61) Styrene	14.56	104	700808	56.7319	ug/kg	91
62) Bromoform	15.02	173	191639	61.3662	ug/kg	95
63) Isopropylbenzene	14.95	105	1114530	54.7537	ug/kg	100
65) 1,1,2,2-Tetrachloroethane	15.16	83	268152	52.6200	ug/kg#	92
67) 1,2,3-Trichloropropane	15.35	110	92085	52.5521	ug/kg	84
68) trans-1,4-Dichloro-2-Buten	15.40	53	71731	46.4956	ug/kg#	52
69) n-Propylbenzene	15.46	91	1389700	53.5370	ug/kg	94
70) Bromobenzene	15.56	156	284849	56.8939	ug/kg	83
71) 1,3,5-Trimethylbenzene	15.65	105	964190	54.8118	ug/kg	96
72) 2-Chlorotoluene	15.72	91	813000m	49.6444	ug/kg	
73) 4-Chlorotoluene	15.77	91	880392	51.5425	ug/kg	97
74) a-Methylstyrene	16.05	118	444489	50.8412	ug/kg	96
75) tert-Butylbenzene	16.11	119	974390	56.0794	ug/kg#	70

(#) = qualifier out of range (m) = manual integration

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 13:50 2002

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	16.16	105	1009511	52.3958	ug/kg	98
77) sec-Butylbenzene	16.37	105	1236446	54.0229	ug/kg	99
78) p-Isopropyltoluene	16.54	119	1057480	53.7108	ug/kg	100
79) 1,3-Dichlorobenzene	16.71	146	539529	52.0144	ug/kg	98
80) 1,4-Dichlorobenzene	16.84	146	545753	50.2060	ug/kg	99
81) n-Butylbenzene	17.06	91	1002398	50.7749	ug/kg	96
82) 1,2-Dichlorobenzene	17.32	146	510114	51.4040	ug/kg	95
83) 1,2-Dibromo-3-Chloropropan	18.31	157	63808	58.0237	ug/kg#	74
84) 1,2,4-Trichlorobenzene	19.45	180	408444	54.5850	ug/kg	97
85) Hexachlorobutadiene	19.61	225	281949	57.1857	ug/kg	96
86) Naphthalene	19.80	128	818356	51.5592	ug/kg	99
87) 1,2,3-Trichlorobenzene	20.12	180	386234	53.6928	ug/kg	97

(#) = qualifier out of range (m) = manual integration

9M19479.D 8260SL.M

Wed Apr 03 13:50:29 2002

HPMS_9

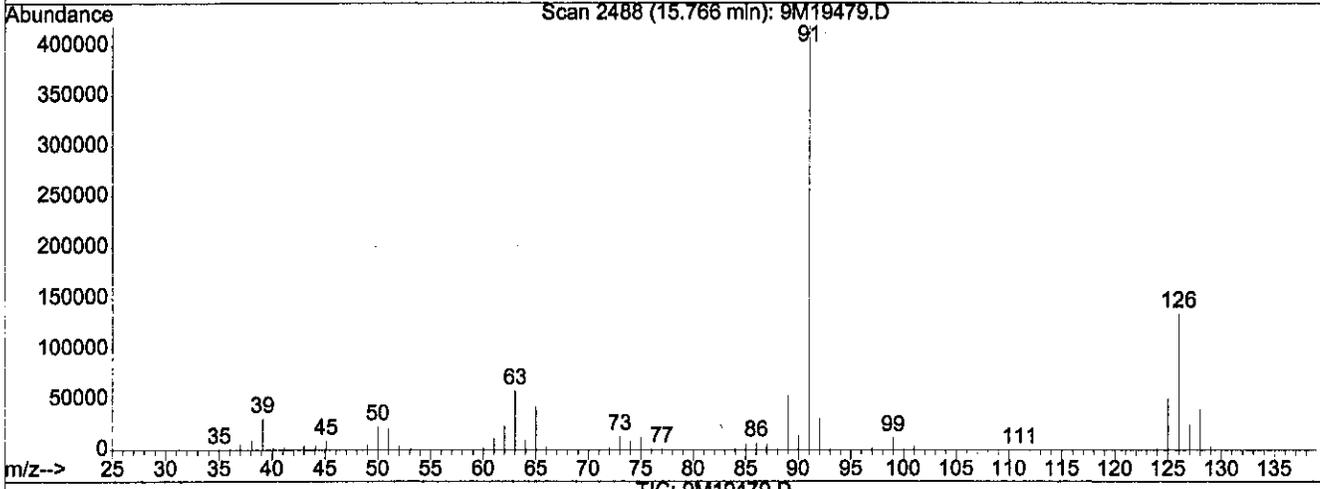
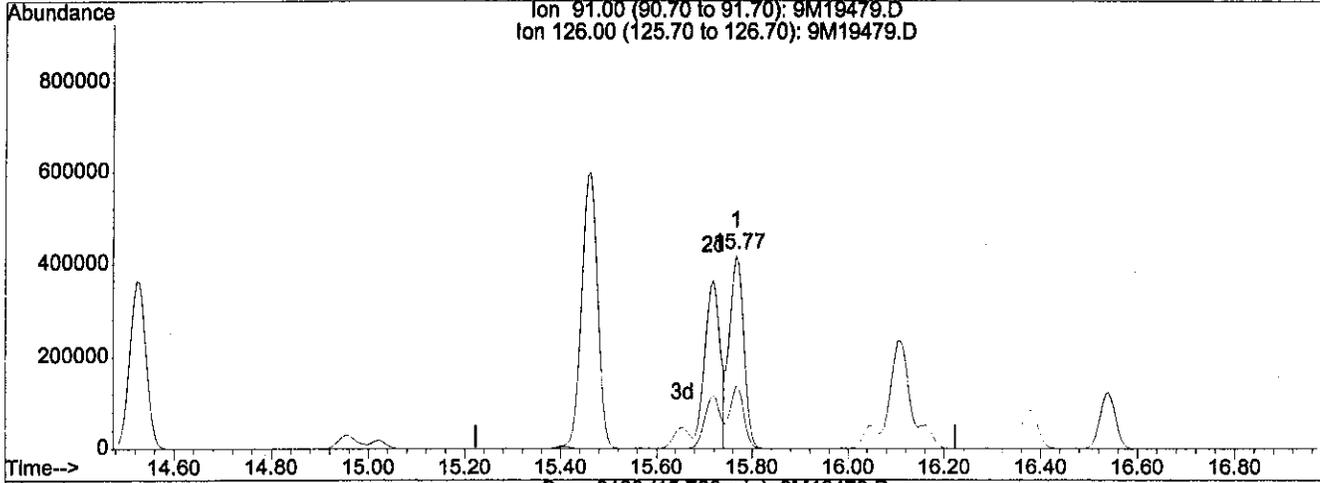
Page 3

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 8:57 2002

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration



(72) 2-Chlorotoluene (T)
 15.77min 53.76ug/kg
 response 880392

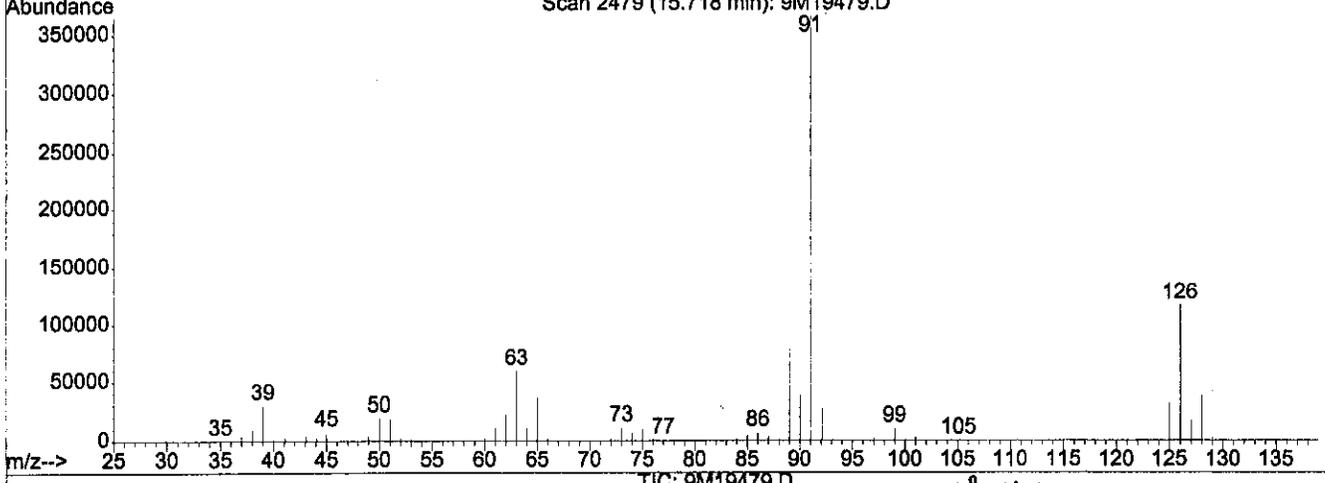
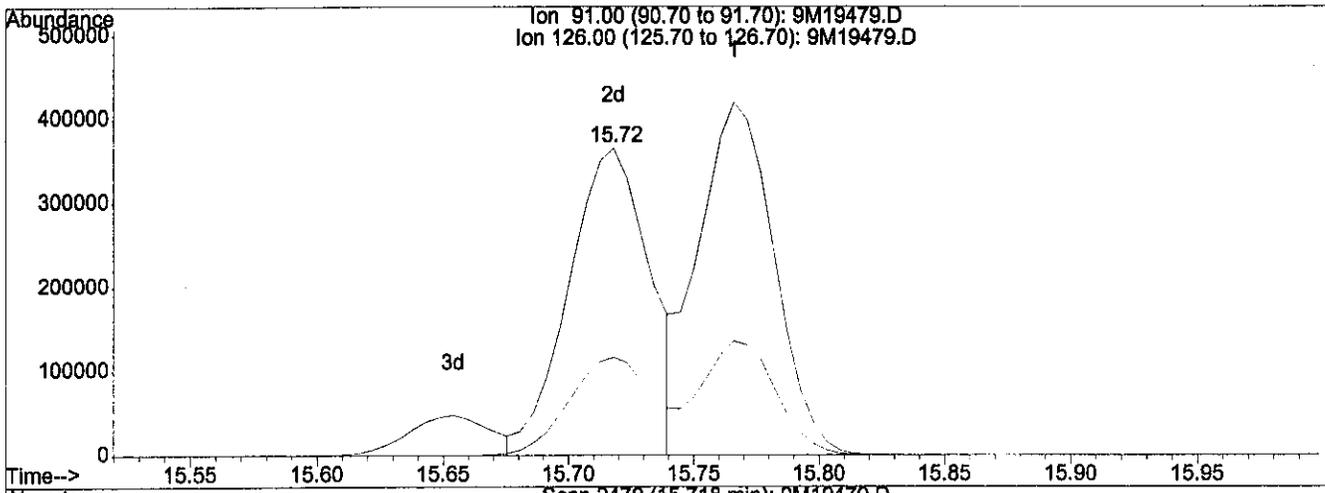
Ion	Exp%	Act%
91.00	100	100
126.00	28.40	30.45
0.00	0.00	0.00
0.00	0.00	0.00

Data File : D:\HPCHEM\1\DATA\040202\9M19479.D
 Acq On : 2 Apr 2002 8:34
 Sample : WG115462-02 50PPB SOIL STD 8260B
 Misc : 7,1 SV9218
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 13:50 2002

Vial: 2
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Multiple Level Calibration



(72) 2-Chlorotoluene (T)

15.72min 49.64ug/kg m

response 813000

Ion	Exp%	Act%
91.00	100	100
126.00	28.40	32.97
0.00	0.00	0.00
0.00	0.00	0.00

mcg 4.302

#1

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Ical Date: 3/22/2002 Ical Filename: 6M29662.D
CCV Date: 4 Apr 2002 19:24 CCV Filename: 6M29952.D

Instrument: HPMS 6

	Fluorbenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d	
	Ret. Time	Response	Ret. Time	Response	Ret. Time	Response
Ical	10.7	1428571	15.17	1082281	18.72	647997
CCV	10.7	1296036	15.17	985308	18.72	622791
	Pass	Pass	Pass	Pass	Pass	Pass

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorobenzene	1.000	1.000	0.0	91	0.00
2 T	Dichlorodifluoromethane	0.430	0.346	19.5	71	-0.02
3 P	Chloromethane	0.281	0.242 ✓	13.9	81	-0.02
4 C	Vinyl Chloride	0.199	0.160	19.6 ✓	83	-0.02
5 T	Bromomethane	0.121	0.107	11.6	81	-0.03
6 T	Chloroethane	0.123	0.118	4.1	88	-0.01
7 T	Trichlorofluoromethane	0.296	0.300	-1.4	90	-0.02
8 T	Isoprene	0.223	0.279	-25.1#	101	-0.03
9 T	Acrolein	0.015	0.017	-13.3	95	-0.02
10 T	1,1,2-Trichloro-1,2,2-Trifl	0.347	0.345	0.6	87	-0.02
11 T	Acetone	0.040	0.036	10.0	98	0.00
12 C	1,1-Dichloroethene	0.260	0.253	2.7 ✓	82	-0.01
13 T	Dimethyl Sulfide	0.244	0.251	-2.9	92	-0.02
14 T	Iodomethane	0.182	0.266	-46.2#	125	0.00
15 T	Methylene Chloride	0.302	0.286	5.3	92	0.00
16 T	Carbon Disulfide	0.856	0.857	-0.1	85	-0.02
17 T	Acrylonitrile	0.048	0.047	2.1	89	0.00
18 T	Methyl Tert Butyl Ether	0.386	0.428	-10.9	99	0.00
19 T	trans-1,2-Dichloroethene	0.301	0.312	-3.7	88	-0.02
20 T	n-Hexane	0.396	0.443	-11.9	87	-0.03
21 T	Vinyl Acetate	0.327	0.427	-30.6#	104	0.00
22 P	1,1-Dichloroethane	0.601	0.594 ✓	1.2	88	-0.01
23 T	2-Butanone	0.044	0.046	-4.5	104	0.00
24 T	2,2-Dichloropropane	0.407	0.404	0.7	78	0.00
25 T	cis-1,2-Dichloroethene	0.290	0.323	-11.4	90	0.00
26 C	Chloroform	0.584	0.552	5.5 ✓	87	-0.01
27 T	Bromochloromethane	0.166	0.170	-2.4	96	0.00
28 S	Dibromofluoromethane	0.301	0.315	-4.7	96	0.00
29 T	1,1,1-Trichloroethane	0.503	0.510	-1.4	87	0.00
30 T	Cyclohexane	0.507	0.542	-6.9	88	0.00
31 T	1,1-Dichloropropene	0.400	0.420	-5.0	84	-0.01
32 T	Carbon Tetrachloride	0.422	0.471	-11.6	89	-0.01
33 S	1,2-Dichloroethane-d4	0.303	0.319	-5.3	101	0.00
34 T	1,2-Dichloroethane	0.378	0.397	-5.0	98	0.00
35 T	Benzene	1.103	1.152	-4.4	88	0.00
36 T	Trichloroethene	0.312	0.307	1.6	83	0.00
37 C	1,2-Dichloropropane	0.274	0.275	-0.4 ✓	86	0.00
38 T	Bromodichloromethane	0.321	0.368	-14.6	96	0.00
39 T	Dibromomethane	0.125	0.138	-10.4	102	0.00
40 T	2-Chloroethyl Vinyl Ether	0.072	0.106	-47.2#	122	0.00
41 T	4-Methyl-2-Pentanone	0.038	0.047	-23.7#	115	0.00

272

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42 T	cis-1,3-Dichloropropene	0.314	0.383	-22.0#	93	0.00
43 T	Dimethyl Disulfide	0.144	0.168	-16.7	91	0.00
44 I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00
45 S	Toluene-d8	1.342	1.455	-8.4	93	0.00
46 C	Toluene	1.449	1.643	-13.4	90	0.00
47 T	Ethyl Methacrylate	0.222	0.263	-18.5	108	0.00
48 T	trans-1,3-Dichloropropene	0.366	0.446	-21.9#	98	0.00
49 T	1,1,2-Trichloroethane	0.231	0.245	-6.1	99	0.00
50 T	2-Hexanone	0.169	0.108	36.1#	83	0.00
51 T	1,3-Dichloropropane	0.379	0.427	-12.7	100	0.00
52 T	Tetrachloroethene	0.342	0.352	-2.9	89	0.00
53 T	Dibromochloromethane	0.268	0.326	-21.6#	98	0.00
54 T	1,2-Dibromoethane	0.206	0.235	-14.1	100	0.00
55 T	1-Chlorohexane	0.410	0.519	-26.6#	86	0.00
56 P	Chlorobenzene	1.202	1.124	6.5	87	0.00
57 T	1,1,1,2-Tetrachloroethane	0.364	0.397	-9.1	92	0.00
58 C	Ethylbenzene	0.567	0.600	-5.8	89	0.00
59 T	m-,p-Xylene	0.732	0.768	-4.9	88	0.00
60 T	o-Xylene	0.630	0.742	-17.8	90	0.00
61 T	Styrene	1.146	1.266	-10.5	88	0.00
62 P	Bromoform	0.146	0.193	-32.2#	108	0.00
63 T	Isopropylbenzene	1.714	2.007	-17.1	89	0.00
64 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00
65 P	1,1,2,2-Tetrachloroethane	0.392	0.429	-9.4	110	0.00
66 S	p-Bromofluorobenzene	0.928	1.011	-8.9	99	0.00
67 T	1,2,3-Trichloropropane	0.129	0.140	-8.5	106	0.00
68 T	trans-1,4-Dichloro-2-Butene	0.096	0.111	-15.6	113	0.00
69 T	n-Propylbenzene	3.620	3.912	-8.1	88	0.00
70 T	Bromobenzene	0.768	0.791	-3.0	94	0.00
71 T	1,3,5-Trimethylbenzene	2.612	2.873	-10.0	89	0.00
72 T	2-Chlorotoluene	2.406	2.530	-5.2	92	0.00
73 T	4-Chlorotoluene	2.503	2.509	-0.2	86	0.00
74 T	a-Methylstyrene	1.421	1.514	-6.5	90	0.00
75 T	tert-Butylbenzene	2.462	2.625	-6.6	91	0.00
76 T	1,2,4-Trimethylbenzene	2.929	3.053	-4.2	90	0.00
77 T	sec-Butylbenzene	3.204	3.613	-12.8	92	0.00
78 T	p-Isopropyltoluene	2.878	3.177	-10.4	88	0.00
79 T	1,3-Dichlorobenzene	1.635	1.667	-2.0	93	0.00
80 T	1,4-Dichlorobenzene	1.712	1.687	1.5	95	0.00

(#) = Out of Range

6M29952.D 8260BWT.M

Thu Apr 04 20:23:04 2002

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81 T	n-Butylbenzene	2.539	2.915	-14.8	93	0.00
82 T	1,2-Dichlorobenzene	1.380	1.423	-3.1	96	0.00
83 T	1,2-Dibromo-3-Chloropropane	0.048	0.059	-22.9#	117	0.00
84 T	1,2,4-Trichlorobenzene	0.701	0.897	-28.0#	104	0.00
85 T	Hexachlorobutadiene	0.441	0.461	-4.5	89	0.00
86 T	Naphthalene	0.936	1.390	-48.5#	115	0.00
87 T	1,2,3-Trichlorobenzene	0.571	0.737	-29.1#	113	0.00

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Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	Fluorobenzene	25.000	25.000	0.0	91	0.00
2 T	Dichlorodifluoromethane	50.000	40.292	19.4	71	-0.02
3 P	Chloromethane	50.000	43.054	13.9	81	-0.02
4 C	Vinyl Chloride	50.000	40.150	19.7	83	-0.02
5 T	Bromomethane	50.000	44.325	11.3	81	-0.03
6 T	Chloroethane	50.000	48.221	3.6	88	-0.01
7 T	Trichlorofluoromethane	50.000	50.590	-1.2	90	-0.02
8 T	Isoprene	50.000	62.588	-25.2#	101	-0.03
9 T	Acrolein	100.000	108.677	-8.7	95	-0.02
10 T	1,1,2-Trichloro-1,2,2-Trifl	50.000	49.714	0.6	87	-0.02
11 T	Acetone	50.000	44.863	10.3	98	0.00
12 C	1,1-Dichloroethene	50.000	48.657	2.7	82	-0.01
13 T	Dimethyl Sulfide	50.000	51.507	-3.0	92	-0.02
14 T	Iodomethane	50.000	72.894	-45.8#	125	0.00
15 T	Methylene Chloride	50.000	47.286	5.4	92	0.00
16 T	Carbon Disulfide	50.000	50.109	-0.2	85	-0.02
17 T	Acrylonitrile	50.000	49.328	1.3	89	0.00
18 T	Methyl Tert Butyl Ether	50.000	55.363	-10.7	99	0.00
19 T	trans-1,2-Dichloroethene	50.000	51.944	-3.9	88	-0.02
20 T	n-Hexane	50.000	55.849	-11.7	87	-0.03
21 T	Vinyl Acetate	50.000	65.290	-30.6#	104	0.00
22 P	1,1-Dichloroethane	50.000	49.406	1.2	88	-0.01
23 T	2-Butanone	50.000	52.566	-5.1	104	0.00
24 T	2,2-Dichloropropane	50.000	49.630	0.7	78	0.00
25 T	cis-1,2-Dichloroethene	50.000	55.607	-11.2	90	0.00
26 C	Chloroform	50.000	47.217	5.6	87	-0.01
27 T	Bromochloromethane	50.000	51.214	-2.4	96	0.00
28 S	Dibromofluoromethane	25.000	26.140	-4.6	96	0.00
29 T	1,1,1-Trichloroethane	50.000	50.645	-1.3	87	0.00
30 T	Cyclohexane	50.000	53.380	-6.8	88	0.00
31 T	1,1-Dichloropropene	50.000	52.584	-5.2	84	-0.01
32 T	Carbon Tetrachloride	50.000	55.855	-11.7	89	-0.01
33 S	1,2-Dichloroethane-d4	25.000	26.377	-5.5	101	0.00
34 T	1,2-Dichloroethane	50.000	52.544	-5.1	98	0.00
35 T	Benzene	50.000	52.234	-4.5	88	0.00
36 T	Trichloroethene	50.000	49.280	1.4	83	0.00
37 C	1,2-Dichloropropane	50.000	50.035	-0.1	86	0.00
38 T	Bromodichloromethane	50.000	57.270	-14.5	96	0.00
39 T	Dibromomethane	50.000	55.363	-10.7	102	0.00
40 T	2-Chloroethyl Vinyl Ether	50.000	73.439	-46.9#	122	0.00
41 T	4-Methyl-2-Pentanone	50.000	61.521	-23.0#	115	0.00

(#) = Out of Range

6M29952.D 8260BWT.M Thu Apr 04 20:23:08 2002

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Page 1

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B_WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42 T	cis-1,3-Dichloropropene	50.000	61.132	-22.3#	93	0.00
43 T	Dimethyl Disulfide	50.000	58.260	-16.5	91	0.00
44 I	Chlorobenzene-d5	25.000	25.000	0.0	91	0.00
45 S	Toluene-d8	25.000	27.109	-8.4	93	0.00
46 C	Toluene	50.000	56.679	-13.4	90	0.00
47 T	Ethyl Methacrylate	50.000	59.375	-18.8	108	0.00
48 T	trans-1,3-Dichloropropene	50.000	60.835	-21.7#	98	0.00
49 T	1,1,2-Trichloroethane	50.000	53.077	-6.2	99	0.00
50 T	2-Hexanone	50.000	32.069	35.9#	83	0.00
51 T	1,3-Dichloropropane	50.000	56.416	-12.8	100	0.00
52 T	Tetrachloroethene	50.000	51.445	-2.9	89	0.00
53 T	Dibromochloromethane	50.000	60.799	-21.6#	98	0.00
54 T	1,2-Dibromoethane	50.000	57.133	-14.3	100	0.00
55 T	1-Chlorohexane	50.000	63.348	-26.7#	86	0.00
56 P	Chlorobenzene	50.000	46.779	6.4	87	0.00
57 T	1,1,1,2-Tetrachloroethane	50.000	54.533	-9.1	92	0.00
58 C	Ethylbenzene	50.000	52.933	-5.9	89	0.00
59 T	m-,p-Xylene	100.000	104.822	-4.8	88	0.00
60 T	o-Xylene	50.000	58.931	-17.9	90	0.00
61 T	Styrene	50.000	55.235	-10.5	88	0.00
62 P	Bromoform	50.000	66.160	-32.3#	108	0.00
63 T	Isopropylbenzene	50.000	58.554	-17.1	89	0.00
64 I	1,4-Dichlorobenzene-d4	25.000	25.000	0.0	96	0.00
65 P	1,1,2,2-Tetrachloroethane	50.000	54.648	-9.3	110	0.00
66 S	p-Bromofluorobenzene	25.000	27.248	-9.0	99	0.00
67 T	1,2,3-Trichloropropane	50.000	54.553	-9.1	106	0.00
68 T	trans-1,4-Dichloro-2-Butene	50.000	58.146	-16.3	113	0.00
69 T	n-Propylbenzene	50.000	54.033	-8.1	88	0.00
70 T	Bromobenzene	50.000	51.467	-2.9	94	0.00
71 T	1,3,5-Trimethylbenzene	50.000	54.993	-10.0	89	0.00
72 T	2-Chlorotoluene	50.000	52.572	-5.1	92	0.00
73 T	4-Chlorotoluene	50.000	50.123	-0.2	86	0.00
74 T	a-Methylstyrene	50.000	53.248	-6.5	90	0.00
75 T	tert-Butylbenzene	50.000	53.315	-6.6	91	0.00
76 T	1,2,4-Trimethylbenzene	50.000	52.121	-4.2	90	0.00
77 T	sec-Butylbenzene	50.000	56.386	-12.8	92	0.00
78 T	p-Isopropyltoluene	50.000	55.186	-10.4	88	0.00
79 T	1,3-Dichlorobenzene	50.000	50.970	-1.9	93	0.00
80 T	1,4-Dichlorobenzene	50.000	49.278	1.4	95	0.00

(#) = Out of Range

6M29952.D 8260BWT.M

Thu Apr 04 20:23:09 2002

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Page 2

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Thu Apr 04 14:12:36 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81 T n-Butylbenzene	50.000	57.398	-14.8	93	0.00
82 T 1,2-Dichlorobenzene	50.000	51.561	-3.1	96	0.00
83 T 1,2-Dibromo-3-Chloropropane	50.000	61.398	-22.8#	117	0.00
84 T 1,2,4-Trichlorobenzene	50.000	63.997	-28.0#	104	0.00
85 T Hexachlorobutadiene	50.000	52.180	-4.4	89	0.00
86 T Naphthalene	50.000	74.239	-48.5#	115	0.00
87 T 1,2,3-Trichlorobenzene	50.000	64.602	-29.2#	113	0.00

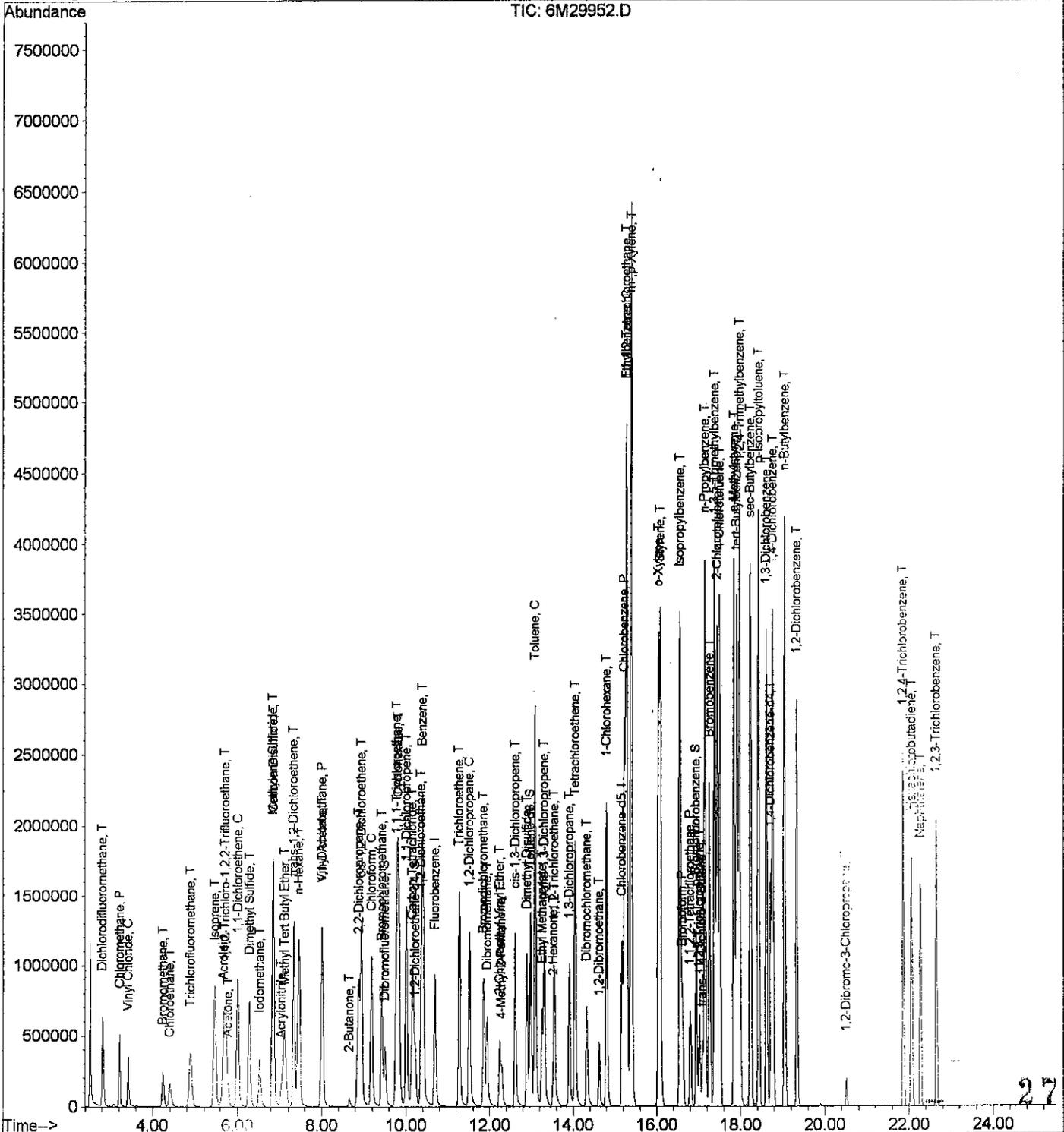
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
Acq On : 4 Apr 2002 19:24
Sample : WG115697-02 50PPB STD
Misc : 1,1 SV9227
MS Integration Params: rteint.p
Quant Time: Apr 4 19:50 2002

Vial: 2
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Thu Apr 04 14:12:36 2002
Response via : Initial Calibration



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Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p
 Quant Time: Apr 4 19:50 2002

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.70	96	1296036	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	985308	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	622791	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	408455	26.1400	ug/L	0.00
Spiked Amount	25.000	Range	86 - 118	Recovery	=	104.56%
33) 1,2-Dichloroethane-d4	10.23	65	413886	26.3774	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	105.52%
45) Toluene-d8	12.98	98	1434050	27.1088	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	108.44%
66) p-Bromofluorobenzene	16.94	95	629713	27.2483	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	109.00%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.81	85	897774	40.2924	ug/L	97
3) Chloromethane	3.22	50	626925	43.0537	ug/L	100
4) Vinyl Chloride	3.42	62	415162	40.1504	ug/L	100
5) Bromomethane	4.24	94	278646	44.3247	ug/L	99
6) Chloroethane	4.41	64	306709	48.2215	ug/L	96
7) Trichlorofluoromethane	4.89	101	777353	50.5896	ug/L	# 98
8) Isoprene	5.46	67	723898	62.5882	ug/L	99
9) Acrolein	5.66	56	86220	108.6772	ug/L	90
10) 1,1,2-Trichloro-1,2,2-Trif	5.70	101	894635	49.7140	ug/L	97
11) Acetone	5.78	43	93595	44.8627	ug/L	99
12) 1,1-Dichloroethene	6.01	96	654651	48.6570	ug/L	91
13) Dimethyl Sulfide	6.28	62	650316	51.5066	ug/L	# 1
14) Iodomethane	6.53	142	689035	72.8941	ug/L	96
15) Methylene Chloride	6.83	84	740774	47.2860	ug/L	92
16) Carbon Disulfide	6.85	76	2222650	50.1088	ug/L	99
17) Acrylonitrile	7.03	53	122581	49.3279	ug/L	87
18) Methyl Tert Butyl Ether	7.11	73	1109047	55.3631	ug/L	99
19) trans-1,2-Dichloroethene	7.33	96	809717	51.9442	ug/L	94
20) n-Hexane	7.45	57	1147805	55.8487	ug/L	99
21) Vinyl Acetate	8.00	43	1106473	65.2902	ug/L	98
22) 1,1-Dichloroethane	8.01	63	1539576	49.4056	ug/L	97
23) 2-Butanone	8.66	43	118776	52.5662	ug/L	96
24) 2,2-Dichloropropane	8.88	77	1046052	49.6295	ug/L	100
25) cis-1,2-Dichloroethene	8.94	96	837232	55.6065	ug/L	96
26) Chloroform	9.18	83	1429819	47.2173	ug/L	98
27) Bromochloromethane	9.43	130	441777	51.2136	ug/L	84
29) 1,1,1-Trichloroethane	9.78	97	1321824	50.6449	ug/L	88

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(#) = qualifier out of range (m) = manual integration
 6M29952.D 8260BWT.M Thu Apr 04 20:22:07 2002

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p
 Quant Time: Apr 4 19:50 2002

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Cyclohexane	9.82	56	1403838	53.3797	ug/L	97
31) 1,1-Dichloropropene	10.01	75	1089956	52.5836	ug/L	97
32) Carbon Tetrachloride	10.16	117	1222096	55.8547	ug/L	99
34) 1,2-Dichloroethane	10.36	62	1029383	52.5441	ug/L #	83
35) Benzene	10.40	78	2986883	52.2335	ug/L	99
36) Trichloroethene	11.28	130	796472	49.2800	ug/L	91
37) 1,2-Dichloropropane	11.52	63	711898	50.0354	ug/L	97
38) Bromodichloromethane	11.86	83	954179	57.2698	ug/L	99
39) Dibromomethane	11.94	93	357832	55.3633	ug/L	99
40) 2-Chloroethyl Vinyl Ether	12.24	63	273519	73.4387	ug/L	97
41) 4-Methyl-2-Pentanone	12.29	58	121334	61.5205	ug/L	94
42) cis-1,3-Dichloropropene	12.61	75	993826	61.1321	ug/L	100
43) Dimethyl Disulfide	12.89	79	435963	58.2597	ug/L	96
46) Toluene	13.09	91	3237037	56.6795	ug/L	97
47) Ethyl Methacrylate	13.26	69	518897	59.3753	ug/L	98
48) trans-1,3-Dichloropropene	13.31	75	878184	60.8355	ug/L	98
49) 1,1,2-Trichloroethane	13.55	97	483758	53.0767	ug/L	99
50) 2-Hexanone	13.52	43	213196	32.0694	ug/L	98
51) 1,3-Dichloropropane	13.91	76	842419	56.4162	ug/L	96
52) Tetrachloroethene	14.05	164	693478	51.4445	ug/L	98
53) Dibromochloromethane	14.33	129	642253	60.7985	ug/L	99
54) 1,2-Dibromoethane	14.63	107	463543	57.1334	ug/L	100
55) 1-Chlorohexane	14.80	91	1023538	63.3485	ug/L	89
56) Chlorobenzene	15.23	112	2215337	46.7786	ug/L	84
57) 1,1,1,2-Tetrachloroethane	15.27	131	782158	54.5329	ug/L	99
58) Ethylbenzene	15.29	106	1183321	52.9325	ug/L	88
59) m-,p-Xylene	15.39	106	3025949	104.8224	ug/L	85
60) o-Xylene	16.04	106	1463072	58.9315	ug/L	93
61) Styrene	16.09	104	2494207	55.2354	ug/L	99
62) Bromoform	16.62	173	380503	66.1603	ug/L	99
63) Isopropylbenzene	16.56	105	3955276	58.5539	ug/L	96
65) 1,1,2,2-Tetrachloroethane	16.80	83	534197	54.6480	ug/L	100
67) 1,2,3-Trichloropropane	17.02	110	174873	54.5533	ug/L	97
68) trans-1,4-Dichloro-2-Buten	17.09	53	138700	58.1462	ug/L #	71
69) n-Propylbenzene	17.15	91	4872388	54.0327	ug/L	96
70) Bromobenzene	17.26	156	985085	51.4666	ug/L	100
71) 1,3,5-Trimethylbenzene	17.38	105	3579020	54.9929	ug/L	96
72) 2-Chlorotoluene	17.45	91	3151364	52.5716	ug/L	97
73) 4-Chlorotoluene	17.51	91	3125269	50.1227	ug/L	97
74) a-Methylstyrene	17.85	118	1885252	53.2484	ug/L	98
75) tert-Butylbenzene	17.92	119	3270249	53.3151	ug/L	97

280

(#) = qualifier out of range (m) = manual integration
 6M29952.D 8260BWT.M Thu Apr 04 20:22:08 2002

Data File : C:\HPCHEM\1\DATA\040402\6M29952.D
 Acq On : 4 Apr 2002 19:24
 Sample : WG115697-02 50PPB STD
 Misc : 1,1 SV9227
 MS Integration Params: rteint.p
 Quant Time: Apr 4 19:50 2002

Vial: 2
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

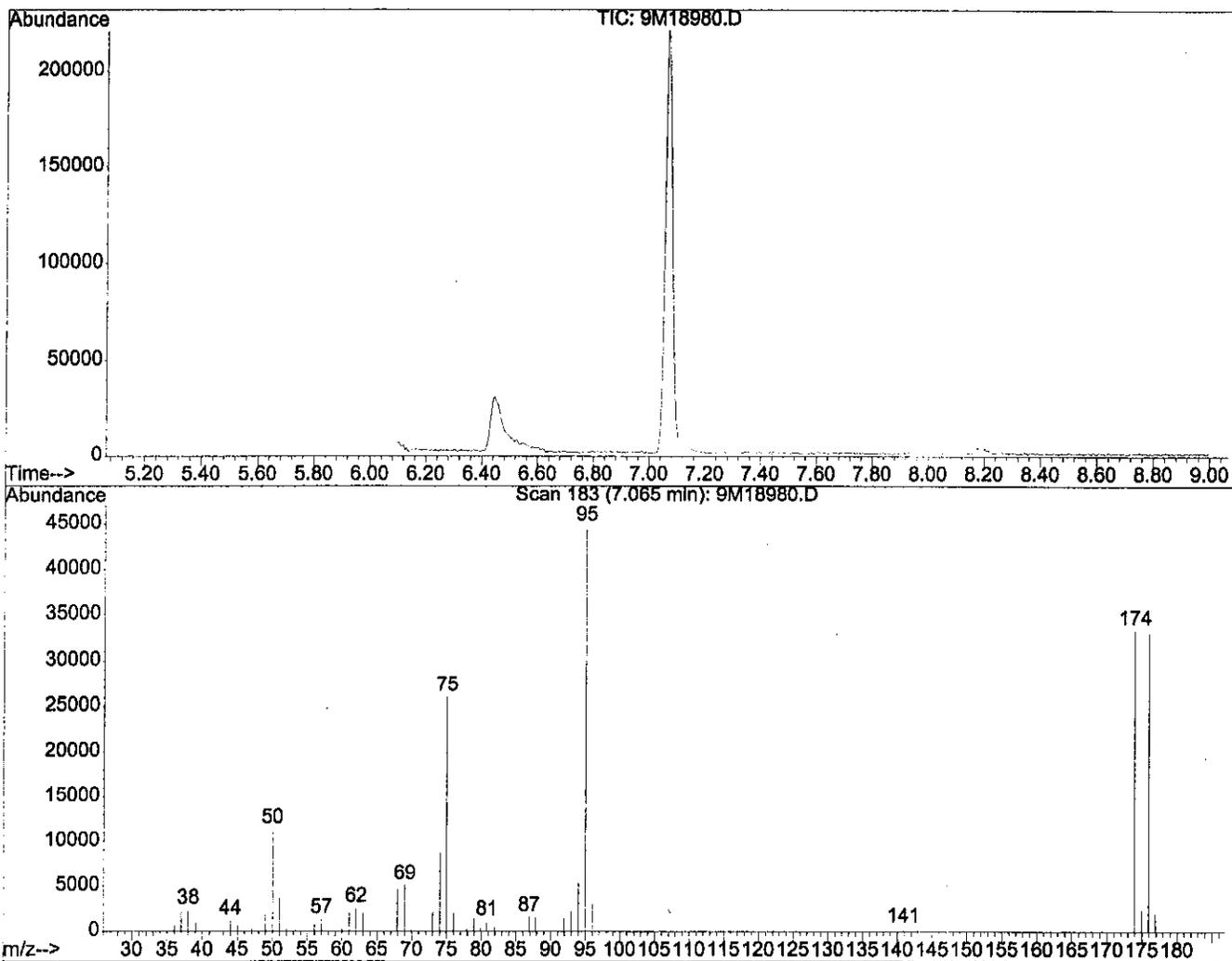
Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) 1,2,4-Trimethylbenzene	17.98	105	3802602	52.1212	ug/L	96
77) sec-Butylbenzene	18.24	105	4500842	56.3856	ug/L	97
78) p-Isopropyltoluene	18.43	119	3956793	55.1862	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	2076015	50.9703	ug/L	100
80) 1,4-Dichlorobenzene	18.78	146	2101133	49.2779	ug/L	100
81) n-Butylbenzene	19.05	91	3630310	57.3981	ug/L	96
82) 1,2-Dichlorobenzene	19.35	146	1772184	51.5608	ug/L	100
83) 1,2-Dibromo-3-Chloropropan	20.52	157	73902	61.3978	ug/L	88
84) 1,2,4-Trichlorobenzene	21.87	180	1117707	63.9965	ug/L	98
85) Hexachlorobutadiene	22.07	225	573845	52.1801	ug/L #	37
86) Naphthalene	22.28	128	1731784	74.2392	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	918499	64.6021	ug/L	98

2.1.1.4 Raw QC Data

Data File : D:\HPCHEM\1\DATA\030502\9M18980.D
 Acq On : 5 Mar 2002 8:29
 Sample : WG113899-01 50NG BFB 8260B
 Misc : 1,1 SV9043
 MS Integration Params: RTEINT.P
 Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 02/20/2002 - HPMS 9

Vial: 1
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00



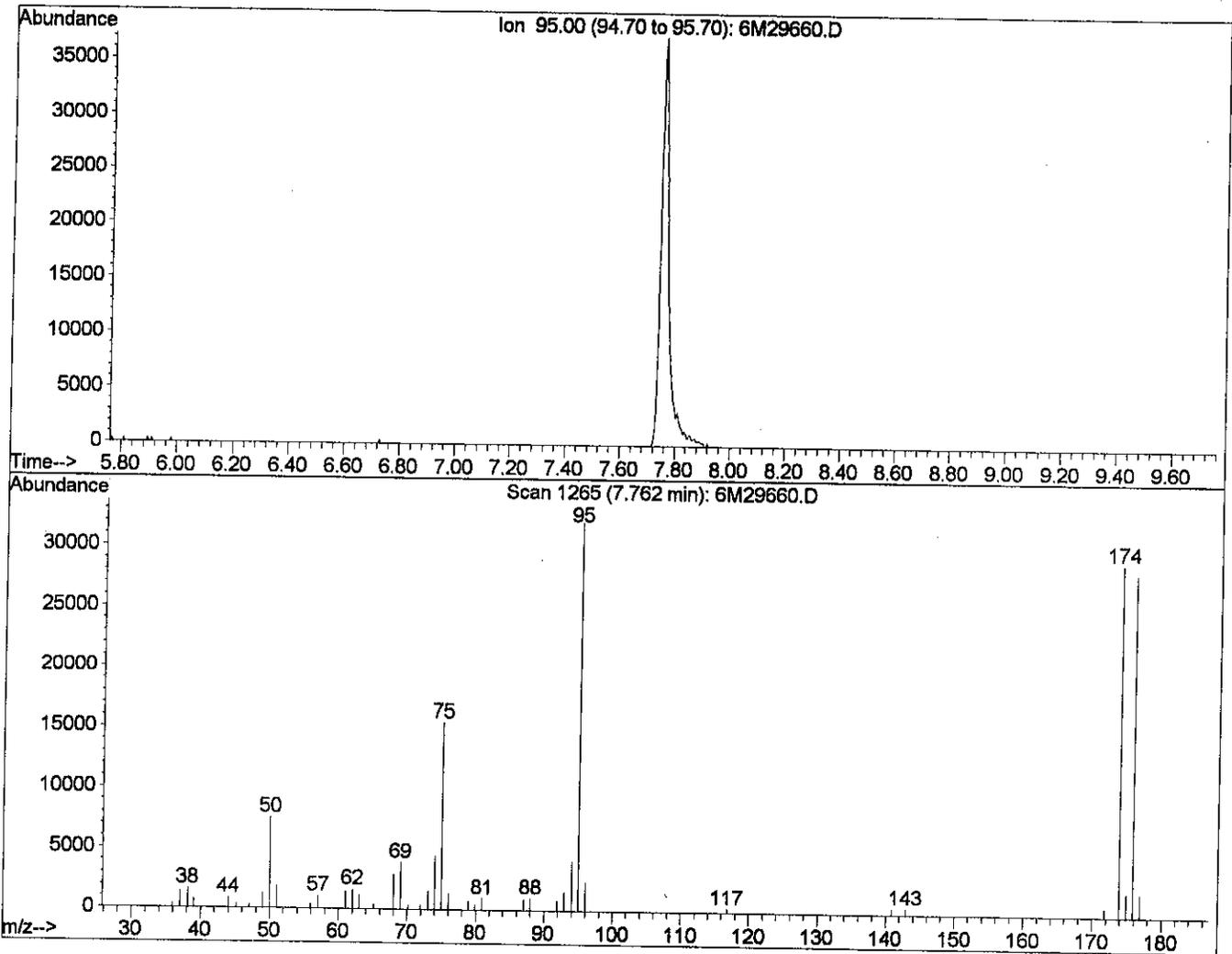
Spectrum Information: Scan 183

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.6	11451	PASS
75	95	30	60	58.2	26072	PASS
95	95	100	100	100.0	44816	PASS
96	95	5	9	6.9	3076	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.5	33408	PASS
175	174	5	9	7.3	2448	PASS
176	174	95	101	99.0	33080	PASS
177	176	5	9	6.2	2043	PASS

283

Data File : C:\HPCHEM\1\DATA\032102\6M29660.D
 Acq On : 21 Mar 2002 22:40
 Sample : WG114932-01 5ONG BFB STD
 Misc : 1,1 SV9148
 MS Integration Params: events.e
 Method : C:\HPCHEM\1\METHODS\BFB.M (Chemstation Integrator)
 Title :

Vial: 4
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

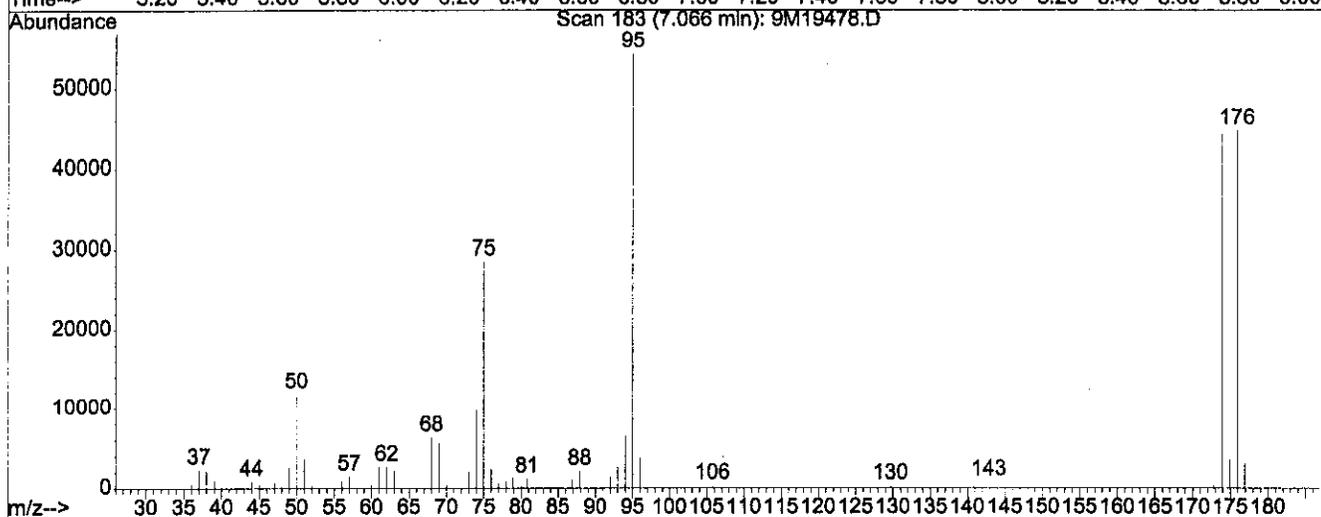
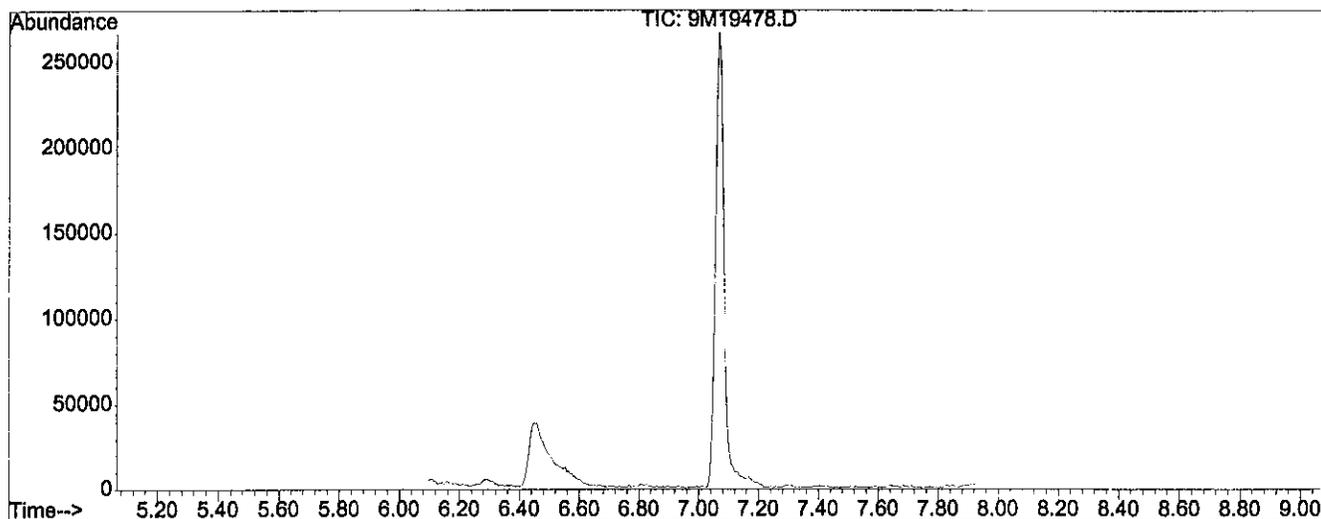


Spectrum Information: Scan 1265

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.5	7549	PASS
75	95	30	60	48.3	15497	PASS
95	95	100	100	100.0	32088	PASS
96	95	5	9	7.5	2409	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	90.6	29072	PASS
175	174	5	9	6.8	1974	PASS
176	174	95	101	97.1	28232	PASS
177	176	5	9	7.0	1987	PASS

Data File : d:\HPCHEM\1\DATA\040202\9M19478.D
 Acq On : 2 Apr 2002 8:00
 Sample : WG115462-01 50NG BFB 8260B
 Misc : 7,1 SV9148
 MS Integration Params: RTEINT.P
 Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9

Vial: 1
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00



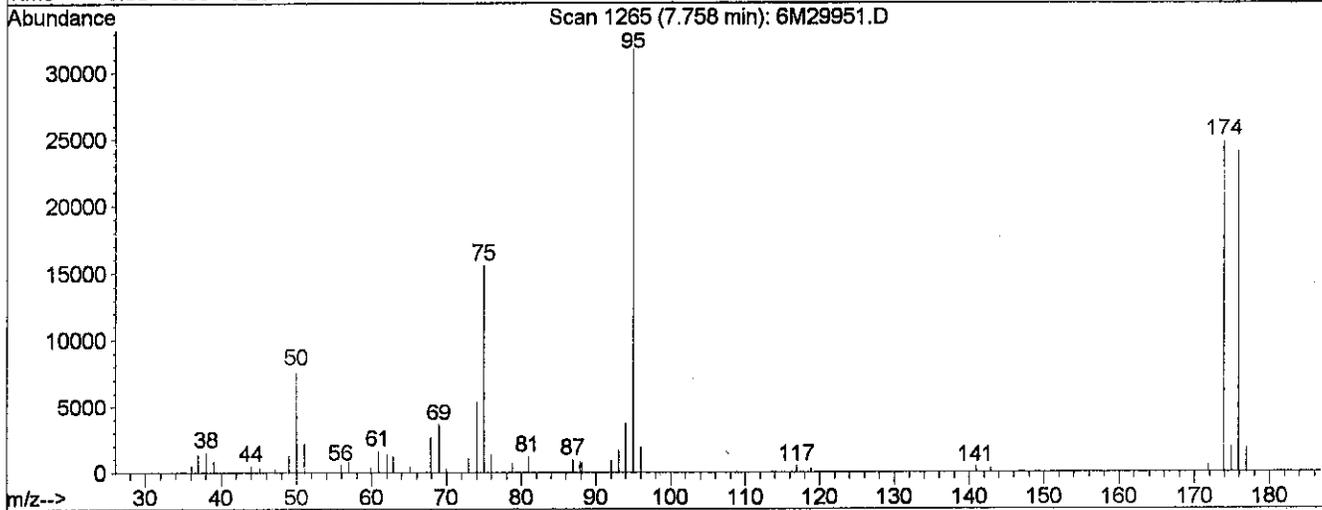
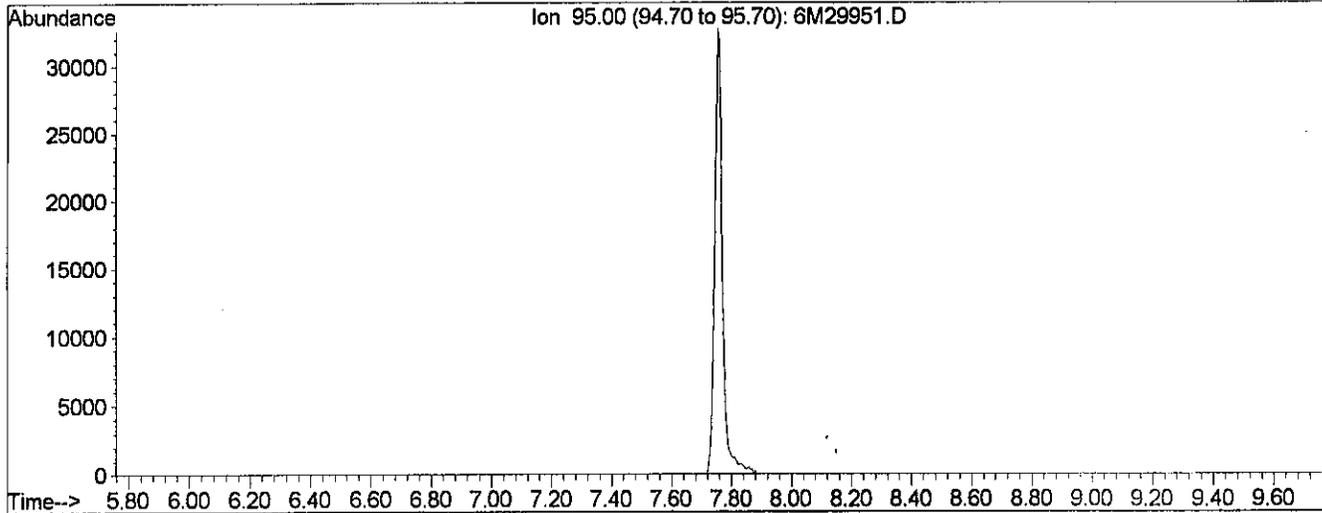
Spectrum Information: Scan 183

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.9	11891	PASS
75	95	30	60	52.5	28528	PASS
95	95	100	100	100.0	54336	PASS
96	95	5	9	7.2	3923	PASS
173	174	0.00	2	0.9	409	PASS
174	95	50	100	82.0	44560	PASS
175	174	5	9	7.8	3488	PASS
176	174	95	101	100.6	44832	PASS
177	176	5	9	6.9	3113	PASS

285

Data File : C:\HPCHEM\1\DATA\040402\6M29951.D
 Acq On : 4 Apr 2002 18:54
 Sample : WG115697-01 50NG BFB STD
 Misc : 1,1 SV9148
 MS Integration Params: rteint.p
 Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B_WATER - ICAL 3/21/02 - HPMS6

Vial: 1
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00



Spectrum Information: Scan 1265

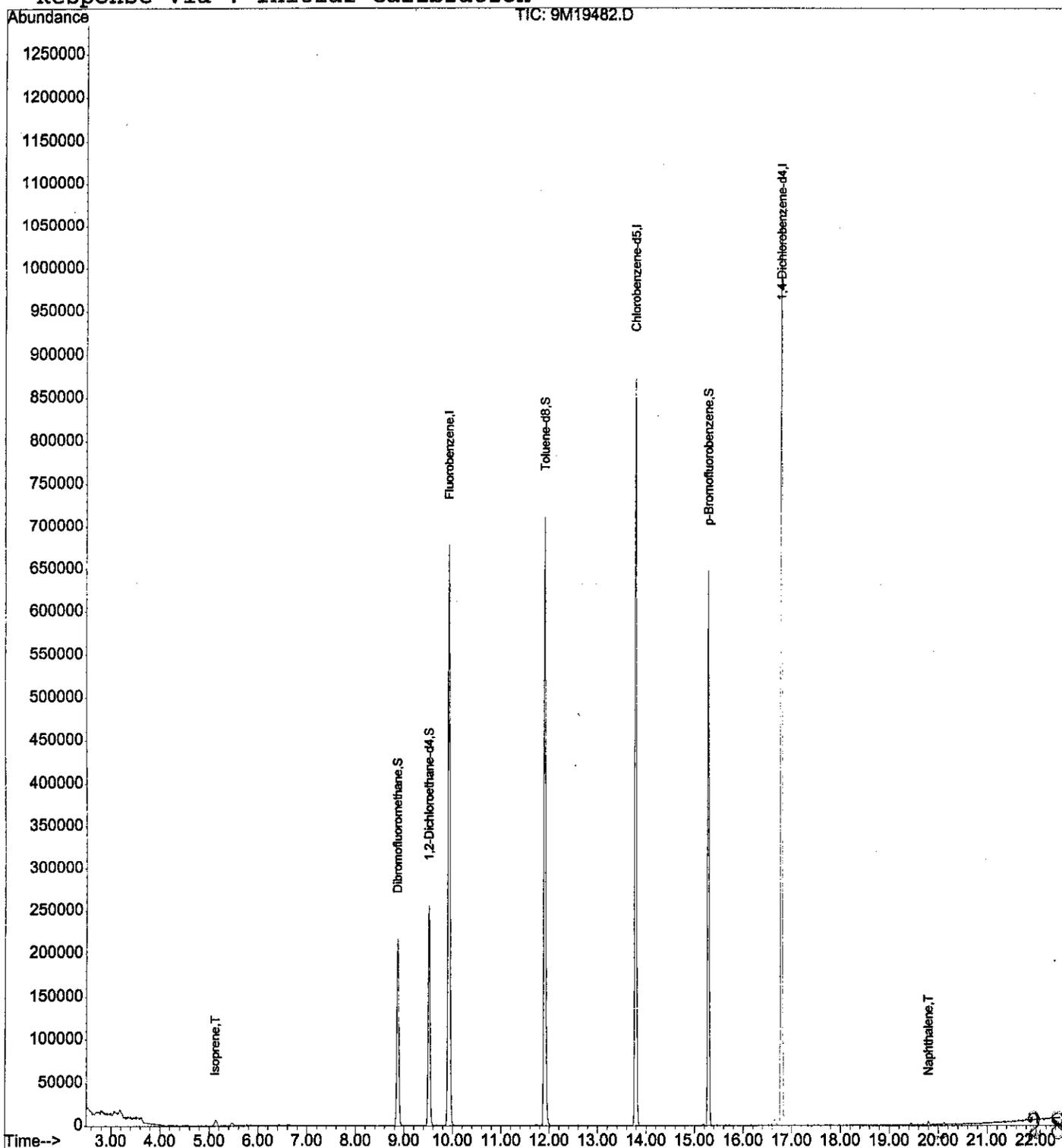
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.5	7794	PASS
75	95	30	60	49.0	15572	PASS
95	95	100	100	100.0	31752	PASS
96	95	5	9	6.2	1963	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.2	24824	PASS
175	174	5	9	7.6	1899	PASS
176	174	95	101	96.7	24008	PASS
177	176	5	9	7.8	1870	PASS

Data File : d:\HPCHEM\1\DATA\040202\9M19482.D
Acq On : 2 Apr 2002 10:18
Sample : WG115463-01 VBLK0402 8260B
Misc : 7,1
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:41 2002

Vial: 5
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Wed Mar 06 10:09:02 2002
Response via : Initial Calibration



Data File : d:\HPCHEM\1\DATA\040202\9M19482.D
 Acq On : 2 Apr 2002 10:18
 Sample : WG115463-01 VBLK0402 8260B
 Misc : 7,1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:41 2002

Vial: 5
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

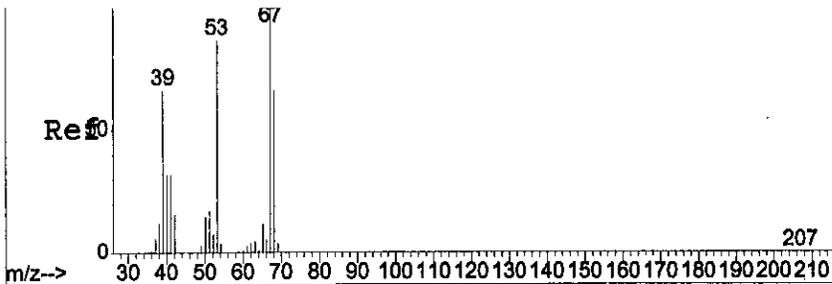
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.93	96	856017	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	614820	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	345195	50.00	ug/kg	0.00

System Monitoring Compounds

28) Dibromofluoromethane	8.88	111	192733	52.6834	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.36%
33) 1,2-Dichloroethane-d4	9.52	65	277122	49.0523	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.10%
45) Toluene-d8	11.91	98	649844	50.8700	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	101.74%
66) p-Bromofluorobenzene	15.29	95	267604	48.0273	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	96.06%

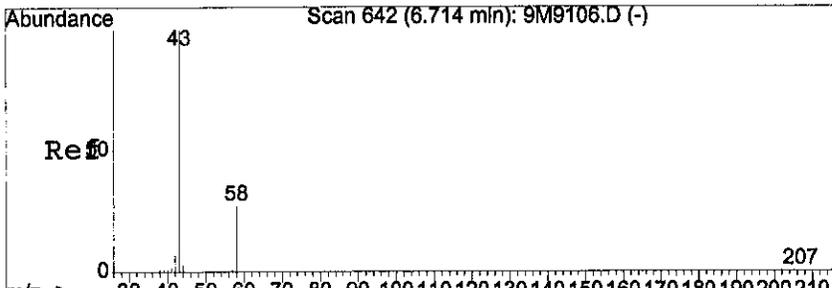
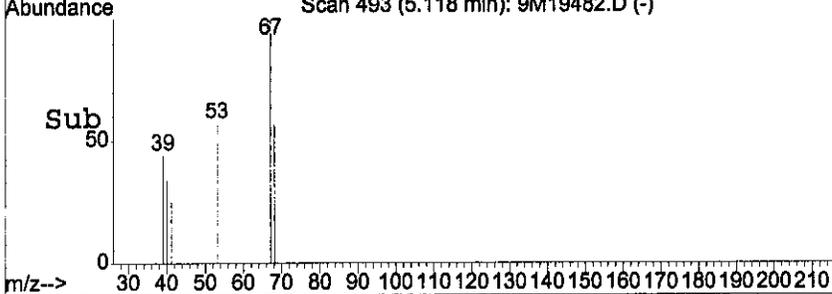
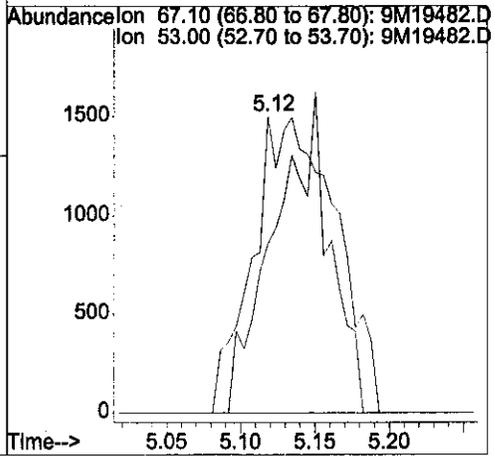
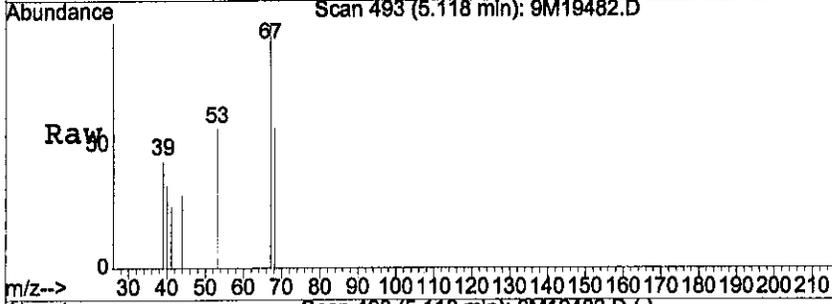
Target Compounds

8) Isoprene	5.12	67	5822	1.2198	ug/kg#F	47
11) Acetone	5.47	43	9441	Below Cal		100
86) Naphthalene	19.81	128	5167	0.6178	ug/kg#F	93



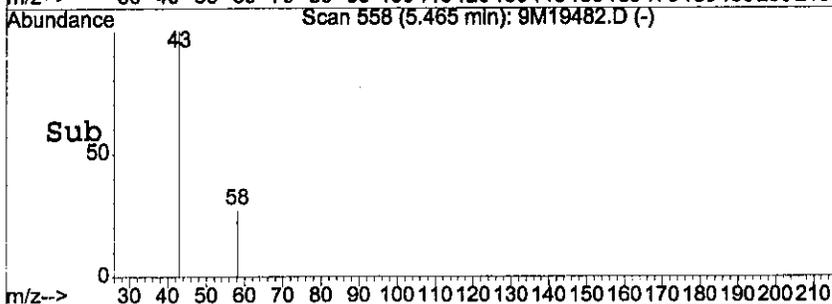
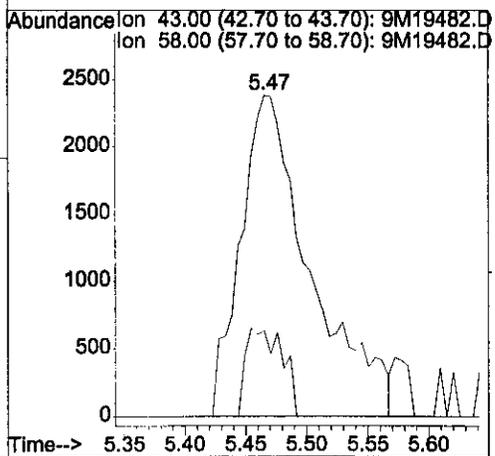
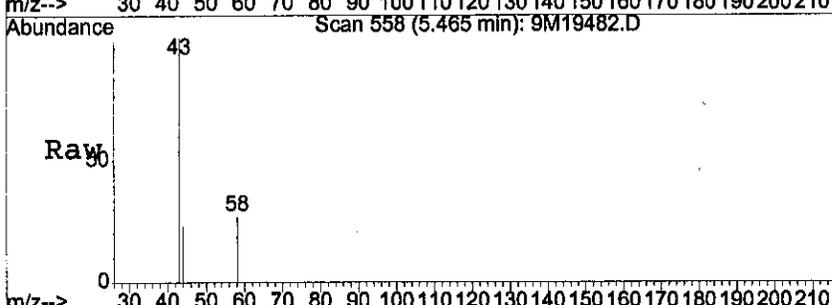
Isoprene
 Concen: 1.22 ug/kg
 RT: 5.12 min Scan# 493
 Delta R.T. -0.01 min
 Lab File: 9M19482.D
 Acq: 2 Apr 2002 10:18

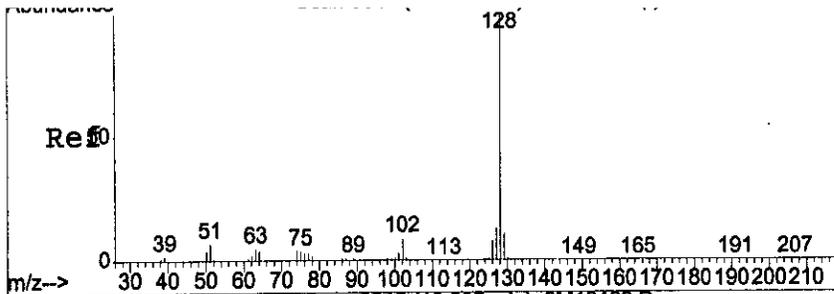
Tgt Ion: 67 Resp: 5822
 Ion Ratio Lower Upper
 67 100
 53 72.4 31.9 47.9#



#11
 Acetone
 Concen: Below Cal
 RT: 5.47 min Scan# 558
 Delta R.T. 0.00 min
 Lab File: 9M19482.D
 Acq: 2 Apr 2002 10:18

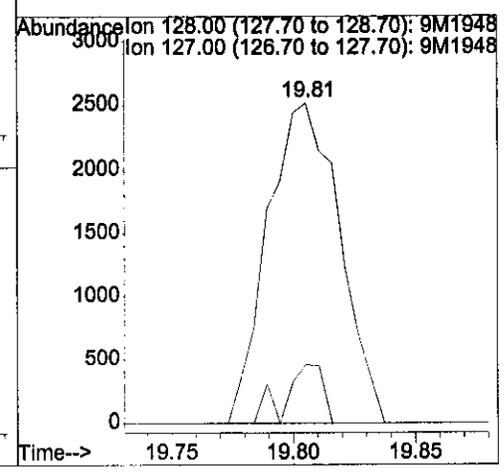
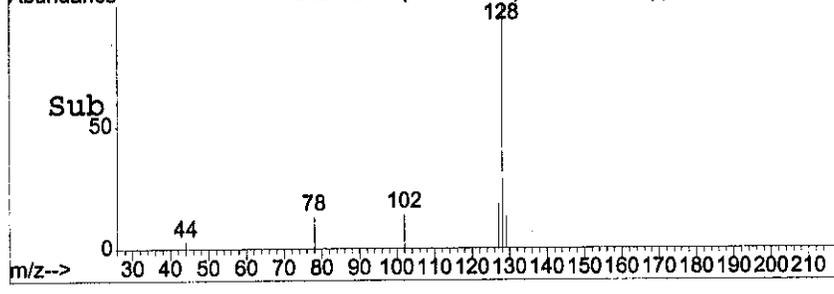
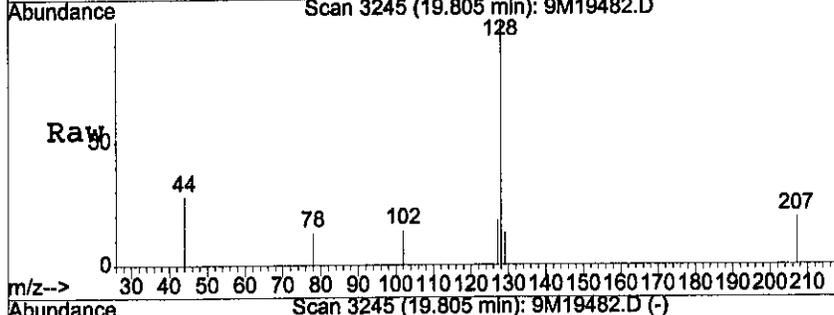
Tgt Ion: 43 Resp: 9441
 Ion Ratio Lower Upper
 43 100
 58 14.4 11.6 17.4





Naphthalene
 Concen: 0.62 ug/kg
 RT: 19.81 min Scan# 3245
 Delta R.T. -0.00 min
 Lab File: 9M19482.D
 Acq: 2 Apr 2002 10:18

Tgt Ion	Resp	Lower	Upper
128	5167	100	
127	9.5	9.8	14.8#

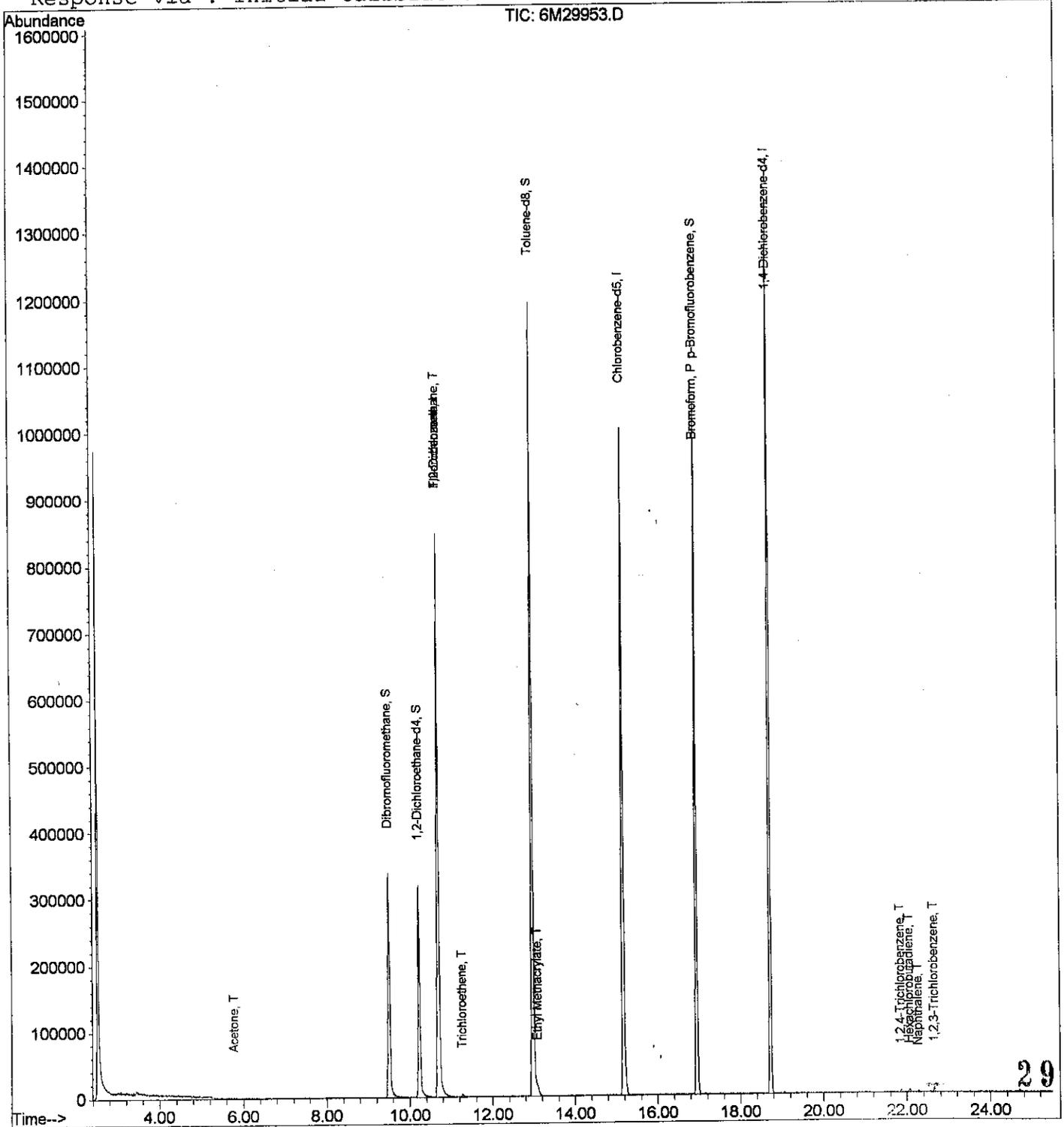


Data File : C:\HPCHEM\1\DATA\040402\6M29953.D
Acq On : 4 Apr 2002 20:21
Sample : WG115698-01 VBLK 0404
Misc : 1,1
MS Integration Params: rteint.p
Quant Time: Apr 4 20:47 2002

Vial: 3
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration



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Data File : C:\HPCHEM\1\DATA\040402\6M29953.D
 Acq On : 4 Apr 2002 20:21
 Sample : WG115698-01 VBLK 0404
 Misc : 1,1
 MS Integration Params: rteint.p
 Quant Time: Apr 4 20:47 2002

Vial: 3
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	10.70	96	1178279	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	841573	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	471899	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	355210	25.0044	ug/L	0.00
Spiked Amount	25.000	Range	86 - 118	Recovery	=	100.00%
33) 1,2-Dichloroethane-d4	10.23	65	368707	25.8465	ug/L	0.00
Spiked Amount	25.000	Range	80 - 120	Recovery	=	103.40%
45) Toluene-d8	12.98	98	1197157	26.4958	ug/L	0.00
Spiked Amount	25.000	Range	88 - 110	Recovery	=	106.00%
66) p-Bromofluorobenzene	16.94	95	489012	27.9260	ug/L	0.00
Spiked Amount	25.000	Range	86 - 115	Recovery	=	111.72%

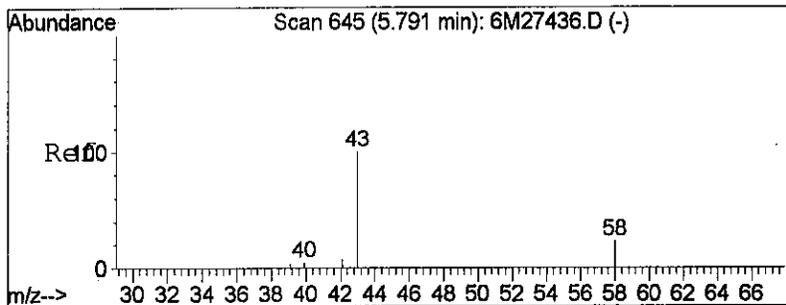
Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
11) Acetone	5.79	43	981	0.5172	ug/L #	46
34) 1,2-Dichloroethane	10.69	62	17813	1.0001	ug/L #	1
36) Trichloroethene	11.28	130	2210	0.1504	ug/L #	75
47) Ethyl Methacrylate	13.10	69	4347	0.5824	ug/L #	56
62) Bromoform	16.93	173	637	0.1297	ug/L #	1
84) 1,2,4-Trichlorobenzene	21.87	180	2734	0.2066	ug/L #F	89
85) Hexachlorobutadiene	22.07	225	2448	0.2938	ug/L #F	71
86) Naphthalene	22.28	128	3626	0.2051	ug/L #F	75
87) 1,2,3-Trichlorobenzene	22.66	180	4067	0.3775	ug/L #F	87

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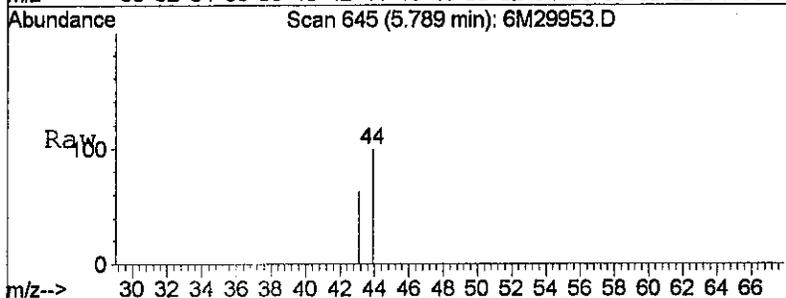
(#) = qualifier out of range (m) = manual integration
 6M29953.D 8260BWT.M Fri Apr 05 12:13:43 2002

Page 1

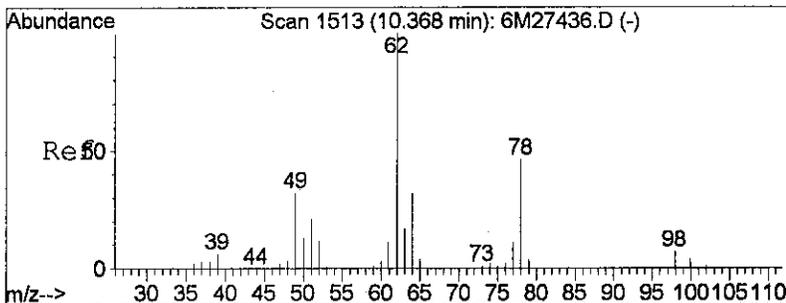
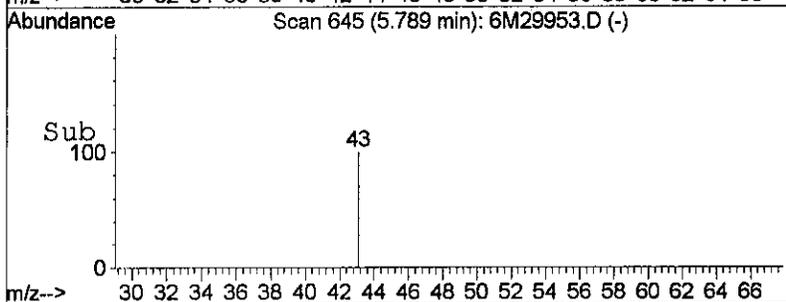
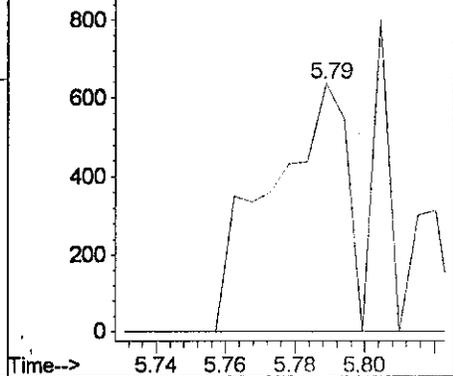


#11
 Acetone
 Concen: 0.52 ug/L
 RT: 5.79 min Scan# 645
 Delta R.T. -0.00 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
43	100		
58	0.0	23.0	34.4#

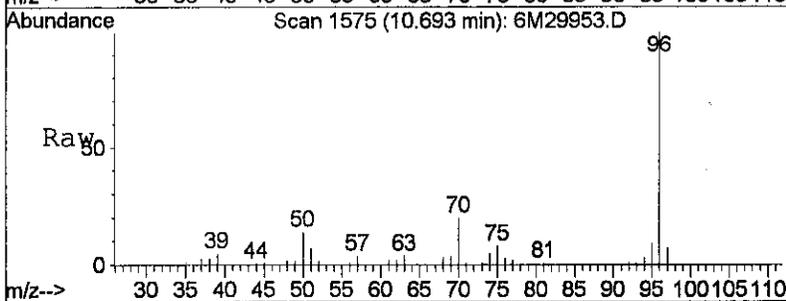


Abundance Ion 43.00 (42.70 to 43.70): 6M299
 Ion 58.00 (57.70 to 58.70): 6M299

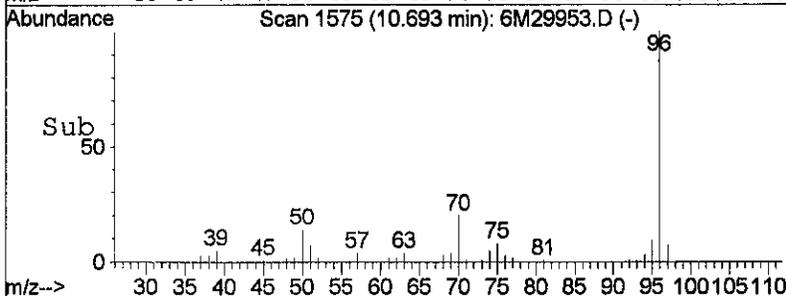
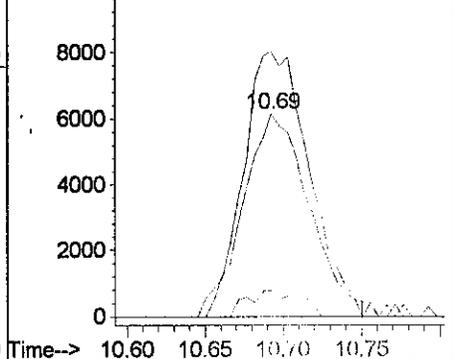


#34
 1,2-Dichloroethane
 Concen: 1.00 ug/L
 RT: 10.69 min Scan# 1575
 Delta R.T. 0.32 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

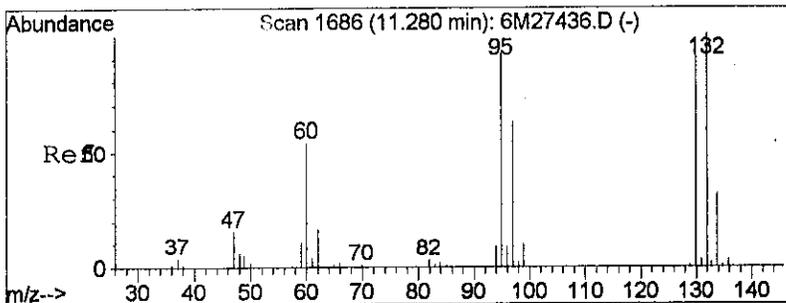
Tgt Ion	Resp	Lower	Upper
62	100		
49	133.5	19.1	28.7#
98	9.8	8.0	12.0



Abundance Ion 62.00 (61.70 to 62.70): 6M299
 Ion 49.00 (48.70 to 49.70): 6M299
 Ion 98.00 (97.70 to 98.70): 6M299

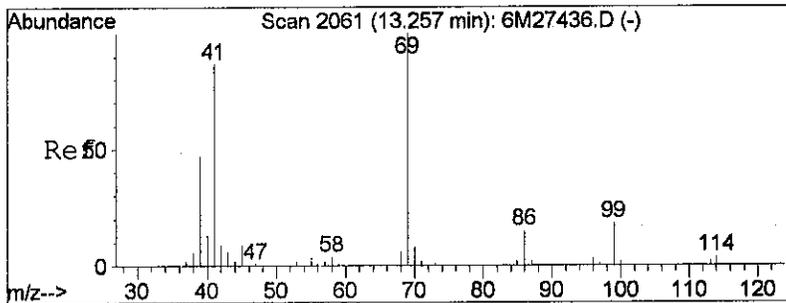
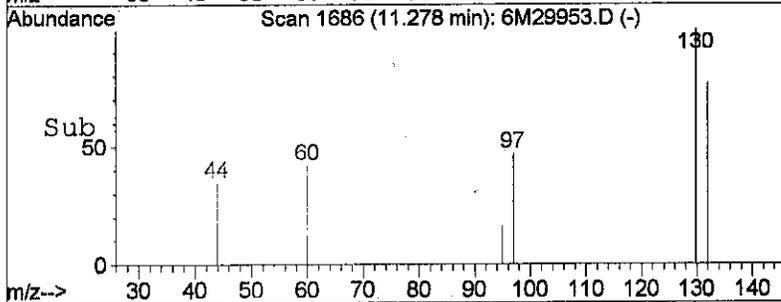
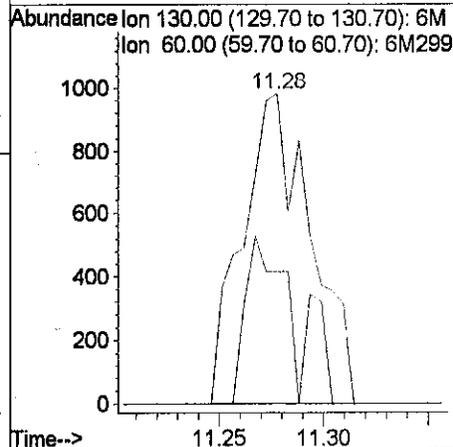
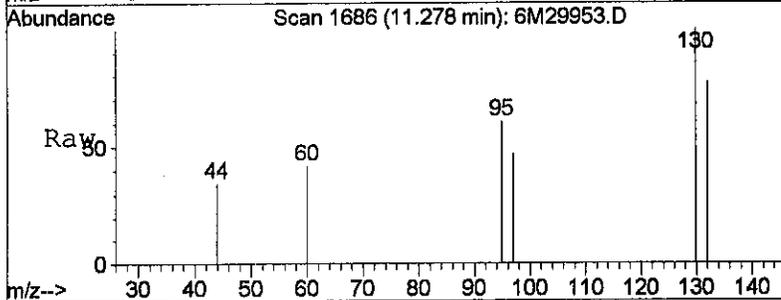


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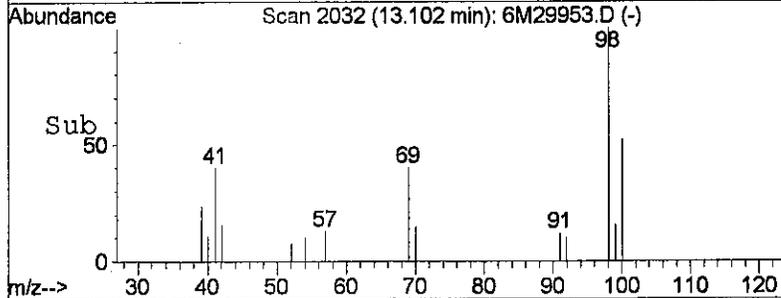
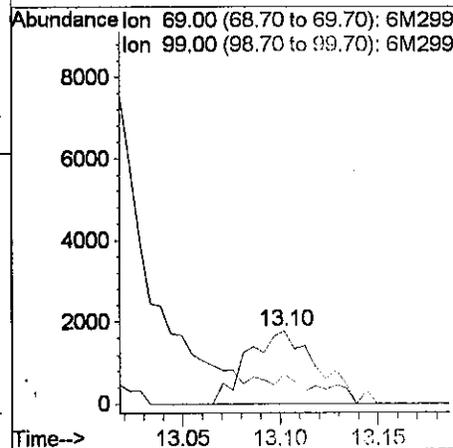
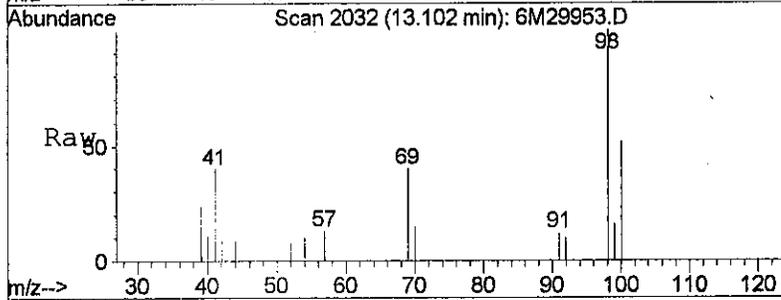
#36
 Trichloroethene
 Concen: 0.15 ug/L
 RT: 11.28 min Scan# 1686
 Delta R.T. -0.00 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

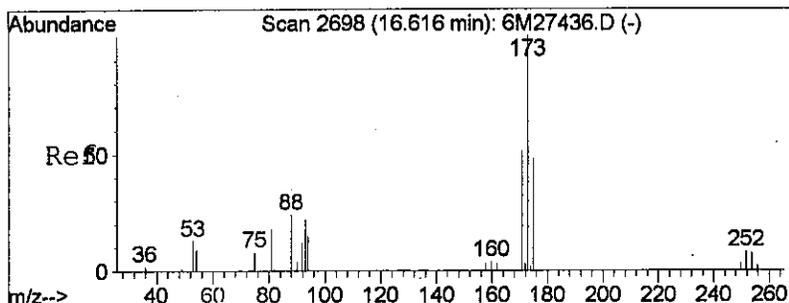
Tgt Ion: 130 Resp: 2210
 Ion Ratio Lower Upper
 130 100
 60 29.8 37.0 55.4#



#47
 Ethyl Methacrylate
 Concen: 0.58 ug/L
 RT: 13.10 min Scan# 2032
 Delta R.T. -0.16 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

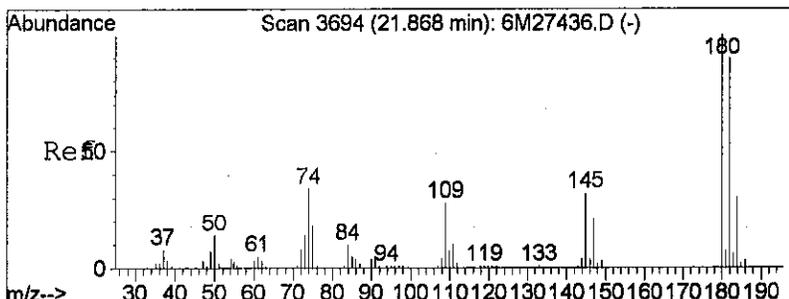
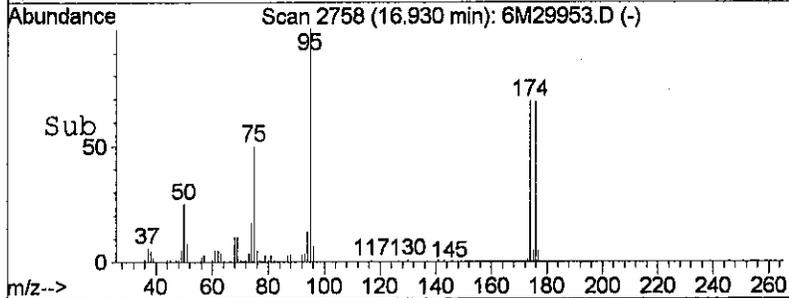
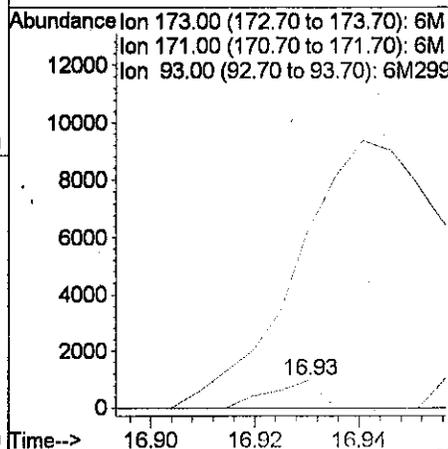
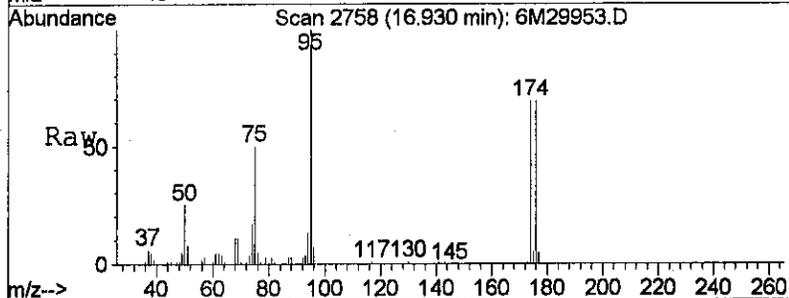
Tgt Ion: 69 Resp: 4347
 Ion Ratio Lower Upper
 69 100
 99 0.0 16.6 24.8#





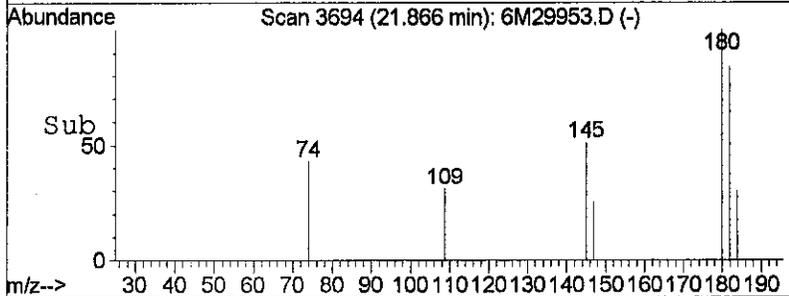
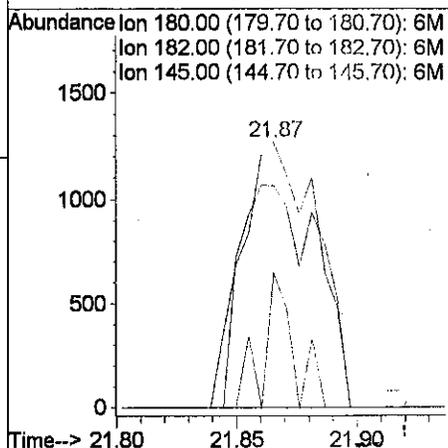
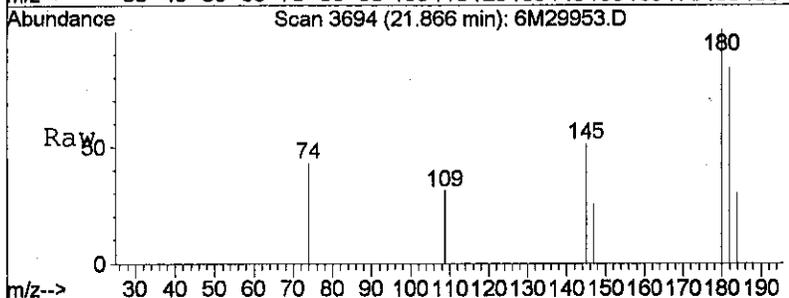
#62
 Bromoform
 Concen: 0.13 ug/L
 RT: 16.93 min Scan# 2758
 Delta R.T. 0.32 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
173	100		
171	0.0	41.3	61.9#
93	3303.8	18.2	27.2#

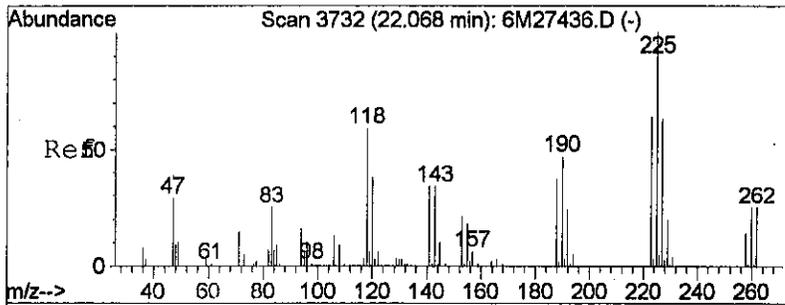


#84
 1,2,4-Trichlorobenzene
 Concen: 0.21 ug/L
 RT: 21.87 min Scan# 3694
 Delta R.T. -0.00 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
180	100		
182	88.8	75.8	113.8
145	20.8	27.4	41.0#

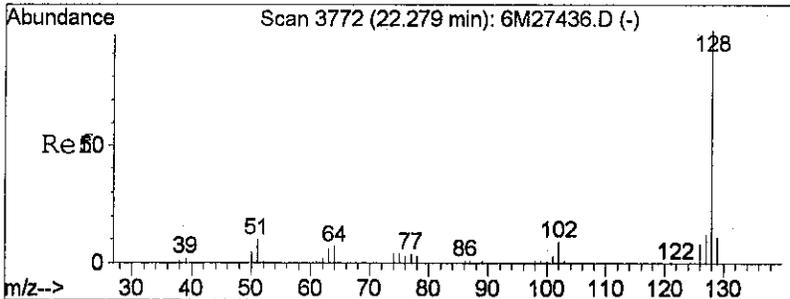
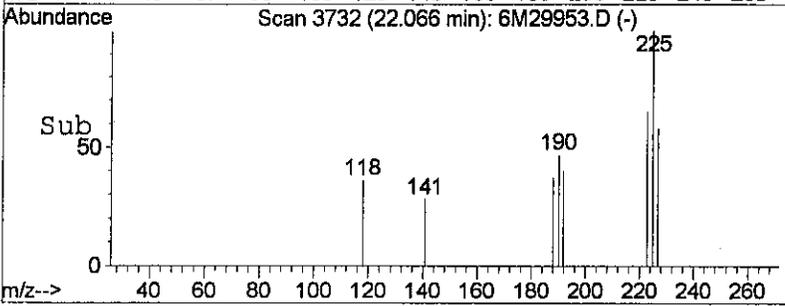
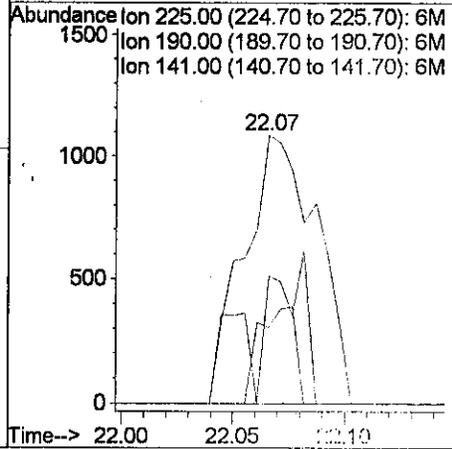
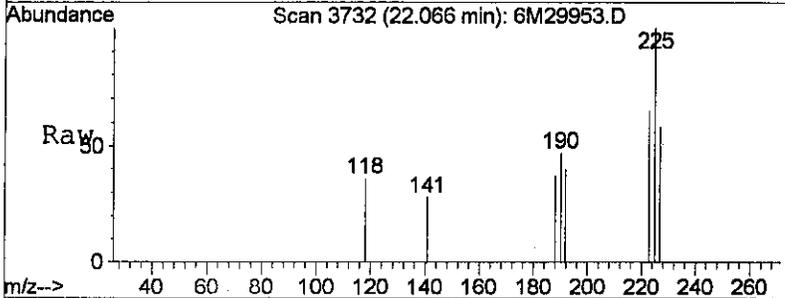


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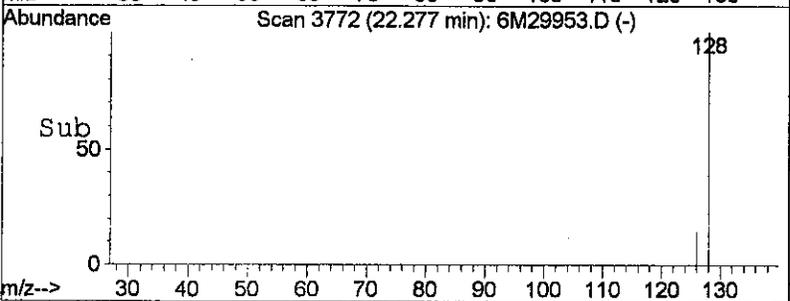
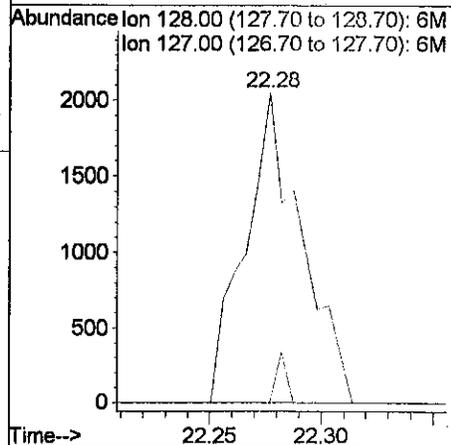
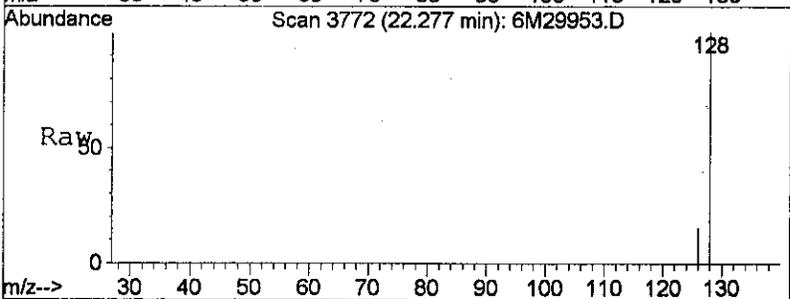
#85
 Hexachlorobutadiene
 Concen: 0.29 ug/L
 RT: 22.07 min Scan# 3732
 Delta R.T. -0.00 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
225	100		
190	25.4	0.5	0.7#
141	0.0	0.2	0.4#

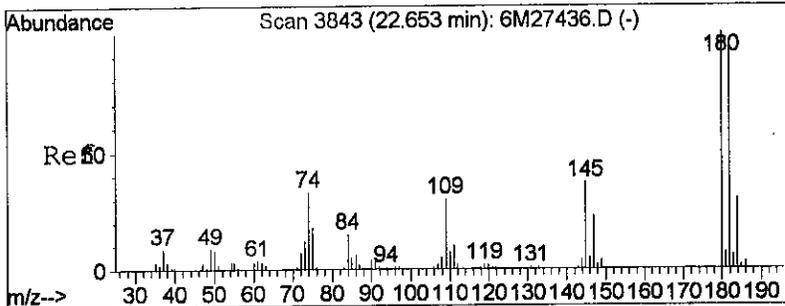


#86
 Naphthalene
 Concen: 0.21 ug/L
 RT: 22.28 min Scan# 3772
 Delta R.T. -0.00 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
128	100		
127	0.0	7.1	10.7#

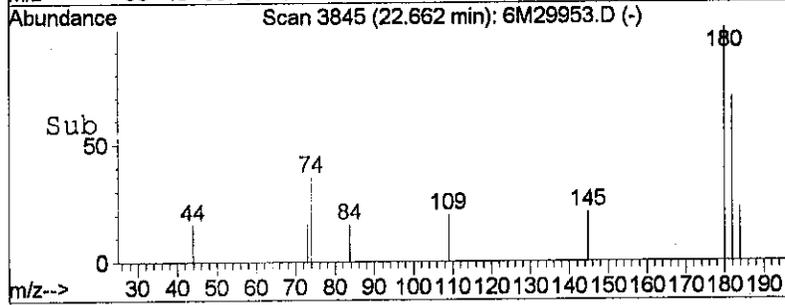
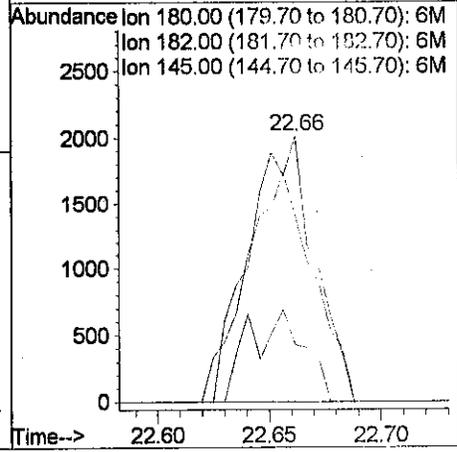
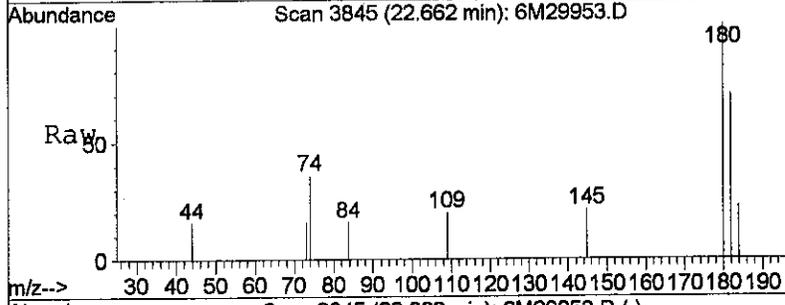


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#87
 1,2,3-Trichlorobenzene
 Concen: 0.38 ug/L
 RT: 22.66 min Scan# 3845
 Delta R.T. 0.01 min
 Lab File: 6M29953.D
 Acq: 4 Apr 2002 20:21

Tgt Ion	Resp	Lower	Upper
180	4067		
180	100		
182	88.9	76.3	114.5
145	18.3	28.8	43.2#

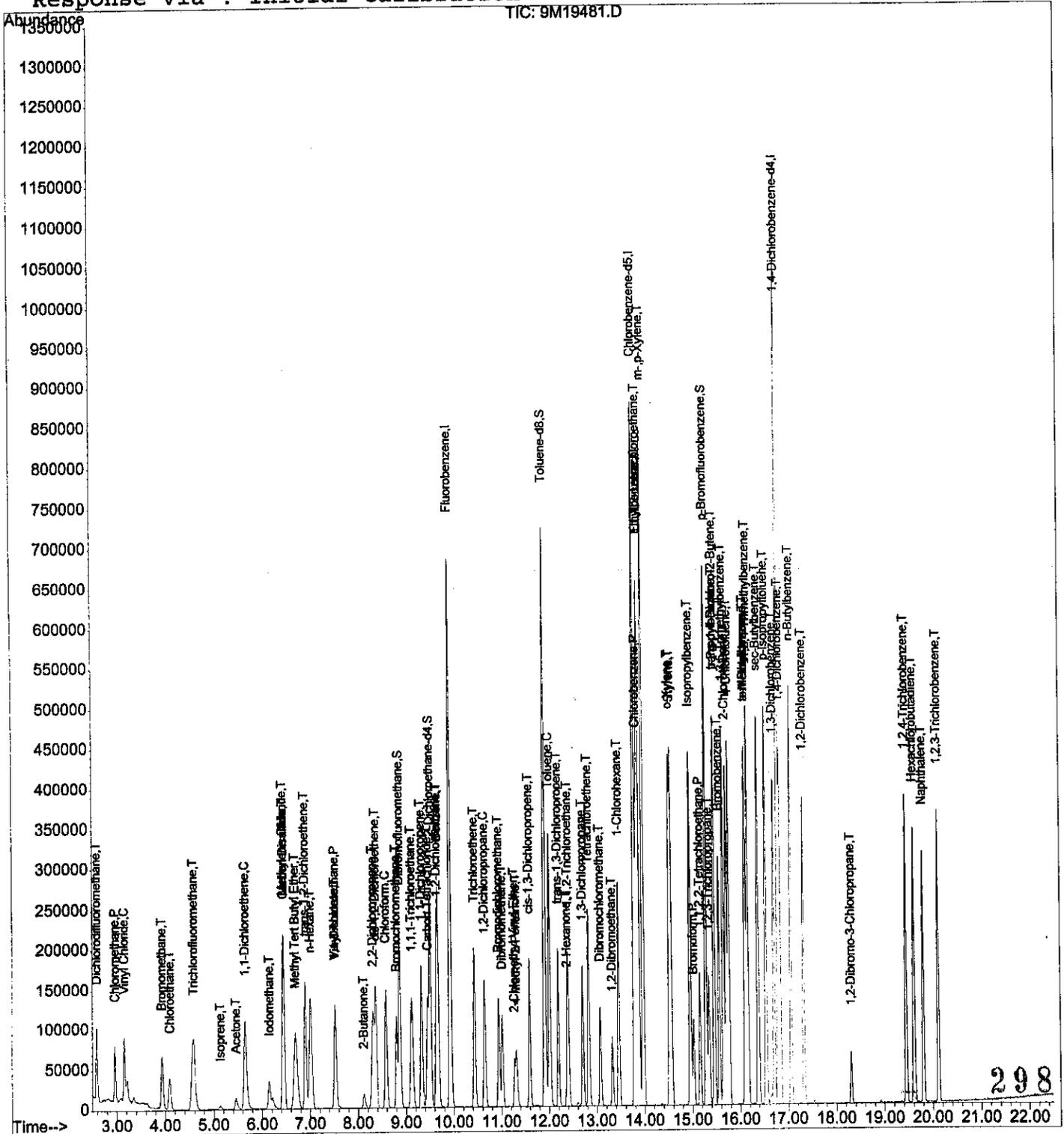


Data File : d:\HPCHEM\1\DATA\040202\9M19481.D
 Acq On : 2 Apr 2002 9:43
 Sample : WG115463-02 20PPB LCS 8260B
 Misc : 7,1 SV9139
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:06 2002

Vial: 4
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration



Data File : d:\HPCHEM\1\DATA\040202\9M19481.D
 Acq On : 2 Apr 2002 9:43
 Sample : WG115463-02 20PPB LCS 8260B
 Misc : 7,1 SV9139
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:06 2002

Vial: 4
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.93	96	866161	50.00	ug/kg	0.00
44) Chlorobenzene-d5	13.79	117	638551	50.00	ug/kg	0.00
64) 1,4-Dichlorobenzene-d4	16.80	152	370269	50.00	ug/kg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
28) Dibromofluoromethane	8.87	111	197757	53.4236	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.84%
33) 1,2-Dichloroethane-d4	9.52	65	279155	48.8335	ug/kg	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.66%
45) Toluene-d8	11.91	98	673059	50.7292	ug/kg	0.00
Spiked Amount	50.000	Range	81 - 117	Recovery	=	101.46%
66) p-Bromofluorobenzene	15.29	95	283246	47.3922	ug/kg	0.00
Spiked Amount	50.000	Range	74 - 121	Recovery	=	94.78%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.58	85	109872	14.4778	ug/kg#	93
3) Chloromethane	2.96	50	80308	16.4272	ug/kg	95
4) Vinyl Chloride	3.15	62	79388	18.7423	ug/kg	98
5) Bromomethane	3.94	94	68879	29.2874	ug/kg	94
6) Chloroethane	4.10	64	61293	18.9152	ug/kg	91
7) Trichlorofluoromethane	4.58	101	195788	20.3868	ug/kg#	62
8) Isoprene	5.13	67	3797	0.7862	ug/kg#	38
11) Acetone	5.46	43	34814	17.6296	ug/kg#	73
12) 1,1-Dichloroethene	5.65	96	74052	23.5852	ug/kg	89
14) Iodomethane	6.16	142	65758	34.9349	ug/kg	97
15) Methylene Chloride	6.43	84	80769	19.1119	ug/kg	95
16) Carbon Disulfide	6.45	76	245211	20.1859	ug/kg	98
18) Methyl Tert Butyl Ether	6.69	73	215446	22.8627	ug/kg#	71
19) trans-1,2-Dichloroethene	6.90	96	85952	23.9401	ug/kg	99
20) n-Hexane	7.01	57	131195	21.2624	ug/kg#	69
21) Vinyl Acetate	7.52	43	66104	9.1743	ug/kg#	86
22) 1,1-Dichloroethane	7.52	63	165178	21.6001	ug/kg	98
23) 2-Butanone	8.12	43	35733	18.8823	ug/kg#	76
24) 2,2-Dichloropropane	8.31	77	152974	25.1896	ug/kg#	76
25) cis-1,2-Dichloroethene	8.38	96	83902	22.5883	ug/kg	91
26) Chloroform	8.58	83	175548	21.3349	ug/kg	98
27) Bromochloromethane	8.81	128	38117	23.5277	ug/kg	92
29) 1,1,1-Trichloroethane	9.12	97	171090	23.4406	ug/kg	98
31) 1,1-Dichloropropene	9.33	75	125665	21.7134	ug/kg	91
32) Carbon Tetrachloride	9.46	117	150524	23.9541	ug/kg	99
34) 1,2-Dichloroethane	9.64	62	145692	19.6534	ug/kg#	98
35) Benzene	9.67	78	331415	21.2531	ug/kg	99

(#) = qualifier out of range (m) = manual integration
 9M19481.D 8260SL.M Tue Apr 02 10:06:37 2002

Data File : d:\HPCHEM\1\DATA\040202\9M19481.D
 Acq On : 2 Apr 2002 9:43
 Sample : WG115463-02 20PPB LCS 8260B
 Misc : 7,1 SV9139
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:06 2002

Vial: 4
 Operator: MES
 Inst : HPMS9
 Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
 Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
 Last Update : Wed Mar 06 10:09:02 2002
 Response via : Initial Calibration
 DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) Trichloroethene	10.44	130	88734	24.7374	ug/kg	96
37) 1,2-Dichloropropane	10.65	63	80063	20.6063	ug/kg	97
38) Bromodichloromethane	10.94	83	129333	21.9015	ug/kg#	96
39) Dibromomethane	11.02	93	54166	23.0040	ug/kg	93
40) 2-Chloroethyl Vinyl Ether	11.27	63	31184	33.9850	ug/kg	99
41) 4-Methyl-2-Pentanone	11.32	58	28880	19.0934	ug/kg#	24
42) cis-1,3-Dichloropropene	11.59	75	132240	23.1699	ug/kg	97
46) Toluene	12.01	91	345496	20.9716	ug/kg	98
48) trans-1,3-Dichloropropene	12.19	75	131984	21.7581	ug/kg	98
49) 1,1,2-Trichloroethane	12.40	97	72663	20.0017	ug/kg	95
50) 2-Hexanone	12.37	43	52127	14.9974	ug/kg#	78
51) 1,3-Dichloropropane	12.71	76	126645	19.5703	ug/kg	88
52) Tetrachloroethene	12.83	164	79835	22.3808	ug/kg	92
53) Dibromochloromethane	13.07	129	87213	20.9942	ug/kg	96
54) 1,2-Dibromoethane	13.33	107	73689	20.4555	ug/kg	95
55) 1-Chlorohexane	13.46	91	115138	21.6603	ug/kg	95
56) Chlorobenzene	13.84	112	240174	20.9652	ug/kg	98
57) 1,1,1,2-Tetrachloroethane	13.88	131	90807	22.2489	ug/kg	94
58) Ethylbenzene	13.88	106	135754	22.2441	ug/kg	92
59) m-,p-Xylene	13.97	106	337507	42.6541	ug/kg	100
60) o-Xylene	14.52	106	156846	22.3737	ug/kg	95
61) Styrene	14.56	104	266091	21.6469	ug/kg	91
62) Bromoform	15.03	173	67319	21.6631	ug/kg	95
63) Isopropylbenzene	14.96	105	420386	20.7542	ug/kg	99
65) 1,1,2,2-Tetrachloroethane	15.16	83	104591	19.8211	ug/kg#	93
67) 1,2,3-Trichloropropane	15.36	110	35935	20.6140	ug/kg#	86
68) trans-1,4-Dichloro-2-Buten	15.46	53	2748	1.7905	ug/kg#	1
69) n-Propylbenzene	15.46	91	534948	20.7151	ug/kg	94
70) Bromobenzene	15.56	156	115903	23.2696	ug/kg	83
71) 1,3,5-Trimethylbenzene	15.65	105	378733	21.6415	ug/kg	97
72) 2-Chlorotoluene	15.72	91	329332	20.2142	ug/kg	90
73) 4-Chlorotoluene	15.77	91	345085	20.3076	ug/kg	97
74) a-Methylstyrene	16.11	118	3597	0.4136	ug/kg#	1
75) tert-Butylbenzene	16.11	119	360225	20.8395	ug/kg	86
76) 1,2,4-Trimethylbenzene	16.16	105	394469	20.5798	ug/kg	98
77) sec-Butylbenzene	16.38	105	492583	21.6334	ug/kg	99
78) p-Isopropyltoluene	16.54	119	394579	20.1449	ug/kg	100
79) 1,3-Dichlorobenzene	16.71	146	217507	21.0778	ug/kg	97
80) 1,4-Dichlorobenzene	16.84	146	222407	20.5661	ug/kg	97
81) n-Butylbenzene	17.06	91	398062	20.2676	ug/kg	97
82) 1,2-Dichlorobenzene	17.33	146	201599	20.4202	ug/kg	96

(#) = qualifier out of range (m) = manual integration

Data File : d:\HPCHEM\1\DATA\040202\9M19481.D
Acq On : 2 Apr 2002 9:43
Sample : WG115463-02 20PPB LCS 8260B
Misc : 7,1 SV9139
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:06 2002

Vial: 4
Operator: MES
Inst : HPMS9
Multiplr: 1.00

Quant Results File: 8260SL.RES

Quant Method : C:\HPCHEM\1\METHODS\8260SL.M (RTE Integrator)
Title : Method 8260B Soil Analysis 03/05/2002 - HPMS 9
Last Update : Wed Mar 06 10:09:02 2002
Response via : Initial Calibration
DataAcq Meth : 8260SL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83) 1,2-Dibromo-3-Chloropropan	18.31	157	23039	22.2672	ug/kg	79
84) 1,2,4-Trichlorobenzene	19.45	180	156640	21.0419	ug/kg	98
85) Hexachlorobutadiene	19.61	225	111814	22.7958	ug/kg	96
86) Naphthalene	19.81	128	307137	19.6182	ug/kg	99
87) 1,2,3-Trichlorobenzene	20.12	180	150709	21.0595	ug/kg	96

(#) = qualifier out of range (m) = manual integration

9M19481.D 8260SL.M

Tue Apr 02 10:06:39 2002

HPMS_9

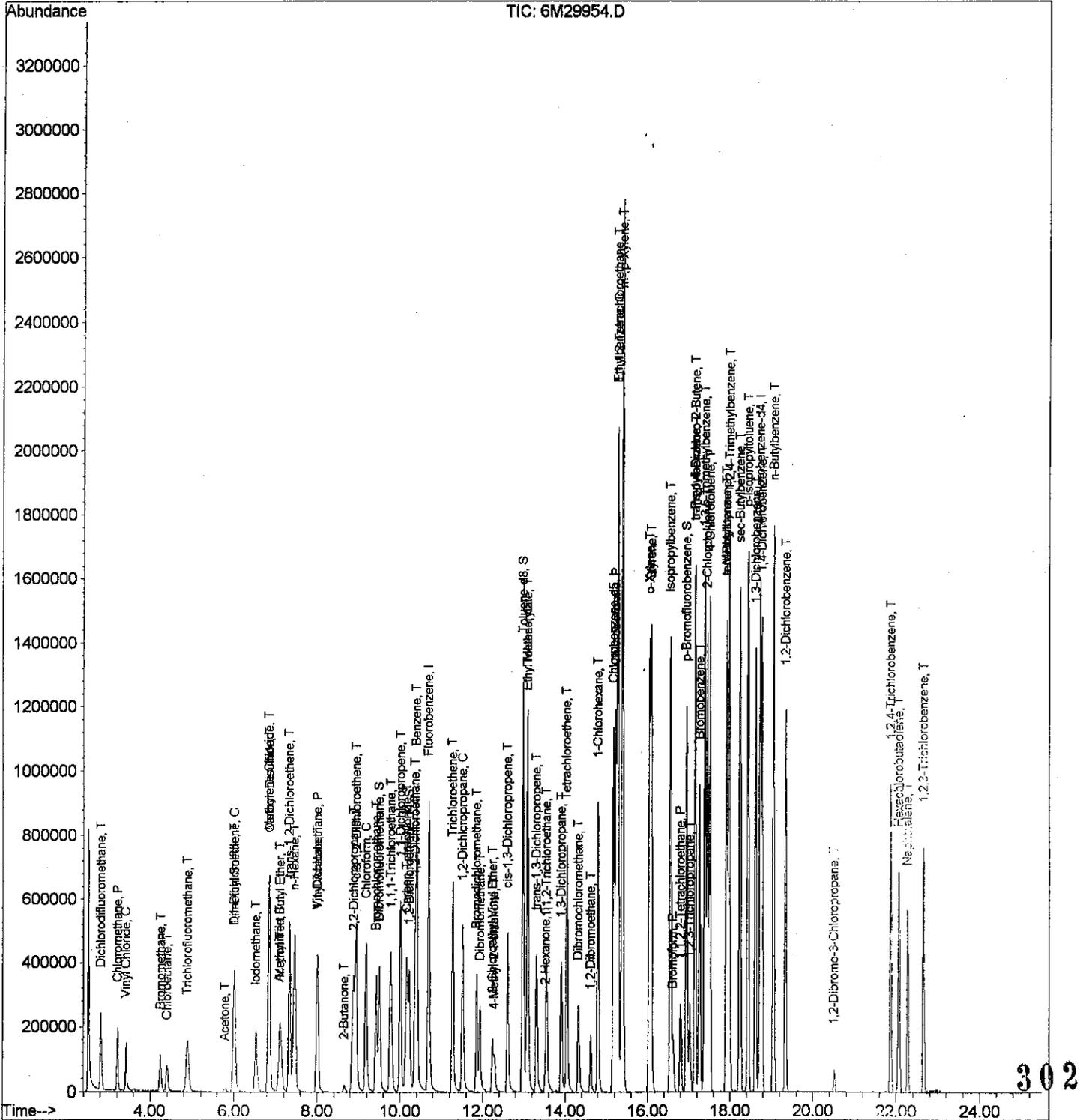
Page 3

Data File : C:\HPCHEM\1\DATA\040402\6M29954.D
 Acq On : 4 Apr 2002 20:54
 Sample : WG115698-02 20PPB LCS
 Misc : 1,1 SV9231
 MS Integration Params: rteint.p
 Quant Time: Apr 4 21:20 2002

Vial: 4
 Operator: CMS
 Inst : HPMS6
 Multiplr: 1.00

Quant Results File: 8260BWT.RES

Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
 Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
 Last Update : Fri Mar 22 08:01:26 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\040402\6M29954.D

Vial: 4

Acq On : 4 Apr 2002 20:54

Operator: CMS

Sample : WG115698-02 20PPB LCS

Inst : HPMS6

Misc : 1,1 SV9231

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 4 21:20 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	10.69	96	1291372	25.00	ug/L	0.00
44) Chlorobenzene-d5	15.17	117	970822	25.00	ug/L	0.00
64) 1,4-Dichlorobenzene-d4	18.72	152	603271	25.00	ug/L	0.00

System Monitoring Compounds

28) Dibromofluoromethane	9.50	111	398443	25.5914	ug/L	0.00
Spiked Amount	25.000	Range 86 - 118	Recovery	=	102.36%	
33) 1,2-Dichloroethane-d4	10.23	65	401587	25.6860	ug/L	0.00
Spiked Amount	25.000	Range 80 - 120	Recovery	=	102.76%	
45) Toluene-d8	12.98	98	1342143	25.7500	ug/L	0.00
Spiked Amount	25.000	Range 88 - 110	Recovery	=	103.00%	
66) p-Bromofluorobenzene	16.94	95	604942	27.0234	ug/L	0.00
Spiked Amount	25.000	Range 86 - 115	Recovery	=	108.08%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	2.82	85	342124	15.4101	ug/L	97
3) Chloromethane	3.22	50	235531	16.2334	ug/L	100
4) Vinyl Chloride	3.42	62	175240	17.0087	ug/L	99
5) Bromomethane	4.24	94	115609	18.4566	ug/L	99
6) Chloroethane	4.40	64	117457	18.5335	ug/L	97
7) Trichlorofluoromethane	4.88	101	301145	19.6691	ug/L #	98
11) Acetone	5.78	43	36151	17.3908	ug/L	95
12) 1,1-Dichloroethene	6.01	96	261888	19.5352	ug/L	90
13) Dimethyl Sulfide	6.00	62	39588	3.1468	ug/L #	1
14) Iodomethane	6.53	142	376705	39.9962	ug/L	96
15) Methylene Chloride	6.83	84	276562	17.7176	ug/L	91
16) Carbon Disulfide	6.85	76	842170	19.0550	ug/L	99
17) Acrylonitrile	7.09	53	3786	1.5290	ug/L #	30
18) Methyl Tert Butyl Ether	7.11	73	421928	21.1385	ug/L	98
19) trans-1,2-Dichloroethene	7.33	96	320196	20.6151	ug/L	94
20) n-Hexane	7.45	57	460202	22.4729	ug/L	99
21) Vinyl Acetate	8.00	43	201564	11.9368	ug/L	98
22) 1,1-Dichloroethane	8.01	63	610112	19.6495	ug/L	97
23) 2-Butanone	8.65	43	43758	19.4357	ug/L	94
24) 2,2-Dichloropropane	8.88	77	412659	19.6492	ug/L	99
25) cis-1,2-Dichloroethene	8.94	96	333532	22.2322	ug/L	94
26) Chloroform	9.18	83	610343	20.2283	ug/L	99
27) Bromochloromethane	9.43	130	181472	21.1134	ug/L	85
29) 1,1,1-Trichloroethane	9.78	97	546129	21.0002	ug/L	89
31) 1,1-Dichloropropene	10.01	75	438465	21.2296	ug/L	95
32) Carbon Tetrachloride	10.16	117	506802	23.2465	ug/L	100
34) 1,2-Dichloroethane	10.36	62	434550	22.2614	ug/L #	83

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040402\6M29954.D

Vial: 4

Acq On : 4 Apr 2002 20:54

Operator: CMS

Sample : WG115698-02 20PPB LCS

Inst : HPMS6

Misc : 1,1 SV9231

Multiplr: 1.00

MS Integration Params: rteint.p

Quant Time: Apr 4 21:20 2002

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)

Title : Method 8260B_WATER - ICAL 3/21/02 - HPMS6

Last Update : Fri Mar 22 08:01:26 2002

Response via : Initial Calibration

DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35) Benzene	10.40	78	1228490	21.5610	ug/L	98
36) Trichloroethene	11.28	130	345139	21.4319	ug/L	92
37) 1,2-Dichloropropane	11.52	63	292832	20.6559	ug/L	98
38) Bromodichloromethane	11.86	83	379710	22.8725	ug/L	99
39) Dibromomethane	11.94	93	142225	22.0843	ug/L	98
40) 2-Chloroethyl Vinyl Ether	12.24	63	93106	25.0888	ug/L	96
41) 4-Methyl-2-Pentanone	12.29	58	44831	22.8130	ug/L	93
42) cis-1,3-Dichloropropene	12.61	75	389796	24.0637	ug/L	99
46) Toluene	13.09	91	1322695	23.5055	ug/L	96
47) Ethyl Methacrylate	13.10	69	5307	0.6163	ug/L #	79
48) trans-1,3-Dichloropropene	13.31	75	328728	23.1122	ug/L	98
49) 1,1,2-Trichloroethane	13.55	97	200380	22.3132	ug/L	99
50) 2-Hexanone	13.52	43	72718	11.1016	ug/L	95
51) 1,3-Dichloropropane	13.91	76	332991	22.6329	ug/L	95
52) Tetrachloroethene	14.05	164	281104	21.1644	ug/L	97
53) Dibromochloromethane	14.33	129	244201	23.4621	ug/L	99
54) 1,2-Dibromoethane	14.63	107	181089	22.6529	ug/L	99
55) 1-Chlorohexane	14.80	91	408154	25.6383	ug/L	86
56) Chlorobenzene	15.23	112	930102	19.9329	ug/L	85
57) 1,1,1,2-Tetrachloroethane	15.27	131	317811	22.4888	ug/L	98
58) Ethylbenzene	15.28	106	491188	22.2998	ug/L	87
59) m-,p-Xylene	15.39	106	1260758	44.3258	ug/L	84
60) o-Xylene	16.04	106	585078	23.9182	ug/L	92
61) Styrene	16.09	104	1023988	23.0151	ug/L	99
62) Bromoform	16.62	173	128689	22.7098	ug/L	99
63) Isopropylbenzene	16.55	105	1538684	23.1186	ug/L	96
65) 1,1,2,2-Tetrachloroethane	16.80	83	208293	21.9977	ug/L	99
67) 1,2,3-Trichloropropane	17.02	110	72031	23.1979	ug/L	97
68) trans-1,4-Dichloro-2-Buten	17.15	53	11391	4.9299	ug/L #	1
69) n-Propylbenzene	17.15	91	1993282	22.8199	ug/L	95
70) Bromobenzene	17.26	156	404119	21.7967	ug/L	99
71) 1,3,5-Trimethylbenzene	17.38	105	1467676	23.2811	ug/L	95
72) 2-Chlorotoluene	17.45	91	1260407	21.7067	ug/L	99
73) 4-Chlorotoluene	17.51	91	1359288	22.5055	ug/L	95
74) a-Methylstyrene	17.92	118	19372	0.5649	ug/L #	1
75) tert-Butylbenzene	17.92	119	1239827	20.8670	ug/L	98
76) 1,2,4-Trimethylbenzene	17.98	105	1555299	22.0078	ug/L	96
77) sec-Butylbenzene	18.24	105	1809311	23.4001	ug/L	96
78) p-Isopropyltoluene	18.43	119	1541272	22.1920	ug/L	97
79) 1,3-Dichlorobenzene	18.62	146	843409	21.3774	ug/L	100
80) 1,4-Dichlorobenzene	18.78	146	858610	20.7886	ug/L	99

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(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040402\6M29954.D
Acq On : 4 Apr 2002 20:54
Sample : WG115698-02 20PPB LCS
Misc : 1,1 SV9231
MS Integration Params: rteint.p
Quant Time: Apr 4 21:20 2002

Vial: 4
Operator: CMS
Inst : HPMS6
Multiplr: 1.00

Quant Results File: 8260BWT.RES

Quant Method : C:\HPCHEM\1\METHODS\8260BWT.M (RTE Integrator)
Title : Method 8260B WATER - ICAL 3/21/02 - HPMS6
Last Update : Fri Mar 22 08:01:26 2002
Response via : Initial Calibration
DataAcq Meth : 8260BWT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81) n-Butylbenzene	19.05	91	1477745	24.1203	ug/L	95
82) 1,2-Dichlorobenzene	19.35	146	719903	21.6229	ug/L	100
83) 1,2-Dibromo-3-Chloropropan	20.52	157	24070	20.6444	ug/L #	80
84) 1,2,4-Trichlorobenzene	21.87	180	406859	24.0493	ug/L	98
85) Hexachlorobutadiene	22.07	225	220578	20.7063	ug/L #	37
86) Naphthalene	22.28	128	595287	26.3449	ug/L #	90
87) 1,2,3-Trichlorobenzene	22.66	180	338474	24.5767	ug/L	98

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9M18980.D	1.	WG113899-01 50NG BFB 8260B	7,1 SV9043 ✓	
2	2	9M18981.D	1.	WG113899-02 50PPB STD 8260B	1,1 SV9048 ✓	5 Mar 2002 08:29
3	3	9M18982.D	1.	WG113900-01 VBLK0305 8260B	1,1 ✓	5 Mar 2002 09:03
4	4	9M18983.D	1.	WG113900-01 VBLK0305 8260B	1,1 ✓	5 Mar 2002 09:38
5	5	9M18984.D	1.	WG113899-02 1PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 10:12
6	6	9M18985.D	1.	WG113899-03 2PPB SOIL STD SV9122	7,1 DNR ✓	5 Mar 2002 10:46
7	7	9M18986.D	1.	WG113899-04 5PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 12:24
8	8	9M18987.D	1.	WG113899-05 10PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 12:59
9	9	9M18988.D	1.	WG113899-06 20PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 13:33
10	10	9M18989.D	1.	WG113899-07 50PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 14:08
11	11	9M18990.D	1.	WG113899-08 100PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 14:42
12	12	9M18991.D	1.	WG113899-09 200PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 15:17
13	13	9M18992.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 15:52
14	14	9M18993.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 16:26
15	15	9M18994.D	1.	SYSTEM BLANK	7,1 ✓	5 Mar 2002 17:01
16	16	9M18995.D	1.	WG113899-03 2PPB SOIL STD SV9122	7,1 ✓	5 Mar 2002 17:36
17	15	9M18996.D	1.	WG113899-10 20PPB ALT SOURCE SV91-6	7,1 ✓	5 Mar 2002 18:10
					7,1	5 Mar 2002 18:44

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Injection Log

Directory: c:\hpchem\1\data\032102

IS:SV9126
SS:SV9127

Analyst: CMS

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	6m29645.d	1.	✓WG114853-01 BFB 50NG STD 8260	1,1 SV9148	21 Mar 02 07:25
2	2	6m29646.d	1.	RR WG114853-02 50 PPB STD 8260	1,1 SV9147	21 Mar 02 07:55
3	3	6m29647.d	1.	RR:SS WG114853-02 50 PPB STD 8260	1,1 SV9147	21 Mar 02 08:38
4	4	6m29648.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 09:11
5	5	6m29649.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 09:54
6	6	6m29650.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 10:26
7	7	6m29651.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 10:59
8	8	6m29652.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 11:33
9	9	6m29653.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 13:46
10	10	6m29654.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 14:19
11	11	6m29655.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 14:52
12	12	6m29656.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 15:25
13	1	6m29657.d	1.	RR WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 17:44
14	2	6m29658.d	1.	└ WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 18:13
15	3	6m29659.d	1.	└ WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 22:11
16	4	6m29660.d	1.	✓WG114932-01 50NG BFB STD	1,1 SV9148	21 Mar 02 22:40
17	5	6m29661.d	1.	✓SYSTEM BLANK	1,1	21 Mar 02 23:10
18	6	6m29662.d	1.	✓WG114932-02 50PPB STD	1,1 SV9206	22 Mar 02 00:36
19	7	6m29663.d	1.	✓WG114932-03 20PPB STD	1,1 SV9206	22 Mar 02 01:08
20	8	6m29664.d	1.	✓WG114932-04 10PPB STD	1,1 SV9206	22 Mar 02 01:40
21	9	6m29665.d	1.	✓WG114932-05 5PPB STD	1,1 SV9206	22 Mar 02 02:12
22	10	6m29666.d	1.	✓WG114932-06 2PPB STD	1,1 SV9206	22 Mar 02 02:44
23	11	6m29667.d	1.	✓WG114932-07 1PPB STD	1,1 SV9206	22 Mar 02 03:16
24	12	6m29668.d	1.	✓WG114932-08 0.4PPB STD	1,1 SV9206	22 Mar 02 03:48
25	13	6m29669.d	1.	DNR WG114932-09 0.25PPB STD	1,1 SV9206	22 Mar 02 04:20
26	14	6m29670.d	1.	✓WG114932-10 100PPB STD	1,1 SV9206	22 Mar 02 04:52
27	15	6m29671.d	1.	✓WG114932-11 200PPB STD	1,1 SV9206	22 Mar 02 05:24
28	16	6m29672.d	1.	✓SYSTEM BLANK	1,1	22 Mar 02 05:57
29	17	6m29673.d	1.	✓SYSTEM BLANK	1,1	22 Mar 02 06:31
30	18	6m29674.d	1.	✓WG114932-12 20PPB ALT SOURCE	1,1 SV9139	22 Mar 02 07:06

WG114932

No reanalyses

SV9141/SV224

Analyst: MES

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9M19478.D	1.	WG115462-01 50NG BFB 8260B	7,1 SV9148 ✓	2 Apr 2002 08:00
2	2	9M19479.D	1.	WG115462-02 50PPB SOIL STD 8260B	7,1 SV9218 ✓	2 Apr 2002 08:34
3	3	9M19480.D	1.	WG115463-01 VBLK0402 8260B	7,1 ✓	2 Apr 2002 09:09
4	4	9M19481.D	1.	WG115463-02 20PPB LCS 8260B	7,1 SV9139 ✓	2 Apr 2002 09:43
5	5	9M19482.D	1.	WG115463-01 VBLK0402 8260B	7,1 ✓	2 Apr 2002 10:18
6	6	9M19483.D	1.	100PPB FOO STD	7,1 SV9207 ✓	2 Apr 2002 10:52
7	7	9M19484.D	1.	L0204001-01 A 00 0.91X 826-TCL 5.52G	7,0.91 ✓	2 Apr 2002 11:27
8	8	9M19485.D	1.	L0203519-05 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 12:01
9	9	9M19486.D	1.	L0203519-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 12:35
10	10	9M19487.D	1.	L0203558-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 13:09
11	11	9M19488.D	1.	L0203558-07 MS 00 826-AF31-SPE	7,1 SV9231 ✓	2 Apr 2002 13:43
12	12	9M19489.D	1.	L0203558-08 MSD 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 14:18
13	13	9M19490.D	1.	L0203527-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 14:52
14	14	9M19491.D	1.	L0203528-04 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 15:26
15	15	9M19492.D	1.	L0203528-05 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 16:00
16	16	9M19493.D	1.	L0203528-06 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 16:35
17	17	9M19494.D	1.	L0203511-01 00 8260/826-F	7,1 RR 5X for SS	2 Apr 2002 17:08
18	18	9M19495.D	1.	L0203511-03 00 8260/826-F	7,1 ✓	2 Apr 2002 17:43
19	19	9M19496.D	1.	L0203568-01 00 8260/826-F	7,1 RR 5X acetone	2 Apr 2002 18:17
20	20	9M19497.D	1.	L0203558-02 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 18:51
21	21	9M19498.D	1.	L0203558-10 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 19:25
22	22	9M19499.D	1.	L0203558-11 00 826-AF31-SPE	7,1 ✓	2 Apr 2002 19:59

WG115463 reanalyzes

L0203511-01 @ 5X

L0203568-01 @ 5X

Injection Log

Directory: c:\hpcchem\1\data\040402

IS: SV9223

SS: SV9209

Analyst: CMS

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	6m29930.d	1.	✓WG115617-01 BFB 50NG STD 8260	1,1 SV9148	4 Apr 02 06:40
2	2	6m29931.d	1.	✓WG115617-02 50 PPB STD 8260	1,1 SV9227	4 Apr 02 07:16
3	3	6m29932.d	1.	✓WG115618-01 VBLK0404 BLANK 8260	1,1	4 Apr 02 07:59
4	4	6m29933.d	1.	✓WG115618-02 20 PPB LCS STD 8260	1,1 SV9231	4 Apr 02 08:31
5	5	6m29934.d	1.	✓L0203572-10 B 00 8260	1,1 pH<2	4 Apr 02 09:13
6	6	6m29935.d	1.	✓L0203572-08 B 10X D1 8260	1,10	4 Apr 02 09:46
7	7	6m29936.d	1.	✓WG115618-03 L0203572-16 B 10X D1 8260	1,10	4 Apr 02 10:18
8	8	6m29937.d	1.	✓WG115618-04 L0203572-16 MS B 10X D1 826	1,10 SV9231	4 Apr 02 10:51
9	9	6m29938.d	1.	✓WG115618-05 L0203572-16 MSD B 10X D1 82	1,10 SV9231	4 Apr 02 11:23
10	10	6m29939.d	1.	✓L0203572-15 B 100X D1 8260	1,100	4 Apr 02 11:56
11	11	6m29940.d	1.	✓L0203572-14 B 100X D1 8260	1,100	4 Apr 02 12:29
12	12	6m29941.d	1.	✓L0203572-17 B 500X D1 8260	1,500	4 Apr 02 13:01
13	13	6m29942.d	1.	✓L0203572-13 B 500X D1 8260	1,500	4 Apr 02 13:34
14	14	6m29943.d	1.	✓L0203572-09 B 1000X D1 8260	1,1000	4 Apr 02 14:07
15	15	6m29944.d	1.	✓L0203572-12 B 1000X D1 8260	1,1000	4 Apr 02 14:39
16	16	6m29945.d	1.	✓L0203572-11 B 100X D1 8260	1,100	4 Apr 02 15:12
17	17	6m29946.d	1.	✓L0203560-09 B 100X D1 826-TC	17,100 (4/1@1600)	4 Apr 02 15:45
18	18	6m29947.d	1.	✓L0203572-03 B 00 8260	1,1 pH<2	4 Apr 02 16:18
19	19	6m29948.d	1.	RR 50X L0203572-04 B 00 8260	1,1 L	4 Apr 02 16:51
20	20	6m29949.d	1.	DNR: DNC L0203560-16 B 100X D1 826-TC	17,100 (4/1@1600)	4 Apr 02 17:23
21	21	6m29950.d	1.	✓L0204022-01 A 00 826-BETXN	2,1	4 Apr 02 17:56
22	1	6m29951.d	1.	✓WG115697-01 50NG BFB STD	1,1 SV9148	4 Apr 02 18:54
23	2	6m29952.d	1.	✓WG115697-02 50PPB STD	1,1 SV9227	4 Apr 02 19:24
24	3	6m29953.d	1.	✓WG115698-01 VBLK 0404	1,1	4 Apr 02 20:21
25	4	6m29954.d	1.	✓WG115698-02 20PPB LCS	1,1 SV9231	4 Apr 02 20:54
26	5	6m29955.d	1.	✓L0204023-01 A 00 826-BETXN	2,1 pH<2	4 Apr 02 21:39
27	6	6m29956.d	1.	✓L0204001-02 A 00 826-TCL	1,1	4 Apr 02 22:12
28	7	6m29957.d	1.	✓L0203590-08 A 00 826-SPE	1,1	4 Apr 02 22:44
29	8	6m29958.d	1.	✓WG115698-03 L0203590-01 A 00 826-SPE	1,1	4 Apr 02 23:17
30	9	6m29959.d	1.	✓WG115698-04 L0203590-01 MS A 00 826-SPE	1,1 SV9231	4 Apr 02 23:49
31	10	6m29960.d	1.	✓WG115698-05 L0203590-01 MSD A 00 826-SP	1,1 SV9231	5 Apr 02 00:21
32	11	6m29961.d	1.	✓L0203590-02 A 00 826-SPE	1,1 pH<2	5 Apr 02 00:54
33	12	6m29962.d	1.	✓L0203590-03 A 00 826-SPE	1,1	5 Apr 02 01:26
34	13	6m29963.d	1.	✓L0203590-04 A 00 826-SPE	1,1	5 Apr 02 01:59
35	14	6m29964.d	1.	✓L0203590-05 A 00 826-SPE	1,1	5 Apr 02 02:31
36	15	6m29965.d	1.	✓L0203590-06 A 00 826-SPE	1,1	5 Apr 02 03:03
37	16	6m29966.d	1.	✓L0203590-07 A 00 826-SPE	1,1	5 Apr 02 03:35
38	17	6m29967.d	1.	DNR: DNC L0203560-16 A D1 100X 826-TC	17,100 (4/1/02@1600)	5 Apr 02 04:07
39	18	6m29968.d	1.	✓L0203579-01 A.00 10X 826-TC	17,10 (4/3/02@1400)	5 Apr 02 04:39
40	19	6m29969.d	1.	✓L0203579-02 A 00 10X 826-TC	17,10 (4/3/02@1400)	5 Apr 02 05:11
41	20	6m29970.d	1.	✓L0203582-01 A 00 10X 826-TC	17,10 (4/2/02@1000)	5 Apr 02 05:43
42	21	6m29971.d	1.	✓L0203583-01 A 00 10X 826-TC	17,10 (4/2/02@1000)	5 Apr 02 06:15
43	22	6m29972.d	1.	✓SYSTEM BLANK	1,1	5 Apr 02 06:47

WG115618 reanalyses

L0203572-04 @ 50X: TCFM, TCE-10M15252

L0203560-16: Didn't confirm RR@box

WG115698 reanalyses

L0203560-16: Didn't confirm

RR@box

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Method 5035 Preservation and Extraction Log
VOA Laboratory

Client	Sample #	Fraction ID	Date Collected	Time Collected (Time Zone)	Date Preserved	Time Preserved (EST)	Sample Weight (g)	Volume of Water	Volume of Methanol	Analyst Initials	Comments
ITCORP TX	10203228-01	A	3/12/02	0800	3/14/02	1215	5.38	5mL	NA	MES	□
	-02	A		0840		1236	5.45				
	-03	A		0910		1249	5.91				
	-04	A		1015		1251	5.78				
	-05	A		1035		1350	5.21				
	-06	A		1100		1352	5.71				
	-07	A		1300		1353	5.20				
	-08	A		1400		1355	5.14				
	-09	A		1415		1357	5.51				
ITCORP TX	5035 BLANK	A				1358	5.00				
	10203228-05	B	3/12/02	1035	3/14/02	1530	4.96	5mL	NA	MES	□
EGIS	10204001-01	A	3/12/02	0950	4/2/02	1100	5.52	5mL	NA	MES	□ * not fur
	5035 BLANK	A	3/12/02			1102	5.00				□

Supervisor Review:

T&R worked mg 4.2.02

Comments:

- * = improperly sealed cap
- ☉ = improperly sealed plunger
- ▲ = hydrocarbon odor
- ★ = samples preserved out of hold (past 48 hours from time of collection)
- EF = sample effervesced
- = no NaHSO₄

2.2 Semivolatiles

2.2.1 Semivolatiles GC MS Data (8270)

**REPORT NARRATIVE
GC/MS SEMIVOLATILE ORGANICS**

KEMRON Report No.: L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: The MS/MSD were not associated with these samples.

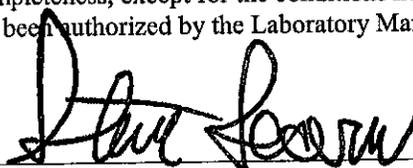
SAMPLES

Internal Standards: All acceptance criteria were met.
Surrogates: Sample 02 yielded a % recovery for p-terphenyl-d14 that was above the upper advisory limit. All other acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: mdc

REVIEWED: _____



DATE: _____

4/4/02

Rev. 6/00

GC/MS DATA - 8270

Login Number L0204001

A. QC Summary

- Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Holding Time Summary
- Surrogate Recovery Summary
- Instrument Tune Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Internal Standard Area Summary
- Instrument Run Log
- Extraction Bench Sheet

B. Sample Data

- Target compound and surrogate results summary (See Summary Report)
- Tentatively Identified Compounds (TIC) (if requested - See Summary Report)
- Chromatograms (RIC) and quantitation report
- Raw and background corrected mass spectra of identified target compounds
- Mass spectra for all reported TICs with three best matches

C. Standards Data

- Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms

D. Raw QC Data

- GC/MS instrument performance check DFTPP
- Method blank chromatogram and quantitation report
- LCS chromatogram and quantitation report
- MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: ndc Date: 4/4/02

2.2.1.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0204001
Blank File ID: 4M12770
Date Analyzed: 04/02/02
Time Analyzed: 12:52
Analyst: MDC

Work Group: WG115546
Blank Sample ID: WG115413-01
Instrument ID: HPMS4
Method: 8270C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115413-02	4M12771	04/02/02 13:22	01
LCS2	WG115413-03	4M12772	04/02/02 13:53	01
027-EQBFS-01	L0204001-01	4M12774	04/02/02 14:55	01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115413-01
 Instrument ID: HPMS4 Run Time: 12:52 Method: 8270C
 File ID: 4M12770 Analvst: MDC Matrix: Solid
 Workgroup (AAB#): WG115546 Units: ug/kg
 Contract #: _____ Cal ID: HPMS4-01-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Phenol	31.5	165	31.5	1.00	ND
bis(2-Chloroethyl) ether	40.2	165	40.2	1.00	ND
2-Chlorophenol	33.6	165	33.6	1.00	ND
1,3-Dichlorobenzene	31.9	165	31.9	1.00	ND
1,4-Dichlorobenzene	33.8	165	33.8	1.00	ND
1,2-Dichlorobenzene	32.8	165	32.8	1.00	ND
2-Methylphenol	63.0	165	63.0	1.00	ND
bis(2-Chloroisopropyl) ether	41.2	165	41.2	1.00	ND
3-,4-Methylphenol	41.2	165	41.2	1.00	ND
n-Nitrosodipropylamine	35.2	165	35.2	1.00	ND
Hexachloroethane	32.5	165	32.5	1.00	ND
Nitrobenzene	34.2	165	34.2	1.00	ND
Isophorone	43.3	165	43.3	1.00	ND
2-Nitrophenol	32.3	165	32.3	1.00	ND
2,4-Dimethylphenol	37.1	165	37.1	1.00	ND
bis(2-Chloroethoxy) methane	47.1	165	47.1	1.00	ND
2,4-Dichlorophenol	40.5	165	40.5	1.00	ND
1,2,4-Trichlorobenzene	32.5	165	32.5	1.00	ND
Naphthalene	36.3	165	36.3	1.00	ND
4-Chloroaniline	53.0	165	53.0	1.00	ND
Hexachlorobutadiene	36.7	165	36.7	1.00	ND
4-Chloro-3-Methylphenol	45.7	165	45.7	1.00	ND
2-Methylnaphthalene	36.5	165	36.5	1.00	ND
Hexachlorocyclopentadiene	86.9	165	86.9	1.00	ND
2,4,6-Trichlorophenol	42.3	165	42.3	1.00	ND
2,4,5-Trichlorophenol	46.8	823	46.8	1.00	ND
2-Chloronaphthalene	39.6	165	39.6	1.00	ND
2-Nitroaniline	46.0	823	46.0	1.00	ND
Dimethylphthalate	45.4	165	45.4	1.00	ND
Acenaphthylene	42.1	165	42.1	1.00	ND
2,6-Dinitrotoluene	40.1	165	40.1	1.00	ND
3-Nitroaniline	72.0	823	72.0	1.00	ND
Acenaphthene	41.5	165	41.5	1.00	ND
2,4-Dinitrophenol	106	823	106	1.00	ND
4-Nitrophenol	56.6	823	56.6	1.00	ND
Dibenzofuran	43.0	165	43.0	1.00	ND
2,4-Dinitrotoluene	42.3	165	42.3	1.00	ND
Diethylphthalate	48.6	165	48.6	1.00	ND
Fluorene	44.0	165	44.0	1.00	ND
4-Chlorophenyl Phenyl Ether	43.8	165	43.8	1.00	ND
4-Nitroaniline	39.8	823	39.8	1.00	ND
4,6-Dinitro-2-Methylphenol	36.0	823	36.0	1.00	ND

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KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115413-01
 Instrument ID: HPMS4 Run Time: 12:52 Method: 8270C
 File ID: 4M12770 Analyst: MDC Matrix: Solid
 Workgroup (AAB#): WG115546 Units: ug/kg
 Contract #: _____ Cal ID: HPMS4-01-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
n-Nitrosodiphenylamine	47.4	165	47.4	1.00	ND
4-Bromophenyl Phenyl Ether	37.7	165	37.7	1.00	ND
Hexachlorobenzene	39.8	165	39.8	1.00	ND
Pentachlorophenol	20.2	823	20.2	1.00	ND
Phenanthrene	43.4	165	43.4	1.00	ND
Anthracene	34.9	165	34.9	1.00	ND
Carbazole	36.3	165	36.3	1.00	ND
Di-n-Butyl Phthalate	31.1	165	31.1	1.00	ND
Fluoranthene	28.2	165	28.2	1.00	ND
Pyrene	30.3	165	30.3	1.00	ND
Butyl Benzyl Phthalate	30.8	165	30.8	1.00	ND
Benzo[a]anthracene	28.7	165	28.7	1.00	ND
3,3'-Dichlorobenzidine	153	329	153	1.00	ND
Chrysene	40.4	165	40.4	1.00	ND
bis(2-Ethylhexyl) phthalate	39.4	165	39.4	1.00	ND
Di-n-Octyl Phthalate	30.5	165	30.5	1.00	ND
Benzo[b]fluoranthene	27.8	165	27.8	1.00	ND
Benzo[k]fluoranthene	33.8	165	33.8	1.00	ND
Benzo[a]pyrene	25.8	165	25.8	1.00	ND
Indeno[1,2,3-cd]pyrene	35.8	165	35.8	1.00	ND
Dibenz[ah]anthracene	38.7	165	38.7	1.00	ND
Benzo[ghi]perylene	36.6	165	36.6	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	48.9	25 - 121	PASS
Phenol-d5	52.5	24 - 113	PASS
Nitrobenzene-d5	52.8	23 - 120	PASS
2-Fluorobiphenyl	54.5	30 - 115	PASS
2,4,6-Tribromophenol	41.8	19 - 122	PASS
p-Terphenyl-d14	51.9	18 - 137	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES**

Loginnum: L0204001

Worknum: WG115546

Method: 8270C

Instrument ID: HPMS4

Cal ID: HPMS4 - 01-APR-2002

Matrix: Solid

Analyst: MDC

Contract #:

Units: ug/kg

Sample ID: WG115413-02 LCS File ID: 4M12771 Run Date: 04/02/2002 13:22

Sample ID: WG115413-03 LCS2 File ID: 4M12772 Run Date: 04/02/2002 13:53

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Phenol	1670	784	47.1	1660	1360	81.9	54	13 - 95	51	#
bis(2-Chloroethyl) ether	1670	751	45.1	1660	1340	80.7	56.3	10 - 93	52	#
2-Chlorophenol	1670	749	45.0	1660	1270	76.3	51.6	13 - 90	47	#
1,3-Dichlorobenzene	1670	813	48.8	1660	1280	77.1	44.7	16 - 84	42	#
1,4-Dichlorobenzene	1670	766	46.0	1660	1220	73.1	45.3	13 - 84	43	#
1,2-Dichlorobenzene	1670	825	49.6	1660	1350	81.0	47.8	16 - 85	42	#
2-Methylphenol	1670	808	48.5	1660	1370	82.2	51.3	13 - 99	52	#
bis(2-Chloroisopropyl) ether	1670	756	45.4	1660	1370	82.5	58.2	10 - 84	49	#
3-,4-Methylphenol	1670	795	47.8	1660	1440	86.6	57.6	25 - 135	52	#
n-Nitrosodipropylamine	1670	792	47.6	1660	1550	93.3	65	10 - 103	59	#
Hexachloroethane	1670	728	43.7	1660	1190	71.4	48	10 - 87	47	#
Nitrobenzene	1670	775	46.5	1660	1390	83.7	57.2	12 - 93	50	#
Isophorone	1670	871	52.3	1660	1680	101	63.5	13 - 114	62	#
2-Nitrophenol	1670	820	49.3	1660	1570	94.5	62.6	10 - 102	60	#
2,4-Dimethylphenol	1670	811	48.7	1660	1510	91.0	60.5	14 - 107	57	#
bis(2-Chloroethoxy) methane	1670	777	46.6	1660	1490	89.5	63	12 - 99	53	#
2,4-Dichlorophenol	1670	764	45.9	1660	1430	85.9	60.5	14 - 100	53	#
1,2,4-Trichlorobenzene	1670	773	46.4	1660	1360	81.8	55	13 - 88	46	#
Naphthalene	1670	830	49.8	1660	1480	88.9	56.4	10 - 95	45	#
4-Chloroaniline	1670	755	45.3	1660	1410	84.5	60.3	10 - 110	73	#
Hexachlorobutadiene	1670	856	51.4	1660	1530	92.0	56.6	15 - 100	52	#
4-Chloro-3-Methylphenol	1670	818	49.1	1660	1540	92.6	61.2	14 - 116	62	#
2-Methylnaphthalene	1670	782	47.0	1660	1470	88.7	61.3	10 - 103	49	#
Hexachlorocyclopentadiene	1670	782	46.9	1660	1530	92.2	64.9	10 - 92	60	*
2,4,6-Trichlorophenol	1670	788	47.3	1660	1530	91.9	63.8	12 - 114	63	#
2,4,5-Trichlorophenol	1670	808	48.5	1660	1570	94.4	64.1	13 - 116	63	#
2-Chloronaphthalene	1670	904	54.3	1660	1700	102	61.1	15 - 96	50	*
2-Nitroaniline	1670	881	52.9	1660	1580	95.1	57	15 - 123	67	#
Dimethylphthalate	1670	924	55.5	1660	1530	92.0	49.3	20 - 122	63	#
Acenaphthylene	1670	827	49.7	1660	1520	91.7	59.2	10 - 109	53	#
2,6-Dinitrotoluene	1670	985	59.2	1660	1720	104	54.5	14 - 126	69	#
3-Nitroaniline	1670	1050	63.2	1660	1720	104	48.2	13 - 153	86	#
Acenaphthene	1670	885	53.2	1660	1660	100	61.3	10 - 123	70	#
2,4-Dinitrophenol	1670	1150	69.0	1660	1880	113	48.3	11 - 127	72	#
4-Nitrophenol	1670	958	57.5	1660	1570	94.3	48.4	10 - 165	99	#
Dibenzofuran	1670	851	51.1	1660	1540	92.6	57.5	18 - 108	55	#
2,4-Dinitrotoluene	1670	1190	71.7	1660	1900	114	45.7	24 - 146	75	#
Diethylphthalate	1670	1090	65.4	1660	1700	102	43.8	26 - 140	70	#
Fluorene	1670	944	56.7	1660	1620	97.7	53.2	10 - 122	55	#
4-Chlorophenyl Phenyl Ether	1670	848	51.0	1660	1510	90.8	56.1	14 - 119	64	#

**KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES**

Loginum: L0204001

Worknum: WG115546

Method: 8270C

Instrument ID: HPMS4

Cal ID: HPMS4 01-APR-2002

Matrix: Solid

Analyst: MDC

Contract #:

Units: ug/kg

Sample ID: WG115413-02 LCS File ID: 4M12771 Run Date: 04/02/2002 13:22

Sample ID: WG115413-03 LCS2 File ID: 4M12772 Run Date: 04/02/2002 13:53

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
4-Nitroaniline	1670	1110	66.9	1660	1870	112	50.5	14 - 169	95	
4,6-Dinitro-2-Methylphenol	1670	1300	78.3	1660	2020	121	43.1	11 - 152	86	
n-Nitrosodiphenylamine	1670	1030	61.9	1660	1650	99.0	46	21 - 127	65	
4-Bromophenyl Phenyl Ether	1670	830	49.8	1660	1380	82.9	49.9	17 - 112	58	
Hexachlorobenzene	1670	1040	62.7	1660	1660	99.6	45.4	25 - 136	68	
Pentachlorophenol	1670	1040	62.4	1660	1600	96.1	42.4	21 - 146	77	
Phenanthrene	1670	1050	63.0	1660	1570	94.6	39.9	10 - 144	70	
Anthracene	1670	1020	61.3	1660	1530	92.2	40	10 - 149	72	
Carbazole	1670	1110	66.6	1660	1600	96.1	36.2	18 - 179	99	
Di-n-Butyl Phthalate	1670	1070	64.6	1660	1630	98.0	41.1	22 - 156	82	
Fluoranthene	1670	1070	64.4	1660	1590	95.6	39	10 - 158	80	
Pyrene	1670	1130	67.8	1660	1630	97.8	36	10 - 161	89	
Butyl Benzyl Phthalate	1670	1100	66.2	1660	1610	97.1	37.7	22 - 162	86	
Benzo[a]anthracene	1670	1060	63.9	1660	1530	91.8	35.5	10 - 159	83	
3,3'-Dichlorobenzidine	1670	1180	71.0	1660	1770	107	39.8	10 - 209	135	
Chrysene	1670	1100	66.0	1660	1580	94.8	35.6	10 - 153	72	
bis(2-Ethylhexyl)phthalate	1670	1060	64.0	1660	1610	96.6	40.4	22 - 157	83	
Di-n-Octyl Phthalate	1670	1020	61.4	1660	1550	93.3	40.9	17 - 173	96	
Benzo[b]fluoranthene	1670	1020	61.2	1660	1540	92.8	41	10 - 161	76	
Benzo[k]fluoranthene	1670	1040	62.4	1660	1490	89.7	35.7	10 - 165	79	
Benzo[a]pyrene	1670	966	58.0	1660	1430	86.2	39	10 - 152	72	
Indeno[1,2,3-cd]pyrene	1670	1090	65.2	1660	1640	98.6	40.7	10 - 162	84	
Dibenz[ah]anthracene	1670	1100	65.8	1660	1650	99.2	40.4	10 - 169	88	
Benzo[ghi]perylene	1670	1150	69.3	1660	1720	104	39.6	10 - 160	85	

Surogates	LCS	LCS2	Surrogate Limits		Qualifier
	% Recovery	% Recovery			
2-Fluorophenol	43.8	69.4	25	- 121	PASS
Phenol-d5	46.9	79.7	24	- 113	PASS
Nitrobenzene-d5	47.0	84.7	23	- 120	PASS
2-Fluorobiphenyl	48.4	88.8	30	- 115	PASS
2,4,6-Tribromophenol	55.3	90.1	19	- 122	PASS
p-Terphenyl-d14	56.6	73.5	18	- 137	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C

AAB#: WG115546

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	01-APR-02	14	3.12	02-APR-02	40	1.09	

* EXT = MISSED EXTRACTION HOLD TIME

*ANAL = MISSED ANALYTICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0204001 _____
 Instrument Id: HPMS4 _____
 Workgroup (AAB#): WG115546 _____

Method: 8270 _____
 Matrix: SOLID _____

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0204001-01	1.00	01	44.3	52.3	47.2	50.4	53.9	50.1
WG115413-01	1.00	01	41.8	54.5	48.9	52.8	51.9	52.5
WG115413-02	1.00	01	55.3	48.4	43.8	47.0	56.6	46.9
WG115413-03	1.00	01	90.1	88.8	69.4	84.7	73.5	79.7

Surrogates	Surrogate Limits	
1 - 2,4,6-Tribromophenol	19	- 122
2 - 2-Fluorobiphenyl	30	- 115
3 - 2-Fluorophenol	25	- 121
4 - Nitrobenzene-d5	23	- 120
5 - P-Terphenyl-d14	18	- 137
6 - Phenol-d5	24	- 113

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0204001 _____ Tune ID: WG115403-01 _____
 Instrument: HPMS4 _____ Run Date: 04/01/2002 _____
 Analyst: MDC _____ Run Time: 09:54 _____
 Workgroup: WG115403 _____ File ID: 4M12734 _____
 Cal ID: HPMS4-01-APR-02 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51.0	198	30.0	60.0	47.6	119053	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	50.1	125342	PASS
70.0	69.0	0	2.00	0.489	613	PASS
127	198	40.0	60.0	52.3	130891	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	250176	PASS
199	198	5.00	9.00	6.61	16532	PASS
275	198	10.0	30.0	24.4	60931	PASS
365	198	1.00	100	2.46	6162	PASS
441	443	0.0100	100	47.7	13030	PASS
442	198	40.0	100	56.3	140808	PASS
443	442	17.0	23.0	19.4	27325	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag
WG115403-03	STD	01
WG115403-04	STD	01
WG115403-05	STD	01
WG115403-06	STD	01
WG115403-07	STD	01
WG115403-08	STD	01
WG115403-09	SSCV	01

* Sample past 12 hour tune limit

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0204001
Instrument: HPMS4
Analyst: MDC
Workgroup: WG115478

Tune ID: WG115478-01
Run Date: 04/02/2002
Run Time: 10:01
File ID: 4M12764

Cal ID: HPMS4 - 01-APR-2002

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51.0	198	30.0	60.0	46.8	126741	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	48.9	132162	PASS
70.0	69.0	0	2.00	0.492	650	PASS
127	198	40.0	60.0	52.5	142027	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	270528	PASS
199	198	5.00	9.00	7.00	18943	PASS
275	198	10.0	30.0	25.1	67781	PASS
365	198	1.00	100	2.74	7401	PASS
441	443	0.0100	100	77.0	24528	PASS
442	198	40.0	100	58.8	158955	PASS
443	442	17.0	23.0	20.1	31872	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Q
L0204001-01	027-EQBFS-01	01	
WG115413-01	BLANK	01	
WG115413-02	LCS	01	
WG115413-03	LCS2	01	

* Sample past 12 hour tune limit

Calibration Table Report

Method: BNA.M

Title: M8270/625/Initial cal. 04/01/02

Last Calibration: Tue Apr 02 07:53:51 2002

HPMS4

Calibration Files

Compound	3	10	20	50	80	100	120	Avg	%RSD	R ² value
I 1,4-Dichlorobenzene-d4	ISTD									
Pyridine	1.277	1.361	1.498	1.468	1.443	1.452	1.465	1.423	5.4	
n-Nitrosodimethylamine	0.675	0.766	0.841	0.799	0.794	0.792	0.803	0.781	6.6	
S 2-Fluorophenol	1.127	1.206	1.342	1.272	1.273	1.281	1.284	1.255	5.5	
Aniline	0.756	0.786	0.834	0.777	0.754	0.749	0.751	0.772	4.0	
S Phenol-d5	1.559	1.650	1.738	1.629	1.603	1.589	1.595	1.623	3.6	
C Phenol	1.656	1.734	1.888	1.760	1.730	1.703	1.718	1.741	4.1	
bis(2-Chloroethyl)ether	0.998	1.010	1.030	0.977	0.966	0.950	0.950	0.983	3.1	
2-Chlorophenol	1.341	1.383	1.486	1.379	1.370	1.362	1.367	1.384	3.4	
1,3-Dichlorobenzene	1.530	1.494	1.592	1.421	1.399	1.393	1.390	1.460	5.5	
C 1,4-Dichlorobenzene	1.726	1.661	1.713	1.552	1.530	1.514	1.519	1.602	5.9	
Benzyl Alcohol	0.742	0.853	0.956	0.902	0.897	0.899	0.905	0.879	7.7	
1,2-Dichlorobenzene	1.447	1.434	1.504	1.355	1.349	1.334	1.336	1.394	4.8	
2-Methylphenol	1.135	1.186	1.221	1.093	1.099	1.081	1.088	1.129	4.8	
bis(2-Chloroisopropyl)ether	1.939	1.922	2.028	1.908	1.867	1.862	1.870	1.914	3.1	
3-,4-Methylphenol	1.603	1.637	1.772	1.657	1.621	1.615	1.613	1.645	3.6	
P n-Nitrosodipropylamine	0.915	0.992	1.057	1.010	0.998	0.987	0.985	0.992	4.2	
Hexachloroethane	0.556	0.593	0.644	0.602	0.607	0.599	0.601	0.600	4.3	
I Naphthalene-d8	ISTD									
S Nitrobenzene-d5	0.340	0.362	0.384	0.359	0.358	0.358	0.357	0.360	3.6	
Nitrobenzene	0.363	0.378	0.398	0.366	0.366	0.364	0.361	0.371	3.6	
Isophorone	0.582	0.632	0.667	0.620	0.615	0.610	0.609	0.619	4.2	
C 2-Nitrophenol	0.130	0.155	0.180	0.173	0.182	0.186	0.187	0.170	12.3	
2,4-Dimethylphenol	0.300	0.326	0.334	0.307	0.304	0.302	0.301	0.311	4.4	
bis(2-Chloroethoxy)methane	0.408	0.426	0.439	0.402	0.400	0.400	0.395	0.410	4.0	
Benzoic Acid	0.011	0.029	0.087	0.082	0.101	0.112	0.070	0.070	57.9	0.992QR
C 2,4-Dichlorophenol	0.256	0.269	0.285	0.269	0.266	0.266	0.264	0.268	3.3	
1,2,4-Trichlorobenzene	0.328	0.324	0.337	0.299	0.299	0.297	0.293	0.311	5.8	
Naphthalene	0.999	0.997	1.021	0.913	0.908	0.893	0.884	0.945	6.1	
4-Chloroaniline	0.392	0.418	0.437	0.392	0.394	0.395	0.396	0.404	4.4	
C Hexachlorobutadiene	0.160	0.163	0.167	0.148	0.148	0.147	0.148	0.155	5.4	
C 4-Chloro-3-Methylphenol	0.270	0.301	0.318	0.297	0.297	0.295	0.294	0.296	4.8	
2-Methylnaphthalene	0.730	0.737	0.758	0.677	0.671	0.659	0.658	0.698	6.0	
I Acenaphthene-d10	ISTD									
P Hexachlorocyclopentadiene	0.030	0.092	0.151	0.190	0.226	0.242	0.245	0.168	48.7	0.995LR
C 2,4,6-Trichlorophenol	0.289	0.336	0.374	0.363	0.359	0.358	0.359	0.348	8.2	
2,4,5-Trichlorophenol	0.336	0.373	0.406	0.393	0.392	0.395	0.395	0.384	6.1	
S 2-Fluorobiphenyl	1.421	1.405	1.453	1.304	1.290	1.255	1.243	1.339	6.4	
2-Chloronaphthalene	1.097	1.100	1.143	1.020	1.019	1.002	1.001	1.054	5.5	
2-Nitroaniline		0.326	0.377	0.367	0.368	0.364	0.364	0.361	5.0	
Dimethylphthalate	1.414	1.438	1.476	1.328	1.311	1.288	1.289	1.363	5.7	
Acenaphthylene	1.975	2.016	2.112	1.913	1.869	1.824	1.795	1.929	5.8	
2,6-Dinitrotoluene	0.229	0.275	0.307	0.301	0.305	0.307	0.308	0.290	10.1	
3-Nitroaniline		0.320	0.354	0.312	0.302	0.297	0.311	0.316	6.5	
C Acenaphthene	1.169	1.169	1.206	1.113	1.108	1.089	1.085	1.134	4.1	
P 2,4-Dinitrophenol		0.005	0.022	0.082	0.078	0.097	0.109	0.062	66.6	0.999QR
P 4-Nitrophenol			0.199	0.223	0.221	0.225	0.230	0.220	5.4	
Dibenzofuran	1.833	1.781	1.835	1.643	1.601	1.570	1.553	1.688	7.4	
2,4-Dinitrotoluene	0.255	0.331	0.375	0.371	0.379	0.380	0.379	0.353	13.2	
Diethylphthalate	1.307	1.349	1.403	1.291	1.267	1.244	1.233	1.299	4.6	
Fluorene	1.386	1.373	1.436	1.304	1.283	1.261	1.254	1.328	5.3	
4-Chlorophenyl Phenyl Ether	0.708	0.713	0.736	0.660	0.653	0.643	0.640	0.679	5.7	
4-Nitroaniline		0.293	0.324	0.307	0.266	0.274	0.279	0.291	7.6	
1,2-Diphenylhydrazine	1.570	1.630	1.699	1.562	1.513	1.475	1.457	1.558	5.5	
S 2,4,6-Tribromophenol	0.096	0.123	0.151	0.156	0.163	0.165	0.166	0.146	18.1	1.000LR
I Phenanthrene-d10	ISTD									
4,6-Dinitro-2-Methylphenol		0.031	0.055	0.081	0.096	0.107	0.114	0.081	39.8	1.000QR
C n-Nitrosodiphenylamine	0.542	0.570	0.591	0.532	0.521	0.515	0.513	0.540	5.5	
4-Bromophenyl Phenyl Ether	0.201	0.211	0.221	0.201	0.202	0.200	0.198	0.205	4.0	
Hexachlorobenzene	0.203	0.205	0.206	0.188	0.188	0.186	0.185	0.194	5.0	
C Pentachlorophenol			0.060	0.093	0.096	0.102	0.108	0.092	20.3	0.997LR
Phenanthrene	1.256	1.249	1.273	1.120	1.089	1.062	1.044	1.156	8.6	
Anthracene	1.264	1.273	1.331	1.185	1.152	1.112	1.101	1.203	7.3	

Calibration Table Report
 Method: BNA.M
 Title: M8270/625/Initial cal. 04/01/02
 Last Calibration: Tue Apr 02 07:53:51 2002
 HPMS4
 Calibration Files

Compound	3	10	20	50	80	100	120	Avg	%RSD	R ² value
	4M12736.D	4M12737.D	4M12738.D	4M12735.D	4M12739.D	4M12740.D	4M12741.D			
Carbazole	1.084	1.076	1.088	0.948	0.874	0.841	0.831	0.963	12.2	
Di-n-Butyl Phthalate	1.332	1.410	1.481	1.374	1.314	1.272	1.251	1.348	6.0	
C Fluoranthene	1.318	1.328	1.377	1.225	1.192	1.155	1.135	1.247	7.5	
I Chrysene-d12	ISTD									
Benzdine	0.305	0.409	0.498	0.308	0.405	0.399	0.399	0.389	17.0	0.990QR
Pyrene	1.403	1.405	1.452	1.265	1.222	1.194	1.146	1.298	9.3	
S p-Terphenyl-d14	0.992	1.004	1.041	0.921	0.895	0.875	0.850	0.940	7.8	
Butyl Benzyl Phthalate	0.676	0.680	0.728	0.670	0.646	0.628	0.613	0.663	5.7	
Benzo[a]anthracene	1.367	1.354	1.407	1.257	1.225	1.206	1.176	1.284	7.0	
3,3'-Dichlorobenzidine	0.409	0.384	0.364	0.324	0.302	0.312	0.310	0.344	12.2	
Chrysene	1.368	1.323	1.366	1.216	1.202	1.176	1.145	1.257	7.4	
bis(2-Ethylhexyl)phthalate	0.942	0.968	1.004	0.934	0.890	0.875	0.850	0.923	5.9	
I Perylene-d12	ISTD									
C Di-n-Octyl Phthalate	2.148	2.263	2.413	2.270	2.176	2.126	2.087	2.212	5.0	
Benzo[b]fluoranthene	1.669	1.721	1.804	1.625	1.677	1.623	1.628	1.678	3.9	
Benzo[k]fluoranthene	1.713	1.678	1.771	1.623	1.550	1.578	1.548	1.637	5.3	
C Benzo[a]pyrene	1.601	1.608	1.702	1.571	1.564	1.555	1.546	1.593	3.4	
Indeno[1,2,3-cd]pyrene	1.444	1.443	1.525	1.439	1.444	1.431	1.420	1.449	2.4	
Dibenz[ah]anthracene	1.140	1.171	1.270	1.186	1.192	1.187	1.183	1.190	3.3	
Benzo[ghi]perylene	1.051	1.081	1.163	1.093	1.103	1.100	1.094	1.098	3.1	

Tue Apr 02 09:57:52 2002

Login Number: L0204001

Instrument ID: HPMS4

File ID: 4M12742

Run Date: 04/01/2002

ALT ID: WG115403-09

Run Time: 13:49

Units: ug/mL

Analyst: MDC

Cal ID: HPMS4 - 01-APR-02

Analyte		Expected	Found	RF	%D	Q
Benzo[a]pyrene	CCC	50	49.2	1.57	1.6	
Di-n-Octyl Phthalate	CCC	50	53.1	2.35	6.2	
Fluoranthene	CCC	50	52.3	1.30	4.6	
Pentachlorophenol	CCC	50	50.1	0.0914	0.2	
n-Nitrosodiphenylamine	CCC	50	55.7	0.602	11.4	
Acenaphthene	CCC	50	57.4	1.30	14.8	
2,4,6-Trichlorophenol	CCC	50	53.9	0.376	7.8	
4-Chloro-3-Methylphenol	CCC	50	52.1	0.308	4.2	
Hexachlorobutadiene	CCC	50	59.9	0.185	19.8	
2,4-Dichlorophenol	CCC	50	52.4	0.280	4.8	
2-Nitrophenol	CCC	50	58.0	0.198	16.0	
1,4-Dichlorobenzene	CCC	50	51.2	1.64	2.4	
Phenol	CCC	50	51.9	1.81	3.8	
4-Nitrophenol	SPCC	50	50.2	0.220	0.4	
2,4-Dinitrophenol	SPCC	50	58.8	0.0769	17.6	
Hexachlorocyclopentadiene	SPCC	50	51.4	0.227	2.8	
n-Nitrosodipropylamine	SPCC	50	54.5	1.08	9.0	
Benzo[ghi]perylene		50	54.1	1.19	8.2	
Dibenz[ah]anthracene		50	52.3	1.24	4.6	
Indeno[1,2,3-cd]pyrene		50	52.1	1.51	4.2	
Benzo[k]fluoranthene		50	53.0	1.74	6.0	
Benzo[b]fluoranthene		50	52.5	1.76	5.0	
bis(2-Ethylhexyl) phthalate		50	53.1	0.980	6.2	
Chrysene		50	54.0	1.36	8.0	
3,3'-Dichlorobenzidine		50	49.8	0.342	0.4	
Benzo[a]anthracene		50	53.0	1.36	6.0	
Butyl Benzyl Phthalate		50	54.5	0.722	9.0	
Pyrene		50	56.3	1.46	12.6	
Benzidine		50	13.1	0.102	73.8	*
Di-n-Butyl Phthalate		50	53.6	1.45	7.2	
Carbazole		50	43.3	0.833	13.4	
Anthracene		50	52.0	1.25	4.0	
Phenanthrene		50	53.1	1.23	6.2	
Hexachlorobenzene		50	54.3	0.211	8.6	
4-Bromophenyl Phenyl Ether		50	47.3	0.194	5.4	
4,6-Dinitro-2-Methylphenol		50	58.8	0.102	17.6	
1,2-Diphenylhydrazine		50	49.8	1.55	0.4	
4-Nitroaniline		50	40.9	0.238	18.2	
4-Chlorophenyl Phenyl Ether		50	52.0	0.707	4.0	
Fluorene		50	56.0	1.49	12.0	
Diethylphthalate		50	56.8	1.48	13.6	
2,4-Dinitrotoluene		50	61.4	0.433	22.8	
Dibenzofuran		50	51.3	1.73	2.6	
3-Nitroaniline		50	50.7	0.320	1.4	

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0204001
 File ID: 4M12742
 ALT ID: WG115403-09
 Units: ug/mL

Instrument ID: HPMS4
 Run Date: 04/01/2002
 Run Time: 13:49
 Analyst: MDC
 Cal ID: HPMS4 01-APR-02

Analyte	Expected	Found	RF	%D	Q
2,6-Dinitrotoluene	50	56.0	0.325	12.0	
Acenaphthylene	50	53.3	2.06	6.6	
Dimethylphthalate	50	52.2	1.42	4.4	
2-Nitroaniline	50	52.0	0.375	4.0	
2-Chloronaphthalene	50	58.3	1.23	16.6	
2,4,5-Trichlorophenol	50	53.1	0.408	6.2	
2-Methylnaphthalene	50	51.4	0.718	2.8	
4-Chloroaniline	50	47.8	0.386	4.4	
Naphthalene	50	55.6	1.05	11.2	
1,2,4-Trichlorobenzene	50	52.1	0.324	4.2	
Benzoic Acid	50	49.9	0.0724	0.2	
bis(2-Chloroethoxy)methane	50	53.5	0.439	7.0	
2,4-Dimethylphenol	50	53.7	0.333	7.4	
Isophorone	50	57.8	0.715	15.6	
Nitrobenzene	50	50.6	0.375	1.2	
Hexachloroethane	50	50.3	0.604	0.6	
3-,4-Methylphenol	50	52.0	1.71	4.0	
bis(2-Chloroisopropyl)ether	50	53.1	2.03	6.2	
2-Methylphenol	50	50.8	1.15	1.6	
1,2-Dichlorobenzene	50	55.7	1.55	11.4	
Benzyl Alcohol	50	52.5	0.923	5.0	
1,3-Dichlorobenzene	50	55.0	1.61	10.0	
2-Chlorophenol	50	51.6	1.43	3.2	
bis(2-Chloroethyl)ether	50	52.8	1.04	5.6	
Aniline	50	44.9	0.693	10.2	
n-Nitrosodimethylamine	50	55.0	0.860	10.0	
Pyridine	50	56.3	1.60	12.6	

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

Login Number: L0204001
 File ID: 4M12765
 CCV ID: WG115478-02
 Units: ug/mL

Instrument ID: HPMS4
 Run Date: 04/02/2002
 Run Time: 10:19
 Analyst: MDC
 Cal ID: HPMS4 - 01-APR-02

Analyte		Expected	Found	RF	%D	Q
Benzo[a]pyrene	CCC	50	49.1	1.57	1.8	
Di-n-Octyl Phthalate	CCC	50	50.0	2.21	0.0	
Fluoranthene	CCC	50	49.4	1.23	1.2	
Pentachlorophenol	CCC	50	52.8	0.0977	5.6	
n-Nitrosodiphenylamine	CCC	50	48.9	0.529	2.2	
Acenaphthene	CCC	50	49.4	1.12	1.2	
2,4,6-Trichlorophenol	CCC	50	52.2	0.364	4.4	
4-Chloro-3-Methylphenol	CCC	50	51.0	0.302	2.0	
Hexachlorobutadiene	CCC	50	48.5	0.150	3.0	
2,4-Dichlorophenol	CCC	50	50.2	0.269	0.4	
2-Nitrophenol	CCC	50	56.2	0.191	12.4	
1,4-Dichlorobenzene	CCC	50	48.7	1.56	2.6	
Phenol	CCC	50	50.6	1.76	1.2	
4-Nitrophenol	SPCC	50	51.6	0.227	3.2	
2,4-Dinitrophenol	SPCC	50	64.0	0.0888	28.0	
Hexachlorocyclopentadiene	SPCC	50	50.0	0.220	0.0	
n-Nitrosodipropylamine	SPCC	50	50.4	0.999	0.8	
Benzo[ghi]perylene		50	54.2	1.19	8.4	
Dibenz[ah]anthracene		50	53.4	1.27	6.8	
Indeno[1,2,3-cd]pyrene		50	53.0	1.54	6.0	
Benzo[k]fluoranthene		50	48.6	1.59	2.8	
Benzo[b]fluoranthene		50	48.8	1.64	2.4	
bis(2-Ethylhexyl)phthalate		50	50.1	0.926	0.2	
Chrysene		50	48.5	1.22	3.0	
3,3'-Dichlorobenzidine		50	44.6	0.307	10.8	
Benzo[a]anthracene		50	48.3	1.24	3.4	
Butyl Benzyl Phthalate		50	49.7	0.660	0.6	
Pyrene		50	48.0	1.25	4.0	
Benzidine		50	51.6	0.384	3.2	
Di-n-Butyl Phthalate		50	49.9	1.35	0.2	
Carbazole		50	47.9	0.924	4.2	
Anthracene		50	48.9	1.18	2.2	
Phenanthrene		50	48.4	1.12	3.2	
Hexachlorobenzene		50	48.4	0.188	3.2	
4-Bromophenyl Phenyl Ether		50	48.7	0.199	2.6	
4,6-Dinitro-2-Methylphenol		50	61.1	0.107	22.2	
1,2-Diphenylhydrazine		50	49.7	1.55	0.6	
4-Nitroaniline		50	49.9	0.290	0.2	
4-Chlorophenyl Phenyl Ether		50	48.8	0.663	2.4	
Fluorene		50	48.9	1.30	2.2	
Diethylphthalate		50	49.5	1.29	1.0	
2,4-Dinitrotoluene		50	54.6	0.385	9.2	

Login Number: L0204001
 File ID: 4M12765
 CCV ID: WG115478-02
 Units: ug/mL

Instrument ID: HPMS4
 Run Date: 04/02/2002
 Run Time: 10:19
 Analyst: MDC
 Cal ID: HPMS4 01-APR-02

Analyte	Expected	Found	RF	%D	Q
Dibenzofuran	50	48.5	1.64	3.0	
3-Nitroaniline	50	49.0	0.310	2.0	
2,6-Dinitrotoluene	50	53.5	0.311	7.0	
Acenaphthylene	50	49.4	1.91	1.2	
Dimethylphthalate	50	48.8	1.33	2.4	
2-Nitroaniline	50	51.3	0.370	2.6	
2-Chloronaphthalene	50	48.6	1.03	2.8	
2,4,5-Trichlorophenol	50	51.6	0.396	3.2	
2-Methylnaphthalene	50	48.5	0.678	3.0	
4-Chloroaniline	50	48.3	0.390	3.4	
Naphthalene	50	48.6	0.918	2.8	
1,2,4-Trichlorobenzene	50	48.5	0.302	3.0	
Benzoic Acid	50	66.4	0.110	32.8	
bis(2-Chloroethoxy)methane	50	48.9	0.402	2.2	
2,4-Dimethylphenol	50	48.5	0.301	3.0	
Isophorone	50	49.8	0.617	0.4	
Nitrobenzene	50	50.0	0.371	0.0	
Hexachloroethane	50	51.4	0.617	2.8	
3-,4-Methylphenol	50	50.0	1.65	0.0	
bis(2-Chloroisopropyl)ether	50	49.2	1.88	1.6	
2-Methylphenol	50	48.8	1.10	2.4	
1,2-Dichlorobenzene	50	49.1	1.37	1.8	
Benzyl Alcohol	50	51.2	0.901	2.4	
1,3-Dichlorobenzene	50	48.7	1.42	2.6	
2-Chlorophenol	50	50.1	1.39	0.2	
bis(2-Chloroethyl)ether	50	49.2	0.968	1.6	
Aniline	50	49.5	0.765	1.0	
n-Nitrosodimethylamine	50	51.2	0.800	2.4	
Pyridine	50	50.9	1.45	1.8	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

INTERNAL STANDARD AREA SUMMARY

Login Number: L0204001
 Instrument ID: HPMS4
 Workgroup (AAB#): WG115546

CCV Number: WG115478-02
 CCV Date: 02-APR-02
 Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG115478-02	NA	NA	325983	720838	1221314	1361482	884572	1290668
Upper Limit	NA	NA	651966	1441676	2442628	2722964	1769144	2581336
Lower Limit	NA	NA	162992	360419	610657	680741	442286	645334
L0204001-01	1.00	01	320184	676535	1105936	1303453	802530	1193030

- IS-1 - 1,4-Dichlorobenzene-d4
- IS-2 - Acenaphthene-d10
- IS-3 - Chrysene-d12
- IS-4 - Naphthalene-d8
- IS-5 - Perylene-d12
- IS-6 - Phenanthrene-d10

Underline = Response outside limits

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4M12734.D	1.	✓ WG115403-01 50PPM DFTPP		
2	2	4M12735.D	1.	WG115403-02 50PPM BNA STD	1,1 SOS58-27	1 Apr 2002 09:54
3	3	4M12736.D	1.	WG115403-03 3PPM BNA STD	1,1 SOS59-14-1	1 Apr 2002 10:12
4	4	4M12737.D	1.	WG115403-04 10PPM BNA STD	1,1 SOS59-14-2	1 Apr 2002 10:43
5	5	4M12738.D	1.	WG115403-05 20PPM BNA STD	1,1 SOS59-14-3	1 Apr 2002 11:14
6	6	4M12739.D	1.	WG115403-06 80PPM BNA STD	1,1 SOS59-14-4	1 Apr 2002 11:46
7	7	4M12740.D	1.	WG115403-07 100PPM BNA STD	1,1 SOS59-14-5	1 Apr 2002 12:16
8	8	4M12741.D	1.	WG115403-08 120PPM BNA STD	1,1 SOS59-14-6	1 Apr 2002 12:46
9	9	4M12742.D	1.	WG115403-09 50PPM Alt source BNA STD	1,1 SOS59-14-7	1 Apr 2002 13:18
10	10	4M12743.D	1.	60PPM Hanlin STD	1,1 SOS57-48	1 Apr 2002 13:49
11	11	4M12744.D	1.	WG115325-01 BLK 3/29 V182P139	1,1 SOS59-11-4	1 Apr 2002 14:20
12	12	4M12745.D	1.	WG115325-02 LCS 3/29 V182P139	2,1	1 Apr 2002 14:47
13	13	4M12746.D	1.	WG115325-03 LCS DUP 3/29 V182P139	2,1	1 Apr 2002 15:17
14	14	4M12747.D	1.	WG115299-01 TBLK 3/28	2,1	1 Apr 2002 15:49
15	15	4M12748.D	1.	L0203454-03 TCLP	17,1	1 Apr 2002 16:19
16	16	4M12749.D	1.	L0203511-01 TCLP	17,1	1 Apr 2002 16:49
17	17	4M12750.D	1.	L0203511-03 TCLP	17,1	1 Apr 2002 17:20
18	18	4M12751.D	1.	L0203517-01 TCLP	17,1	1 Apr 2002 17:52
19	19	4M12752.D	2.	L0203335-12 RE 2X	17,1	1 Apr 2002 18:23
20	20	4M12753.D	1.	L0203556-01	1,2,RE	1 Apr 2002 18:54
21	21	4M12754.D	1.	L0203556-02	2,1	1 Apr 2002 19:25
22	22	4M12755.D	1.	L0203556-03	2,1	1 Apr 2002 19:56
23	23	4M12756.D	1.	L0203556-04	2,1	1 Apr 2002 20:27
24	24	4M12757.D	1.	L0203556-05	2,1	1 Apr 2002 20:58
25	25	4M12758.D	1.	L0203556-06	2,1	1 Apr 2002 21:29
26	26	4M12759.D	1.	L0203556-07	2,1	1 Apr 2002 22:00
27	27	4M12760.D	1.	L0203556-08	2,1	1 Apr 2002 22:31
28	28	4M12761.D	1.	L0203556-09	2,1	1 Apr 2002 23:01
29	29	4M12762.D	10.	L0203556-01 10X	2,1	1 Apr 2002 23:31
30	30	4M12763.D	10.	L0203556-05 10X	2,10	2 Apr 2002 08:27

EC2 4/2/02

KEMRON ENVIRONMENTAL SERVICES

Semivolatile GC/MS Laboratory Maintenance / Runlog

Analysis Date/Time 4/1/02
 Analyst Initials LDK
 ISTD# 13116320

Instrument ID 1121154 Column ID RTK-5.1.115
 Data Subdirectory C:\1616

SOP # MSS01 Rev. # 9 8270C ✓
 SOP # MSS02 Rev. # 3 625 ✓
 SOP # MSS03 Rev. # PAH 8270C

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Preventative Maintenance	Additional Maintenance
<input type="checkbox"/> Change o-ring <input checked="" type="checkbox"/> Change liner <input type="checkbox"/> Change septum <input type="checkbox"/> Clip column (___ cm) <input checked="" type="checkbox"/> Injection port seal (goldseal) <input type="checkbox"/> Change gases _____	Problem: <u>Baseline noise, peak-to-peak, hard not calibrating well</u> _____ _____ Action Taken: <u>5. liner seal injection port, changed gold seal</u> _____ _____
Returned To Control? Yes <input checked="" type="checkbox"/> No _____	_____ _____

Comments

6120335-12-551,3,4 100%
61203556-10-16X for #10,11,13
24-55 1-4/100%
25-10X for #10,11,13,28

Reviewed By: ECZ 4/2/02

1	1	4M12764.D	1.	WG115478-01 50PPM DFTPP	1,1 SOS58-27	2 Apr 2002 10:01
2	2	4M12765.D	1.	WG115478-02 50PPM BNA STD	1,1 SOS59-14-1	2 Apr 2002 10:19
3	3	4M12766.D	1.	50PPM 2-Ethoxyethanol	1,1 SOS58-34	2 Apr 2002 10:50
4	4	4M12767.D	1.	WG115351-01 BLK 3/29 V182P143	10,1 SOIL	2 Apr 2002 11:20
5	5	4M12768.D	1.	WG115351-02 LCS 3/29 V182P143	10,1 SOIL	2 Apr 2002 11:51
6	6	4M12769.D	1.	WG115351-03 LCS DUP 3/29 V182P143	10,1 SOIL	2 Apr 2002 12:21
7	7	4M12770.D	1.	WG115413-01 BLK 4/1 V182P159	7,1 SOIL	2 Apr 2002 12:52
8	8	4M12771.D	1.	WG115413-02 LCS 4/1 V182P159	7,1 SOIL	2 Apr 2002 13:22
9	9	4M12772.D	1.	WG115413-03 LCS DUP 4/1 V182P159	7,1 SOIL	2 Apr 2002 13:53
10	10	4M12773.D	1.	PE L0203568-01	10,1 SOIL	2 Apr 2002 14:24
11	11	4M12774.D	1.	L0204001-01	7,1 SOIL	2 Apr 2002 14:55
12	12	4M12775.D	1.	WG115512-01 BLK 4/2 V182P167	17,1	2 Apr 2002 15:26
13	13	4M12776.D	1.	L0203560-01	17,1	2 Apr 2002 15:56
14	14	4M12777.D	1.	WG115453-02 L0203560-02	17,1	2 Apr 2002 16:26
15	15	4M12778.D	1.	WG115453-03 L0203560-02 SPK	17,1	2 Apr 2002 16:56
16	16	4M12779.D	1.	L0203560-03	17,1	2 Apr 2002 17:26
17	17	4M12780.D	1.	L0203560-06	17,1	2 Apr 2002 17:57
18	18	4M12781.D	1.	L0203560-07	17,1	2 Apr 2002 18:27
19	19	4M12782.D	1.	L0203560-09	17,1	2 Apr 2002 18:57
20	20	4M12783.D	1.	L0203560-11	17,1	2 Apr 2002 19:27
21	21	4M12784.D	1.	L0203560-16	17,1	2 Apr 2002 19:57
22	22	4M12785.D	1.	L0203511-01	10,1 SOIL	2 Apr 2002 20:28
23	23	4M12786.D	1.	L0203511-03	10,1 SOIL	2 Apr 2002 20:58

mdu 4/3/02
ESC 4/3/02

Semivolatle GC/MS Laboratory Maintenance / Runlog

Analysis Date/Time 4/6/02
Analyst Initials ms
ISTD # 121102202

Instrument ID HP1101 Column ID RIV-61-21
Data Subdirectory 040202

SOP # MSS01 Rev. # 7 8270C
SOP # MSS02 Rev. # 625
SOP # MSS03 Rev. # PAH 8270C

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Preventative Maintenance

- Change o-ring
- Change liner
- Change septum
- Clip column (___ cm)
- Injection port seal (goldseal)
- Change gases _____

Additional Maintenance

Problem: _____

Action Taken: _____

Returned To Control?

Yes ___ No ___

Comments

L0219065-01 - 551-4 low
L0208170-02 - 553 high, need 5X #2933
↓ 22 PK - 552 high
L0208171-03 - 551.5 low (overcode sample)
↓ 03-00000 low

Reviewed By: FAC 4/3/02

Date/Time Extracted: 4-01-02 @ 12:45 Date TV/KD: 04/01/02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-08#15 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-38 #2 Spike #: B = ---

Extract Relinquished By: DP
 Extract Received By & Date: 02/4/1/02

Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
		<2	N	>12						A	BN	N	
1	Blank				30.06g	500.uL		1mL	T				WG 1/54/3-01
2	LCS				1.03g		500.uL		C				WG 1-02
3	LCS DUP				1.06g				C				WG 1-03
4	04-001-01	827-TCL			1.02g				C				
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

DP
 04/01/02

Methylene Chloride Lot #: 42015
 Hexane Lot #: _____
 Ether Lot #: _____
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Acid: _____ Lot #: _____
 Florisil Lot #: _____
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: LR 2005

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	✓			
Waste	3580A				

* Accelerated Solvent Extractor(ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		NA	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

General Comments: *None*

Extraction Anomalies: *None*

Concentration Anomalies: *None*

Clean-Up Anomalies: *Not applicable*

Supervisor Review: _____ Date: _____

2.2.1.2 Sample Data

Data File : C:\HPCHEM\1\METHODS\BNA.M
 Acq On : 2 Apr 2002 14:55
 Sample : L0204001-01
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:43 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

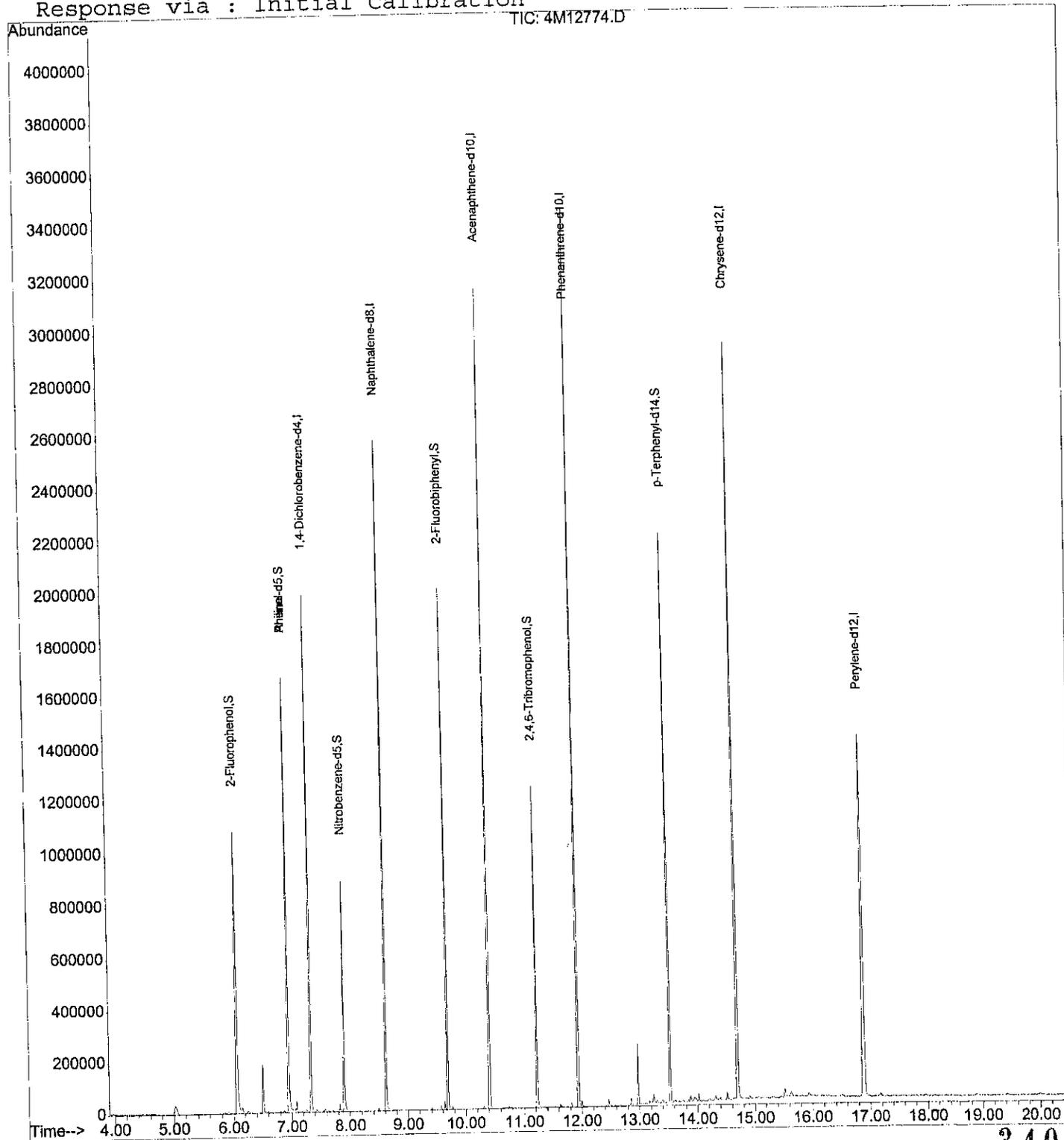
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	320184	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1303453	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	676535	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1193030	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1105936	40.00	ug/ml	0.00
76) Perylene-d12	16.88	264	802530	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.05	112	474348	47.2190	ug/ml	0.00
Spiked Amount 100.000	Range 25 - 121		Recovery =	47.22%		
6) Phenol-d5	6.94	99	651484	50.1390	ug/ml	0.00
Spiked Amount 100.000	Range 24 - 113		Recovery =	50.14%		
20) Nitrobenzene-d5	7.90	82	295592	25.2244	ug/ml	0.00
Spiked Amount 50.000	Range 23 - 120		Recovery =	50.44%		
38) 2-Fluorobiphenyl	9.68	172	591718	26.1337	ug/ml	0.00
Spiked Amount 50.000	Range 30 - 115		Recovery =	52.26%		
55) 2,4,6-Tribromophenol	11.23	330	119738	44.3378	ug/ml	0.00
Spiked Amount 100.000	Range 19 - 122		Recovery =	44.34%		
70) p-Terphenyl-d14	13.53	244	700246	26.9521	ug/ml	0.00
Spiked Amount 50.000	Range 18 - 137		Recovery =	53.90%		
Target Compounds						
5) Aniline	6.94	66	32770	5.3013	ug/ml#	Qvalue 1

Data File : C:\MSDCHEM\1\DATA\4M12774.D
Acq On : 2 Apr 2002 14:55
Sample : L0204001-01
Misc : 7,1 SOIL
MS Integration Params: RTEINT.P
Quant Time: Apr 3 7:43 2002

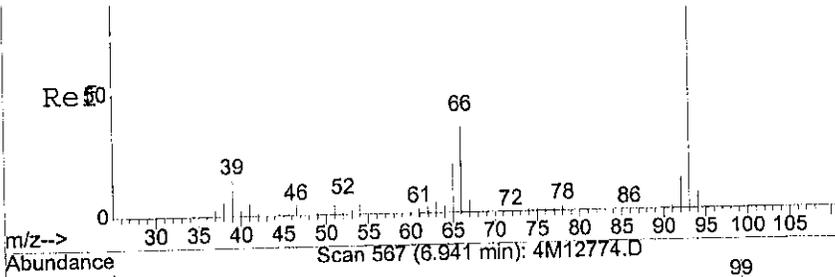
Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

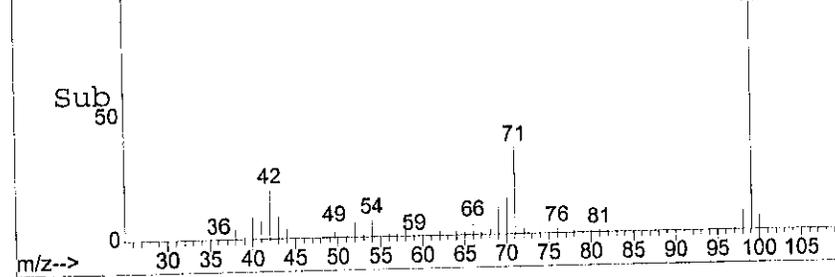
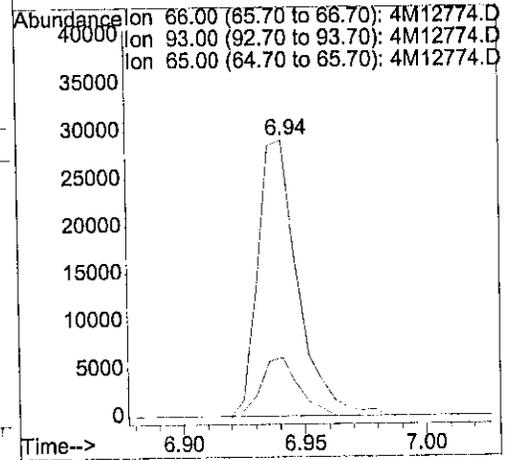
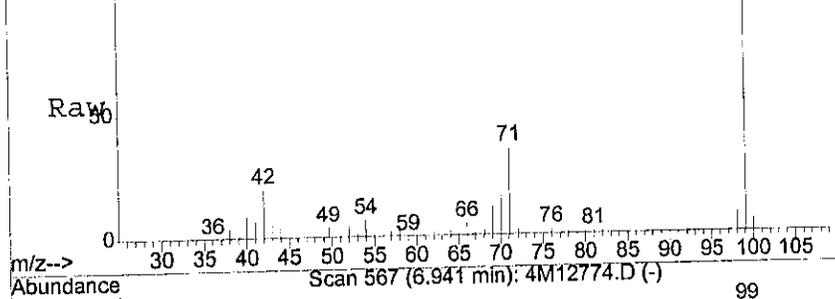
Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Wed Apr 03 07:35:47 2002
Response via : Initial Calibration



Concen: 5.30 ug/ml
 RT: 6.94 min Scan# 567
 Delta R.T. -0.07 min
 Lab File: 4M12774.D
 Acq: 2 Apr 2002 14:55



Tgt Ion	Resp	Lower	Upper
66	32770		
93	0.0	205.1	307.7#
65	20.0	38.1	57.1#



2.2.1.3 Standards Data

Calibration Table Report

Method: BNA.M

Title: M8270/625/Initial cal. 04/01/02

Last Calibration: Tue Apr 02 07:53:51 2002

HPMS4

Calibration Files

Compound	3	10	20	50	80	100	120	Avg	%RSD	R ² value	
	4M12736.D	4M12737.D	4M12738.D	4M12735.D	4M12739.D	4M12740.D	4M12741.D				
I 1,4-Dichlorobenzene-d4	ISTD										
Pyridine	1.277	1.361	1.498	1.468	1.443	1.452	1.465	1.423	5.4		
n-Nitrosodimethylamine	0.675	0.766	0.841	0.799	0.794	0.792	0.803	0.781	6.6		
S 2-Fluorophenol	1.127	1.206	1.342	1.272	1.273	1.281	1.284	1.255	5.5		
Aniline	0.756	0.786	0.834	0.777	0.754	0.749	0.751	0.772	4.0		
S Phenol-d5	1.559	1.650	1.738	1.629	1.603	1.589	1.595	1.623	3.6		
C Phenol	1.656	1.734	1.888	1.760	1.730	1.703	1.718	1.741	4.1		
bis(2-Chloroethyl)ether	0.998	1.010	1.030	0.977	0.966	0.950	0.950	0.983	3.1		
2-Chlorophenol	1.341	1.383	1.486	1.379	1.370	1.362	1.367	1.384	3.4		
1,3-Dichlorobenzene	1.530	1.494	1.592	1.421	1.399	1.393	1.390	1.460	5.5		
C 1,4-Dichlorobenzene	1.726	1.661	1.713	1.552	1.530	1.514	1.519	1.602	5.9		
Benzyl Alcohol	0.742	0.853	0.956	0.902	0.897	0.899	0.905	0.879	7.7		
1,2-Dichlorobenzene	1.447	1.434	1.504	1.355	1.349	1.334	1.336	1.394	4.8		
2-Methylphenol	1.135	1.186	1.221	1.093	1.099	1.081	1.088	1.129	4.8		
bis(2-Chloroisopropyl)ether	1.939	1.922	2.028	1.908	1.867	1.862	1.870	1.914	3.1		
3-,4-Methylphenol	1.803	1.837	1.772	1.657	1.621	1.615	1.613	1.645	3.6		
P n-Nitrosodipropylamine	0.915	0.992	1.057	1.010	0.998	0.987	0.985	0.992	4.2		
Hexachloroethane	0.556	0.593	0.644	0.602	0.607	0.599	0.601	0.600	4.3		
I Naphthalene-d8	ISTD										
S Nitrobenzene-d5	0.340	0.362	0.384	0.359	0.358	0.358	0.357	0.360	3.6		
Nitrobenzene	0.363	0.378	0.398	0.366	0.366	0.364	0.361	0.371	3.6		
Isophorone	0.582	0.632	0.667	0.620	0.615	0.610	0.609	0.619	4.2		
C 2-Nitrophenol	0.130	0.155	0.180	0.173	0.182	0.186	0.187	0.170	12.3		
2,4-Dimethylphenol	0.300	0.326	0.334	0.307	0.304	0.302	0.301	0.311	4.4		
bis(2-Chloroethoxy)methane	0.408	0.426	0.439	0.402	0.400	0.400	0.395	0.410	4.0		
Benzoic Acid		0.011	0.029	0.087	0.082	0.101	0.112	0.070	57.9	0.992QR	
C 2,4-Dichlorophenol	0.256	0.269	0.285	0.269	0.266	0.266	0.264	0.268	3.3		
1,2,4-Trichlorobenzene	0.328	0.324	0.337	0.299	0.299	0.297	0.293	0.311	5.8		
Naphthalene	0.999	0.997	1.021	0.913	0.908	0.893	0.884	0.945	6.1		
4-Chloroaniline	0.392	0.418	0.437	0.392	0.394	0.395	0.396	0.404	4.4		
C Hexachlorobutadiene	0.160	0.163	0.167	0.148	0.149	0.147	0.148	0.155	5.4		
C 4-Chloro-3-Methylphenol	0.270	0.301	0.318	0.297	0.297	0.295	0.294	0.296	4.8		
2-Methylnaphthalene	0.730	0.737	0.758	0.677	0.671	0.659	0.658	0.698	6.0		
I Acenaphthene-d10	ISTD										
P Hexachlorocyclopentadiene	0.030	0.092	0.151	0.190	0.226	0.242	0.245	0.188	48.7	0.995LR	
C 2,4,6-Trichlorophenol	0.289	0.336	0.374	0.363	0.359	0.358	0.359	0.348	8.2		
2,4,5-Trichlorophenol	0.336	0.373	0.406	0.393	0.392	0.395	0.395	0.384	6.1		
S 2-Fluorobiphenyl	1.421	1.405	1.453	1.304	1.290	1.255	1.243	1.339	6.4		
2-Chloronaphthalene	1.097	1.100	1.143	1.020	1.019	1.002	1.001	1.054	5.5		
2-Nitroaniline		0.326	0.377	0.367	0.368	0.364	0.364	0.361	5.0		
Dimethylphthalate	1.414	1.438	1.476	1.328	1.311	1.288	1.289	1.363	5.7		
Acenaphthylene	1.975	2.016	2.112	1.913	1.869	1.824	1.795	1.929	5.8		
2,6-Dinitrotoluene	0.229	0.275	0.307	0.301	0.305	0.307	0.308	0.290	10.1		
3-Nitroaniline		0.320	0.354	0.312	0.302	0.297	0.311	0.316	6.5		
C Acenaphthene	1.169	1.169	1.206	1.113	1.108	1.089	1.085	1.134	4.1		
P 2,4-Dinitrophenol		0.005	0.022	0.062	0.078	0.097	0.109	0.062	66.6	0.999QR	
P 4-Nitrophenol			0.199	0.223	0.221	0.225	0.230	0.220	5.4		
Dibenzofuran	1.833	1.781	1.835	1.643	1.601	1.570	1.553	1.688	7.4		
2,4-Dinitrotoluene	0.255	0.331	0.375	0.371	0.379	0.380	0.379	0.353	13.2		
Diethylphthalate	1.307	1.349	1.403	1.291	1.267	1.244	1.233	1.299	4.6		
Fluorene	1.386	1.373	1.436	1.304	1.283	1.261	1.254	1.328	5.3		
4-Chlorophenyl Phenyl Ether	0.708	0.713	0.736	0.660	0.653	0.643	0.640	0.679	5.7		
4-Nitroaniline		0.293	0.324	0.307	0.266	0.274	0.279	0.291	7.6		
1,2-Diphenylhydrazine	1.570	1.630	1.699	1.562	1.513	1.475	1.457	1.558	5.5		
S 2,4,6-Tribromophenol	0.096	0.123	0.151	0.156	0.163	0.165	0.166	0.146	18.1	1.000LR	
I Phenanthrene-d10	ISTD										
4,6-Dinitro-2-Methylphenol		0.031	0.055	0.081	0.096	0.107	0.114	0.081	39.8	1.000QR	
C n-Nitrosodiphenylamine	0.542	0.570	0.591	0.532	0.521	0.515	0.513	0.540	5.5		
4-Bromophenyl Phenyl Ether	0.201	0.211	0.221	0.201	0.202	0.200	0.198	0.205	4.0		
Hexachlorobenzene	0.203	0.205	0.206	0.188	0.188	0.186	0.185	0.194	5.0		
C Pentachlorophenol			0.060	0.093	0.096	0.102	0.108	0.092	20.3	0.997LR	
Phenanthrene	1.256	1.249	1.273	1.120	1.089	1.062	1.044	1.156	8.6		
Anthracene	1.264	1.273	1.331	1.185	1.152	1.112	1.101	1.203	7.3		

Method: BNA.M
 Title: M8270/625/initial cal. 04/01/02
 Last Calibration: Tue Apr 02 07:53:51 2002
 HPMS4
 Calibration Files

Compound	3	10	20	50	80	100	120	Avg	%RSD	R ² value
	4M12736.D	4M12737.D	4M12738.D	4M12735.D	4M12739.D	4M12740.D	4M12741.D			
Carbazole	1.084	1.076	1.088	0.948	0.874	0.841	0.831	0.963	12.2	
Di-n-Butyl Phthalate	1.332	1.410	1.481	1.374	1.314	1.272	1.251	1.348	6.0	
C Fluoranthene	1.318	1.328	1.377	1.225	1.192	1.155	1.135	1.247	7.5	
I Chrysene-d12	ISTD									
Benzidine	0.305	0.409	0.498	0.308	0.405	0.399	0.399	0.389	17.0	0.990QR
Pyrene	1.403	1.405	1.452	1.265	1.222	1.194	1.146	1.298	9.3	
S p-Terphenyl-d14	0.992	1.004	1.041	0.921	0.895	0.875	0.850	0.940	7.8	
Butyl Benzyl Phthalate	0.676	0.680	0.728	0.670	0.646	0.628	0.613	0.663	5.7	
Benzo[a]anthracene	1.367	1.354	1.407	1.257	1.225	1.206	1.176	1.284	7.0	
3,3'-Dichlorobenzidine	0.409	0.384	0.364	0.324	0.302	0.312	0.310	0.344	12.2	
Chrysene	1.368	1.323	1.366	1.216	1.202	1.176	1.145	1.257	7.4	
bis(2-Ethylhexyl)phthalate	0.942	0.968	1.004	0.934	0.890	0.875	0.850	0.923	5.9	
I Perylene-d12	ISTD									
C Di-n-Octyl Phthalate	2.148	2.263	2.413	2.270	2.176	2.126	2.087	2.212	5.0	
Benzo[b]fluoranthene	1.669	1.721	1.804	1.625	1.677	1.623	1.628	1.678	3.9	
Benzo[k]fluoranthene	1.713	1.678	1.771	1.623	1.550	1.578	1.548	1.637	5.3	
C Benzo[a]pyrene	1.601	1.608	1.702	1.571	1.564	1.555	1.546	1.593	3.4	
Indeno[1,2,3-cd]pyrene	1.444	1.443	1.525	1.439	1.444	1.431	1.420	1.449	2.4	
Dibenz[ah]anthracene	1.140	1.171	1.270	1.186	1.192	1.187	1.183	1.190	3.3	
Benzo[ghi]perylene	1.051	1.081	1.163	1.093	1.103	1.100	1.094	1.098	3.1	

Tue Apr 02 09:57:52 2002

Data File : C:\HPCHEM\1\DATA\070102\4M12735.D
 Acq On : 1 Apr 2002 10:12
 Sample : WG115403-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:40 2002

Vial: 2
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:40:19 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	310902	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1300656	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	689364	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1231472	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1143835	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	809722	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	494512	50.6959	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	50.70%
6) Phenol-d5	6.94	99	633061	50.1757	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	50.18%
20) Nitrobenzene-d5	7.90	82	583023	49.8594	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	99.72%
38) 2-Fluorobiphenyl	9.68	172	1123904	48.7143	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	97.42%
55) 2,4,6-Tribromophenol	11.23	330	134237	53.4346	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	53.43%
70) p-Terphenyl-d14	13.53	244	1316476	48.9915	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	97.98%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	4.59	79	570520	51.5680	ug/ml	100
3) n-Nitrosodimethylamine	4.57	74	310523	50.6097	ug/ml	100
5) Aniline	7.02	66	301782	50.2633	ug/ml	100
7) Phenol	6.95	94	683985	50.5378	ug/ml	100
8) bis(2-Chloroethyl)ether	7.05	63	379642	49.6896	ug/ml	100
9) 2-Chlorophenol	7.13	128	536026	49.8303	ug/ml	100
10) 1,3-Dichlorobenzene	7.28	146	552355	48.6835	ug/ml	100
11) 1,4-Dichlorobenzene	7.35	146	603102	48.4305	ug/ml	100
12) Benzyl Alcohol	7.45	108	350554	51.3160	ug/ml	100
13) 1,2-Dichlorobenzene	7.51	146	526547	48.5933	ug/ml	100
14) 2-Methylphenol	7.54	107	424694	48.3909	ug/ml	100
15) bis(2-Chloroisopropyl)ethe	7.57	45	741324	49.8408	ug/ml	100
16) 3-,4-Methylphenol	7.68	107	643959	50.3504	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	392552	50.9089	ug/ml	100
18) Hexachloroethane	7.84	117	233785	50.1230	ug/ml	100
21) Nitrobenzene	7.92	77	595840	49.3875	ug/ml	100
22) Isophorone	8.13	82	1008776	50.0996	ug/ml	100
23) 2-Nitrophenol	8.23	139	281914	50.9121	ug/ml	100
24) 2,4-Dimethylphenol	8.22	122	499667	49.4766	ug/ml	100
25) bis(2-Chloroethoxy)methane	8.31	93	654369	49.0738	ug/ml	100

(#) = qualifier out of range (m) = manual integration
 4M12735.D BNA.M Tue Apr 02 07:52:34 2002 HPMS4

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Data File : C:\HPCHEM\1\DATA\4M12735.D
 Acq On : 1 Apr 2002 10:12
 Sample : WG115403-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:40 2002

Vial: 2
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:40:19 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.29	122	141855	61.7866	ug/ml	100
27) 2,4-Dichlorophenol	8.46	162	436675	50.1491	ug/ml	100
28) 1,2,4-Trichlorobenzene	8.55	180	486531	48.0949	ug/ml	100
29) Naphthalene	8.64	128	1484738	48.3171	ug/ml	100
30) 4-Chloroaniline	8.68	127	637266	48.5562	ug/ml	100
31) Hexachlorobutadiene	8.74	225	240558	47.8281	ug/ml	100
32) 4-Chloro-3-Methylphenol	9.13	107	483535	50.2371	ug/ml	100
33) 2-Methylnaphthalene	9.33	142	1100138	48.4502	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	164078	56.6275	ug/ml	100
36) 2,4,6-Trichlorophenol	9.61	196	312903	52.1368	ug/ml	100
37) 2,4,5-Trichlorophenol	9.66	196	338321	51.0824	ug/ml	100
39) 2-Chloronaphthalene	9.84	162	878618	48.3535	ug/ml	100
40) 2-Nitroaniline	9.95	65	316215	50.8277	ug/ml	100
41) Dimethylphthalate	10.08	163	1144708	48.7139	ug/ml	100
42) Acenaphthylene	10.27	152	1648247	49.5737	ug/ml	100
43) 2,6-Dinitrotoluene	10.18	165	259508	51.8593	ug/ml	100
44) 3-Nitroaniline	10.37	138	269274	49.4520	ug/ml	100
45) Acenaphthene	10.45	154	959018	49.0690	ug/ml	100
46) 2,4-Dinitrophenol	10.47	184	53234	49.7717	ug/ml#	100
47) 4-Nitrophenol	10.50	65	192128	50.7259	ug/ml	100
48) Dibenzofuran	10.62	168	1416211	48.6861	ug/ml	100
49) 2,4-Dinitrotoluene	10.60	165	319965	52.6093	ug/ml	100
50) Diethylphthalate	10.79	149	1112761	49.6884	ug/ml	100
51) Fluorene	10.97	166	1123695	49.0925	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	569057	48.6256	ug/ml	100
53) 4-Nitroaniline	11.00	138	264831	52.8893	ug/ml	100
54) 1,2-Diphenylhydrazine	11.10	77	1346253	50.1379	ug/ml	100
57) 4,6-Dinitro-2-Methylphenol	11.01	198	124626	50.1056	ug/ml	100
58) n-Nitrosodiphenylamine	11.05	169	818250	49.1742	ug/ml	100
59) 4-Bromophenyl Phenyl Ether	11.44	248	309307	49.0819	ug/ml	100
60) Hexachlorobenzene	11.56	284	289721	48.3954	ug/ml	100
61) Pentachlorophenol	11.75	266	143204	50.7383	ug/ml	100
62) Phenanthrene	11.97	178	1724567	48.4537	ug/ml	100
63) Anthracene	12.02	178	1824033	49.2635	ug/ml	100
64) Carbazole	12.17	167	1459696	49.2251	ug/ml	100
65) Di-n-Butyl Phthalate	12.43	149	2114864	50.9677	ug/ml	100
66) Fluoranthene	13.19	202	1886096	49.1257	ug/ml	100
68) Benzidine	13.30	184	440629	39.6067	ug/ml	100
69) Pyrene	13.44	202	1808408	48.7164	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	957388	50.5064	ug/ml	100
72) Benzo[a]anthracene	14.68	228	1797700	48.9425	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12735.D

Vial: 2

Acq On : 1 Apr 2002 10:12

Operator: mdc

Sample : WG115403-02 50PPM BNA STD

Inst : HPMS4

Misc : 1,1 SOS59-14-1

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 1 13:40 2002

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)

Title : M8270/625/Initial cal. 04/01/02

Last Update : Mon Apr 01 13:40:19 2002

Response via : Initial Calibration

DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	463284	47.1523	ug/ml	100
74) Chrysene	14.73	228	1738926	48.3934	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.52	149	1335501	50.5766	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	2297391	51.3132	ug/ml	100
78) Benzo[b]fluoranthene	16.18	252	1644391	48.4059	ug/ml	100
79) Benzo[k]fluoranthene	16.23	252	1642730	49.5825	ug/ml	100
80) Benzo[a]pyrene	16.79	252	1590422	49.3311	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.34	276	1456262	49.6385	ug/ml	100
82) Dibenz[ah]anthracene	19.34	278	1200286	49.8338	ug/ml	100
83) Benzo[ghi]perylene	20.11	276	1106305	49.7762	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12735.D BNA.M

Tue Apr 02 07:52:35 2002

HPMS4

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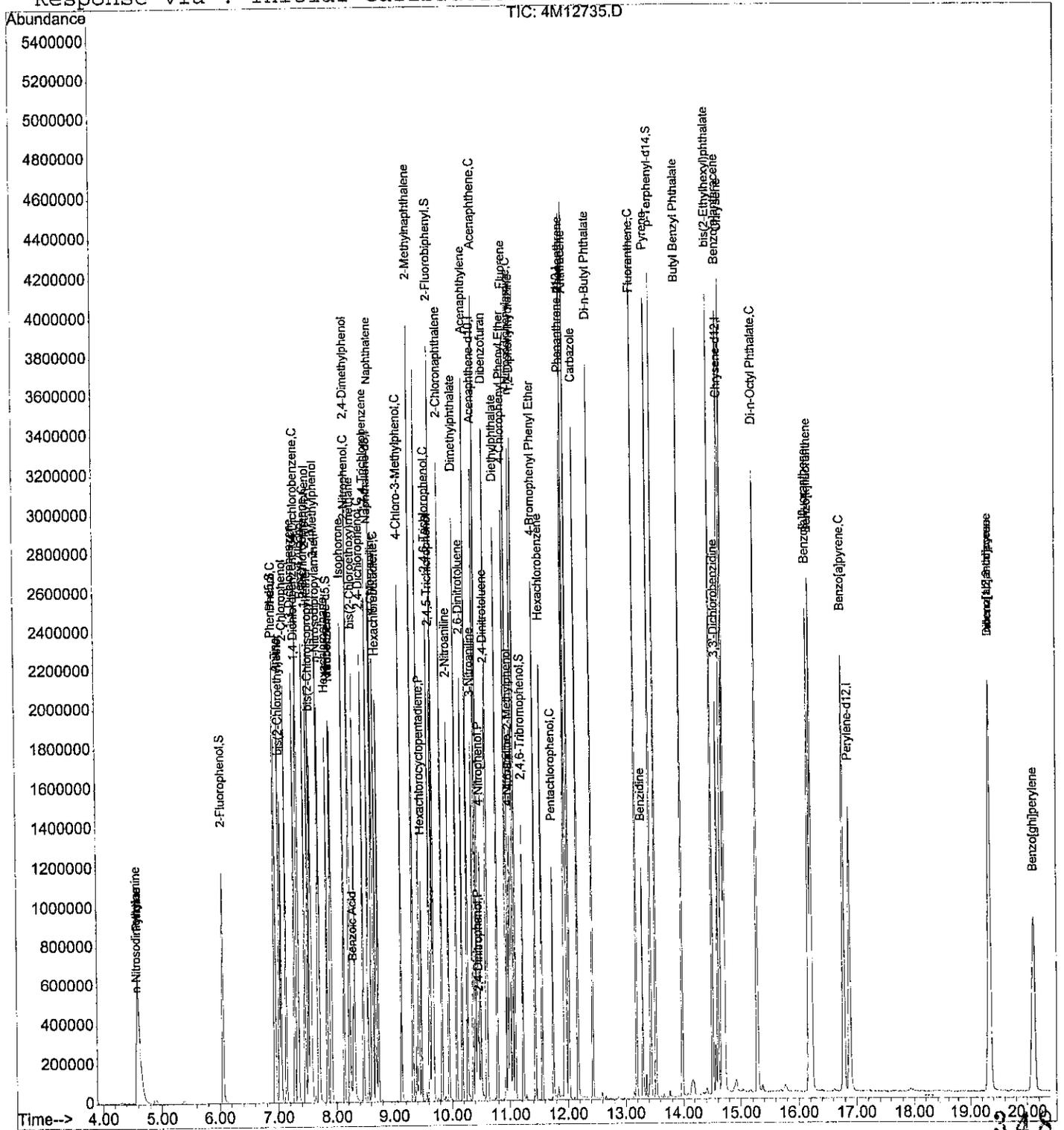
Page 3

Data File : C:\HPCHEM\1\DATA\040102\4M12735.D
 Acq On : 1 Apr 2002 10:12
 Sample : WG115403-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:40 2002

vial: 2
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\040102\4M12736.D
 Acq On : 1 Apr 2002 10:43
 Sample : WG115403-03 3PPM BNA STD
 Misc : 1,1 SOS59-14-2
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:50 2002

Vial: 3
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 10:38:13 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	315837	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1300229	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	672996	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1186565	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1061829	40.00	ug/ml	0.00
76) Perylene-d12	16.88	264	751144	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.06	112	26696	2.7618	ug/ml	0.01
Spiked Amount	100.000	Range 21 - 100	Recovery	=	2.76%#	
6) Phenol-d5	6.95	99	36918	2.8987	ug/ml	0.01
Spiked Amount	100.000	Range 10 - 94	Recovery	=	2.90%#	
20) Nitrobenzene-d5	7.90	82	33137	2.8806	ug/ml	0.00
Spiked Amount	50.000	Range 35 - 114	Recovery	=	5.76%#	
38) 2-Fluorobiphenyl	9.68	172	71702	3.2335	ug/ml	0.00
Spiked Amount	50.000	Range 43 - 116	Recovery	=	6.46%#	
55) 2,4,6-Tribromophenol	11.23	330	4839	2.1313	ug/ml	0.00
Spiked Amount	100.000	Range 10 - 123	Recovery	=	2.13%#	
70) p-Terphenyl-d14	13.52	244	79036	3.0418	ug/ml	0.00
Spiked Amount	50.000	Range 33 - 141	Recovery	=	6.08%#	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	4.67	79	30238	2.7211	ug/ml#	71
3) n-Nitrosodimethylamine	4.60	74	15991	2.3829	ug/ml#	93
5) Aniline	7.02	66	17909	3.6149	ug/ml	82
7) Phenol	6.96	94	39237	2.7994	ug/ml	98
8) bis(2-Chloroethyl) ether	7.05	63	23641	3.0357	ug/ml#	80
9) 2-Chlorophenol	7.14	128	31764	2.9081	ug/ml	96
10) 1,3-Dichlorobenzene	7.28	146	36233	2.9237	ug/ml	98
11) 1,4-Dichlorobenzene	7.35	146	40887	3.2089	ug/ml	94
12) Benzyl Alcohol	7.46	108	17566	2.5440	ug/ml	91
13) 1,2-Dichlorobenzene	7.51	146	34274	2.9063	ug/ml	99
14) 2-Methylphenol	7.55	107	26890	3.0080	ug/ml	96
15) bis(2-Chloroisopropyl) ethe	7.57	45	45938	2.9484	ug/ml	98
16) 3-,4-Methylphenol	7.69	107	37975	2.9112	ug/ml	99
17) n-Nitrosodipropylamine	7.71	70	21666	2.7315	ug/ml	97
18) Hexachloroethane	7.84	117	13159	2.9044	ug/ml	97
21) Nitrobenzene	7.92	77	35435	2.9147	ug/ml	94
22) Isophorone	8.13	82	56767	2.8279	ug/ml	99
23) 2-Nitrophenol	8.23	139	12638	2.2180	ug/ml	93
24) 2,4-Dimethylphenol	8.22	122	29225	2.9654	ug/ml	98
25) bis(2-Chloroethoxy) methane	8.31	93	39766	2.9361	ug/ml	98

(#) = qualifier out of range (m) = manual integration

4M12736.D BNA.M

Tue Apr 02 08:08:46 2002

HPMS4

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Data File : C:\HPCHEM\1\DATA\040102\4M12736.D
 Acq On : 1 Apr 2002 10:43
 Sample : WG115403-03 3PPM BNA STD
 Misc : 1,1 SOS59-14-2
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:50 2002

Vial: 3
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 10:38:13 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.22	122	29225	8.4484	ug/ml#	9
27) 2,4-Dichlorophenol	8.46	162	24953	2.9849	ug/ml	96
28) 1,2,4-Trichlorobenzene	8.55	180	32007	3.1317	ug/ml	97
29) Naphthalene	8.64	128	97430	2.9729	ug/ml	99
30) 4-Chloroaniline	8.68	127	38210	3.1049	ug/ml	96
31) Hexachlorobutadiene	8.73	225	15638	2.9435	ug/ml	97
32) 4-Chloro-3-Methylphenol	9.13	107	26313	2.7894	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	71174	3.1841	ug/ml	98
35) Hexachlorocyclopentadiene	9.48	237	1531	0.5244	ug/ml#	84
36) 2,4,6-Trichlorophenol	9.61	196	14574	2.6460	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	16973	2.7216	ug/ml	97
39) 2-Chloronaphthalene	9.84	162	55370	2.7969	ug/ml	99
40) 2-Nitroaniline	9.95	65	13974	2.3300	ug/ml	98
41) Dimethylphthalate	10.08	163	71348	3.1500	ug/ml	99
42) Acenaphthylene	10.27	152	99676	3.1107	ug/ml	99
43) 2,6-Dinitrotoluene	10.18	165	11576	2.4218	ug/ml	96
44) 3-Nitroaniline	10.37	138	13603	2.4871	ug/ml	96
45) Acenaphthene	10.45	154	58985	2.9015	ug/ml	96
47) 4-Nitrophenol	10.51	65	5478	1.4477	ug/ml	87
48) Dibenzofuran	10.61	168	92508	3.2654	ug/ml	98
49) 2,4-Dinitrotoluene	10.60	165	12882	2.0542	ug/ml#	83
50) Diethylphthalate	10.78	149	65969	2.8790	ug/ml	98
51) Fluorene	10.96	166	69944	2.9720	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	35714	3.1221	ug/ml	98
53) 4-Nitroaniline	11.00	138	12153	2.3469	ug/ml	96
54) 1,2-Diphenylhydrazine	11.09	77	79263	3.0083	ug/ml	98
57) 4,6-Dinitro-2-Methylphenol	11.01	198	1309	0.4170	ug/ml#	29
58) n-Nitrosodiphenylamine	11.06	169	48254	3.0224	ug/ml	97
59) 4-Bromophenyl Phenyl Ether	11.43	248	17878	2.9749	ug/ml	97
60) Hexachlorobenzene	11.55	284	18057	3.0002	ug/ml	98
61) Pentachlorophenol	11.76	266	1548	0.5647	ug/ml#	79
62) Phenanthrene	11.96	178	111768	3.1854	ug/ml	99
63) Anthracene	12.02	178	112449	3.2220	ug/ml	98
64) Carbazole	12.17	167	96443	3.4466	ug/ml	98
65) Di-n-Butyl Phthalate	12.43	149	118504	3.0342	ug/ml	99
66) Fluoranthene	13.19	202	117265	3.1435	ug/ml	98
68) Benzidine	13.30	184	24299	5.8957	ug/ml	100
69) Pyrene	13.44	202	111714	3.0180	ug/ml	98
71) Butyl Benzyl Phthalate	13.98	149	53834	3.1322	ug/ml	99
72) Benzo[a]anthracene	14.68	228	108833	3.1789	ug/ml	99
73) 3,3'-Dichlorobenzidine	14.61	252	32596	3.2607	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12736.D
 Acq On : 1 Apr 2002 10:43
 Sample : WG115403-03 3PPM BNA STD
 Misc : 1,1 SOS59-14-2
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:50 2002

Vial: 3
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 10:38:13 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) Chrysene	14.73	228	108944	3.5037	ug/ml	99
75) bis(2-Ethylhexyl)phthalate	14.51	149	75034	3.1562	ug/ml	97
77) Di-n-Octyl Phthalate	15.29	149	121002	3.1117	ug/ml	100
78) Benzo[b]fluoranthene	16.17	252	94034	3.1114	ug/ml	99
79) Benzo[k]fluoranthene	16.22	252	96503	3.2130	ug/ml	96
80) Benzo[a]pyrene	16.78	252	90188	3.2441	ug/ml	98
81) Indeno[1,2,3-cd]pyrene	19.33	276	81323	2.8056	ug/ml#	98
82) Dibenz[ah]anthracene	19.33	278	64229	2.7714	ug/ml	99
83) Benzo[ghi]perylene	20.09	276	59207	2.5104	ug/ml#	81

(#) = qualifier out of range (m) = manual integration
 4M12736.D BNA.M Tue Apr 02 08:08:47 2002 HPMS4

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Data File : C:\HPCHEM\1\DATA\040102\4M12737.D
 Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:51 2002

Vial: 4
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:50:57 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	309198	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1252179	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	663711	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1170334	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1063382	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	746684	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.06	112	93195	9.7493	ug/ml	0.01
Spiked Amount	100.000	Range	21 - 100	Recovery	=	9.75%#
6) Phenol-d5	6.94	99	127580	10.2388	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	10.24%
20) Nitrobenzene-d5	7.90	82	113207	10.2091	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	20.42%#
38) 2-Fluorobiphenyl	9.68	172	233198	10.6829	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	21.36%#
55) 2,4,6-Tribromophenol	11.23	330	20473	8.8502	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	8.85%#
70) p-Terphenyl-d14	13.52	244	266800	10.3840	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	20.76%#

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	4.63	79	105229	9.5499	ug/ml	98
3) n-Nitrosodimethylamine	4.58	74	59199	9.0642	ug/ml	99
5) Aniline	7.02	66	60739	12.0404	ug/ml	89
7) Phenol	6.96	94	134048	9.8529	ug/ml	99
8) bis(2-Chloroethyl) ether	7.05	63	78087	10.3183	ug/ml	92
9) 2-Chlorophenol	7.14	128	106888	10.0261	ug/ml	98
10) 1,3-Dichlorobenzene	7.28	146	115517	9.7087	ug/ml	100
11) 1,4-Dichlorobenzene	7.35	146	128406	10.3191	ug/ml	98
12) Benzyl Alcohol	7.46	108	65905	9.8289	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	110823	9.7747	ug/ml	100
14) 2-Methylphenol	7.54	107	91706	10.5697	ug/ml#	89
15) bis(2-Chloroisopropyl) ethe	7.57	45	148555	9.8388	ug/ml#	86
16) 3-,4-Methylphenol	7.69	107	126532	9.9612	ug/ml	97
17) n-Nitrosodipropylamine	7.70	70	76671	9.8888	ug/ml	99
18) Hexachloroethane	7.84	117	45822	10.3312	ug/ml	97
21) Nitrobenzene	7.92	77	118478	10.1708	ug/ml	100
22) Isophorone	8.13	82	197808	10.2459	ug/ml	100
23) 2-Nitrophenol	8.23	139	48480	8.9406	ug/ml	95
24) 2,4-Dimethylphenol	8.22	122	102147	10.7685	ug/ml	99
25) bis(2-Chloroethoxy) methane	8.31	93	133452	10.3467	ug/ml	97

(#) = qualifier out of range (m) = manual integration

4M12737.D BNA.M

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HPMS4

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Page 1

Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 1 11:51 2002

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)

Title : M8270/625/Initial cal. 04/01/02

Last Update : Mon Apr 01 11:50:57 2002

Response via : Initial Calibration

DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.29	122	3509m	1.0533	ug/ml	
27) 2,4-Dichlorophenol	8.46	162	84081	10.1907	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	101333	10.3570	ug/ml	99
29) Naphthalene	8.64	128	312005	10.0735	ug/ml	100
30) 4-Chloroaniline	8.68	127	131003	10.9826	ug/ml	99
31) Hexachlorobutadiene	8.74	225	50909	10.1063	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	94118	10.2384	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	230647	10.7145	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	15311	5.3525	ug/ml	99
36) 2,4,6-Trichlorophenol	9.61	196	55813	9.9407	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	61950	9.8237	ug/ml	98
39) 2-Chloronaphthalene	9.84	162	182546	9.5793	ug/ml	99
40) 2-Nitroaniline	9.95	65	54033	9.1355	ug/ml	98
41) Dimethylphthalate	10.08	163	238655	10.6720	ug/ml	99
42) Acenaphthylene	10.27	152	334529	10.5758	ug/ml	99
43) 2,6-Dinitrotoluene	10.18	165	45678	9.5813	ug/ml	99
44) 3-Nitroaniline	10.36	138	53030	9.8315	ug/ml	99
45) Acenaphthene	10.45	154	193919	9.8304	ug/ml	96
46) 2,4-Dinitrophenol	10.48	184	774	0.6083	ug/ml#	1
47) 4-Nitrophenol	10.50	65	26330	7.0555	ug/ml	92
48) Dibenzofuran	10.61	168	295473	10.6396	ug/ml	99
49) 2,4-Dinitrotoluene	10.59	165	54906	8.9474	ug/ml	96
50) Diethylphthalate	10.78	149	223866	9.9873	ug/ml	99
51) Fluorene	10.97	166	227894	9.9078	ug/ml	98
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	118262	10.5464	ug/ml	100
53) 4-Nitroaniline	11.00	138	48537	9.5044	ug/ml	94
54) 1,2-Diphenylhydrazine	11.09	77	270409	10.4262	ug/ml	100
57) 4,6-Dinitro-2-Methylphenol	11.01	198	9044	2.9211	ug/ml#	73
58) n-Nitrosodiphenylamine	11.05	169	166659	10.6611	ug/ml	100
59) 4-Bromophenyl Phenyl Ether	11.44	248	61723	10.4761	ug/ml	98
60) Hexachlorobenzene	11.56	284	60035	10.2438	ug/ml	99
61) Pentachlorophenol	11.75	266	9870	3.6502	ug/ml	94
62) Phenanthrene	11.97	178	365465	10.6814	ug/ml	99
63) Anthracene	12.02	178	372580	10.8143	ug/ml	100
64) Carbazole	12.17	167	314917	11.3622	ug/ml	99
65) Di-n-Butyl Phthalate	12.43	149	412425	10.5716	ug/ml	100
66) Fluoranthene	13.19	202	388658	10.5809	ug/ml	99
68) Benzidine	13.30	184	108780	22.2509	ug/ml	100
69) Pyrene	13.44	202	373455	10.2419	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	180646	10.3081	ug/ml	99
72) Benzo[a]anthracene	14.68	228	359975	10.5442	ug/ml	100

(#)=qualifier out of range (m)=manual integration

4M12737.D BNA.M

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HPMS4

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Page 2

Data File : C:\HPCHEM\1\DATA\040102\4M12737.D
 Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:51 2002

Vial: 4
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:50:57 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	102055	10.0710	ug/ml	99
74) Chrysene	14.72	228	351784	11.1770	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.52	149	257410	10.6095	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	422380	10.6565	ug/ml	98
78) Benzo[b]fluoranthene	16.18	252	321268	10.6579	ug/ml	99
79) Benzo[k]fluoranthene	16.22	252	313240	10.3918	ug/ml	99
80) Benzo[a]pyrene	16.78	252	300193	10.6976	ug/ml	99
81) Indeno[1,2,3-cd]pyrene	19.32	276	269309	9.3776	ug/ml#	100
82) Dibenz[ah]anthracene	19.32	278	218538	9.5313	ug/ml	99
83) Benzo[ghi]perylene	20.10	276	201870	8.7770	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12737.D BNA.M Tue Apr 02 08:08:57 2002 HPMS4

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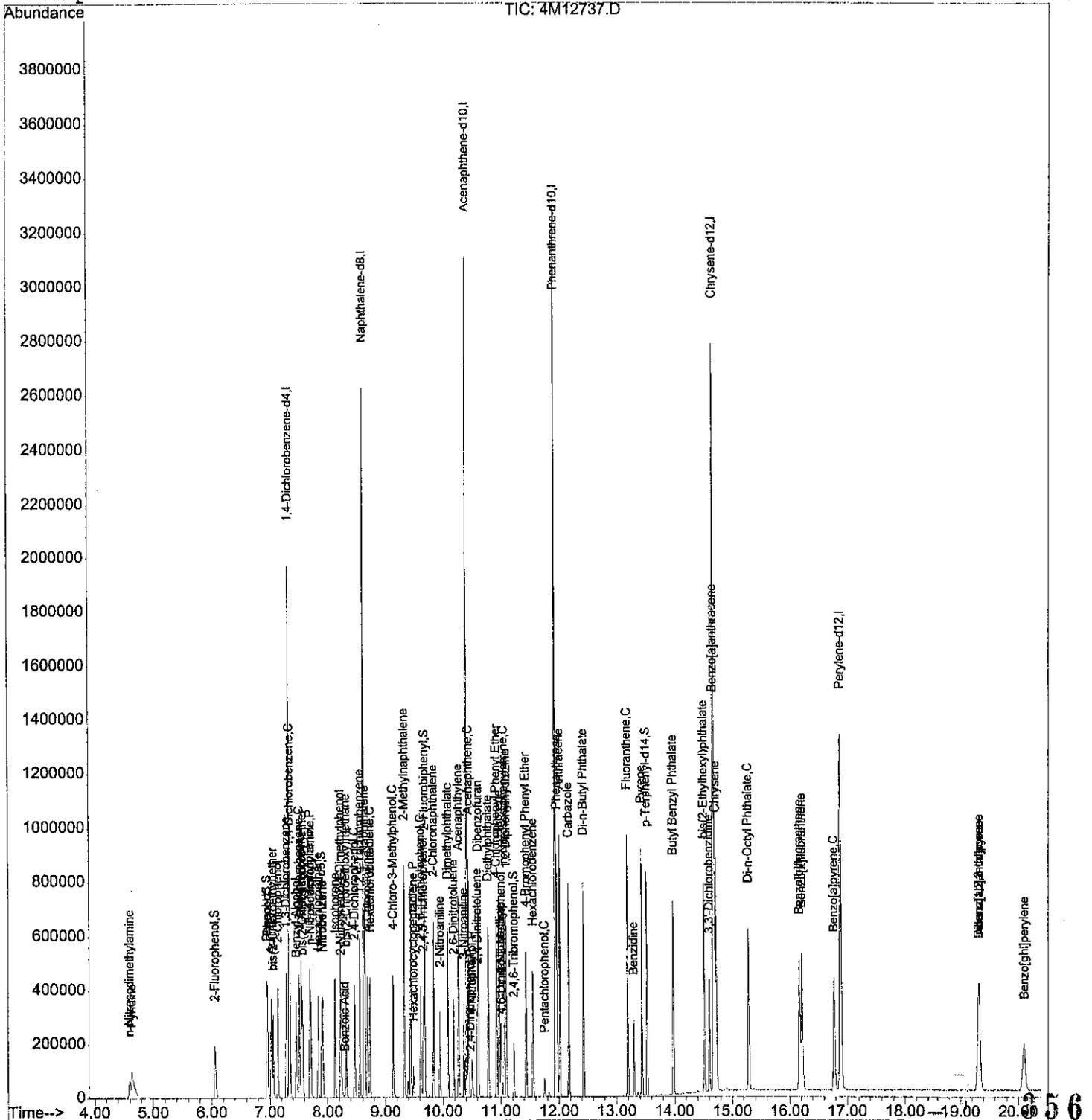
Page 3

Data File : C:\HPCHEM\1\DATA\040102\4M12737.D
 Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:51 2002

vial: 4
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Initial Calibration

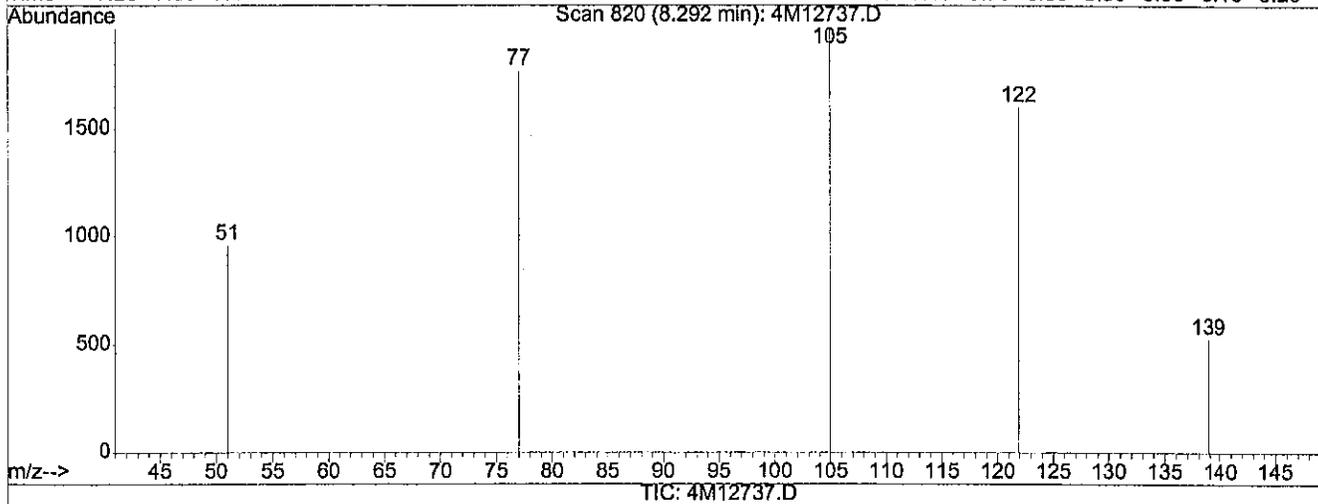
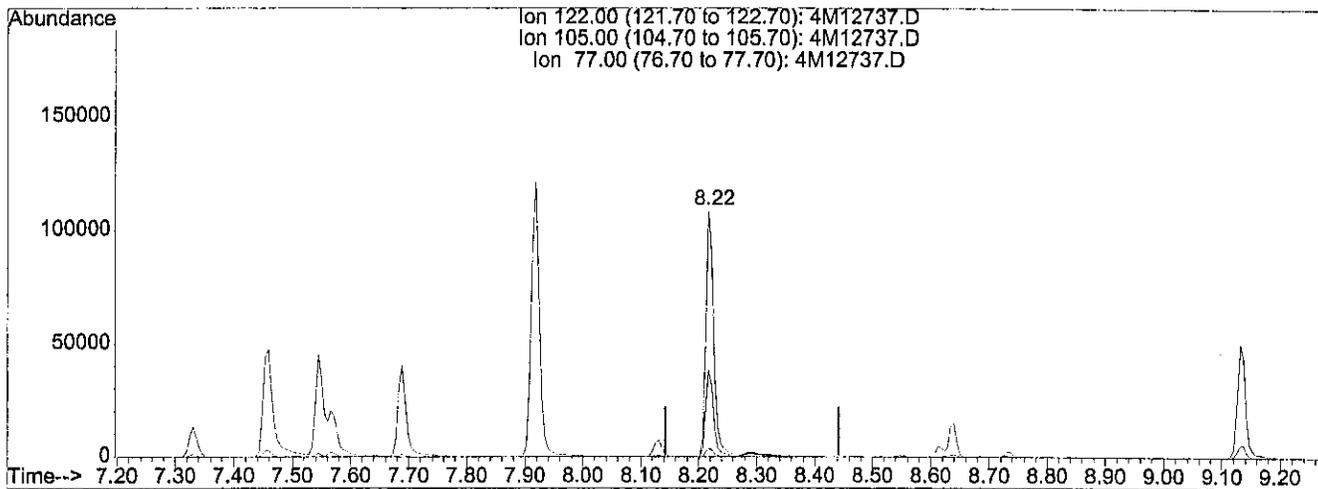


Data File : C:\HPCHEM\1\DATA\040102\4M12737.D
 Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:51 2002

Vial: 4
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:50:57 2002
 Response via : Multiple Level Calibration



(26) Benzoic Acid

8.22min 30.66ug/ml

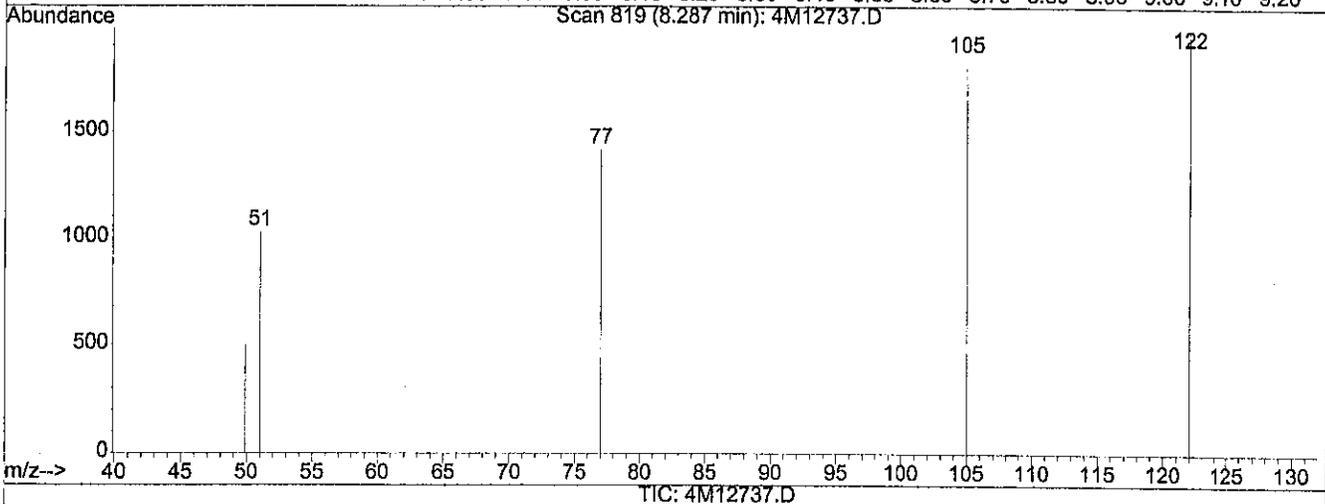
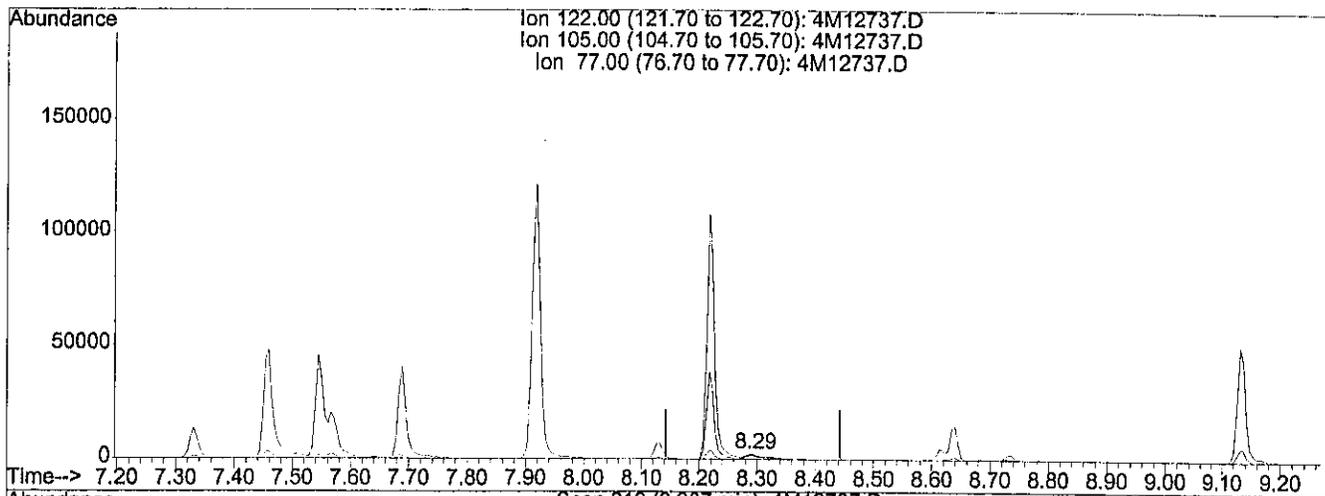
response 102147

Ion	Exp%	Act%
122.00	100	100
105.00	135.60	3.26#
77.00	99.20	35.81#
0.00	0.00	0.00

Data File : C:\HPCHEM\1\DATA\040102\4M12737.D
 Acq On : 1 Apr 2002 11:14
 Sample : WG115403-04 10PPM BNA STD
 Misc : 1,1 SOS59-14-3
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 11:51 2002

Vial: 4
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:50:57 2002
 Response via : Multiple Level Calibration



(26) Benzoic Acid

8.29min 1.05ug/ml m

response 3509

Ion	Exp%	Act%
122.00	100	100
105.00	135.60	94.96#
77.00	99.20	1042.43#
0.00	0.00	0.00

*multi vial
 #1
 EC2 4/2/02*

Acq On : 1 Apr 2002 11:46
Sample : WG115403-05 20PPM BNA STD
Misc : 1,1 SOS59-14-4
MS Integration Params: RTEINT.P
Quant Time: Apr 1 12:41 2002

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Mon Apr 01 11:52:14 2002
Response via : Initial Calibration
DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	308340	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1276099	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	677295	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1193477	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1090332	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	763010	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.06	112	206952	21.5320	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	21.53%
6) Phenol-d5	6.94	99	268017	21.5092	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	21.51%
20) Nitrobenzene-d5	7.90	82	245227	21.5910	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	43.18%
38) 2-Fluorobiphenyl	9.68	172	492131	22.0325	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	44.06%
55) 2,4,6-Tribromophenol	11.23	330	51284	21.3950	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	21.40%
70) p-Terphenyl-d14	13.52	244	567781	21.6884	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	43.38%

Target Compounds

						Qvalue
2) Pyridine	4.61	79	230920	20.9494	ug/ml	99
3) n-Nitrosodimethylamine	4.58	74	129630	20.1593	ug/ml	100
5) Aniline	7.02	66	128565	24.5996	ug/ml	96
7) Phenol	6.95	94	291056	21.4950	ug/ml	99
8) bis(2-Chloroethyl)ether	7.05	63	158736	20.9145	ug/ml	92
9) 2-Chlorophenol	7.13	128	229022	21.5226	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	245392	20.9345	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	264078	21.2714	ug/ml	99
12) Benzyl Alcohol	7.46	108	147342	21.9248	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	231828	20.7517	ug/ml	100
14) 2-Methylphenol	7.55	107	188206	21.7123	ug/ml#	91
15) bis(2-Chloroisopropyl)ethe	7.57	45	312700	20.9030	ug/ml#	89
16) 3-,4-Methylphenol	7.69	107	273218	21.5517	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	162968	21.1099	ug/ml	99
18) Hexachloroethane	7.84	117	99308	22.2827	ug/ml	98
21) Nitrobenzene	7.91	77	254040	21.3798	ug/ml	99
22) Isophorone	8.13	82	425537	21.4839	ug/ml	99
23) 2-Nitrophenol	8.24	139	115016	20.9741	ug/ml	98
24) 2,4-Dimethylphenol	8.22	122	213190	21.8361	ug/ml	100
25) bis(2-Chloroethoxy)methane	8.32	93	280364	21.3206	ug/ml	98

(#) = qualifier out of range (m) = manual integration
4M12738.D BNA.M Tue Apr 02 07:52:57 2002 HPMS4 Page 1

Data File : C:\HPCHEM\1\DATA\070102\4M12738.D
 Acq On : 1 Apr 2002 11:46
 Sample : WG115403-05 20PPM BNA STD
 Misc : 1,1 SOS59-14-4
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:41 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:52:14 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.29	122	18475	6.6277	ug/ml	85
27) 2,4-Dichlorophenol	8.46	162	182037	21.4316	ug/ml	100
28) 1,2,4-Trichlorobenzene	8.55	180	215117	21.5972	ug/ml	99
29) Naphthalene	8.64	128	651574	20.8227	ug/ml	100
30) 4-Chloroaniline	8.68	127	279079	22.6118	ug/ml	99
31) Hexachlorobutadiene	8.74	225	106693	20.9044	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	203021	21.5478	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	483506	21.9185	ug/ml	99
35) Hexachlorocyclopentadiene	9.49	237	51174	17.6386	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	126718	21.7479	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	137650	21.1698	ug/ml	99
39) 2-Chloronaphthalene	9.84	162	386917	20.2310	ug/ml	99
40) 2-Nitroaniline	9.94	65	127588	21.0241	ug/ml	99
41) Dimethylphthalate	10.08	163	499961	21.7685	ug/ml	100
42) Acenaphthylene	10.27	152	715365	22.0700	ug/ml	100
43) 2,6-Dinitrotoluene	10.19	165	104004	21.2011	ug/ml	99
44) 3-Nitroaniline	10.37	138	119956	21.6273	ug/ml	98
45) Acenaphthene	10.45	154	408352	20.4375	ug/ml	98
46) 2,4-Dinitrophenol	10.47	184	7467	5.7498	ug/ml#	1
47) 4-Nitrophenol	10.50	65	67538	17.7348	ug/ml	97
48) Dibenzofuran	10.61	168	621282	21.8796	ug/ml	99
49) 2,4-Dinitrotoluene	10.60	165	126934	20.3369	ug/ml	97
50) Diethylphthalate	10.78	149	475262	20.9245	ug/ml	99
51) Fluorene	10.97	166	486387	20.9278	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	249318	21.7845	ug/ml	100
53) 4-Nitroaniline	11.00	138	109854	20.9251	ug/ml	96
54) 1,2-Diphenylhydrazine	11.09	77	575221	21.6700	ug/ml	100
57) 4,6-Dinitro-2-Methylphenol	11.01	198	33092	11.8832	ug/ml	90
58) n-Nitrosodiphenylamine	11.06	169	352537	22.0043	ug/ml	100
59) 4-Bromophenyl Phenyl Ether	11.44	248	131689	21.8163	ug/ml	100
60) Hexachlorobenzene	11.55	284	122978	20.6284	ug/ml	99
61) Pentachlorophenol	11.75	266	35770	12.9721	ug/ml	98
62) Phenanthrene	11.96	178	759726	21.7739	ug/ml	99
63) Anthracene	12.02	178	793984	22.4798	ug/ml	99
64) Carbazole	12.17	167	649274	22.8465	ug/ml	99
65) Di-n-Butyl Phthalate	12.43	149	883959	22.0821	ug/ml	100
66) Fluoranthene	13.19	202	821435	21.9210	ug/ml	99
68) Benzidine	13.30	184	271686	44.4924	ug/ml	100
69) Pyrene	13.44	202	791669	21.4555	ug/ml	99
71) Butyl Benzyl Phthalate	13.98	149	396750	21.9563	ug/ml	100
72) Benzo[a]anthracene	14.68	228	766808	21.9120	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12738.D
 Acq On : 1 Apr 2002 11:46
 Sample : WG115403-05 20PPM BNA STD
 Misc : 1,1 SOS59-14-4
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:41 2002

vial: 5
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 11:52:14 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	198540	19.2135	ug/ml	99
74) Chrysene	14.73	228	744713	22.7448	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.51	149	547520	21.7655	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	920393	22.3878	ug/ml	100
78) Benzo[b]fluoranthene	16.18	252	688257	22.1504	ug/ml	100
79) Benzo[k]fluoranthene	16.22	252	675484	21.9036	ug/ml	100
80) Benzo[a]pyrene	16.78	252	649361	22.3282	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.33	276	581635	19.9628	ug/ml#	99
82) Dibenz[ah]anthracene	19.33	278	484578	20.7725	ug/ml	99
83) Benzo[ghi]perylene	20.10	276	443598	19.2481	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12738.D BNA.M Tue Apr 02 07:52:57 2002 HPMS4

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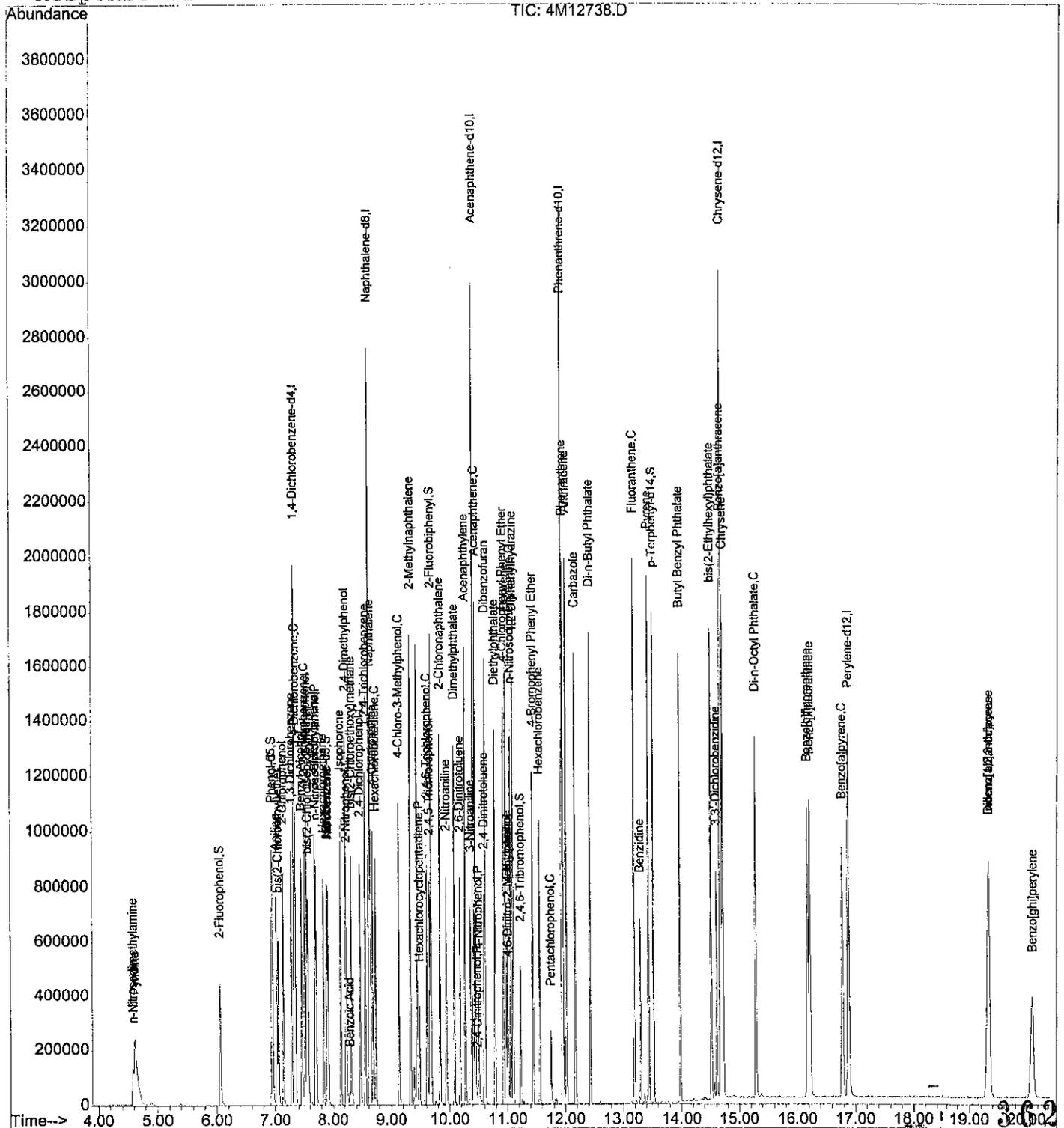
Page 3

Data File : C:\HPCHEM\1\DATA\040102\4M12738.D
 Acq On : 1 Apr 2002 11:46
 Sample : WG115403-05 20PPM BNA STD
 Misc : 1,1 SOS59-14-4
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:41 2002

Via: 5
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\070102\4M12739.D
 Acq On : 1 Apr 2002 12:16
 Sample : WG115403-06 80PPM BNA STD
 Misc : 1,1 SOS59-14-5
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:42 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:06 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	318734	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1324656	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	705914	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1268807	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1189910	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	844429	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	811548	80.9625	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	80.96%
6) Phenol-d5	6.94	99	1021741	78.7841	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	78.78%
20) Nitrobenzene-d5	7.90	82	947994	79.8374	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	159.68%#
38) 2-Fluorobiphenyl	9.68	172	1821263	77.7084	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	155.42%#
55) 2,4,6-Tribromophenol	11.23	330	229754	90.3952	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	90.40%
70) p-Terphenyl-d14	13.53	244	2129664	74.5929	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	149.18%#

Target Compounds

						Qvalue
2) Pyridine	4.59	79	920033	80.2785	ug/ml	100
3) n-Nitrosodimethylamine	4.57	74	506060	76.6284	ug/ml	99
5) Aniline	7.02	66	480640	85.3006	ug/ml	98
7) Phenol	6.95	94	1102751	78.4030	ug/ml	100
8) bis(2-Chloroethyl) ether	7.05	63	615871	78.4648	ug/ml	99
9) 2-Chlorophenol	7.13	128	873523	78.9077	ug/ml	100
10) 1,3-Dichlorobenzene	7.28	146	891514	73.9154	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	975387	75.8170	ug/ml	100
12) Benzyl Alcohol	7.45	108	571729	81.4320	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	860246	74.9085	ug/ml	100
14) 2-Methylphenol	7.55	107	700779	77.7520	ug/ml#	88
15) bis(2-Chloroisopropyl) ethe	7.57	45	1190000	76.8709	ug/ml#	89
16) 3-,4-Methylphenol	7.69	107	1033455	78.3915	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	636097	79.4469	ug/ml	100
18) Hexachloroethane	7.84	117	386626	82.6969	ug/ml	99
21) Nitrobenzene	7.92	77	969329	78.4110	ug/ml	100
22) Isophorone	8.13	82	1628125	78.7403	ug/ml	100
23) 2-Nitrophenol	8.23	139	481649	84.4758	ug/ml	97
24) 2,4-Dimethylphenol	8.22	122	804984	78.6855	ug/ml	99
25) bis(2-Chloroethoxy) methane	8.31	93	1059154	77.4940	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Acq On : 1 Apr 2002 12:16
 Sample : WG115403-06 80PPM BNA STD
 Misc : 1,1 SOS59-14-5
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:42 2002

vial: 0
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:06 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.30	122	217875	84.7377	ug/ml	98
27) 2,4-Dichlorophenol	8.46	162	703396	79.0645	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	792900	76.4954	ug/ml	100
29) Naphthalene	8.64	128	2405580	74.6108	ug/ml	100
30) 4-Chloroaniline	8.68	127	1044606	80.1692	ug/ml	100
31) Hexachlorobutadiene	8.74	225	394856	75.0065	ug/ml	100
32) 4-Chloro-3-Methylphenol	9.13	107	786551	79.8264	ug/ml	100
33) 2-Methylnaphthalene	9.33	142	1777136	77.0548	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	319167	105.4143	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	506579	82.4025	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	553502	81.2762	ug/ml	99
39) 2-Chloronaphthalene	9.84	162	1438423	73.3077	ug/ml	99
40) 2-Nitroaniline	9.95	65	520009	81.4077	ug/ml	99
41) Dimethylphthalate	10.08	163	1850206	76.8520	ug/ml	100
42) Acenaphthylene	10.28	152	2638671	77.6607	ug/ml	99
43) 2,6-Dinitrotoluene	10.18	165	430127	83.7152	ug/ml	100
44) 3-Nitroaniline	10.37	138	426053	72.8857	ug/ml	97
45) Acenaphthene	10.45	154	1564970	75.7018	ug/ml	99
46) 2,4-Dinitrophenol	10.47	184	110504	82.5756	ug/ml#	96
47) 4-Nitrophenol	10.50	65	311641	78.3672	ug/ml	99
48) Dibenzofuran	10.62	168	2260740	76.0609	ug/ml	99
49) 2,4-Dinitrotoluene	10.60	165	534770	82.8734	ug/ml	97
50) Diethylphthalate	10.79	149	1789315	76.0155	ug/ml	100
51) Fluorene	10.97	166	1811118	75.2928	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	922332	76.9823	ug/ml	99
53) 4-Nitroaniline	11.00	138	375674	68.6880	ug/ml	97
54) 1,2-Diphenylhydrazine	11.10	77	2136068	77.0492	ug/ml	99
57) 4,6-Dinitro-2-Methylphenol	11.02	198	244627	84.5718	ug/ml	94
58) n-Nitrosodiphenylamine	11.06	169	1323310	77.2862	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.44	248	511465	79.1125	ug/ml	98
60) Hexachlorobenzene	11.56	284	478037	75.6059	ug/ml	99
61) Pentachlorophenol	11.75	266	242496	81.0084	ug/ml	98
62) Phenanthrene	11.97	178	2762436	74.3999	ug/ml	100
63) Anthracene	12.02	178	2924290	77.0824	ug/ml	99
64) Carbazole	12.17	167	2218429	72.7902	ug/ml	100
65) Di-n-Butyl Phthalate	12.43	149	3335693	77.8277	ug/ml	100
66) Fluoranthene	13.20	202	3024133	75.7105	ug/ml	100
68) Benzidine	13.30	184	963217	117.6052	ug/ml	100
69) Pyrene	13.44	202	2908851	72.6940	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	1537603	77.3317	ug/ml	99
72) Benzo[a]anthracene	14.68	228	2915898	75.8450	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070102\4M12739.D
 Acq On : 1 Apr 2002 12:16
 Sample : WG115403-06 80PPM BNA STD
 Misc : 1,1 SOS59-14-5
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:42 2002

Vial: 6
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:06 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	719139	64.7492	ug/ml	99
74) Chrysene	14.73	228	2859638	78.4740	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.52	149	2118172	76.6171	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	3675379	79.7431	ug/ml	100
78) Benzo[b]fluoranthene	16.19	252	2831852	81.6218	ug/ml	99
79) Benzo[k]fluoranthene	16.23	252	2618387	75.9233	ug/ml	99
80) Benzo[a]pyrene	16.79	252	2642158	80.7930	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.35	276	2439059	76.3523	ug/ml#	99
82) Dibenz[ah]anthracene	19.35	278	2012906	78.1837	ug/ml	99
83) Benzo[ghi]perylene	20.12	276	1862848	74.4077	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12739.D BNA.M Tue Apr 02 07:53:05 2002 HPMS4

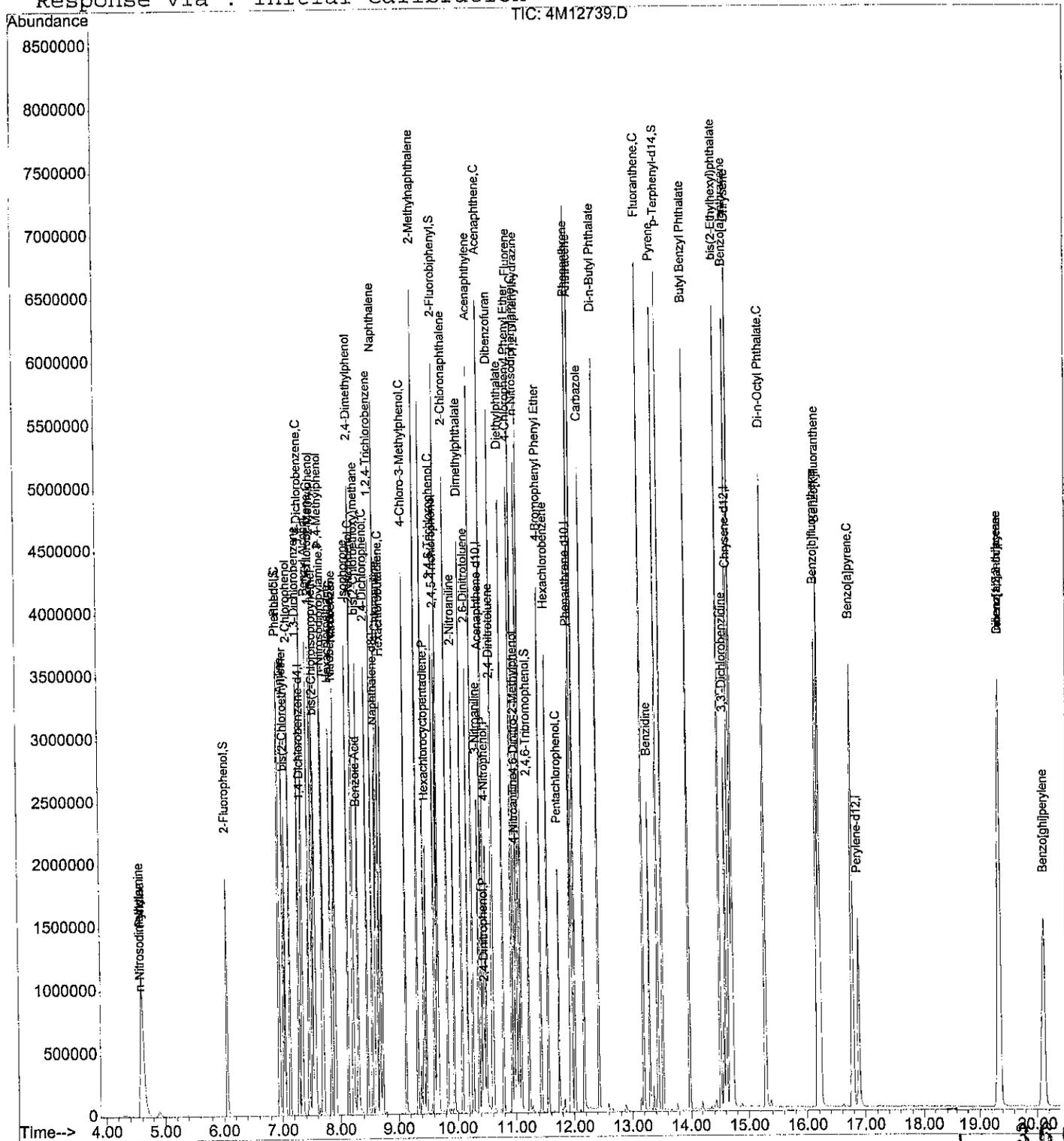
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Data File : C:\HPCHEM\1\DATA\040102\4M12739.D
 Acq On : 1 Apr 2002 12:16
 Sample : WG115403-06 80PPM BNA STD
 Misc : 1,1 SOS59-14-5
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 12:42 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\040102\4M12740.D
 Acq On : 1 Apr 2002 12:46
 Sample : WG115403-07 100PPM BNA STD
 Misc : 1,1 SOS59-14-6
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:09 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:46 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	327224	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1356310	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	728688	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1314035	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1238841	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	881134	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	1047644	101.9613	ug/ml	0.00
Spiked Amount	100.000	Range 21 - 100	Recovery	=	101.96%#	
6) Phenol-d5	6.94	99	1299980	97.7180	ug/ml	0.00
Spiked Amount	100.000	Range 10 - 94	Recovery	=	97.72%#	
20) Nitrobenzene-d5	7.90	82	1214150	99.6374	ug/ml	0.00
Spiked Amount	50.000	Range 35 - 114	Recovery	=	199.28%#	
38) 2-Fluorobiphenyl	9.68	172	2285406	94.0896	ug/ml	0.00
Spiked Amount	50.000	Range 43 - 116	Recovery	=	188.18%#	
55) 2,4,6-Tribromophenol	11.23	330	300125	113.8085	ug/ml	0.00
Spiked Amount	100.000	Range 10 - 123	Recovery	=	113.81%	
70) p-Terphenyl-d14	13.53	244	2708759	91.6212	ug/ml	0.00
Spiked Amount	50.000	Range 33 - 141	Recovery	=	183.24%#	

Target Compounds

						Qvalue
2) Pyridine	4.59	79	1187463	101.3587	ug/ml	99
3) n-Nitrosodimethylamine	4.57	74	647564	97.2027	ug/ml	99
5) Aniline	7.02	66	612512	102.6483	ug/ml	98
7) Phenol	6.95	94	1392858	96.8045	ug/ml	100
8) bis(2-Chloroethyl) ether	7.05	63	777050	96.3685	ug/ml	98
9) 2-Chlorophenol	7.13	128	1113860	98.1396	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	1139317	93.1256	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	1238298	94.0318	ug/ml	100
12) Benzyl Alcohol	7.45	108	735342	102.2030	ug/ml	98
13) 1,2-Dichlorobenzene	7.51	146	1091297	93.5263	ug/ml	100
14) 2-Methylphenol	7.55	107	884440	95.4842	ug/ml	99
15) bis(2-Chloroisopropyl) ethe	7.57	45	1523396	96.3784	ug/ml	100
16) 3-,4-Methylphenol	7.69	107	1321071	97.8743	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	807779	98.6590	ug/ml	100
18) Hexachloroethane	7.84	117	490411	101.3309	ug/ml	98
21) Nitrobenzene	7.92	77	1234823	97.5976	ug/ml	99
22) Isophorone	8.13	82	2068747	97.8046	ug/ml	99
23) 2-Nitrophenol	8.23	139	629043	107.9810	ug/ml	96
24) 2,4-Dimethylphenol	8.22	122	1022431	97.3897	ug/ml	99
25) bis(2-Chloroethoxy) methane	8.32	93	1354963	96.8825	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12740.D
 Acq On : 1 Apr 2002 12:46
 Sample : WG115403-07 100PPM BNA STD
 Misc : 1,1 SOS59-14-6
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:09 2002

vial: /
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:46 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.31	122	342379	132.9574	ug/ml	98
27) 2,4-Dichlorophenol	8.46	162	902604	99.0245	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	1005869	94.8543	ug/ml	99
29) Naphthalene	8.64	128	3029181	92.5613	ug/ml	99
30) 4-Chloroaniline	8.68	127	1339135	99.4991	ug/ml	99
31) Hexachlorobutadiene	8.74	225	499575	93.3755	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	1001604	99.2606	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	2233545	94.3732	ug/ml	99
35) Hexachlorocyclopentadiene	9.48	237	440337	141.9266	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	651543	102.5234	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	719103	102.4570	ug/ml	100
39) 2-Chloronaphthalene	9.84	162	1824550	91.5931	ug/ml	100
40) 2-Nitroaniline	9.95	65	663933	100.6517	ug/ml	99
41) Dimethylphthalate	10.09	163	2346254	94.4395	ug/ml	99
42) Acenaphthylene	10.28	152	3323369	94.5939	ug/ml	99
43) 2,6-Dinitrotoluene	10.18	165	559059	105.4339	ug/ml	98
44) 3-Nitroaniline	10.37	138	540760	90.7681	ug/ml	97
45) Acenaphthene	10.45	154	1983378	93.7713	ug/ml	99
46) 2,4-Dinitrophenol	10.47	184	176518	135.4744	ug/ml#	70
47) 4-Nitrophenol	10.50	65	410312	100.7611	ug/ml	99
48) Dibenzofuran	10.62	168	2859292	93.0175	ug/ml	100
49) 2,4-Dinitrotoluene	10.60	165	692304	105.1585	ug/ml	95
50) Diethylphthalate	10.79	149	2267089	94.1027	ug/ml	100
51) Fluorene	10.97	166	2296314	93.2534	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	1171880	94.7512	ug/ml	99
53) 4-Nitroaniline	11.00	138	498719	90.1984	ug/ml	94
54) 1,2-Diphenylhydrazine	11.10	77	2687431	94.1266	ug/ml	98
57) 4,6-Dinitro-2-Methylphenol	11.02	198	351380	122.2486	ug/ml	93
58) n-Nitrosodiphenylamine	11.06	169	1692512	95.4592	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.44	248	657806	98.0121	ug/ml	98
60) Hexachlorobenzene	11.56	284	610497	93.8957	ug/ml	98
61) Pentachlorophenol	11.75	266	336023	109.1059	ug/ml	98
62) Phenanthrene	11.97	178	3487203	91.0668	ug/ml	100
63) Anthracene	12.02	178	3654304	92.7482	ug/ml	99
64) Carbazole	12.18	167	2761543	87.1348	ug/ml	99
65) Di-n-Butyl Phthalate	12.43	149	4179126	94.1450	ug/ml	99
66) Fluoranthene	13.20	202	3794499	91.9640	ug/ml	99
68) Benzidine	13.30	184	1235490	126.5118	ug/ml	100
69) Pyrene	13.44	202	3697239	89.8061	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	1945736	94.0930	ug/ml	99
72) Benzo[a]anthracene	14.68	228	3734656	93.3956	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12740.D
 Acq On : 1 Apr 2002 12:46
 Sample : WG115403-07 100PPM BNA STD
 Misc : 1,1 SOS59-14-6
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:09 2002

via1: /
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 12:42:46 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	966289	85.7910	ug/ml	99
74) Chrysene	14.73	228	3641006	95.0277	ug/ml	99
75) bis(2-Ethylhexyl)phthalate	14.52	149	2709396	94.3686	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	4683014	96.8569	ug/ml	100
78) Benzo[b]fluoranthene	16.19	252	3576101	97.9009	ug/ml	100
79) Benzo[k]fluoranthene	16.24	252	3475076	96.4505	ug/ml	99
80) Benzo[a]pyrene	16.79	252	3425686	99.3743	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.36	276	3151579	95.7501	ug/ml	99
82) Dibenz[ah]anthracene	19.36	278	2614346	98.0453	ug/ml	98
83) Benzo[ghi]perylene	20.13	276	2423241	95.0239	ug/ml	99

(#) = qualifier out of range (m) = manual integration
 4M12740.D BNA.M Tue Apr 02 07:53:13 2002 HPMS4

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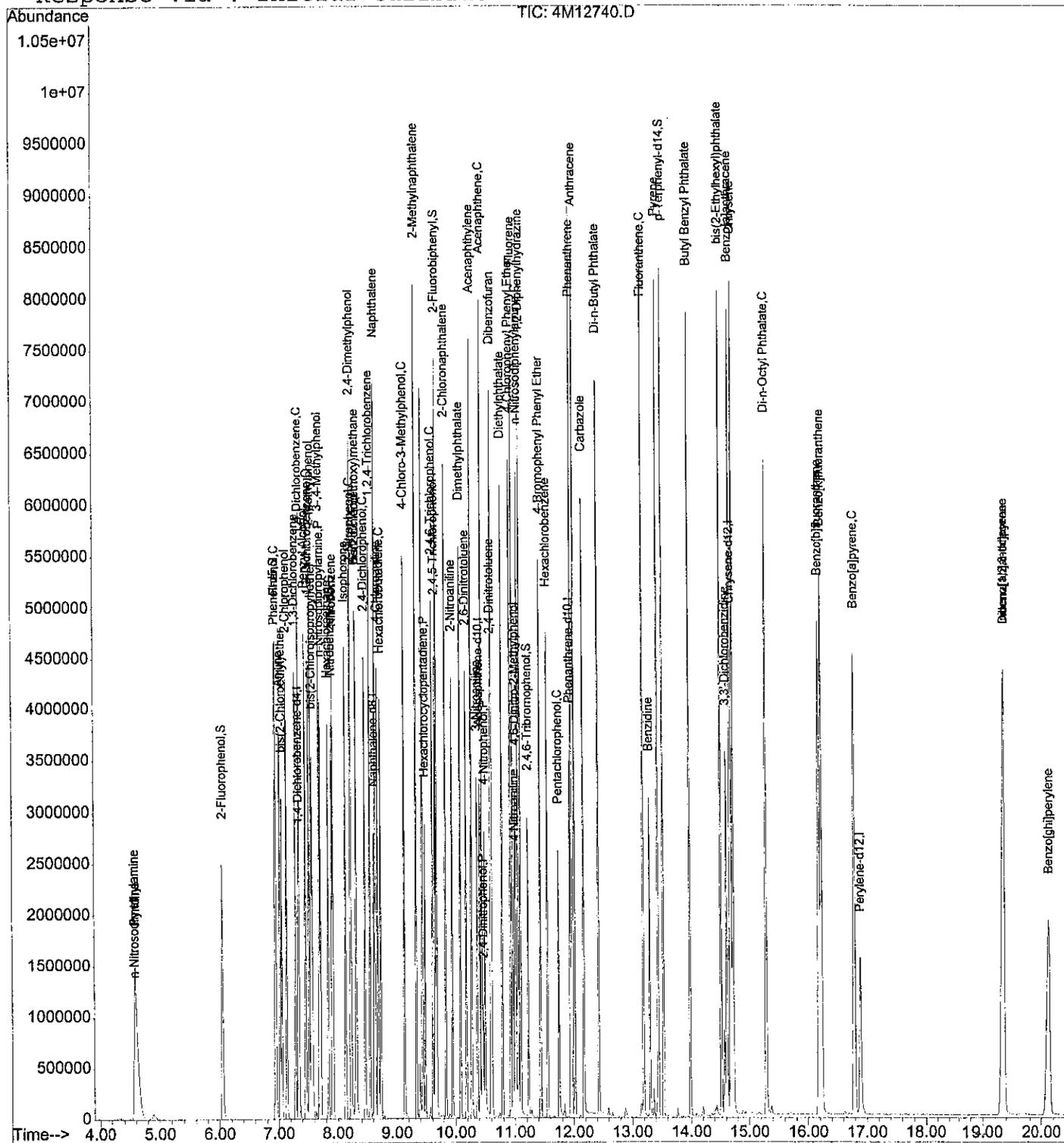
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Data File : C:\HPCHEM\1\DATA\040102\4M12740.D
 Acq On : 1 Apr 2002 12:46
 Sample : WG115403-07 100PPM BNA STD
 Misc : 1,1 SOS59-14-6
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:09 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\040102\4M12741.D
 Acq On : 1 Apr 2002 13:18
 Sample : WG115403-08 120PPM BNA STD
 Misc : 1,1 SOS59-14-7
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:40 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:09:42 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	318916	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1329956	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	717794	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1300233	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1248773	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	884291	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	1228240	122.4547	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	122.45%#
6) Phenol-d5	6.94	99	1525551	117.6380	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	117.64%#
20) Nitrobenzene-d5	7.90	82	1424446	119.0108	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	238.02%#
38) 2-Fluorobiphenyl	9.69	172	2676466	111.5544	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	223.10%#
55) 2,4,6-Tribromophenol	11.23	330	358360	137.2296	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	137.23%#
70) p-Terphenyl-d14	13.53	244	3184836	107.5360	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	215.08%#

Target Compounds

						Qvalue
2) Pyridine	4.59	79	1401893	122.9686	ug/ml	99
3) n-Nitrosodimethylamine	4.57	74	768047	120.0550	ug/ml	99
5) Aniline	7.02	66	718233	119.7835	ug/ml	99
7) Phenol	6.95	94	1643632	117.6419	ug/ml	100
8) bis(2-Chloroethyl) ether	7.05	63	908692	115.5959	ug/ml	97
9) 2-Chlorophenol	7.13	128	1308292	118.2390	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	1329762	112.6844	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	1453670	113.4633	ug/ml	99
12) Benzyl Alcohol	7.46	108	865501	123.2450	ug/ml	97
13) 1,2-Dichlorobenzene	7.51	146	1278304	113.5235	ug/ml	99
14) 2-Methylphenol	7.54	107	1041340	115.3403	ug/ml#	86
15) bis(2-Chloroisopropyl) ethe	7.57	45	1788678	116.5426	ug/ml#	88
16) 3-,4-Methylphenol	7.69	107	1543252	117.3157	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	942857	118.5153	ug/ml	99
18) Hexachloroethane	7.84	117	574648	120.7055	ug/ml	98
21) Nitrobenzene	7.92	77	1439101	116.1435	ug/ml	98
22) Isophorone	8.14	82	2428236	117.3286	ug/ml	99
23) 2-Nitrophenol	8.23	139	744507	130.6857	ug/ml	96
24) 2,4-Dimethylphenol	8.22	122	1201963	116.4647	ug/ml	98
25) bis(2-Chloroethoxy) methane	8.32	93	1576804	115.1193	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12741.D BNA.M

Tue Apr 02 07:53:20 2002

HPMS4

Page 1

Acq On : 1 Apr 2002 13:18
 Sample : WG115403-08 120PPM BNA STD
 Misc : 1,1 SOS59-14-7

vial: 8
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 1 13:40 2002

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:09:42 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.32	122	447353	182.3096	ug/ml	98
27) 2,4-Dichlorophenol	8.46	162	1055171	118.1082	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	1170993	112.7132	ug/ml	100
29) Naphthalene	8.64	128	3525691	110.8607	ug/ml	99
30) 4-Chloroaniline	8.68	127	1581780	118.6962	ug/ml	99
31) Hexachlorobutadiene	8.74	225	591383	113.7931	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	1171743	118.5362	ug/ml	98
33) 2-Methylnaphthalene	9.33	142	2623651	112.8827	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	527511	173.1494	ug/ml	100
36) 2,4,6-Trichlorophenol	9.61	196	772607	123.3179	ug/ml	98
37) 2,4,5-Trichlorophenol	9.66	196	849716	122.8855	ug/ml	99
39) 2-Chloronaphthalene	9.84	162	2154954	111.8032	ug/ml	99
40) 2-Nitroaniline	9.95	65	783379	120.6101	ug/ml	98
41) Dimethylphthalate	10.09	163	2776589	113.4512	ug/ml	100
42) Acenaphthylene	10.27	152	3865772	111.5841	ug/ml	99
43) 2,6-Dinitrotoluene	10.19	165	663382	127.0678	ug/ml	98
44) 3-Nitroaniline	10.37	138	669257	116.1125	ug/ml	96
45) Acenaphthene	10.45	154	2336523	113.3642	ug/ml	98
46) 2,4-Dinitrophenol	10.47	184	234088	193.6610	ug/ml#	56
47) 4-Nitrophenol	10.50	65	495250	124.5956	ug/ml	98
48) Dibenzofuran	10.62	168	3343209	110.3297	ug/ml	100
49) 2,4-Dinitrotoluene	10.60	165	816631	127.1557	ug/ml	95
50) Diethylphthalate	10.79	149	2655908	112.7792	ug/ml	100
51) Fluorene	10.97	166	2700723	112.2525	ug/ml	99
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	1377924	113.0607	ug/ml	98
53) 4-Nitroaniline	11.01	138	601156	112.4564	ug/ml	94
54) 1,2-Diphenylhydrazine	11.10	77	3137457	111.7641	ug/ml	98
57) 4,6-Dinitro-2-Methylphenol	11.02	198	444882	162.6166	ug/ml	93
58) n-Nitrosodiphenylamine	11.06	169	1999264	113.7086	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.44	248	770752	115.7923	ug/ml	97
60) Hexachlorobenzene	11.56	284	719886	112.7561	ug/ml	97
61) Pentachlorophenol	11.75	266	419555	138.6312	ug/ml	98
62) Phenanthrene	11.97	178	4072203	107.7965	ug/ml	99
63) Anthracene	12.02	178	4296143	109.9709	ug/ml	99
64) Carbazole	12.18	167	3241926	103.2980	ug/ml	100
65) Di-n-Butyl Phthalate	12.43	149	4881663	111.1568	ug/ml	99
66) Fluoranthene	13.20	202	4426596	108.6010	ug/ml	99
68) Benzidine	13.30	184	1494111	135.5742	ug/ml	100
69) Pyrene	13.44	202	4294417	104.5504	ug/ml	99
71) Butyl Benzyl Phthalate	13.98	149	2296444	110.4789	ug/ml	99
72) Benzo[a]anthracene	14.68	228	4404526	109.3415	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\040102\4M12741.D

Acq On : 1 Apr 2002 13:18

Sample : WG115403-08 120PPM BNA STD

Misc : 1,1 SOS59-14-7

MS Integration Params: RTEINT.P

Quant Time: Apr 1 13:40 2002

Vial: 8

Operator: mdc

Inst : HPMS4

Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)

Title : M8270/625/Initial cal. 04/01/02

Last Update : Mon Apr 01 13:09:42 2002

Response via : Initial Calibration

DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.62	252	1159684	104.7105	ug/ml	99
74) Chrysene	14.74	228	4290844	110.0680	ug/ml	99
75) bis(2-Ethylhexyl)phthalate	14.52	149	3184809	110.1508	ug/ml	100
77) Di-n-Octyl Phthalate	15.30	149	5536498	113.5274	ug/ml	100
78) Benzo[b]fluoranthene	16.19	252	4318713	116.9496	ug/ml	99
79) Benzo[k]fluoranthene	16.24	252	4107558	113.4675	ug/ml	99
80) Benzo[a]pyrene	16.80	252	4102327	117.3970	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.37	276	3767874	115.6341	ug/ml	99
82) Dibenz[ah]anthracene	19.37	278	3139013	118.1801	ug/ml	98
83) Benzo[ghi]perylene	20.13	276	2903065	116.2638	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12741.D BNA.M

Tue Apr 02 07:53:21 2002

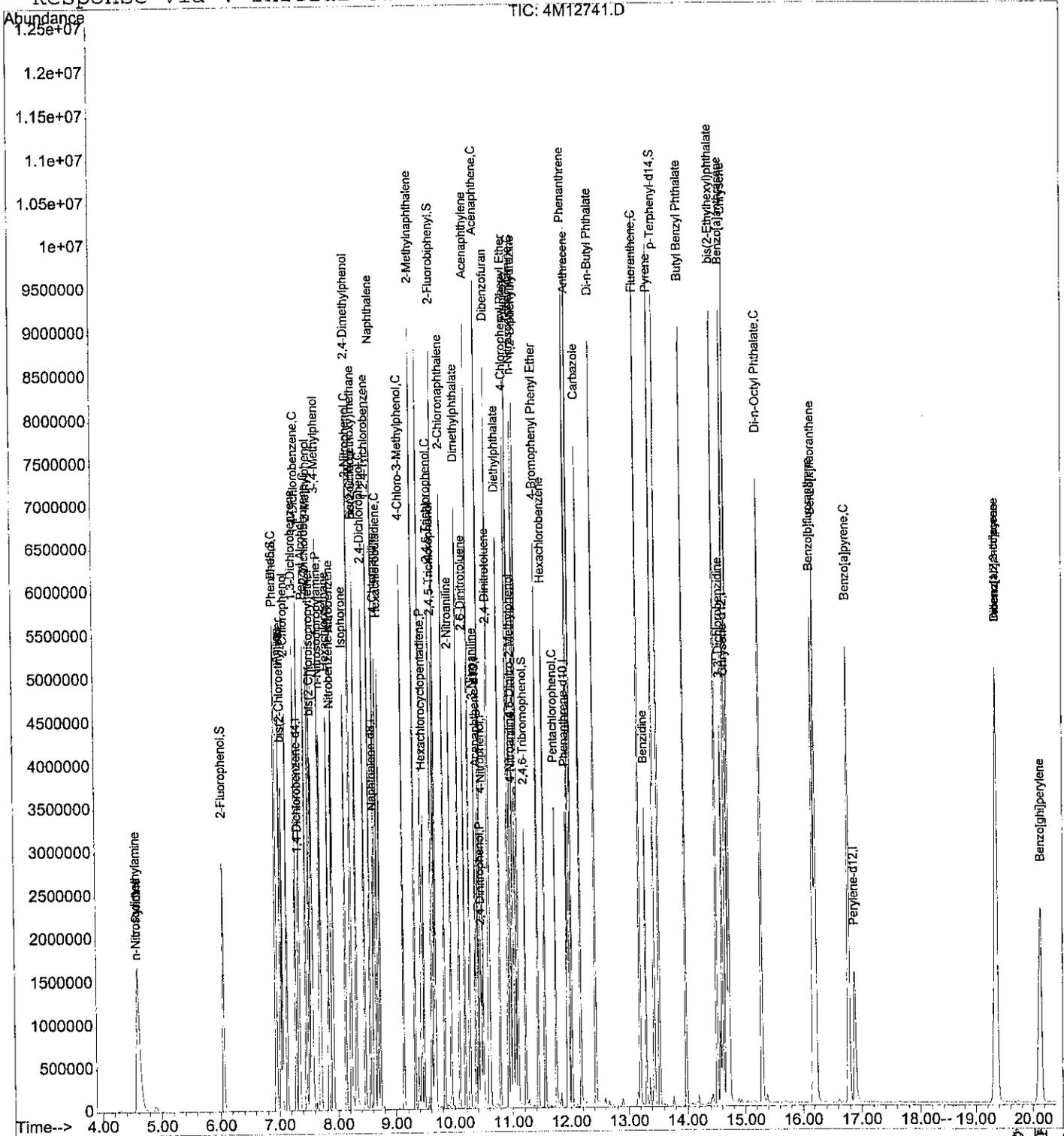
HPMS4

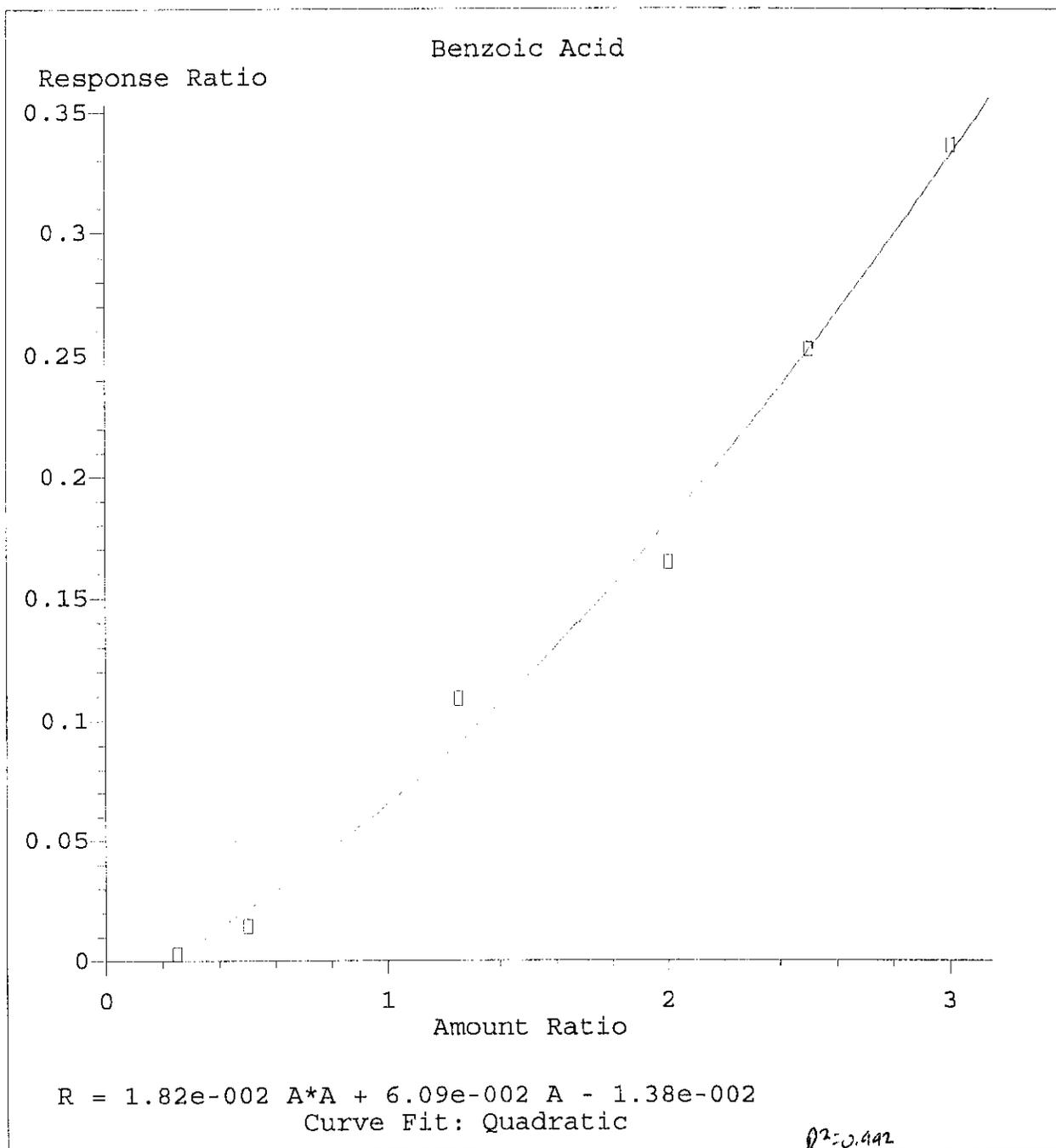
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 Acq On : 1 Apr 2002 13:18
 Sample : WG115403-08 120PPM BNA STD
 Misc : 1,1 SOS59-14-7
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 13:40 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

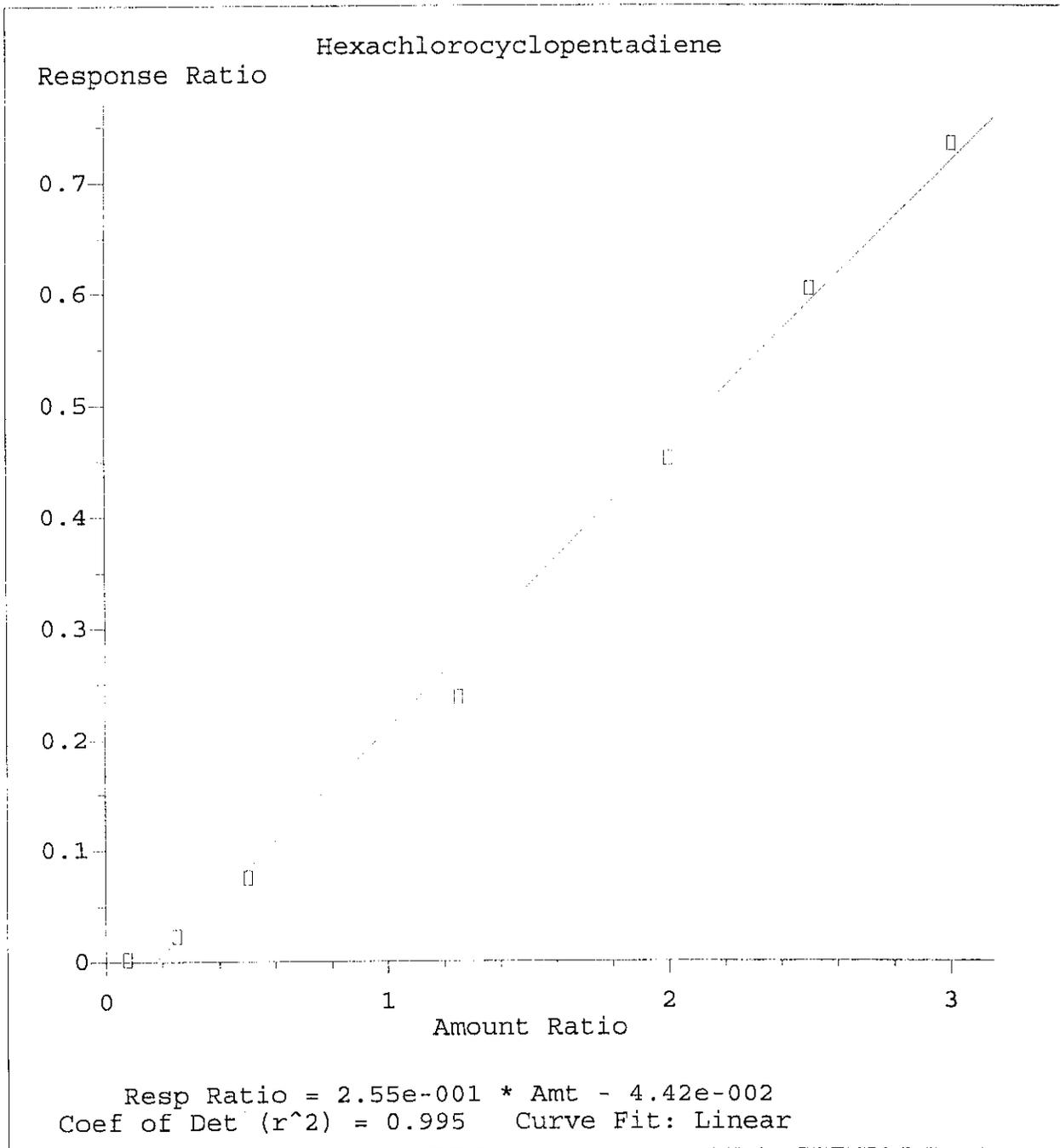
Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration

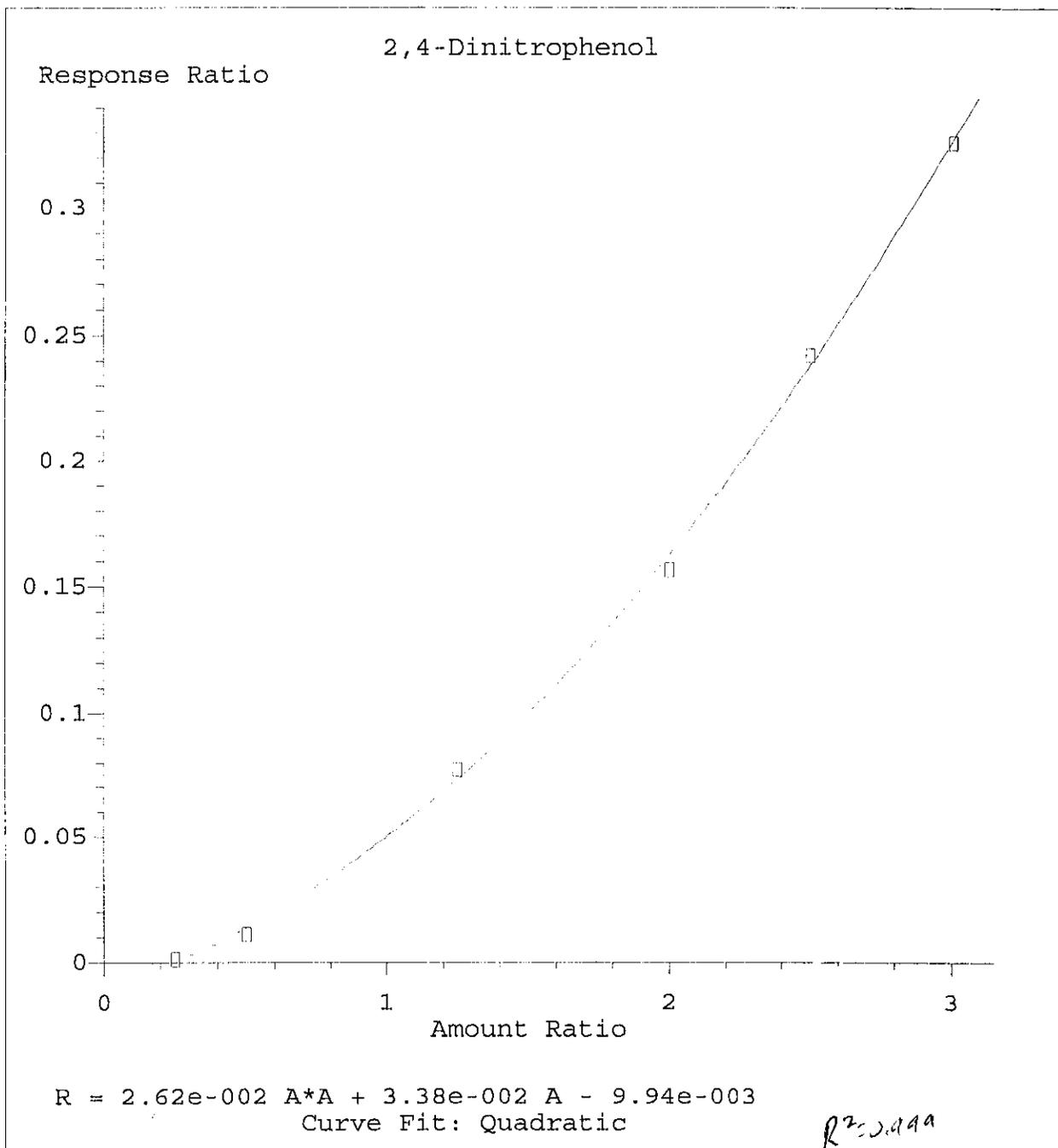




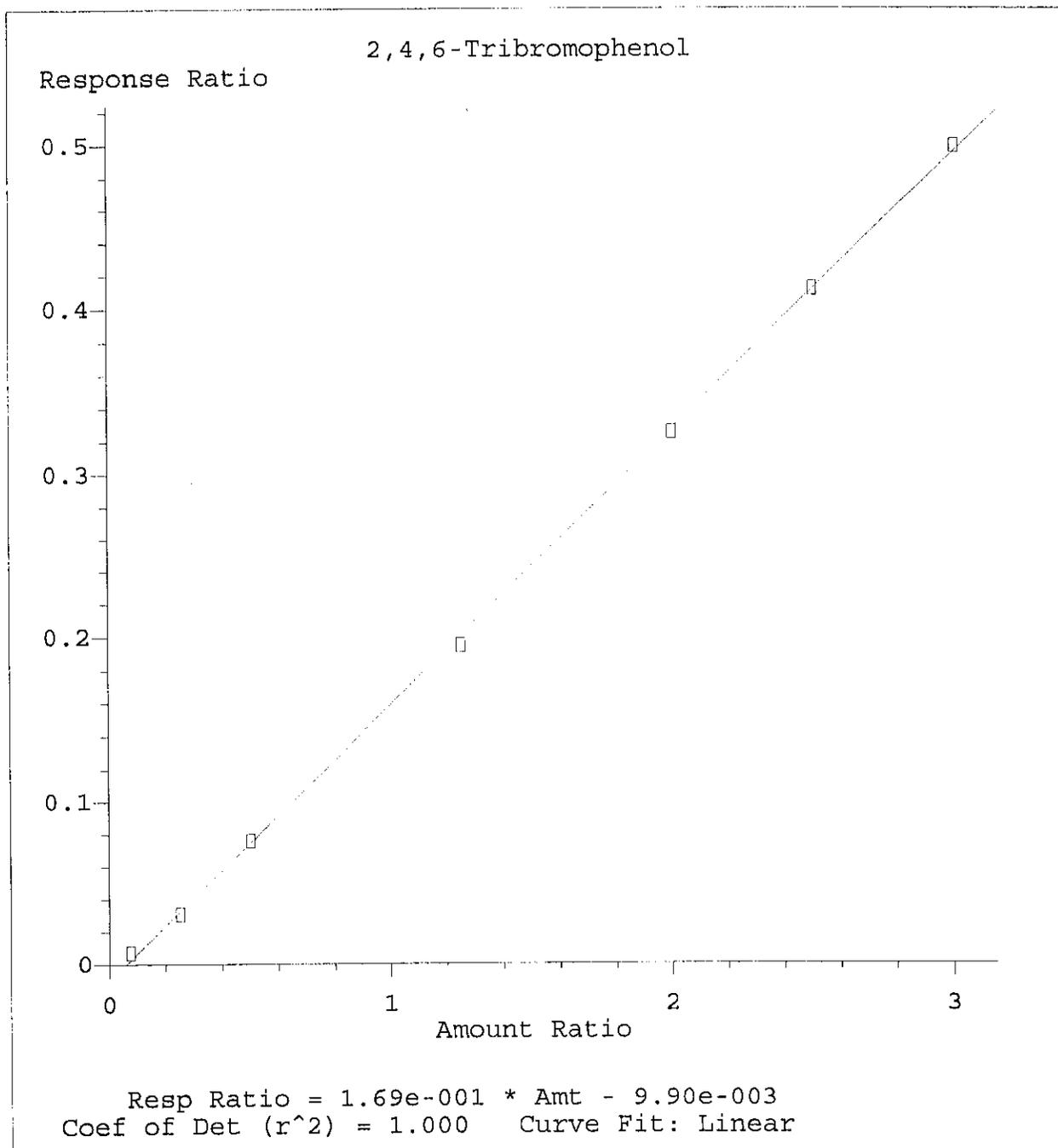
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 Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



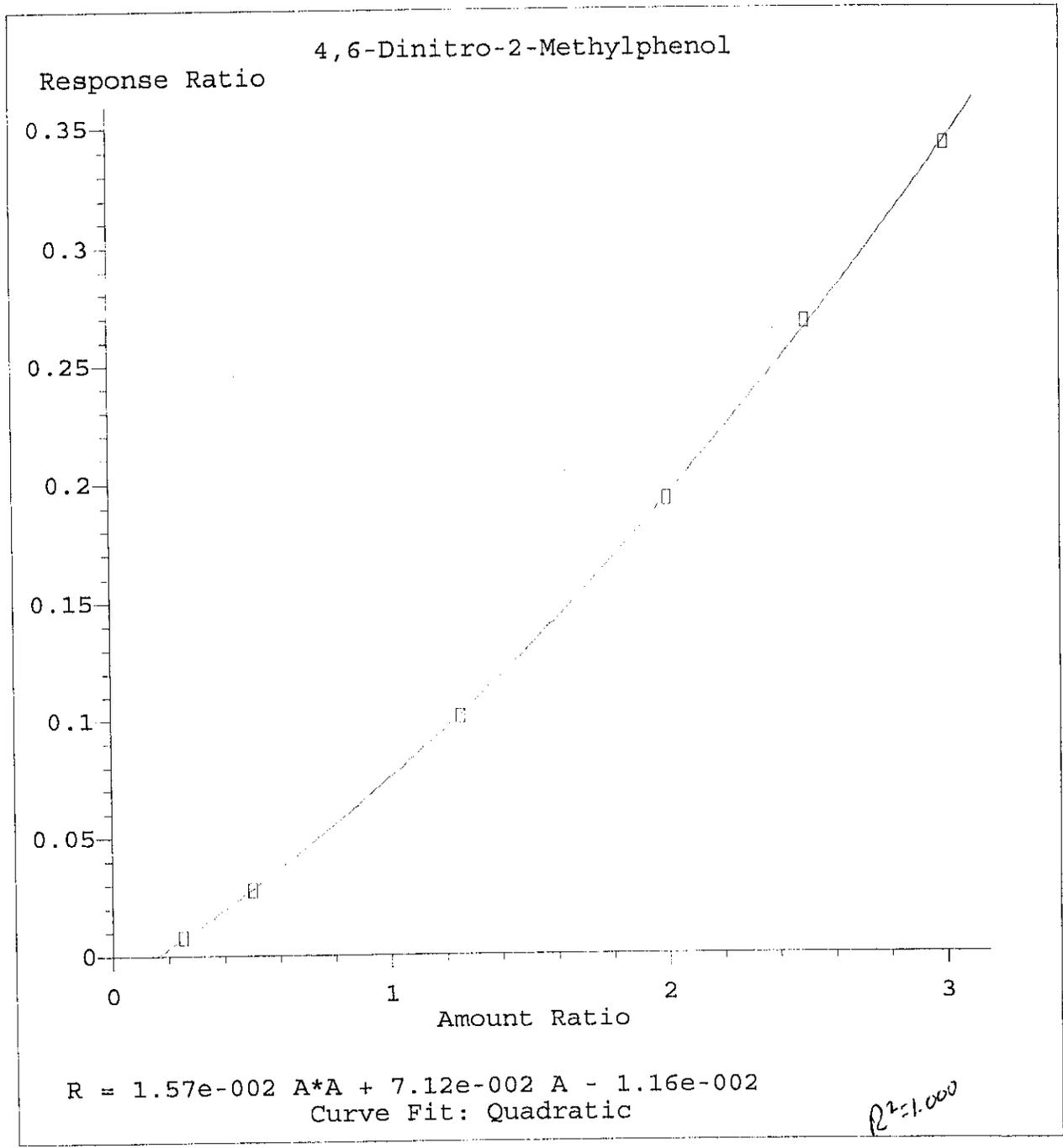
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 Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



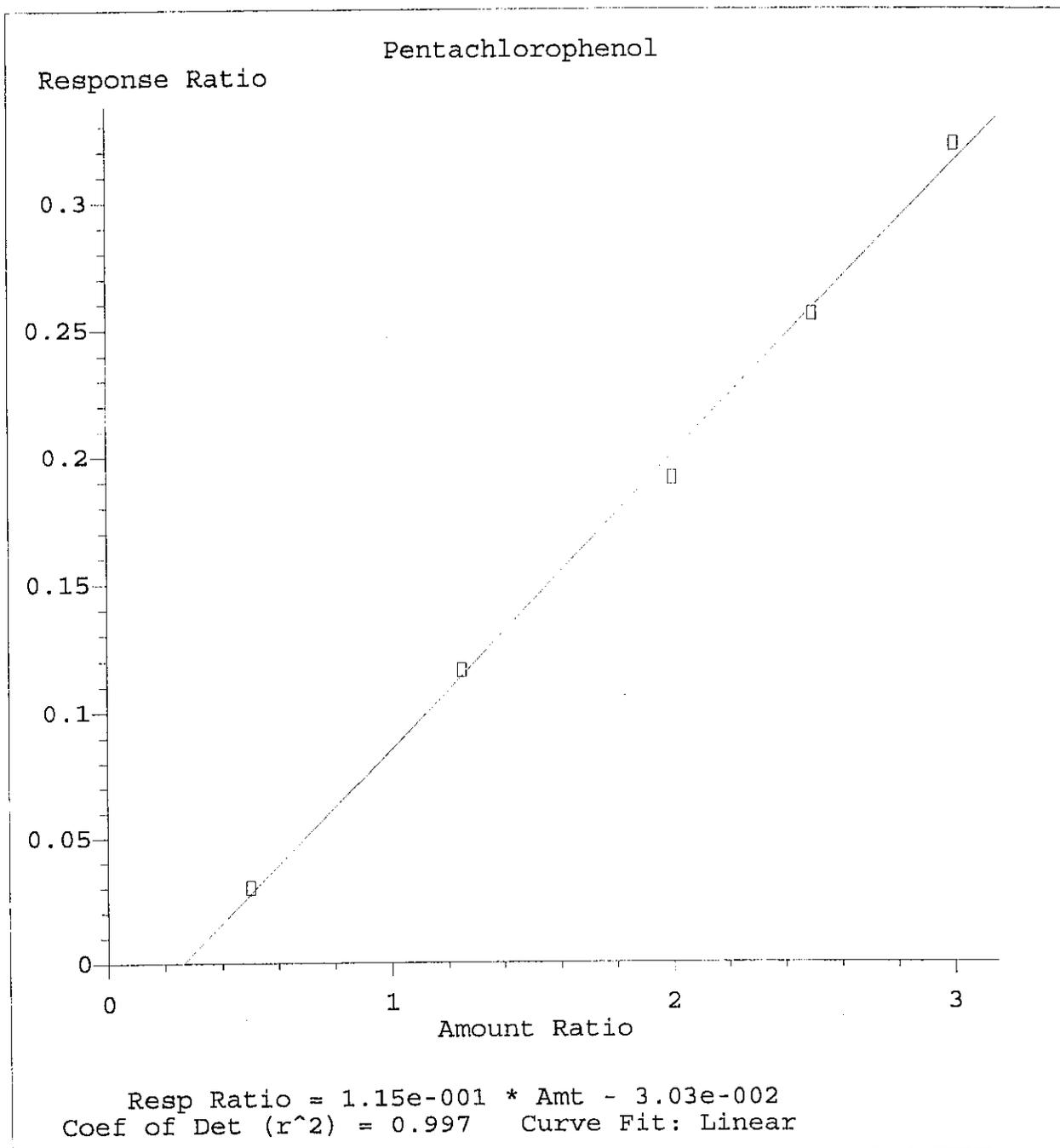
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 Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



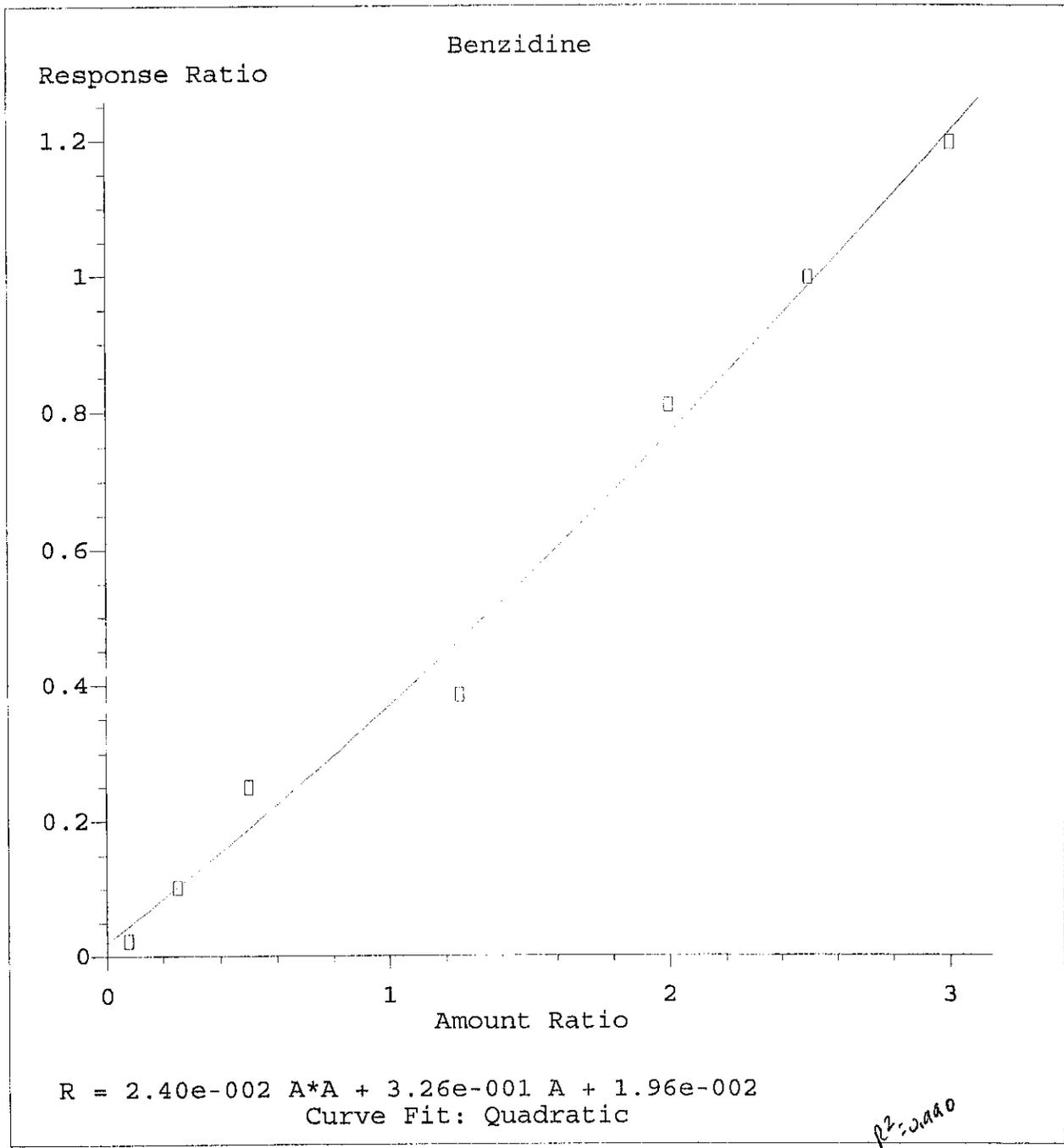
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Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



Method Name: C:\HPCHEM\1\METHODS\BNA.M
 Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



Method Name: C:\HPCHEM\1\METHODS\BNA.M
Calibration Table Last Updated: Tue Apr 02 07:51:02 2002



Method Name: C:\HPCHEM\1\METHODS\BNA.M
 Calibration Table Last Updated: Tue Apr 02 07:51:02 2002

Data File : C:\HPCHEM\1\DATA\070102\4M12742.D
 Acq On : 1 Apr 2002 13:49
 Sample : WG115403-09 50PPM Alt source BNA STD
 Misc : 1,1 SOS57-48
 MS Integration Params: RTEINT.P

Vial: 7
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	101	0.00
2	Pyridine	50.000	56.268	-12.5	111	0.00
3	n-Nitrosodimethylamine	50.000	55.021	-10.0	109	0.00
4 S	2-Fluorophenol	50.000	52.678	-5.4	105	0.00
5	Aniline	50.000	44.858	10.3	90	0.00
6 S	Phenol-d5	50.000	51.611	-3.2	104	0.00
7 C	Phenol	50.000	51.889	-3.8	104	0.00
8	bis(2-Chloroethyl) ether	50.000	52.781	-5.6	108	0.00
9	2-Chlorophenol	50.000	51.561	-3.1	105	0.00
10	1,3-Dichlorobenzene	50.000	55.047	-10.1	115	0.00
11 C	1,4-Dichlorobenzene	50.000	51.157	-2.3	107	0.00
12	Benzyl Alcohol	50.000	52.510	-5.0	104	0.00
13 C	1,2-Dichlorobenzene	50.000	55.717	-11.4	116	0.00
14	2-Methylphenol	50.000	50.790	-1.6	106	0.00
15	bis(2-Chloroisopropyl) ether	50.000	53.130	-6.3	108	0.00
16	3-,4-Methylphenol	50.000	52.047	-4.1	105	0.00
17 P	n-Nitrosodipropylamine	50.000	54.491	-9.0	108	0.00
18	Hexachloroethane	50.000	50.288	-0.6	102	0.00
19 I	Naphthalene-d8	40.000	40.000	0.0	100	0.00
20 S	Nitrobenzene-d5	50.000	52.577	-5.2	105	0.00
21	Nitrobenzene	50.000	50.591	-1.2	102	0.00
22	Isophorone	50.000	57.758	-15.5	115	0.00
23 C	2-Nitrophenol	50.000	57.995	-16.0	114	0.00
24	2,4-Dimethylphenol	50.000	53.675	-7.3	108	0.00
25	bis(2-Chloroethoxy) methane	50.000	53.535	-7.1	109	0.00
26	Benzoic Acid	50.000	49.923	0.2	83	0.00
27 C	2,4-Dichlorophenol	50.000	52.360	-4.7	104	0.00
28	1,2,4-Trichlorobenzene	50.000	52.125	-4.3	108	0.00
29	Naphthalene	50.000	55.593	-11.2	115	0.00
30	4-Chloroaniline	50.000	47.791	4.4	98	0.00
31 C	Hexachlorobutadiene	50.000	59.856	-19.7	125	0.00
32 C	4-Chloro-3-Methylphenol	50.000	52.051	-4.1	104	0.00
33	2-Methylnaphthalene	50.000	51.393	-2.8	106	0.00
34 I	Acenaphthene-d10	40.000	40.000	0.0	101	0.00
35 P	Hexachlorocyclopentadiene	50.000	51.446	-2.9	120	0.00
36 C	2,4,6-Trichlorophenol	50.000	53.938	-7.9	104	0.00
37	2,4,5-Trichlorophenol	50.000	53.130	-6.3	105	0.00
38 S	2-Fluorobiphenyl	50.000	52.458	-4.9	109	0.00
39	2-Chloronaphthalene	50.000	58.269	-16.5	121	0.00

(#)=Out of Range

4M12742.D BNA.M

Tue Apr 02 08:11:21 2002

HPMS4

Page 1

Acq On : 1 Apr 2002 13:49
 Sample : WG115403-09 50PPM Alt source BNA STD
 Misc : 1,1 SOS57-48
 MS Integration Params: RTEINT.P

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
40	2-Nitroaniline	50.000	51.983	-4.0	103	0.00
41	Dimethylphthalate	50.000	52.203	-4.4	108	0.00
42	Acenaphthylene	50.000	53.344	-6.7	108	0.00
43	2,6-Dinitrotoluene	50.000	55.960	-11.9	109	0.00
44	3-Nitroaniline	50.000	50.659	-1.3	103	0.00
45 C	Acenaphthene	50.000	57.409	-14.8	118	0.00
46 P	2,4-Dinitrophenol	50.000	58.762	-17.5	126	0.00
47 P	4-Nitrophenol	50.000	50.176	-0.4	100	0.00
48	Dibenzofuran	50.000	51.333	-2.7	106	0.00
49	2,4-Dinitrotoluene	50.000	61.411	-22.8	118	0.00
50	Diethylphthalate	50.000	56.841	-13.7	115	0.00
51	Fluorene	50.000	56.024	-12.0	115	0.00
52	4-Chlorophenyl Phenyl Ether	50.000	52.034	-4.1	108	0.00
53	4-Nitroaniline	50.000	40.938	18.1	78	0.00
54	1,2-Diphenylhydrazine	50.000	49.803	0.4	100	0.00
55 S	2,4,6-Tribromophenol	50.000	49.528	0.9	103	0.00
56 I	Phenanthrene-d10	40.000	40.000	0.0	101	0.00
57	4,6-Dinitro-2-Methylphenol	50.000	58.840	-17.7	127	0.00
58 C	n-Nitrosodiphenylamine	50.000	55.716	-11.4	115	0.00
59	4-Bromophenyl Phenyl Ether	50.000	47.255	5.5	97	0.00
60	Hexachlorobenzene	50.000	54.253	-8.5	113	0.00
61 C	Pentachlorophenol	50.000	50.089	-0.2	99	0.00
62	Phenanthrene	50.000	53.150	-6.3	111	0.00
63	Anthracene	50.000	51.982	-4.0	107	0.00
64	Carbazole	50.000	43.261	13.5	89	0.00
65	Di-n-Butyl Phthalate	50.000	53.635	-7.3	106	0.00
66 C	Fluoranthene	50.000	52.309	-4.6	108	0.00
67 I	Chrysene-d12	40.000	40.000	0.0	101	0.00
68	Benzidine	50.000	13.141	73.7#	34	0.00
69	Pyrene	50.000	56.258	-12.5	117	0.00
70 S	p-Terphenyl-d14	50.000	51.988	-4.0	107	0.00
71	Butyl Benzyl Phthalate	50.000	54.491	-9.0	109	0.00
72	Benzo[a]anthracene	50.000	52.954	-5.9	109	0.00
73	3,3'-Dichlorobenzidine	50.000	49.813	0.4	107	0.00
74	Chrysene	50.000	53.979	-8.0	113	0.00
75	bis(2-Ethylhexyl)phthalate	50.000	53.077	-6.2	106	0.00
76 I	Perylene-d12	40.000	40.000	0.0	101	0.00
77 C	Di-n-Octyl Phthalate	50.000	53.121	-6.2	105	0.00

(#)=Out of Range

4M12742.D BNA.M

Tue Apr 02 08:11:21 2002

HPMS4

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Page 2

Acq On : 1 Apr 2002 13:49 Operator: mdc
 Sample : WG115403-09 50PPM Alt source BNA STD Inst : HPMS4
 Misc : 1,1 SOS57-48 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
78	Benzo [b]fluoranthene	50.000	52.488	-5.0	110	0.00
79	Benzo [k]fluoranthene	50.000	53.047	-6.1	108	0.00
80 C	Benzo [a]pyrene	50.000	49.214	1.6	101	0.00
81	Indeno [1,2,3-cd]pyrene	50.000	52.059	-4.1	106	0.00
82	Dibenz [ah]anthracene	50.000	52.287	-4.6	106	0.00
83	Benzo [ghi]perylene	50.000	54.116	-8.2	110	0.00

Acq On : 1 Apr 2002 13:49
Sample : WG115403-09 50PPM Alt source BNA STD
Misc : 1,1 SOS57-48
MS Integration Params: RTEINT.P

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00
2	Pyridine	1.423	1.602	-12.6	111	0.00
3	n-Nitrosodimethylamine	0.781	0.860	-10.1	109	0.00
4 S	2-Fluorophenol	1.255	1.322	-5.3	105	0.00
5	Aniline	0.772	0.693	10.2	90	0.00
6 S	Phenol-d5	1.623	1.676	-3.3	104	0.00
7 C	Phenol	1.741	1.807	-3.8	104	0.00
8	bis(2-Chloroethyl) ether	0.983	1.038	-5.6	108	0.00
9	2-Chlorophenol	1.384	1.427	-3.1	105	0.00
10	1,3-Dichlorobenzene	1.460	1.607	-10.1	115	0.00
11 C	1,4-Dichlorobenzene	1.602	1.639	-2.3	107	0.00
12	Benzyl Alcohol	0.879	0.923	-5.0	104	0.00
13 C	1,2-Dichlorobenzene	1.394	1.554	-11.5	116	0.00
14	2-Methylphenol	1.129	1.147	-1.6	106	0.00
15	bis(2-Chloroisopropyl) ether	1.914	2.033	-6.2	108	0.00
16	3-,4-Methylphenol	1.645	1.713	-4.1	105	0.00
17 P	n-Nitrosodipropylamine	0.992	1.081	-9.0	108	0.00
18	Hexachloroethane	0.600	0.604	-0.7	102	0.00
19 I	Naphthalene-d8	1.000	1.000	0.0	100	0.00
20 S	Nitrobenzene-d5	0.360	0.378	-5.0	105	0.00
21	Nitrobenzene	0.371	0.375	-1.1	102	0.00
22	Isophorone	0.619	0.715	-15.5	115	0.00
23 C	2-Nitrophenol	0.170	0.198	-16.5	114	0.00
24	2,4-Dimethylphenol	0.311	0.333	-7.1	108	0.00
25	bis(2-Chloroethoxy) methane	0.410	0.439	-7.1	109	0.00
26	Benzoic Acid	0.070	0.072	-2.9	83	0.00
27 C	2,4-Dichlorophenol	0.268	0.280	-4.5	104	0.00
28	1,2,4-Trichlorobenzene	0.311	0.324	-4.2	108	0.00
29	Naphthalene	0.945	1.051	-11.2	115	0.00
30	4-Chloroaniline	0.404	0.386	4.5	98	0.00
31 C	Hexachlorobutadiene	0.155	0.185	-19.4	125	0.00
32 C	4-Chloro-3-Methylphenol	0.296	0.308	-4.1	104	0.00
33	2-Methylnaphthalene	0.698	0.718	-2.9	106	0.00
34 I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00
35 P	Hexachlorocyclopentadiene	0.168	0.227	-35.1	120	0.00
36 C	2,4,6-Trichlorophenol	0.348	0.376	-8.0	104	0.00
37	2,4,5-Trichlorophenol	0.384	0.408	-6.2	105	0.00
38 S	2-Fluorobiphenyl	1.339	1.405	-4.9	109	0.00
39	2-Chloronaphthalene	1.054	1.229	-16.6	121	0.00

(#)=Out of Range
4M12742.D BNA.M

Tue Apr 02 08:11:28 2002

HPMS4

Page 1

Data File : C:\MSDCHEM\1\DATA\115403.D
 Acq On : 1 Apr 2002 13:49
 Sample : WG115403-09 50PPM Alt source BNA STD
 Misc : 1,1 SOS57-48
 MS Integration Params: RTEINT.P

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40	2-Nitroaniline	0.361	0.375	-3.9	103	0.00
41	Dimethylphthalate	1.363	1.424	-4.5	108	0.00
42	Acenaphthylene	1.929	2.058	-6.7	108	0.00
43	2,6-Dinitrotoluene	0.290	0.325	-12.1	109	0.00
44	3-Nitroaniline	0.316	0.320	-1.3	103	0.00
45 C	Acenaphthene	1.134	1.302	-14.8	118	0.00
46 P	2,4-Dinitrophenol	0.062	0.077	-24.2	126	0.00
47 P	4-Nitrophenol	0.220	0.220	0.0	100	0.00
48	Dibenzofuran	1.688	1.733	-2.7	106	0.00
49	2,4-Dinitrotoluene	0.353	0.433	-22.7	118	0.00
50	Diethylphthalate	1.299	1.477	-13.7	115	0.00
51	Fluorene	1.328	1.488	-12.0	115	0.00
52	4-Chlorophenyl Phenyl Ether	0.679	0.707	-4.1	108	0.00
53	4-Nitroaniline	0.291	0.238	18.2	78	0.00
54	1,2-Diphenylhydrazine	1.558	1.552	0.4	100	0.00
55 S	2,4,6-Tribromophenol	0.146	0.159	-8.9	103	0.00
56 I	Phenanthrene-d10	1.000	1.000	0.0	101	0.00
57	4,6-Dinitro-2-Methylphenol	0.081	0.102	-25.9	127	0.00
58 C	n-Nitrosodiphenylamine	0.540	0.602	-11.5	115	0.00
59	4-Bromophenyl Phenyl Ether	0.205	0.193	5.9	97	0.00
60	Hexachlorobenzene	0.194	0.211	-8.8	113	0.00
61 C	Pentachlorophenol	0.092	0.091	1.1	99	0.00
62	Phenanthrene	1.156	1.229	-6.3	111	0.00
63	Anthracene	1.203	1.250	-3.9	107	0.00
64	Carbazole	0.963	0.833	13.5	89	0.00
65	Di-n-Butyl Phthalate	1.348	1.446	-7.3	106	0.00
66 C	Fluoranthene	1.247	1.305	-4.7	108	0.00
67 I	Chrysene-d12	1.000	1.000	0.0	101	0.00
68	Benzidine	0.389	0.102	73.8#	34#	0.00
69	Pyrene	1.298	1.461	-12.6	117	0.00
70 S	p-Terphenyl-d14	0.940	0.977	-3.9	107	0.00
71	Butyl Benzyl Phthalate	0.663	0.722	-8.9	109	0.00
72	Benzo[a]anthracene	1.284	1.360	-5.9	109	0.00
73	3,3'-Dichlorobenzidine	0.344	0.342	0.6	107	0.00
74	Chrysene	1.257	1.357	-8.0	113	0.00
75	bis(2-Ethylhexyl)phthalate	0.923	0.980	-6.2	106	0.00
76 I	Perylene-d12	1.000	1.000	0.0	101	0.00
77 C	Di-n-Octyl Phthalate	2.212	2.350	-6.2	105	0.00

(#)=Out of Range
 4M12742.D BNA.M

Tue Apr 02 08:11:30 2002

HPMS4

Page 2

Acq On : 1 Apr 2002 13:49
Sample : WG115403-09 50PPM Alt source BNA STD
Misc : 1,1 SOS57-48
MS Integration Params: RTEINT.P

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
78	Benzo[b]fluoranthene	1.678	1.762	-5.0	110	0.00
79	Benzo[k]fluoranthene	1.637	1.737	-6.1	108	0.00
80 C	Benzo[a]pyrene	1.593	1.568	1.6	101	0.00
81	Indeno[1,2,3-cd]pyrene	1.449	1.509	-4.1	106	0.00
82	Dibenz[ah]anthracene	1.190	1.244	-4.5	106	0.00
83	Benzo[ghi]perylene	1.098	1.188	-8.2	110	0.00

Acq On : 1 Apr 2002 13:49 Operator: mdc
 Sample : WG115403-09 50PPM Alt source BNA STD Inst : HPMS4
 Misc : 1,1 SOS57-48 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 14:16 2002 Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:41:26 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	314878	40.00	ug/ml	0.00
19) Naphthalene-d8	8.62	136	1299763	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	694781	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1245670	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1155902	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	818449	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	520421	52.6783	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	52.68%
6) Phenol-d5	6.94	99	659495	51.6108	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	51.61%
20) Nitrobenzene-d5	7.90	82	614377	52.5768	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	105.16%
38) 2-Fluorobiphenyl	9.68	172	1219790	52.4581	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	104.92%
55) 2,4,6-Tribromophenol	11.23	330	138167	49.5280	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	49.53%
70) p-Terphenyl-d14	13.53	244	1411726	51.9877	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	103.98%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	4.60	79	630477	56.2678	ug/ml	98
3) n-Nitrosodimethylamine	4.57	74	338393	55.0213	ug/ml	100
5) Aniline	7.02	66	272691	44.8576	ug/ml	98
7) Phenol	6.95	94	711251	51.8888	ug/ml	100
8) bis(2-Chloroethyl) ether	7.05	63	408397	52.7813	ug/ml	95
9) 2-Chlorophenol	7.13	128	561741	51.5614	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	632542	55.0471	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	645207	51.1574	ug/ml	99
12) Benzyl Alcohol	7.45	108	363296	52.5097	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	611459	55.7170	ug/ml	99
14) 2-Methylphenol	7.55	107	451447	50.7896	ug/ml#	92
15) bis(2-Chloroisopropyl) ethe	7.57	45	800352	53.1299	ug/ml#	87
16) 3-,4-Methylphenol	7.69	107	674170	52.0470	ug/ml	99
17) n-Nitrosodipropylamine	7.71	70	425550	54.4915	ug/ml	99
18) Hexachloroethane	7.84	117	237554	50.2880	ug/ml	98
21) Nitrobenzene	7.92	77	609939	50.5908	ug/ml	99
22) Isophorone	8.13	82	1162184	57.7581	ug/ml	99
23) 2-Nitrophenol	8.23	139	320916	57.9955	ug/ml	95
24) 2,4-Dimethylphenol	8.22	122	541698	53.6753	ug/ml	100
25) bis(2-Chloroethoxy) methane	8.31	93	713370	53.5353	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Acq On : 1 Apr 2002 13:49
 Sample : WG115403-09 50PPM Alt source BNA STD
 Misc : 1,1 SOS57-48
 MS Integration Params: RTEINT.P
 Quant Time: Apr 14:16 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:41:26 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.30	122	117647	49.9232	ug/ml	98
27) 2,4-Dichlorophenol	8.46	162	455610	52.3596	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	526942	52.1254	ug/ml	100
29) Naphthalene	8.64	128	1707137	55.5927	ug/ml	100
30) 4-Chloroaniline	8.68	127	626795	47.7912	ug/ml	99
31) Hexachlorobutadiene	8.74	225	300846	59.8557	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	500648	52.0508	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	1166168	51.3934	ug/ml	99
35) Hexachlorocyclopentadiene	9.48	237	196968	51.4456	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	326258	53.9382	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	354650	53.1304	ug/ml	98
39) 2-Chloronaphthalene	9.84	162	1067109	58.2690	ug/ml	99
40) 2-Nitroaniline	9.95	65	325943	51.9829	ug/ml	98
41) Dimethylphthalate	10.08	163	1236326	52.2025	ug/ml	100
42) Acenaphthylene	10.27	152	1787557	53.3445	ug/ml	100
43) 2,6-Dinitrotoluene	10.18	165	282228	55.9599	ug/ml	99
44) 3-Nitroaniline	10.37	138	278013	50.6588	ug/ml	98
45) Acenaphthene	10.45	154	1130827	57.4087	ug/ml	99
46) 2,4-Dinitrophenol	10.47	184	66821	58.7618	ug/ml#	96
47) 4-Nitrophenol	10.50	65	191449	50.1757	ug/ml	97
48) Dibenzofuran	10.62	168	1504931	51.3327	ug/ml	100
49) 2,4-Dinitrotoluene	10.60	165	376433	61.4113	ug/ml	95
50) Diethylphthalate	10.79	149	1282935	56.8405	ug/ml	99
51) Fluorene	10.97	166	1292419	56.0236	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	613727	52.0337	ug/ml	100
53) 4-Nitroaniline	11.00	138	206597	40.9378	ug/ml	94
54) 1,2-Diphenylhydrazine	11.10	77	1347770	49.8030	ug/ml	98
57) 4,6-Dinitro-2-Methylphenol	11.01	198	158408	58.8400	ug/ml	93
58) n-Nitrosodiphenylamine	11.05	169	937799	55.7164	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.44	248	301227	47.2549	ug/ml	98
60) Hexachlorobenzene	11.56	284	328531	54.2527	ug/ml	99
61) Pentachlorophenol	11.75	266	142240	50.0893	ug/ml	99
62) Phenanthrene	11.97	178	1913524	53.1499	ug/ml	100
63) Anthracene	12.02	178	1946869	51.9817	ug/ml	100
64) Carbazole	12.17	167	1297617	43.2606	ug/ml	99
65) Di-n-Butyl Phthalate	12.43	149	2251191	53.6348	ug/ml	100
66) Fluoranthene	13.19	202	2031458	52.3088	ug/ml	99
68) Benzidine	13.30	184	147738	13.1411	ug/ml	100
69) Pyrene	13.44	202	2110381	56.2577	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	1043807	54.4905	ug/ml	100
72) Benzo[a]anthracene	14.68	228	1965563	52.9539	ug/ml	100

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(#) = qualifier out of range (m) = manual integration

Acq On : 1 Apr 2002 13:49 Operator: mdc
 Sample : WG115403-09 50PPM Alt source BNA STD Inst : HPMS4
 Misc : 1,1 SOS57-48 Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 14:16 2002 Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Mon Apr 01 13:41:26 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	494586	49.8127	ug/ml	99
74) Chrysene	14.73	228	1960095	53.9789	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.52	149	1416303	53.0767	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	2403954	53.1208	ug/ml	100
78) Benzo[b]fluoranthene	16.18	252	1802291	52.4883	ug/ml	100
79) Benzo[k]fluoranthene	16.23	252	1777115	53.0473	ug/ml	99
80) Benzo[a]pyrene	16.78	252	1603738	49.2137	ug/ml	99
81) Indeno[1,2,3-cd]pyrene	19.34	276	1543721	52.0586	ug/ml	100
82) Dibenz[ah]anthracene	19.34	278	1272951	52.2872	ug/ml	99
83) Benzo[ghi]perylene	20.11	276	1215730	54.1163	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12742.D BNA.M Tue Apr 02 07:53:29 2002 HPMS4

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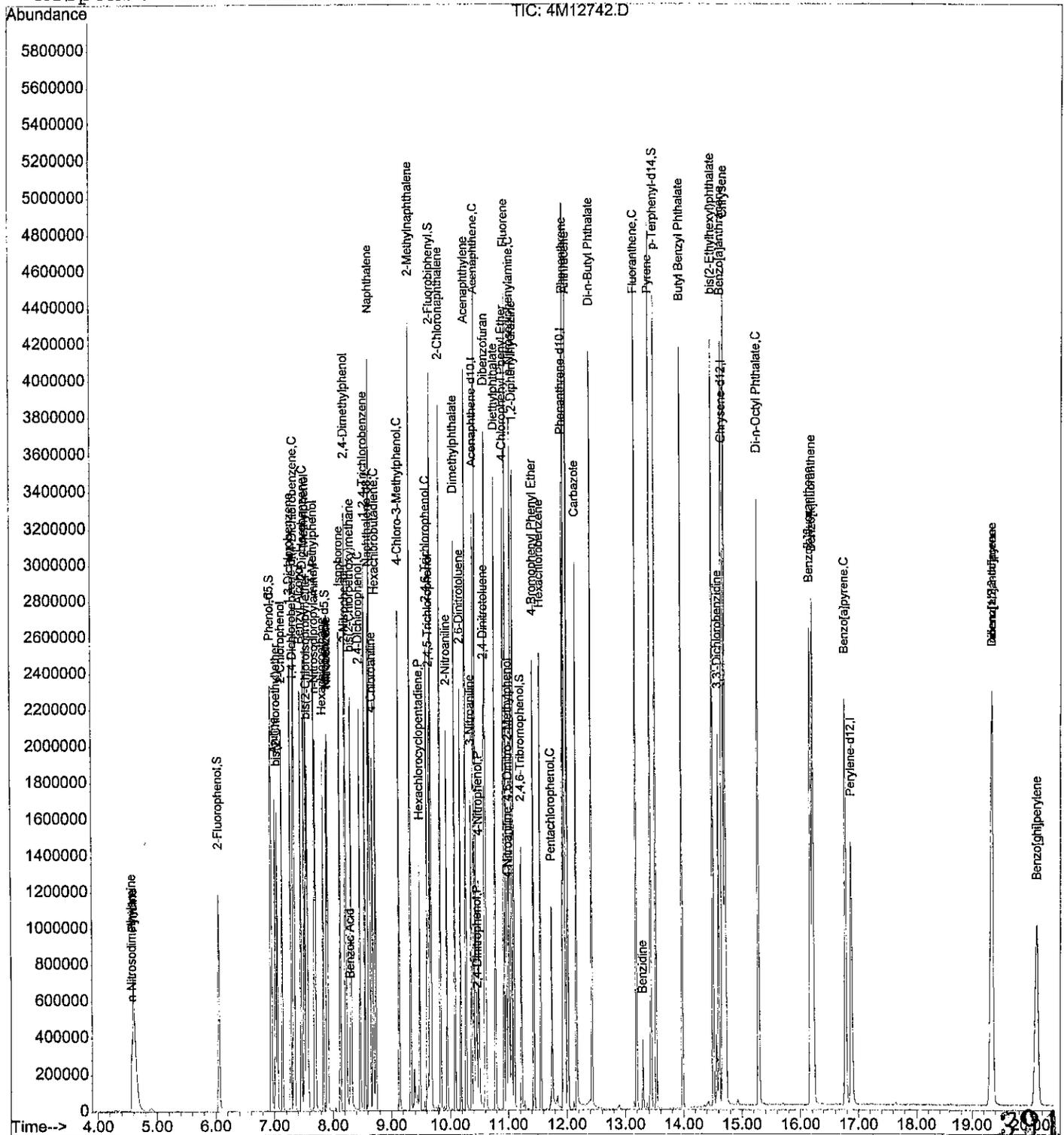
Page 3

Acq On : 1 Apr 2002 13:49
 Sample : WG115403-09 50PPM Alt source BNA STD
 Misc : 1,1 SOS57-48
 MS Integration Params: RTEINT.P
 Quant Time: Apr 1 14:16 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:51:02 2002
 Response via : Initial Calibration



Continuing calibration Area and RT check

Instrument: HPMS4
Initial cal date: 1 Apr 2002 10:12
CCV date: 2 Apr 2002 10:19
CCV filename: 4M12765.D

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	Amount	RT	Amount	RT	Amount	RT
InitCal	310902	7.33	1300656	8.61	689364	10.41
CCV	325983	7.33	1361482	8.61	720838	10.41

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	Amount	RT	Amount	RT	Amount	RT
InitCal	1231472	11.94	1143835	14.70	809722	16.89
CCV	1290668	11.94	1221314	14.70	884572	16.89

Data File : C:\HPCHEM\1\DATA\010202\4M12765.D
 Acq On : 2 Apr 2002 10:19
 Sample : WG115478-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	105	0.00
2	Pyridine	50.000	50.891	-1.8	103	0.00
3	n-Nitrosodimethylamine	50.000	51.168	-2.3	105	0.00
4 S	2-Fluorophenol	50.000	50.677	-1.4	105	0.00
5	Aniline	50.000	49.512	1.0	103	0.00
6 S	Phenol-d5	50.000	50.300	-0.6	105	0.00
7 C	Phenol	50.000	50.568	-1.1	105	0.00
8	bis(2-Chloroethyl) ether	50.000	49.241	1.5	104	0.00
9	2-Chlorophenol	50.000	50.118	-0.2	105	0.00
10	1,3-Dichlorobenzene	50.000	48.726	2.5	105	0.00
11 C	1,4-Dichlorobenzene	50.000	48.680	2.6	105	0.00
12	Benzyl Alcohol	50.000	51.249	-2.5	105	0.00
13 C	1,2-Dichlorobenzene	50.000	49.099	1.8	106	0.00
14	2-Methylphenol	50.000	48.821	2.4	106	0.00
15	bis(2-Chloroisopropyl) ether	50.000	49.210	1.6	104	0.00
16	3-,4-Methylphenol	50.000	49.995	0.0	104	0.00
17 P	n-Nitrosodipropylamine	50.000	50.366	-0.7	104	0.00
18	Hexachloroethane	50.000	51.409	-2.8	108	0.00
19 I	Naphthalene-d8	40.000	40.000	0.0	105	0.00
20 S	Nitrobenzene-d5	50.000	50.633	-1.3	106	0.00
21	Nitrobenzene	50.000	49.987	0.0	106	0.00
22	Isophorone	50.000	49.835	0.3	104	0.00
23 C	2-Nitrophenol	50.000	56.165	-12.3	115	0.00
24	2,4-Dimethylphenol	50.000	48.478	3.0	103	0.00
25	bis(2-Chloroethoxy) methane	50.000	48.950	2.1	104	0.00
26	Benzoic Acid	50.000	66.443	-32.9	132	0.00
27 C	2,4-Dichlorophenol	50.000	50.179	-0.4	105	0.00
28	1,2,4-Trichlorobenzene	50.000	48.524	3.0	106	0.00
29	Naphthalene	50.000	48.550	2.9	105	0.00
30	4-Chloroaniline	50.000	48.281	3.4	104	0.00
31 C	Hexachlorobutadiene	50.000	48.544	2.9	106	0.00
32 C	4-Chloro-3-Methylphenol	50.000	50.958	-1.9	106	0.00
33	2-Methylnaphthalene	50.000	48.526	2.9	105	0.00
34 I	Acenaphthene-d10	40.000	40.000	0.0	105	0.00
35 P	Hexachlorocyclopentadiene	50.000	50.009	-0.0	121	0.00
36 C	2,4,6-Trichlorophenol	50.000	52.210	-4.4	105	0.00
37	2,4,5-Trichlorophenol	50.000	51.559	-3.1	106	0.00
38 S	2-Fluorobiphenyl	50.000	48.390	3.2	104	0.00
39	2-Chloronaphthalene	50.000	48.628	2.7	105	0.00

(#)=Out of Range
 4M12765.D BNA.M

Wed Apr 03 07:35:25 2002

HPMS4

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Page 1

Acq On : 2 Apr 2002 10:19
Sample : WG115478-02 50PPM BNA STD
Misc : 1,1 SOS59-14-1
MS Integration Params: RTEINT.P

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
78	Benzo[b]fluoranthene	50.000	48.810	2.4	110	0.00
79	Benzo[k]fluoranthene	50.000	48.590	2.8	107	0.00
80 C	Benzo[a]pyrene	50.000	49.143	1.7	109	0.00
81	Indeno[1,2,3-cd]pyrene	50.000	52.992	-6.0	117	0.00
82	Dibenz[ah]anthracene	50.000	53.435	-6.9	117	0.00
83	Benzo[ghi]perylene	50.000	54.228	-8.5	119	0.00

(#)=Out of Range I=ISTD S=SURR P=SPCC(0 out) C=CCC(0 out)
4M12765.D BNA.M Wed Apr 03 07:35:25 2002 HPMS4

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Acq On : 2 Apr 2002 10:19
Sample : WG115478-02 50PPM BNA STD
Misc : 1,1 SOS59-14-1
MS Integration Params: RTEINT.P

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
2	Pyridine	1.423	1.449	-1.8	103	0.00
3	n-Nitrosodimethylamine	0.781	0.800	-2.4	105	0.00
4 S	2-Fluorophenol	1.255	1.272	-1.4	105	0.00
5	Aniline	0.772	0.765	0.9	103	0.00
6 S	Phenol-d5	1.623	1.633	-0.6	105	0.00
7 C	Phenol	1.741	1.761	-1.1	105	0.00
8	bis(2-Chloroethyl) ether	0.983	0.968	1.5	104	0.00
9	2-Chlorophenol	1.384	1.387	-0.2	105	0.00
10	1,3-Dichlorobenzene	1.460	1.423	2.5	105	0.00
11 C	1,4-Dichlorobenzene	1.602	1.560	2.6	105	0.00
12	Benzyl Alcohol	0.879	0.901	-2.5	105	0.00
13 C	1,2-Dichlorobenzene	1.394	1.369	1.8	106	0.00
14	2-Methylphenol	1.129	1.103	2.3	106	0.00
15	bis(2-Chloroisopropyl) ether	1.914	1.883	1.6	104	0.00
16	3-,4-Methylphenol	1.645	1.645	0.0	104	0.00
17 P	n-Nitrosodipropylamine	0.992	0.999	-0.7	104	0.00
18	Hexachloroethane	0.600	0.617	-2.8	108	0.00
19 I	Naphthalene-d8	1.000	1.000	0.0	105	0.00
20 S	Nitrobenzene-d5	0.360	0.364	-1.1	106	0.00
21	Nitrobenzene	0.371	0.371	0.0	106	0.00
22	Isophorone	0.619	0.617	0.3	104	0.00
23 C	2-Nitrophenol	0.170	0.191	-12.4	115	0.00
24	2,4-Dimethylphenol	0.311	0.301	3.2	103	0.00
25	bis(2-Chloroethoxy) methane	0.410	0.401	2.2	104	0.00
26	Benzoic Acid	0.070	0.110	-57.1#	132	0.00
27 C	2,4-Dichlorophenol	0.268	0.269	-0.4	105	0.00
28	1,2,4-Trichlorobenzene	0.311	0.302	2.9	106	0.00
29	Naphthalene	0.945	0.918	2.9	105	0.00
30	4-Chloroaniline	0.404	0.390	3.5	104	0.00
31 C	Hexachlorobutadiene	0.155	0.150	3.2	106	0.00
32 C	4-Chloro-3-Methylphenol	0.296	0.302	-2.0	106	0.00
33	2-Methylnaphthalene	0.698	0.678	2.9	105	0.00
34 I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00
35 P	Hexachlorocyclopentadiene	0.168	0.219	-30.4	121	0.00
36 C	2,4,6-Trichlorophenol	0.348	0.364	-4.6	105	0.00
37	2,4,5-Trichlorophenol	0.384	0.396	-3.1	106	0.00
38 S	2-Fluorobiphenyl	1.339	1.296	3.2	104	0.00
39	2-Chloronaphthalene	1.054	1.025	2.8	105	0.00

(#)=Out of Range
4M12765.D BNA.M

Wed Apr 03 07:35:31 2002

HPMS4

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Page 1

Acq On : 2 Apr 2002 10:19
 Sample : WG115478-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40	2-Nitroaniline	0.361	0.370	-2.5	105	0.00
41	Dimethylphthalate	1.363	1.332	2.3	105	0.00
42	Acenaphthylene	1.929	1.906	1.2	104	0.00
43	2,6-Dinitrotoluene	0.290	0.311	-7.2	108	0.00
44	3-Nitroaniline	0.316	0.310	1.9	104	0.00
45 C	Acenaphthene	1.134	1.120	1.2	105	0.00
46 P	2,4-Dinitrophenol	0.062	0.089	-43.5#	150	0.00
47 P	4-Nitrophenol	0.220	0.227	-3.2	106	0.00
48	Dibenzofuran	1.688	1.639	2.9	104	0.00
49	2,4-Dinitrotoluene	0.353	0.385	-9.1	108	0.00
50	Diethylphthalate	1.299	1.286	1.0	104	0.00
51	Fluorene	1.328	1.298	2.3	104	0.00
52	4-Chlorophenyl Phenyl Ether	0.679	0.663	2.4	105	0.00
53	4-Nitroaniline	0.291	0.290	0.3	99	0.00
54	1,2-Diphenylhydrazine	1.558	1.548	0.6	104	0.00
55 S	2,4,6-Tribromophenol	0.146	0.158	-8.2	106	0.00
56 I	Phenanthrene-d10	1.000	1.000	0.0	105	0.00
57	4,6-Dinitro-2-Methylphenol	0.081	0.107	-32.1	139	0.00
58 C	n-Nitrosodiphenylamine	0.540	0.529	2.0	104	0.00
59	4-Bromophenyl Phenyl Ether	0.205	0.199	2.9	104	0.00
60	Hexachlorobenzene	0.194	0.188	3.1	105	0.00
61 C	Pentachlorophenol	0.092	0.098	-6.5	110	0.00
62	Phenanthrene	1.156	1.119	3.2	105	0.00
63	Anthracene	1.203	1.176	2.2	104	0.00
64	Carbazole	0.963	0.924	4.0	102	0.00
65	Di-n-Butyl Phthalate	1.348	1.346	0.1	103	0.00
66 C	Fluoranthene	1.247	1.232	1.2	105	0.00
67 I	Chrysene-d12	1.000	1.000	0.0	107	0.00
68	Benzidine	0.389	0.384	1.3	133	0.00
69	Pyrene	1.298	1.247	3.9	105	0.00
70 S	p-Terphenyl-d14	0.940	0.909	3.3	105	0.00
71	Butyl Benzyl Phthalate	0.663	0.660	0.5	105	0.00
72	Benzo[a]anthracene	1.284	1.241	3.3	105	0.00
73	3,3'-Dichlorobenzidine	0.344	0.307	10.8	101	0.00
74	Chrysene	1.257	1.219	3.0	107	0.00
75	bis(2-Ethylhexyl)phthalate	0.923	0.926	-0.3	106	0.00
76 I	Perylene-d12	1.000	1.000	0.0	109	0.00
77 C	Di-n-Octyl Phthalate	2.212	2.211	0.0	106	0.00

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Acq On : 2 Apr 2002 10:19
 Sample : WG115478-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 40% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
78	Benzo[b]fluoranthene	1.678	1.638	2.4	110	0.00
79	Benzo[k]fluoranthene	1.637	1.591	2.8	107	0.00
80 C	Benzo[a]pyrene	1.593	1.565	1.8	109	0.00
81	Indeno[1,2,3-cd]pyrene	1.449	1.536	-6.0	117	0.00
82	Dibenz[ah]anthracene	1.190	1.272	-6.9	117	0.00
83	Benzo[ghi]perylene	1.098	1.191	-8.5	119	0.00

Acq On : 2 Apr 2002 10:19
 Sample : WG115478-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:40 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	325983	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1361482	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	720838	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1290668	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1221314	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	884572	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	518303	50.6767	ug/ml	0.00
Spiked Amount	100.000	Range	21 - 100	Recovery	=	50.68%
6) Phenol-d5	6.94	99	665417	50.3003	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 94	Recovery	=	50.30%
20) Nitrobenzene-d5	7.90	82	619763	50.6334	ug/ml	0.00
Spiked Amount	50.000	Range	35 - 114	Recovery	=	101.26%
38) 2-Fluorobiphenyl	9.68	172	1167393	48.3899	ug/ml	0.00
Spiked Amount	50.000	Range	43 - 116	Recovery	=	96.78%
55) 2,4,6-Tribromophenol	11.23	330	142417	49.2213	ug/ml	0.00
Spiked Amount	100.000	Range	10 - 123	Recovery	=	49.22%
70) p-Terphenyl-d14	13.53	244	1388353	48.3887	ug/ml	0.00
Spiked Amount	50.000	Range	33 - 141	Recovery	=	96.78%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	4.59	79	590344	50.8913	ug/ml	100
3) n-Nitrosodimethylamine	4.57	74	325794	51.1682	ug/ml	100
5) Aniline	7.02	66	311603	49.5125	ug/ml	98
7) Phenol	6.95	94	717589	50.5678	ug/ml	99
8) bis(2-Chloroethyl)ether	7.05	63	394438	49.2406	ug/ml	97
9) 2-Chlorophenol	7.13	128	565276	50.1183	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	579656	48.7262	ug/ml	99
11) 1,4-Dichlorobenzene	7.35	146	635620	48.6804	ug/ml	100
12) Benzyl Alcohol	7.45	108	367076	51.2487	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	557831	49.0988	ug/ml	100
14) 2-Methylphenol	7.55	107	449256	48.8213	ug/ml#	88
15) bis(2-Chloroisopropyl)ethe	7.57	45	767449	49.2102	ug/ml#	89
16) 3-,4-Methylphenol	7.68	107	670431	49.9951	ug/ml	100
17) n-Nitrosodipropylamine	7.71	70	407206	50.3663	ug/ml	99
18) Hexachloroethane	7.84	117	251415	51.4091	ug/ml	100
21) Nitrobenzene	7.92	77	631280	49.9873	ug/ml	100
22) Isophorone	8.13	82	1050370	49.8348	ug/ml	100
23) 2-Nitrophenol	8.23	139	325545	56.1650	ug/ml	98
24) 2,4-Dimethylphenol	8.22	122	512481	48.4783	ug/ml	99
25) bis(2-Chloroethoxy)methane	8.31	93	683237	48.9496	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12765.D BNA.M Wed Apr 03 07:35:38 2002 HPMS4

Acq On : 2 Apr 2002 10:19
Sample : WG115478-02 50PPM BNA STD
Misc : 1,1 SOS59-14-1
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:40 2002

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Initial Calibration
DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.30	122	187204	66.4432	ug/ml	98
27) 2,4-Dichlorophenol	8.46	162	457365	50.1786	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	513827	48.5239	ug/ml	99
29) Naphthalene	8.64	128	1561678	48.5504	ug/ml	100
30) 4-Chloroaniline	8.68	127	663283	48.2807	ug/ml	99
31) Hexachlorobutadiene	8.74	225	255575	48.5436	ug/ml	99
32) 4-Chloro-3-Methylphenol	9.13	107	513413	50.9582	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	1153384	48.5258	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	197757	50.0087	ug/ml	99
36) 2,4,6-Trichlorophenol	9.61	196	327647	52.2098	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	357066	51.5587	ug/ml	98
39) 2-Chloronaphthalene	9.84	162	923952	48.6282	ug/ml	100
40) 2-Nitroaniline	9.94	65	333454	51.2584	ug/ml	99
41) Dimethylphthalate	10.08	163	1199778	48.8281	ug/ml	100
42) Acenaphthylene	10.27	152	1717558	49.4028	ug/ml	100
43) 2,6-Dinitrotoluene	10.18	165	280015	53.5141	ug/ml	100
44) 3-Nitroaniline	10.37	138	278909	48.9850	ug/ml	99
45) Acenaphthene	10.45	154	1008881	49.3664	ug/ml	100
46) 2,4-Dinitrophenol	10.47	184	80018	63.9608	ug/ml#	99
47) 4-Nitrophenol	10.50	65	204289	51.6054	ug/ml	99
48) Dibenzofuran	10.62	168	1476678	48.5482	ug/ml	99
49) 2,4-Dinitrotoluene	10.60	165	346971	54.5587	ug/ml	99
50) Diethylphthalate	10.79	149	1158306	49.4638	ug/ml	99
51) Fluorene	10.97	166	1169330	48.8557	ug/ml	99
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	597559	48.8316	ug/ml	100
53) 4-Nitroaniline	11.00	138	261375	49.9200	ug/ml	96
54) 1,2-Diphenylhydrazine	11.09	77	1394900	49.6814	ug/ml	99
57) 4,6-Dinitro-2-Methylphenol	11.01	198	172928	61.1437	ug/ml	96
58) n-Nitrosodiphenylamine	11.06	169	853541	48.9425	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.44	248	321497	48.6764	ug/ml	99
60) Hexachlorobenzene	11.56	284	303926	48.4397	ug/ml	100
61) Pentachlorophenol	11.74	266	157626	52.8420	ug/ml	97
62) Phenanthrene	11.97	178	1805088	48.3900	ug/ml	100
63) Anthracene	12.02	178	1897107	48.8871	ug/ml	99
64) Carbazole	12.17	167	1490143	47.9471	ug/ml	100
65) Di-n-Butyl Phthalate	12.43	149	2170903	49.9187	ug/ml	100
66) Fluoranthene	13.19	202	1986871	49.3770	ug/ml	100
68) Benzidine	13.30	184	585789	51.5919	ug/ml	100
69) Pyrene	13.44	202	1904319	48.0457	ug/ml	99
71) Butyl Benzyl Phthalate	13.98	149	1006838	49.7455	ug/ml	99
72) Benzo[a]anthracene	14.68	228	1894261	48.2997	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12765.D BNA.M

Wed Apr 03 07:35:38 2002

HPMS4

Page 2

Acq On : 2 Apr 2002 10:19
Sample : WG115478-02 50PPM BNA STD
Misc : 1,1 SOS59-14-1
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:40 2002

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Tue Apr 02 07:53:51 2002
Response via : Initial Calibration
DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	468344	44.6434	ug/ml	99
74) Chrysene	14.73	228	1860439	48.4905	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.52	149	1413350	50.1292	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	2445138	49.9919	ug/ml	99
78) Benzo[b]fluoranthene	16.18	252	1811408	48.8104	ug/ml	100
79) Benzo[k]fluoranthene	16.23	252	1759310	48.5902	ug/ml	100
80) Benzo[a]pyrene	16.78	252	1730800	49.1426	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.34	276	1698351	52.9919	ug/ml	100
82) Dibenz[ah]anthracene	19.34	278	1405996	53.4350	ug/ml	99
83) Benzo[ghi]perylene	20.12	276	1316656	54.2278	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12765.D BNA.M

Wed Apr 03 07:35:39 2002

HPMS4

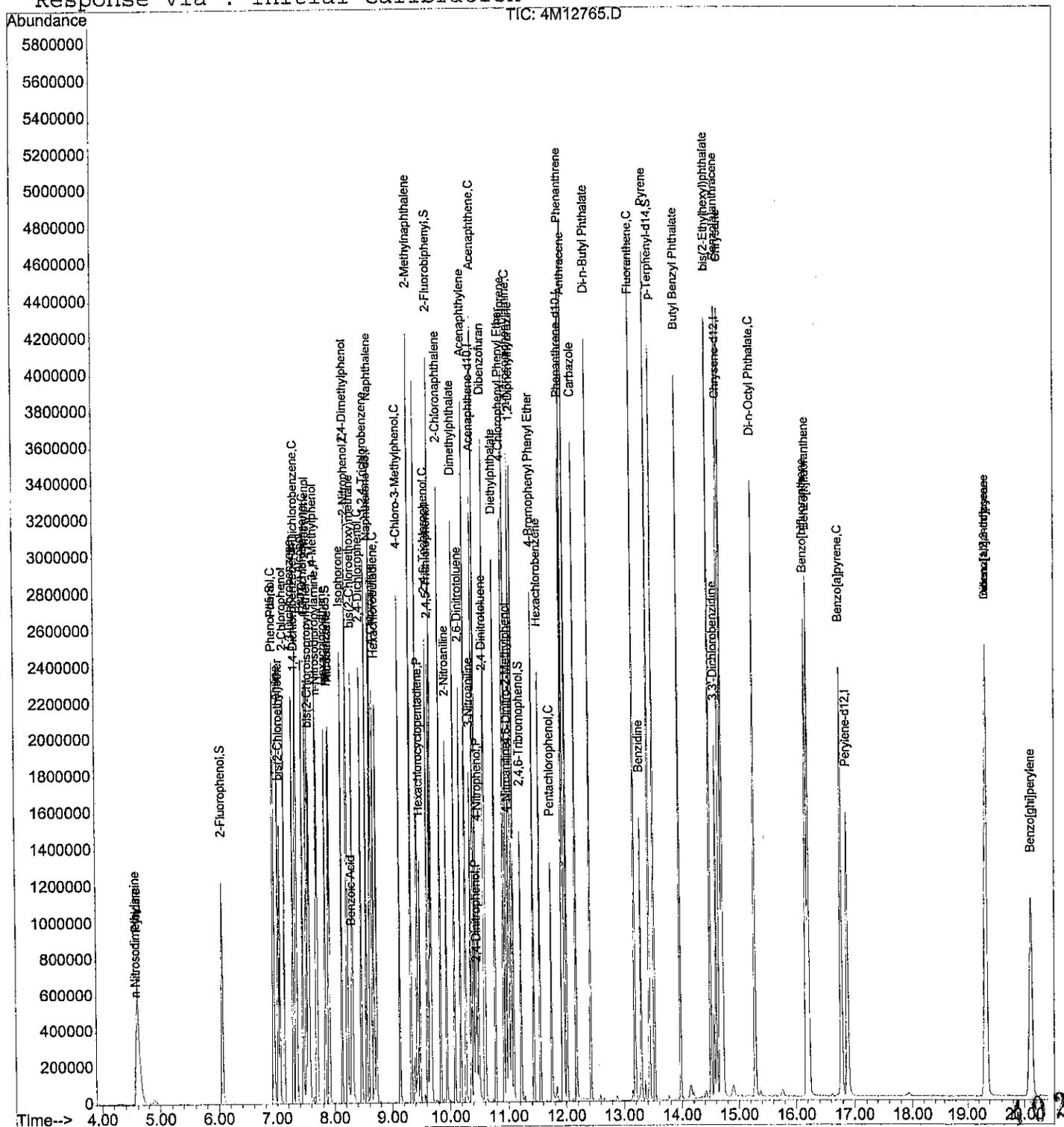
401
Page 3

Acq On : 2 Apr 2002 10:19
 Sample : WG115478-02 50PPM BNA STD
 Misc : 1,1 SOS59-14-1
 MS Integration Params: RTEINT.P
 Quant Time: Apr 2 10:40 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Tue Apr 02 07:53:51 2002
 Response via : Initial Calibration



2.2.1.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\040102\4M12734.D

Acq On : 1 Apr 2002 9:54

Sample : WG115403-01 50PPM DFTPP

Misc : 1,1 SOS58-27

MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)

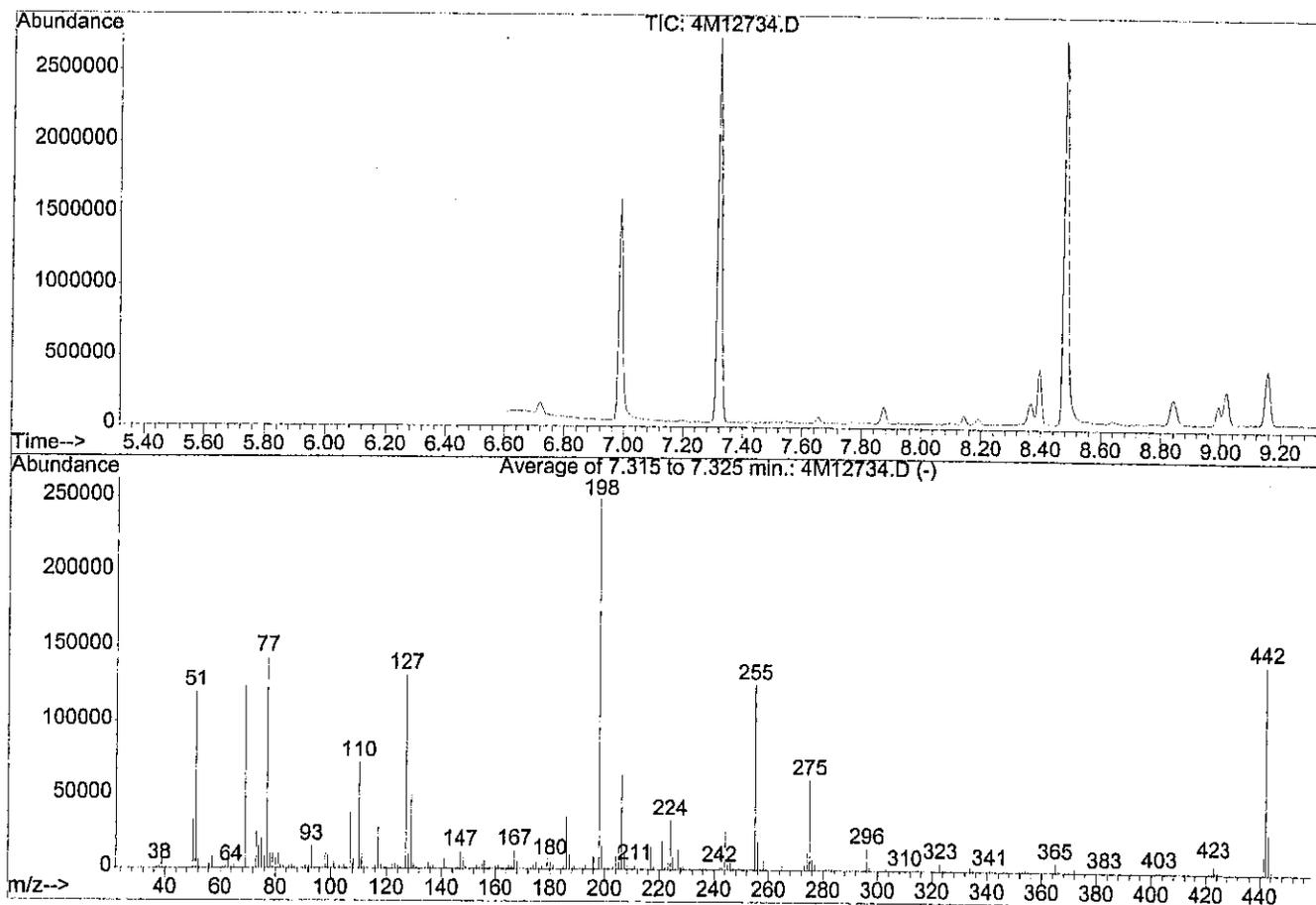
Title : DFTPP

Vial: 1

Operator: mdc

Inst : HPMS4

Multiplr: 1.00



AutoFind: Scans 151, 152, 153; Background Corrected with Scan 144

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
51	198	30	60	47.6	119053	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	50.1	125342	PASS
70	69	0.00	2	0.5	613	PASS
127	198	40	60	52.3	130891	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	250176	PASS
199	198	5	9	6.6	16532	PASS
275	198	10	30	24.4	60931	PASS
365	198	1	100	2.5	6162	PASS
441	443	0.01	100	47.7	13030	PASS
442	198	40	100	56.3	140808	PASS
443	442	17	23	19.4	27325	PASS

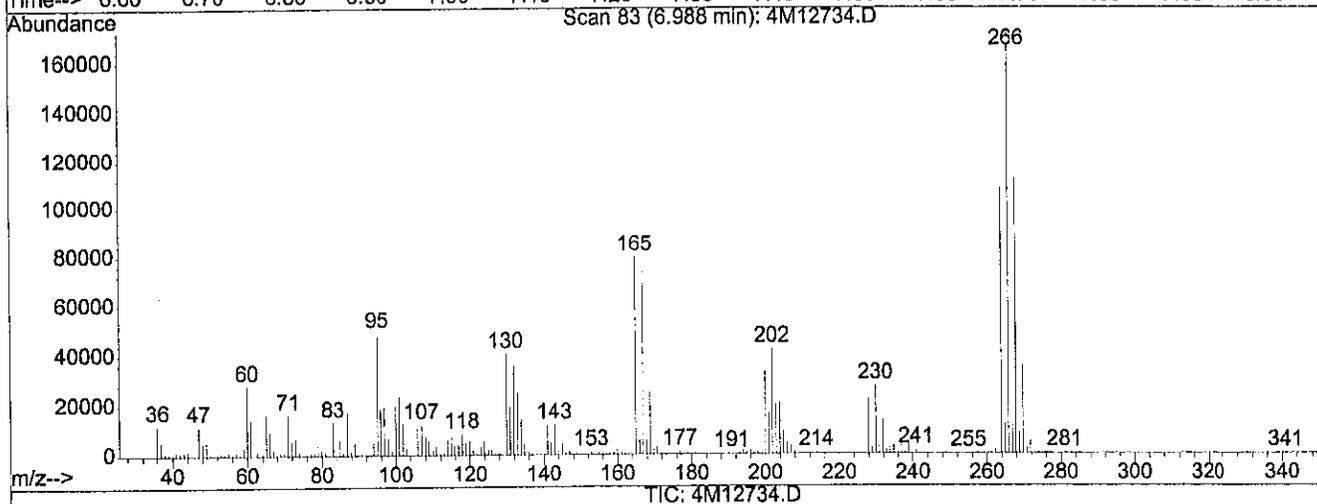
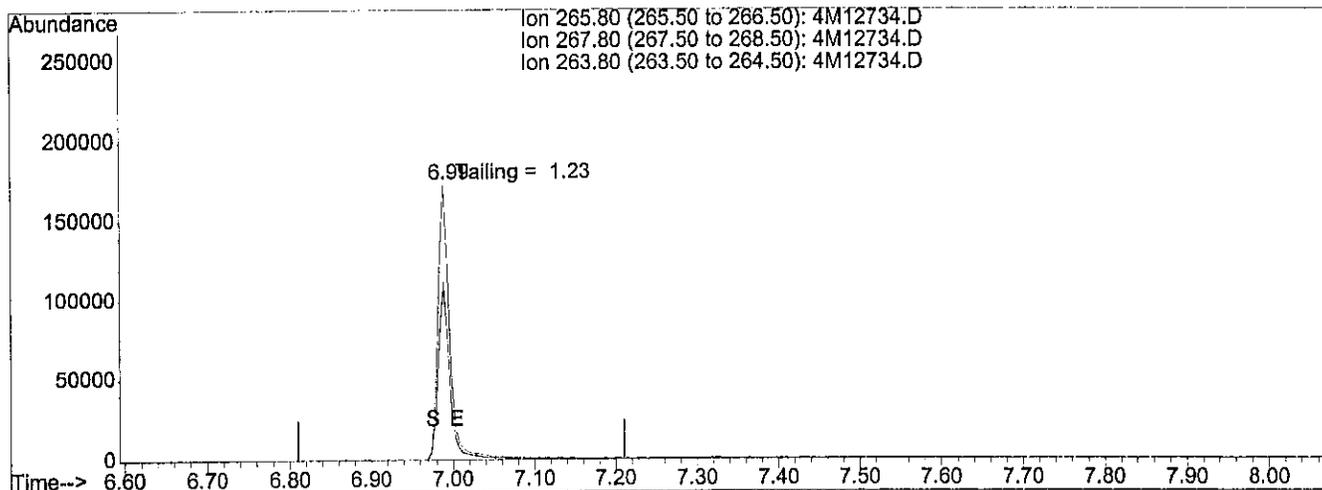
404

405

Data File : C:\HPCHEM\1\DATA\040102\4M12734.D
 Acq On : 1 Apr 2002 9:54
 Sample : WG115403-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 1 10:09 2002

Vial: 1
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00
 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(1) PENTACHLOROPHENOL

6.99min 0.00

response 172880

Ion	Exp%	Act%
265.80	100	100
267.80	63.40	64.97
263.80	61.90	64.60
0.00	0.00	0.00

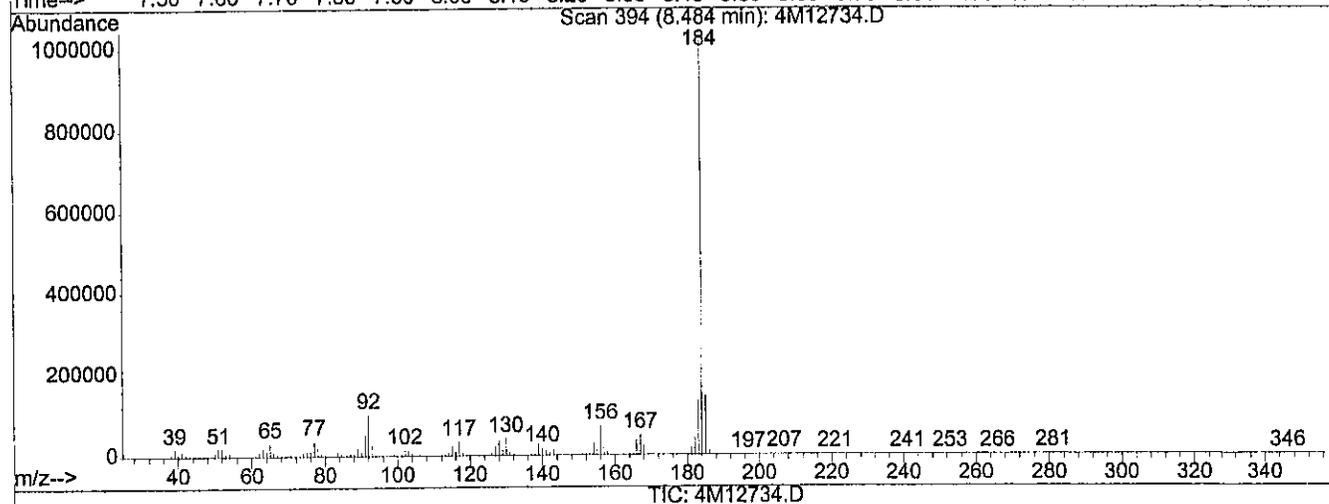
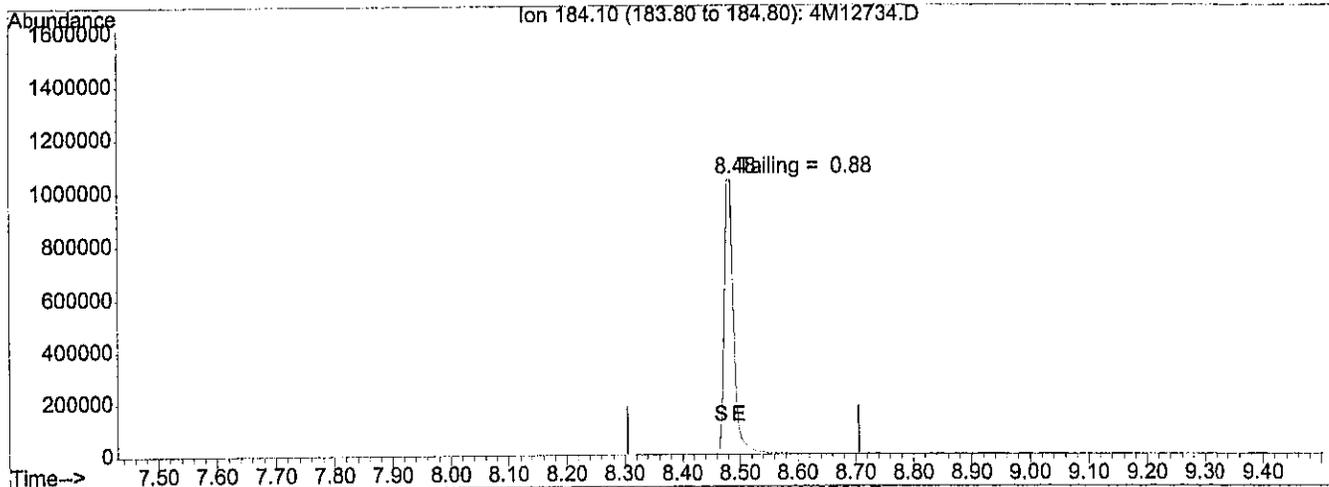
406

Data File : C:\HPCHEM\1\DATA\040102\4M12734.D
 Acq On : 1 Apr 2002 9:54
 Sample : WG115403-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 1 10:09 2002

Vial: 1
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(2) BENZIDINE

8.48min 0.00

response 1167441

Ion	Exp%	Act%
184.10	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

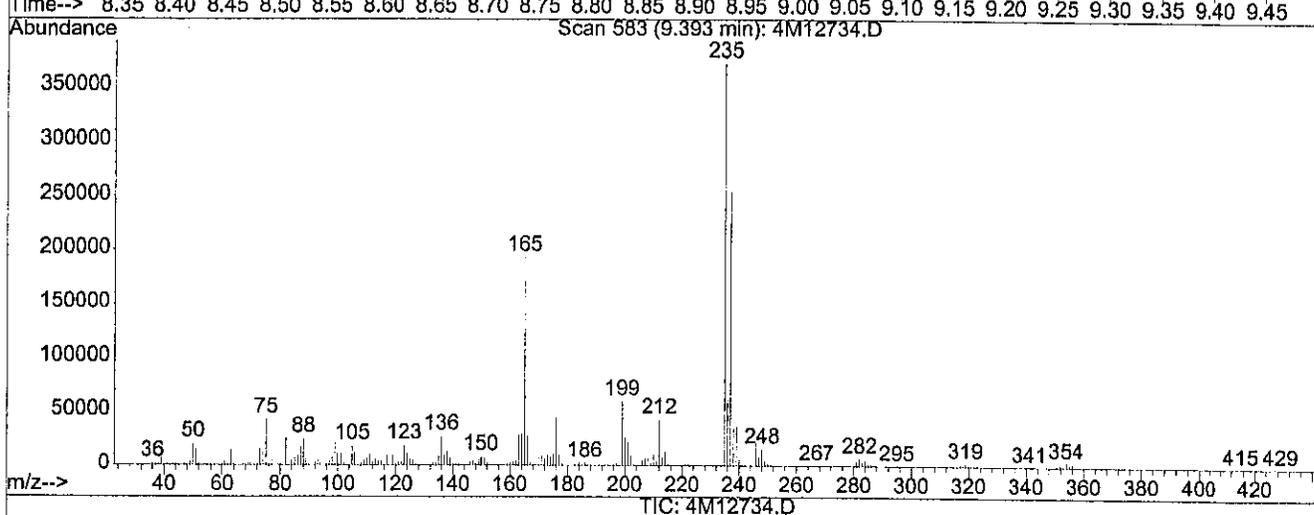
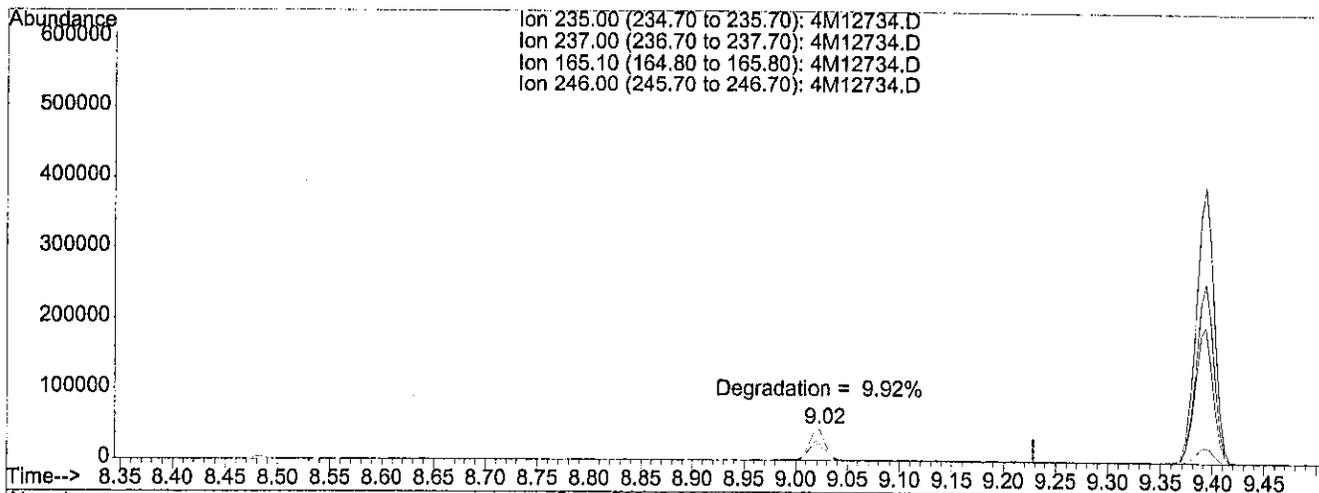
407

Data File : C:\HPCHEM\1\DATA\040102\4M12734.D
 Acq On : 1 Apr 2002 9:54
 Sample : WG115403-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 1 10:09 2002

Vial: 1
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(3) 4,4'-DDT

9.39min 0.00

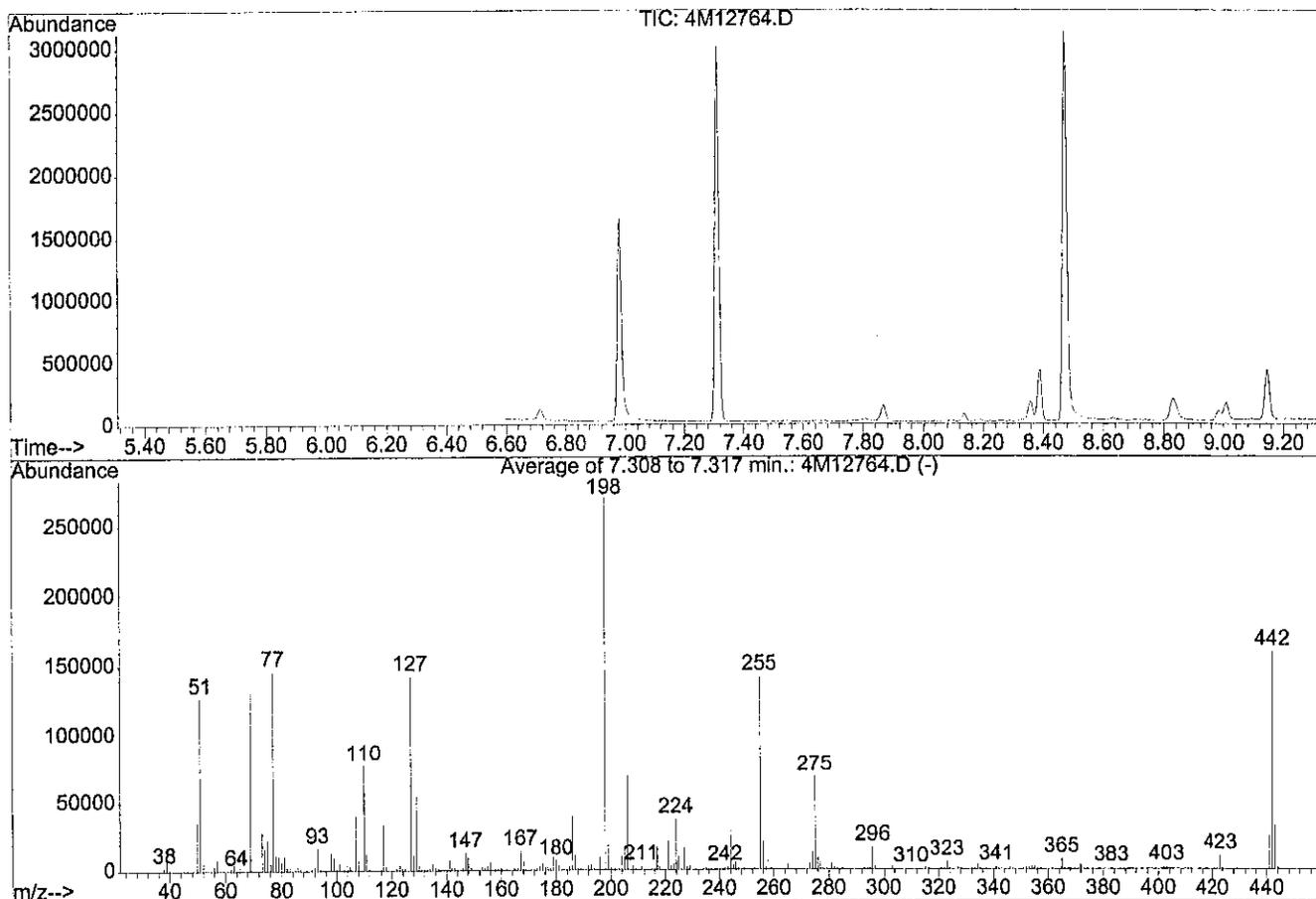
response 490200

Ion	Exp%	Act%
235.00	100	100
237.00	66.10	64.67
165.10	53.70	49.62
246.00	6.10	5.98

408

Data File : C:\HPCHEM\1\DATA\040202\4M12764.D
 Acq On : 2 Apr 2002 10:01
 Sample : WG115478-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP

Vial: 1
 Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00



AutoFind: Scans 149, 150, 151; Background Corrected with Scan 142

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.8	126741	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	48.9	132162	PASS
70	69	0.00	2	0.5	650	PASS
127	198	40	60	52.5	142027	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	270528	PASS
199	198	5	9	7.0	18943	PASS
275	198	10	30	25.1	67781	PASS
365	198	1	100	2.7	7401	PASS
441	443	0.01	100	77.0	24528	PASS
442	198	40	100	58.8	158955	PASS
443	442	17	23	20.1	31872	PASS

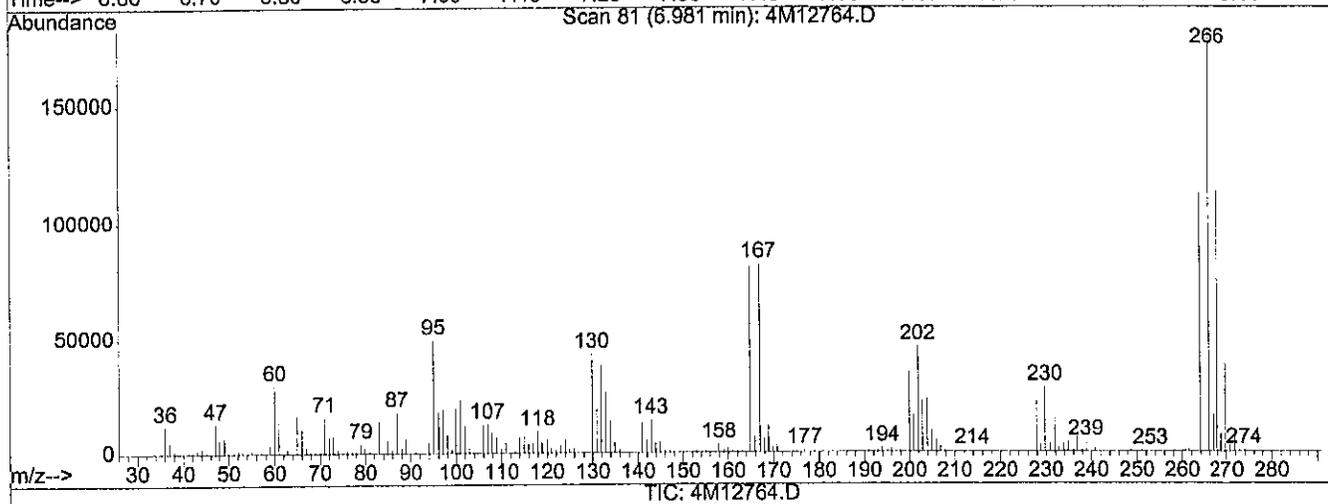
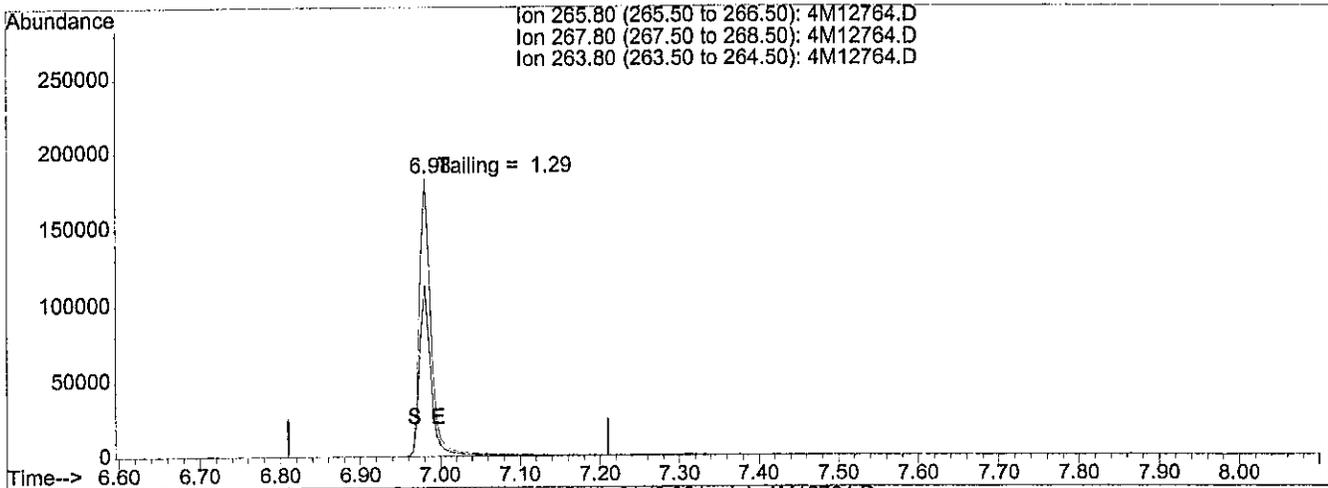
409

Acq On : 2 Apr 2002 10:01
 Sample : WG115478-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 3 7:34 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(1) PENTACHLOROPHENOL

6.98min 0.00

response 181497

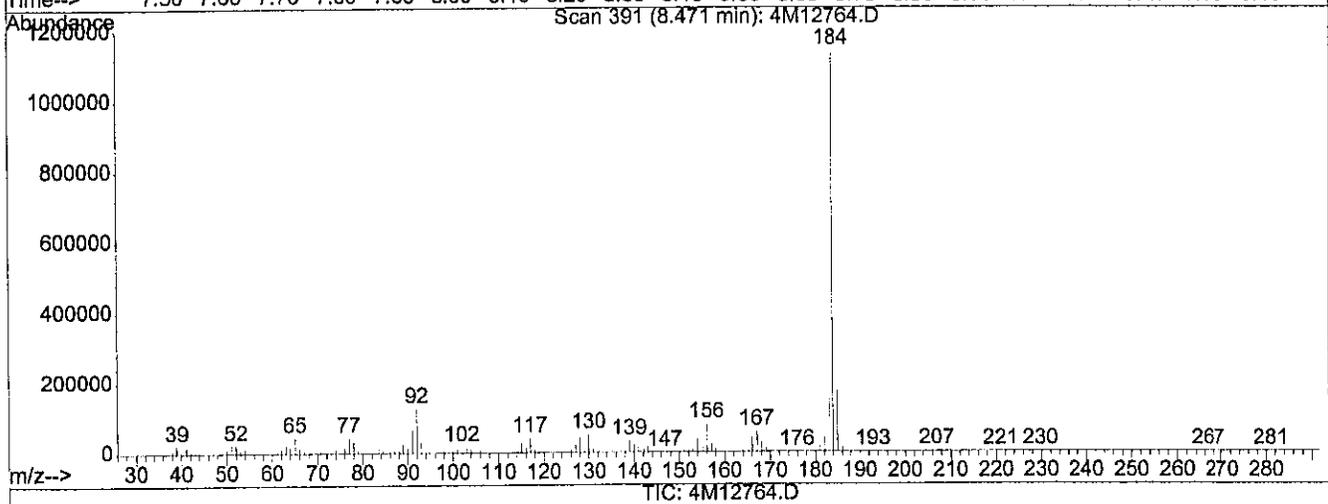
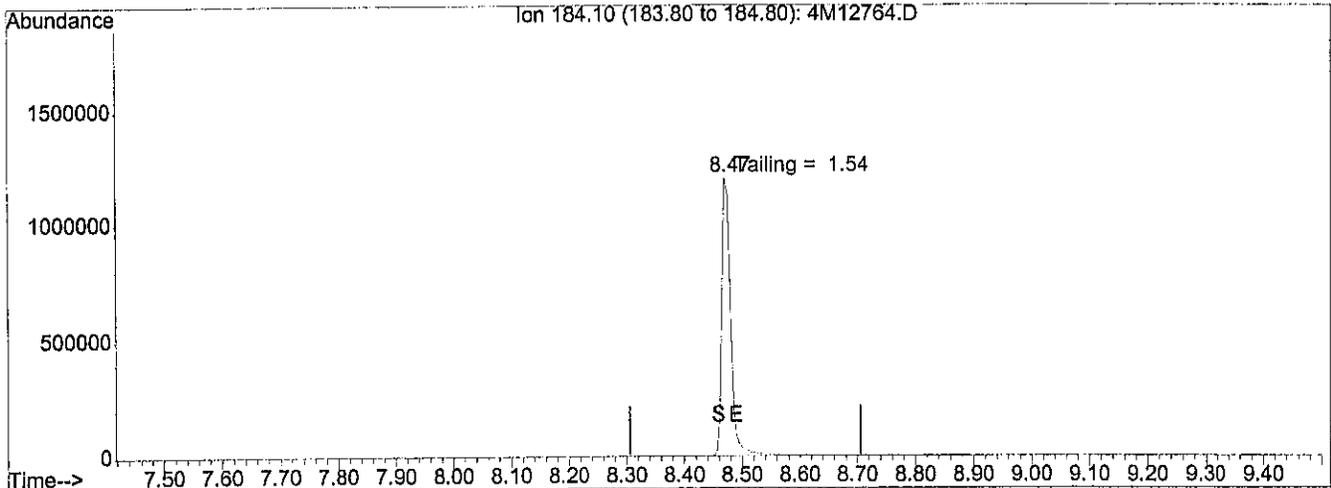
Ion	Exp%	Act%
265.80	100	100
267.80	63.40	60.45
263.80	61.90	60.73
0.00	0.00	0.00

Acq On : 2 Apr 2002 10:01
 Sample : WG115478-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 3 7:34 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(2) BENZIDINE

8.47min 0.00

response 1267196

Ion	Exp%	Act%
184.10	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

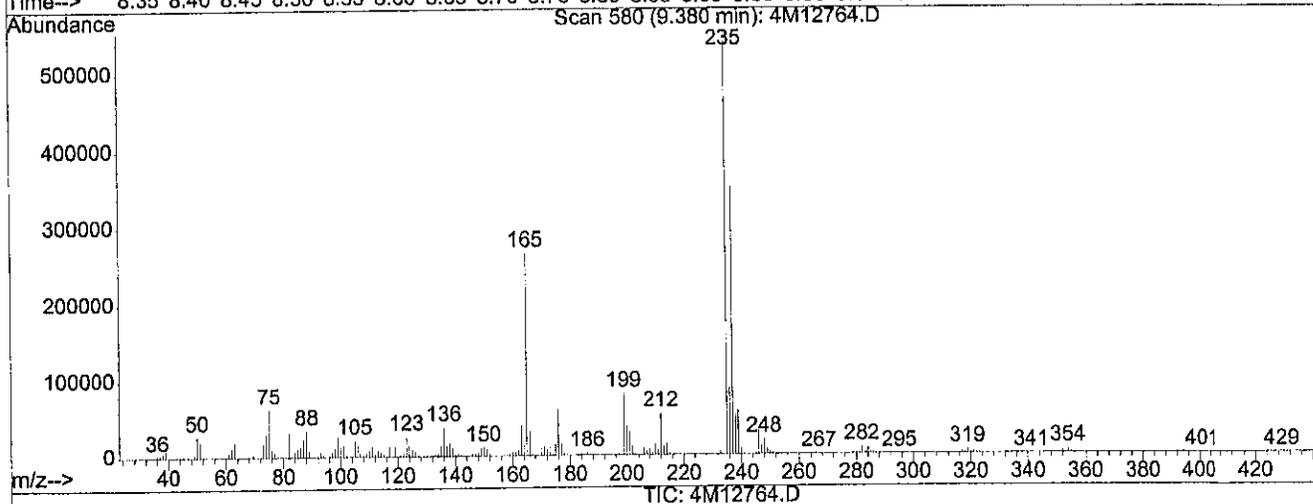
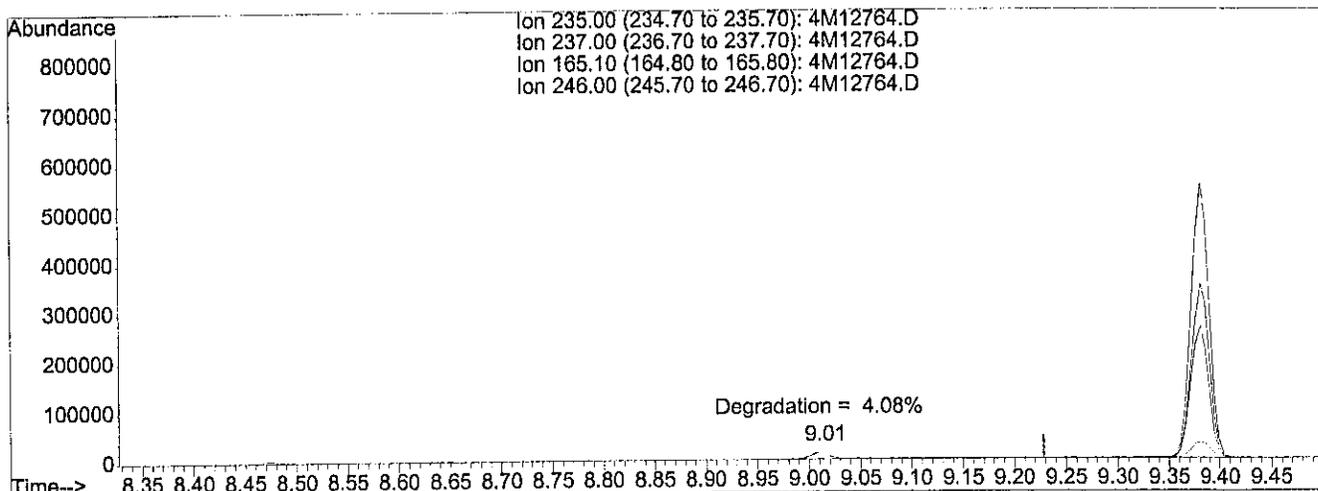
411

Acq On : 2 Apr 2002 10:01
 Sample : WG115478-01 50PPM DFTPP
 Misc : 1,1 SOS58-27
 MS Integration Params: rteint.p
 Quant Time: Apr 3 7:34 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DFTPP.M (RTE Integrator)
 Title : DFTPP
 Last Update : Tue Feb 12 09:38:11 2002
 Response via : Single Level Calibration



(3) 4,4'-DDT

9.38min 0.00

response 680583

Ion	Exp%	Act%
235.00	100	100
237.00	66.10	63.99
165.10	53.70	48.67
246.00	6.10	6.10

412

Acq On : 2 Apr 2002 12:52
 Sample : WG115413-01 BLK 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	320468	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1315366	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	689363	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1212097	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1112411	40.00	ug/ml	0.00
76) Perylene-d12	16.88	264	794357	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	491304	48.8635	ug/ml	0.00
Spiked Amount	100.000	Range	25 - 121	Recovery	=	48.86%
6) Phenol-d5	6.94	99	682353	52.4681	ug/ml	0.00
Spiked Amount	100.000	Range	24 - 113	Recovery	=	52.47%
20) Nitrobenzene-d5	7.90	82	311971	26.3810	ug/ml	0.00
Spiked Amount	50.000	Range	23 - 120	Recovery	=	52.76%
38) 2-Fluorobiphenyl	9.68	172	628544	27.2435	ug/ml	0.00
Spiked Amount	50.000	Range	30 - 115	Recovery	=	54.48%
55) 2,4,6-Tribromophenol	11.23	330	114583	41.7823	ug/ml	0.00
Spiked Amount	100.000	Range	19 - 122	Recovery	=	41.78%
70) p-Terphenyl-d14	13.52	244	677816	25.9369	ug/ml	0.00
Spiked Amount	50.000	Range	18 - 137	Recovery	=	51.88%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
5) Aniline	6.94	66	34298	5.5436	ug/ml#	1

(#) = qualifier out of range (m) = manual integration

4M12770.D BNA.M Wed Apr 03 07:38:16 2002 HPMS4

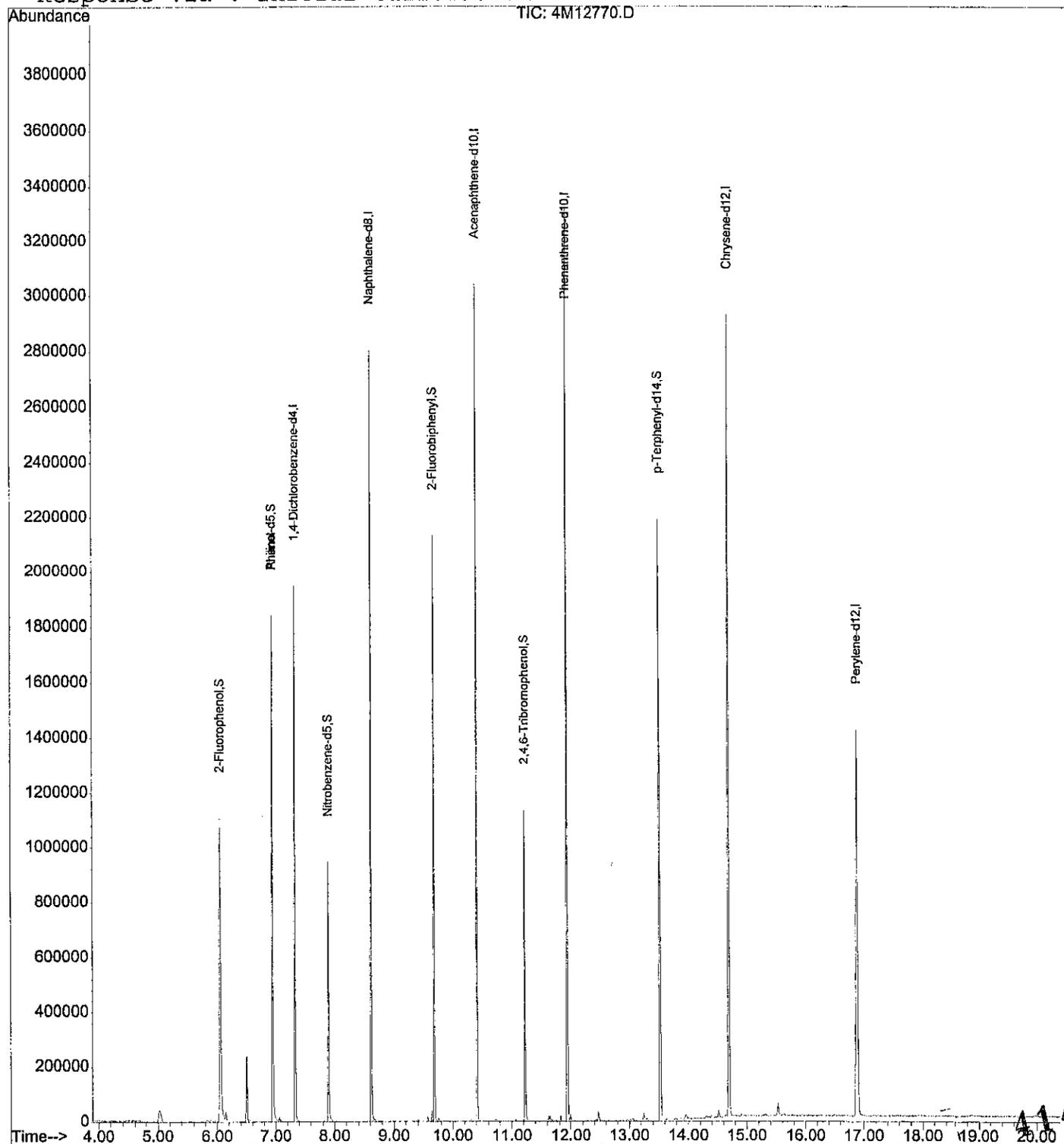
Page 1

Acq On : 2 Apr 2002 12:52
Sample : WG115413-01 BLK 4/1 V182P159
Misc : 7,1 SOIL
MS Integration Params: RTEINT.P
Quant Time: Apr 3 7:38 2002

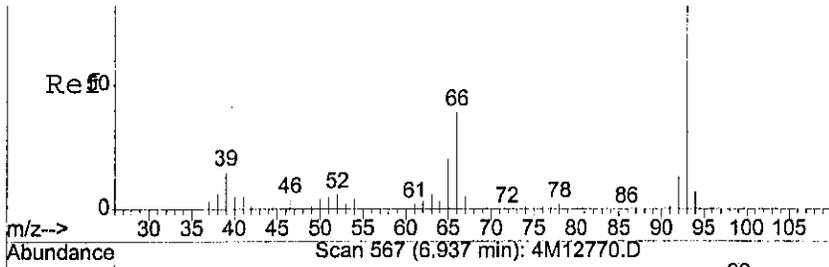
Operator: mac
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

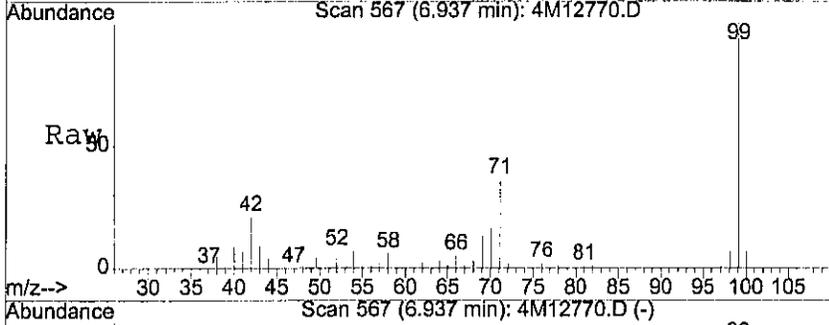
Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Wed Apr 03 07:35:47 2002
Response via : Initial Calibration



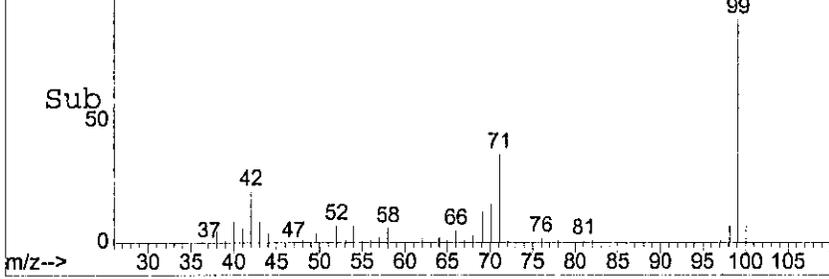
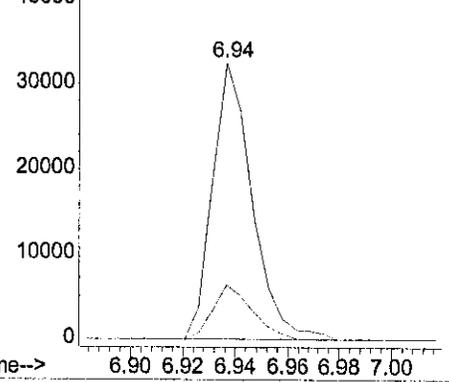
Concen: 5.54 ug/ml
 RT: 6.94 min Scan# 567
 Delta R.T. -0.08 min
 Lab File: 4M12770.D
 Acq: 2 Apr 2002 12:52



Tgt Ion	Resp	Lower	Upper
66	100		
93	0.0	205.1	307.7#
65	19.5	38.1	57.1#



Abundance Ion 66.00 (65.70 to 66.70): 4M12770.D
 Ion 93.00 (92.70 to 93.70): 4M12770.D
 Ion 65.00 (64.70 to 65.70): 4M12770.D



Time-->

Acq On : 2 Apr 2002 13:22
Sample : WG115413-02 LCS 4/1 V182P159
Misc : 7,1 SOIL

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Apr 3 7:38 2002

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)

Title : M8270/625/Initial cal. 04/01/02

Last Update : Wed Apr 03 07:35:47 2002

Response via : Initial Calibration

DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	321762	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1325444	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	699378	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1247057	40.00	ug/ml	0.00
67) Chrysene-d12	14.69	240	1174045	40.00	ug/ml	0.00
76) Perylene-d12	16.88	264	863643	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	442532	43.8358	ug/ml	0.00
Spiked Amount	100.000	Range	25 - 121	Recovery	=	43.84%
6) Phenol-d5	6.94	99	612223	46.8863	ug/ml	0.00
Spiked Amount	100.000	Range	24 - 113	Recovery	=	46.89%
20) Nitrobenzene-d5	7.90	82	280310	23.5234	ug/ml	0.00
Spiked Amount	50.000	Range	23 - 120	Recovery	=	47.04%
38) 2-Fluorobiphenyl	9.68	172	566662	24.2096	ug/ml	0.00
Spiked Amount	50.000	Range	30 - 115	Recovery	=	48.42%
55) 2,4,6-Tribromophenol	11.23	330	156195	55.3333	ug/ml	0.00
Spiked Amount	100.000	Range	19 - 122	Recovery	=	55.33%
70) p-Terphenyl-d14	13.52	244	780777	28.3083	ug/ml	0.00
Spiked Amount	50.000	Range	18 - 137	Recovery	=	56.62%

Target Compounds

						Qvalue
2) Pyridine	4.64	79	60555	5.2887	ug/ml	97
3) n-Nitrosodimethylamine	4.58	74	147418	23.4567	ug/ml	99
5) Aniline	7.02	66	109679	17.6562	ug/ml	96
7) Phenol	6.95	94	329918	23.5540	ug/ml	94
8) bis(2-Chloroethyl) ether	7.05	63	178251	22.5443	ug/ml	95
9) 2-Chlorophenol	7.13	128	250378	22.4902	ug/ml	99
10) 1,3-Dichlorobenzene	7.28	146	286579	24.4060	ug/ml	100
11) 1,4-Dichlorobenzene	7.35	146	296433	23.0008	ug/ml	100
12) Benzyl Alcohol	7.46	108	168573	23.8438	ug/ml	99
13) 1,2-Dichlorobenzene	7.51	146	277945	24.7849	ug/ml	99
14) 2-Methylphenol	7.55	107	220485	24.2748	ug/ml	95
15) bis(2-Chloroisopropyl) ethe	7.57	45	349316	22.6926	ug/ml	97
16) 3-,4-Methylphenol	7.68	107	316068	23.8789	ug/ml	99
17) n-Nitrosodipropylamine	7.71	70	189779	23.7812	ug/ml	99
18) Hexachloroethane	7.84	117	105528	21.8614	ug/ml	98
21) Nitrobenzene	7.91	77	285959	23.2591	ug/ml	99
22) Isophorone	8.13	82	536796	26.1607	ug/ml	100
23) 2-Nitrophenol	8.23	139	138998	24.6328	ug/ml	99
24) 2,4-Dimethylphenol	8.22	122	250676	24.3575	ug/ml	99
25) bis(2-Chloroethoxy) methane	8.32	93	316882	23.3199	ug/ml	98

(#) = qualifier out of range (m) = manual integration

4M12771.D BNA.M

Wed Apr 03 07:38:39 2002

HPMS4

416
Page 1

Acq On : 2 Apr 2002 13:22
 Sample : WG115413-02 LCS 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.29	122	13584	14.2780	ug/ml#	47
27) 2,4-Dichlorophenol	8.46	162	203578	22.9423	ug/ml	100
28) 1,2,4-Trichlorobenzene	8.55	180	239369	23.2197	ug/ml	100
29) Naphthalene	8.64	128	780291	24.9177	ug/ml	100
30) 4-Chloroaniline	8.68	127	303054	22.6592	ug/ml	99
31) Hexachlorobutadiene	8.73	225	131765	25.7078	ug/ml	98
32) 4-Chloro-3-Methylphenol	9.13	107	240790	24.5492	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	543409	23.4842	ug/ml	100
35) Hexachlorocyclopentadiene	9.49	237	73646	23.4738	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	144085	23.6641	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	162952	24.2515	ug/ml	98
39) 2-Chloronaphthalene	9.84	162	500469	27.1483	ug/ml	100
40) 2-Nitroaniline	9.94	65	167070	26.4700	ug/ml	98
41) Dimethylphthalate	10.08	163	661527	27.7487	ug/ml	100
42) Acenaphthylene	10.27	152	837709	24.8347	ug/ml	100
43) 2,6-Dinitrotoluene	10.18	165	150231	29.5919	ug/ml	98
44) 3-Nitroaniline	10.37	138	174673	31.6193	ug/ml	100
45) Acenaphthene	10.45	154	527058	26.5813	ug/ml	98
46) 2,4-Dinitrophenol	10.47	184	27069	34.5215	ug/ml#	84
47) 4-Nitrophenol	10.50	65	110506	28.7715	ug/ml	99
48) Dibenzofuran	10.61	168	754558	25.5685	ug/ml	99
49) 2,4-Dinitrotoluene	10.60	165	221178	35.8458	ug/ml	96
50) Diethylphthalate	10.78	149	742838	32.6952	ug/ml	100
51) Fluorene	10.96	166	658386	28.3520	ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	302572	25.4844	ug/ml	99
53) 4-Nitroaniline	11.00	138	169804	33.4260	ug/ml	94
54) 1,2-Diphenylhydrazine	11.09	77	737398	27.0694	ug/ml	99
57) 4,6-Dinitro-2-Methylphenol	11.01	198	91229	39.1475	ug/ml	100
58) n-Nitrosodiphenylamine	11.06	169	521927	30.9741	ug/ml	100
59) 4-Bromophenyl Phenyl Ether	11.44	248	158989	24.9136	ug/ml	99
60) Hexachlorobenzene	11.55	284	190135	31.3635	ug/ml	99
61) Pentachlorophenol	11.74	266	74446	31.1977	ug/ml	98
62) Phenanthrene	11.96	178	1136068	31.5202	ug/ml	100
63) Anthracene	12.02	178	1149423	30.6556	ug/ml	99
64) Carbazole	12.17	167	1000604	33.3215	ug/ml	99
65) Di-n-Butyl Phthalate	12.43	149	1356574	32.2845	ug/ml	100
66) Fluoranthene	13.19	202	1251153	32.1806	ug/ml	100
68) Benzidine	13.30	184	6252	Below Cal		100
69) Pyrene	13.44	202	1292227	33.9153	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	643867	33.0928	ug/ml	99
72) Benzo[a]anthracene	14.68	228	1205196	31.9672	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12771.D BNA.M

Wed Apr 03 07:38:39 2002

HPMS4

Page 2

Acq On : 2 Apr 2002 13:22
Sample : WG115413-02 LCS 4/1 V182P159
Misc : 7,1 SOIL
MS Integration Params: RTEINT.P
Quant Time: Apr 3 7:38 2002

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Wed Apr 03 07:35:47 2002
Response via : Initial Calibration
DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	358162	35.5152	ug/ml	100
74) Chrysene	14.73	228	1217613	33.0136	ug/ml	100
75) bis(2-Ethylhexyl)phthalate	14.51	149	866737	31.9795	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	1467081	30.7220	ug/ml	100
78) Benzo[b]fluoranthene	16.18	252	1109546	30.6225	ug/ml	100
79) Benzo[k]fluoranthene	16.22	252	1102983	31.2014	ug/ml	100
80) Benzo[a]pyrene	16.78	252	997331	29.0034	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.33	276	1020816	32.6233	ug/ml	100
82) Dibenz[ah]anthracene	19.34	278	845162	32.8989	ug/ml	99
83) Benzo[ghi]perylene	20.11	276	820924	34.6299	ug/ml	99

(#) = qualifier out of range (m) = manual integration

4M12771.D BNA.M Wed Apr 03 07:38:40 2002 HPMS4

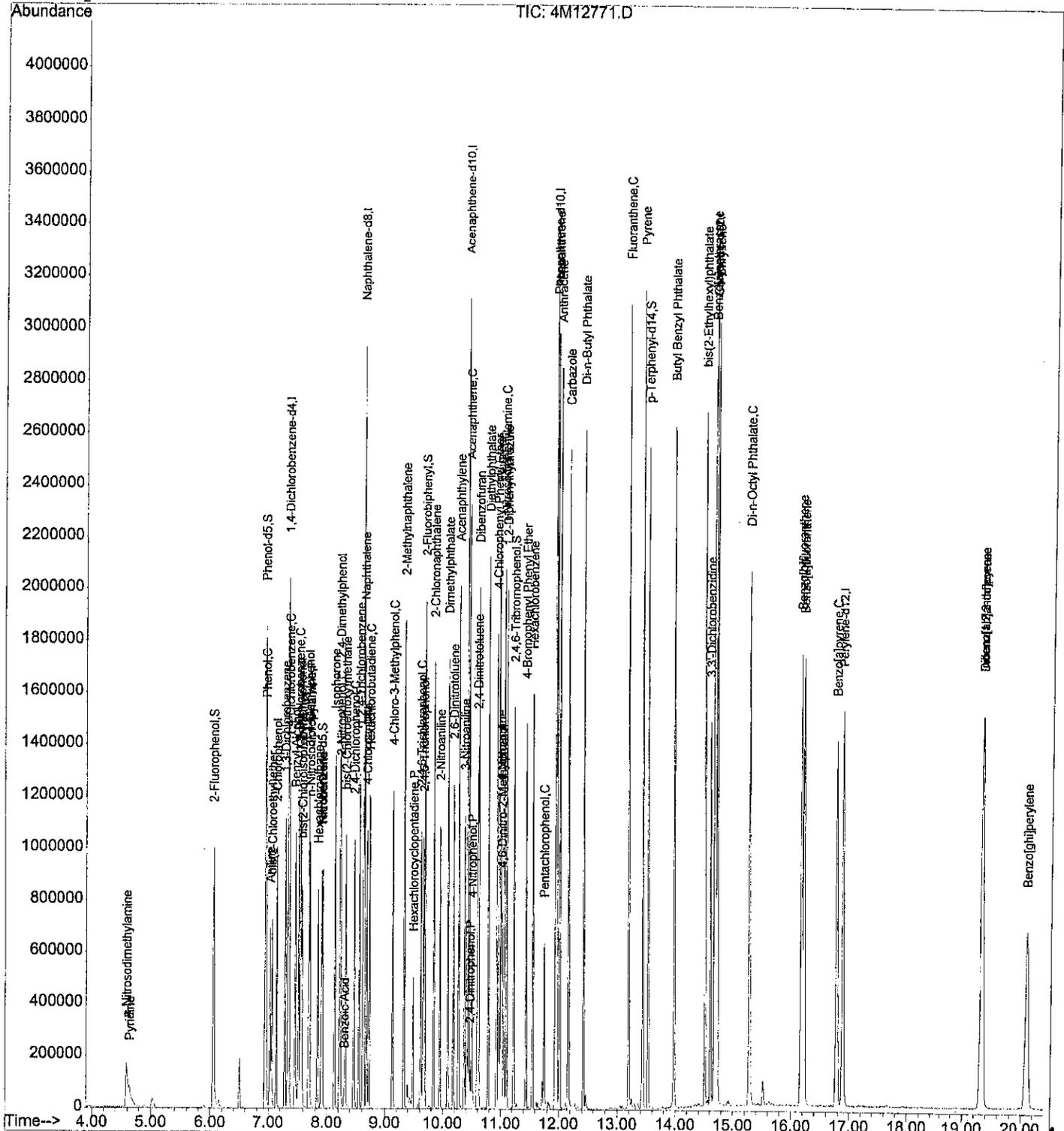
418
Page 3

Acq On : 2 Apr 2002 13:22
 Sample : WG115413-02 LCS 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration



Acq On : 2 Apr 2002 13:53
 Sample : WG115413-03 LCS DUP 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	7.33	152	324733	40.00	ug/ml	0.00
19) Naphthalene-d8	8.61	136	1349368	40.00	ug/ml	0.00
34) Acenaphthene-d10	10.41	164	719290	40.00	ug/ml	0.00
56) Phenanthrene-d10	11.94	188	1284706	40.00	ug/ml	0.00
67) Chrysene-d12	14.70	240	1247315	40.00	ug/ml	0.00
76) Perylene-d12	16.89	264	914008	40.00	ug/ml	0.00

System Monitoring Compounds

4) 2-Fluorophenol	6.05	112	706564	69.3497	ug/ml	0.00
Spiked Amount	100.000	Range 25 - 121	Recovery =	69.35%		
6) Phenol-d5	6.94	99	1050749	79.7341	ug/ml	0.00
Spiked Amount	100.000	Range 24 - 113	Recovery =	79.73%		
20) Nitrobenzene-d5	7.90	82	513531	42.3311	ug/ml	0.00
Spiked Amount	50.000	Range 23 - 120	Recovery =	84.66%		
38) 2-Fluorobiphenyl	9.68	172	1068875	44.4016	ug/ml	0.00
Spiked Amount	50.000	Range 30 - 115	Recovery =	88.80%		
55) 2,4,6-Tribromophenol	11.23	330	266030	90.0936	ug/ml	0.00
Spiked Amount	100.000	Range 19 - 122	Recovery =	90.09%		
70) p-Terphenyl-d14	13.52	244	1077567	36.7739	ug/ml	0.00
Spiked Amount	50.000	Range 18 - 137	Recovery =	73.54%		

Target Compounds

					Qvalue
2) Pyridine	4.62	79	123187	10.6604	ug/ml 98
3) n-Nitrosodimethylamine	4.58	74	244913	38.6133	ug/ml 99
5) Aniline	7.02	66	199168	31.7688	ug/ml 99
7) Phenol	6.95	94	578547	40.9265	ug/ml 94
8) bis(2-Chloroethyl) ether	7.05	63	321865	40.3355	ug/ml 100
9) 2-Chlorophenol	7.13	128	428860	38.1698	ug/ml 99
10) 1,3-Dichlorobenzene	7.28	146	456860	38.5517	ug/ml 99
11) 1,4-Dichlorobenzene	7.35	146	475194	36.5339	ug/ml 100
12) Benzyl Alcohol	7.45	108	321897	45.1141	ug/ml 99
13) 1,2-Dichlorobenzene	7.51	146	458196	40.4844	ug/ml 100
14) 2-Methylphenol	7.55	107	376709	41.0951	ug/ml# 93
15) bis(2-Chloroisopropyl) ethe	7.57	45	641073	41.2650	ug/ml# 90
16) 3-,4-Methylphenol	7.68	107	578513	43.3067	ug/ml 99
17) n-Nitrosodipropylamine	7.71	70	375685	46.6464	ug/ml 99
18) Hexachloroethane	7.84	117	173975	35.7112	ug/ml 99
21) Nitrobenzene	7.91	77	524000	41.8649	ug/ml 100
22) Isophorone	8.13	82	1057123	50.6054	ug/ml 99
23) 2-Nitrophenol	8.23	139	271304	47.2273	ug/ml 99
24) 2,4-Dimethylphenol	8.22	122	476519	45.4811	ug/ml 99
25) bis(2-Chloroethoxy) methane	8.31	93	619089	44.7520	ug/ml 99

(#) = qualifier out of range (m) = manual integration

4M12772.D BNA.M

Wed Apr 03 07:38:47 2002

HPMS4

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Page 1

Acq On : 2 Apr 2002 13:53
 Sample : WG115413-03 LCS DUP 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration
 DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Benzoic Acid	8.29	122	72251	35.0629	ug/ml	99
27) 2,4-Dichlorophenol	8.46	162	388176	42.9700	ug/ml	99
28) 1,2,4-Trichlorobenzene	8.55	180	429504	40.9249	ug/ml	99
29) Naphthalene	8.64	128	1416975	44.4473	ug/ml	100
30) 4-Chloroaniline	8.68	127	575290	42.2516	ug/ml	100
31) Hexachlorobutadiene	8.73	225	240044	46.0030	ug/ml	100
32) 4-Chloro-3-Methylphenol	9.13	107	462185	46.2855	ug/ml	99
33) 2-Methylnaphthalene	9.33	142	1044284	44.3301	ug/ml	100
35) Hexachlorocyclopentadiene	9.48	237	179463	46.1090	ug/ml	98
36) 2,4,6-Trichlorophenol	9.61	196	287704	45.9436	ug/ml	99
37) 2,4,5-Trichlorophenol	9.66	196	326265	47.2125	ug/ml	98
39) 2-Chloronaphthalene	9.84	162	967817	51.0465	ug/ml	99
40) 2-Nitroaniline	9.94	65	308764	47.5652	ug/ml	100
41) Dimethylphthalate	10.08	163	1128059	46.0081	ug/ml	100
42) Acenaphthylene	10.27	152	1590413	45.8441	ug/ml	100
43) 2,6-Dinitrotoluene	10.18	165	270197	51.7489	ug/ml	99
44) 3-Nitroaniline	10.37	138	294166	51.7758	ug/ml	99
45) Acenaphthene	10.45	154	1019421	49.9895	ug/ml	100
46) 2,4-Dinitrophenol	10.47	184	64674	56.4681	ug/ml#	100
47) 4-Nitrophenol	10.50	65	186173	47.1303	ug/ml	99
48) Dibenzofuran	10.61	168	1405872	46.3199	ug/ml	100
49) 2,4-Dinitrotoluene	10.60	165	362792	57.1692	ug/ml	96
50) Diethylphthalate	10.78	149	1195166	51.1477	ug/ml	99
51) Fluorene	10.97	166	1166357	48.8363	ug/ml	99
52) 4-Chlorophenyl Phenyl Ethe	10.93	204	554506	45.4109	ug/ml	98
53) 4-Nitroaniline	11.00	138	292974	56.0755	ug/ml	99
54) 1,2-Diphenylhydrazine	11.09	77	1276426	45.5596	ug/ml	99
57) 4,6-Dinitro-2-Methylphenol	11.01	198	170443	60.7028	ug/ml	97
58) n-Nitrosodiphenylamine	11.06	169	859600	49.5186	ug/ml	99
59) 4-Bromophenyl Phenyl Ether	11.43	248	272352	41.4269	ug/ml	99
60) Hexachlorobenzene	11.55	284	311002	49.7975	ug/ml	99
61) Pentachlorophenol	11.74	266	139207	48.0679	ug/ml	98
62) Phenanthrene	11.97	178	1755360	47.2753	ug/ml	100
63) Anthracene	12.02	178	1780838	46.1039	ug/ml	100
64) Carbazole	12.17	167	1486261	48.0441	ug/ml	100
65) Di-n-Butyl Phthalate	12.43	149	2120581	48.9878	ug/ml	100
66) Fluoranthene	13.19	202	1915125	47.8149	ug/ml	100
68) Benzidine	13.30	184	12849	Below Cal		100
69) Pyrene	13.44	202	1979273	48.8958	ug/ml	100
71) Butyl Benzyl Phthalate	13.98	149	1003153	48.5303	ug/ml	100
72) Benzo[a]anthracene	14.68	228	1838257	45.8947	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Acq On : 2 Apr 2002 13:53
Sample : WG115413-03 LCS DUP 4/1 V182P159
Misc : 7,1 SOIL
MS Integration Params: RTEINT.P
Quant Time: Apr 3 7:38 2002

Operator: mdc
Inst : HPMS4
Multiplr: 1.00

Quant Results File: BNA.RES

Quant Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
Title : M8270/625/Initial cal. 04/01/02
Last Update : Wed Apr 03 07:35:47 2002
Response via : Initial Calibration
DataAcq Meth : BNA

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	14.61	252	570864	53.2814	ug/ml	100
74) Chrysene	14.73	228	1857479	47.4041	ug/ml	99
75) bis(2-Ethylhexyl)phthalate	14.52	149	1390868	48.3035	ug/ml	100
77) Di-n-Octyl Phthalate	15.29	149	2356531	46.6287	ug/ml	99
78) Benzo[b]fluoranthene	16.18	252	1779944	46.4179	ug/ml	100
79) Benzo[k]fluoranthene	16.23	252	1678433	44.8636	ug/ml	100
80) Benzo[a]pyrene	16.78	252	1567915	43.0841	ug/ml	100
81) Indeno[1,2,3-cd]pyrene	19.34	276	1632934	49.3098	ug/ml	99
82) Dibenz[ah]anthracene	19.34	278	1348351	49.5939	ug/ml	99
83) Benzo[ghi]perylene	20.11	276	1299419	51.7943	ug/ml	100

(#) = qualifier out of range (m) = manual integration

4M12772.D BNA.M

Wed Apr 03 07:38:47 2002

HPMS4

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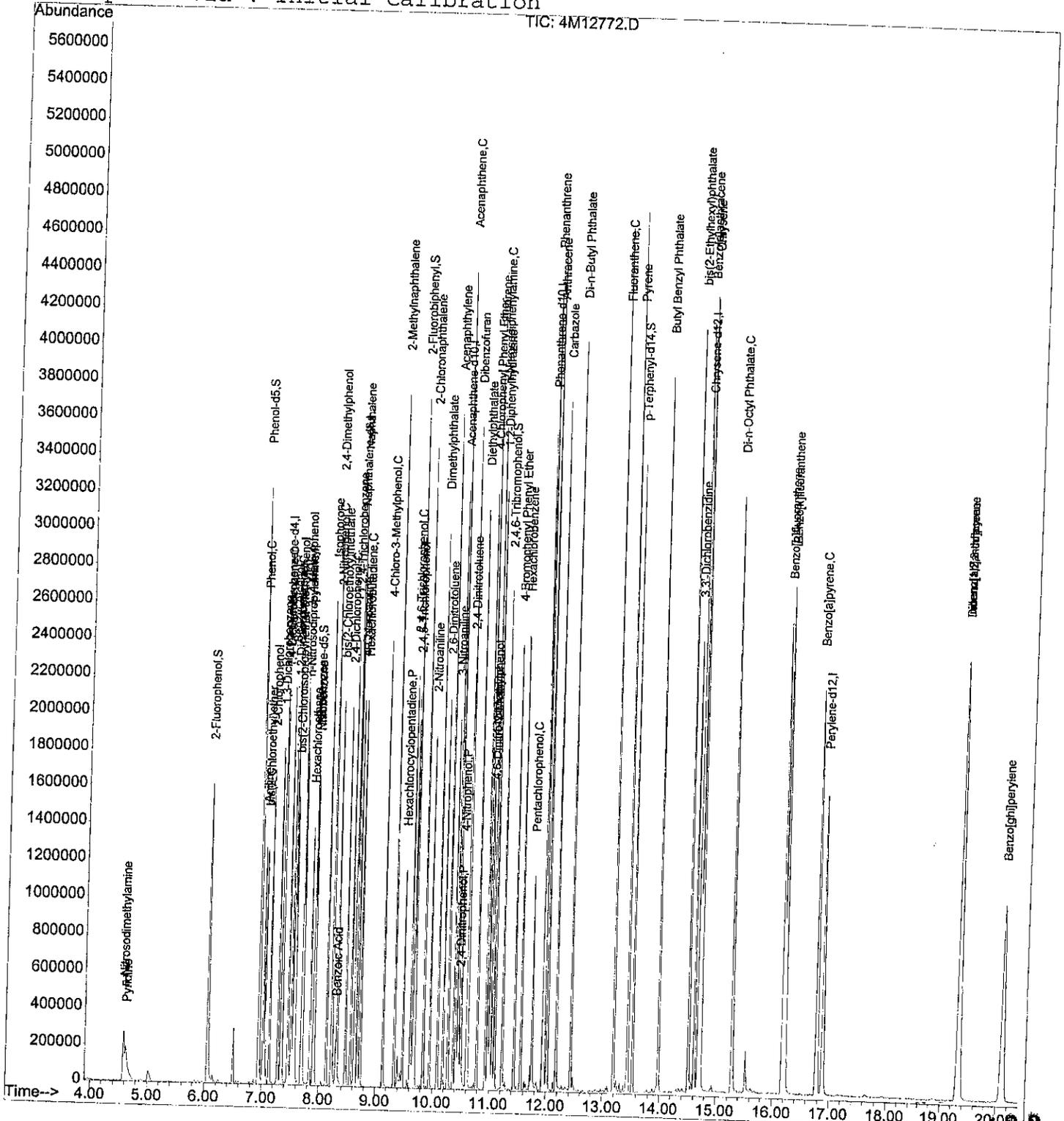
Page 3

Acq On : 2 Apr 2002 13:53
 Sample : WG115413-03 LCS DUP 4/1 V182P159
 Misc : 7,1 SOIL
 MS Integration Params: RTEINT.P
 Quant Time: Apr 3 7:38 2002

Operator: mdc
 Inst : HPMS4
 Multiplr: 1.00

Quant Results File: BNA.RES

Method : C:\HPCHEM\1\METHODS\BNA.M (RTE Integrator)
 Title : M8270/625/Initial cal. 04/01/02
 Last Update : Wed Apr 03 07:35:47 2002
 Response via : Initial Calibration



Injection Log

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4M12734.D	1.	✓ WG115403-01 50PPM DFTPP		
2	2	4M12735.D	1.	WG115403-02 50PPM BNA STD	1,1 SOS58-27	1 Apr 2002 09:54
3	3	4M12736.D	1.	WG115403-03 3PPM BNA STD	1,1 SOS59-14-1	1 Apr 2002 10:12
4	4	4M12737.D	1.	WG115403-04 10PPM BNA STD	1,1 SOS59-14-2	1 Apr 2002 10:43
5	5	4M12738.D	1.	WG115403-05 20PPM BNA STD	1,1 SOS59-14-3	1 Apr 2002 11:14
6	6	4M12739.D	1.	WG115403-06 80PPM BNA STD	1,1 SOS59-14-4	1 Apr 2002 11:46
7	7	4M12740.D	1.	WG115403-07 100PPM BNA STD	1,1 SOS59-14-5	1 Apr 2002 12:16
8	8	4M12741.D	1.	WG115403-08 120PPM BNA STD	1,1 SOS59-14-6	1 Apr 2002 12:46
9	9	4M12742.D	1.	WG115403-09 50PPM Alt source BNA STD	1,1 SOS59-14-7	1 Apr 2002 13:18
10	10	4M12743.D	1.	60PPM Hanlin STD	1,1 SOS57-48	1 Apr 2002 13:49
11	11	4M12744.D	1.	WG115325-01 BLK 3/29 V182P139	1,1 SOS59-11-4	1 Apr 2002 14:20
12	12	4M12745.D	1.	WG115325-02 LCS 3/29 V182P139	2,1	1 Apr 2002 14:47
13	13	4M12746.D	1.	WG115325-03 LCS DUP 3/29 V182P139	2,1	1 Apr 2002 15:17
14	14	4M12747.D	1.	WG115299-01 TBLK 3/28	2,1	1 Apr 2002 15:49
15	15	4M12748.D	1.	L0203454-03 TCLP	17,1	1 Apr 2002 16:19
16	16	4M12749.D	1.	L0203511-01 TCLP	17,1	1 Apr 2002 16:49
17	17	4M12750.D	1.	L0203511-03 TCLP	17,1	1 Apr 2002 16:49
18	18	4M12751.D	1.	L0203517-01 TCLP	17,1	1 Apr 2002 17:20
19	19	4M12752.D	2.	L0203335-12 RE 2X	17,1	1 Apr 2002 17:52
20	20	4M12753.D	1.	L0203556-01	1,2,RE	1 Apr 2002 18:23
21	21	4M12754.D	1.	L0203556-02	2,1	1 Apr 2002 18:54
22	22	4M12755.D	1.	L0203556-03	2,1	1 Apr 2002 19:25
23	23	4M12756.D	1.	L0203556-04	2,1	1 Apr 2002 19:56
24	24	4M12757.D	1.	L0203556-05	2,1	1 Apr 2002 20:27
25	25	4M12758.D	1.	L0203556-06	2,1	1 Apr 2002 20:58
26	26	4M12759.D	1.	L0203556-07	2,1	1 Apr 2002 21:29
27	27	4M12760.D	1.	L0203556-08	2,1	1 Apr 2002 22:00
28	28	4M12761.D	1.	L0203556-09	2,1	1 Apr 2002 22:31
29	29	4M12762.D	10.	L0203556-01 10X	2,1	1 Apr 2002 23:01
30	30	4M12763.D	10.	L0203556-05 10X	2,10	1 Apr 2002 23:31
				<i>W/C 4/2/02</i>	2,10	2 Apr 2002 08:27
						2 Apr 2002 08:57

EC2 4/2/02

				misc info	Injected
1	1	4M12764.D	1.	✓ WG115478-01 50PPM DFTPP	
2	2	4M12765.D	1.	WG115478-02 50PPM BNA STD	1,1 SOS58-27 2 Apr 2002 10:01
3	3	4M12766.D	1.	50PPM 2-Ethoxyethanol	1,1 SOS59-14-1 2 Apr 2002 10:19
4	4	4M12767.D	1.	WG115351-01 BLK 3/29 V182P143	1,1 SOS58-34 2 Apr 2002 10:50
5	5	4M12768.D	1.	WG115351-02 LCS 3/29 V182P143	10,1 SOIL 2 Apr 2002 11:20
6	6	4M12769.D	1.	WG115351-03 LCS DUP 3/29 V182P143	10,1 SOIL 2 Apr 2002 11:51
7	7	4M12770.D	1.	WG115413-01 BLK 4/1 V182P159	10,1 SOIL 2 Apr 2002 12:21
8	8	4M12771.D	1.	WG115413-02 LCS 4/1 V182P159	7,1 SOIL 2 Apr 2002 12:52
9	9	4M12772.D	1.	WG115413-03 LCS DUP 4/1 V182P159	7,1 SOIL 2 Apr 2002 13:22
10	10	4M12773.D	1.	✓ L0203568-01	7,1 SOIL 2 Apr 2002 13:53
11	11	4M12774.D	1.	✓ L0204001-01	10,1 SOIL 2 Apr 2002 14:24
12	12	4M12775.D	1.	✓ WG115512-01 BLK 4/2 V182P167	7,1 SOIL 2 Apr 2002 14:55
13	13	4M12776.D	1.	✓ L0203560-01	17,1 2 Apr 2002 15:26
14	14	4M12777.D	1.	✓ WG115453-02 L0203560-02	17,1 2 Apr 2002 15:56
15	15	4M12778.D	1.	✓ WG115453-03 L0203560-02 SPK	17,1 2 Apr 2002 16:26
16	16	4M12779.D	1.	L0203560-03	17,1 2 Apr 2002 16:56
17	17	4M12780.D	1.	L0203560-06	17,1 2 Apr 2002 17:26
18	18	4M12781.D	1.	L0203560-07	17,1 2 Apr 2002 17:57
19	19	4M12782.D	1.	L0203560-09	17,1 2 Apr 2002 18:27
20	20	4M12783.D	1.	L0203560-11	17,1 2 Apr 2002 18:57
21	21	4M12784.D	1.	L0203560-16	17,1 2 Apr 2002 19:27
22	22	4M12785.D	1.	L0203511-01	10,1 SOIL 2 Apr 2002 19:57
23	23	4M12786.D	1.	L0203511-03	10,1 SOIL 2 Apr 2002 20:28
					2 Apr 2002 20:58

*made 4/3/02
200 4/3/02*

KEMRON ENVIRONMENTAL SERVICES

Semivolatile GC/MS Laboratory Maintenance / Runlog

Analysis Date/Time 4/2/02
Analyst Initials mt
ISTD # 12110220

Instrument ID HP4114 Column ID R18T51-015
Data Subdirectory 250202

SOP # MSS01 Rev. # 7 8270C
SOP # MSS02 Rev. # 625
SOP # MSS03 Rev. # PAH 8270C

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Preventative Maintenance	Additional Maintenance
<input type="checkbox"/> Change o-ring	Problem: _____
<input checked="" type="checkbox"/> Change liner	_____
<input type="checkbox"/> Change septum	_____
<input type="checkbox"/> Clip column (____ cm)	_____
<input type="checkbox"/> Injection port seal (goldseal)	_____
<input type="checkbox"/> Change gases _____	Action Taken: _____
Returned To Control?	_____
Yes ___ No ___	_____

Comments

L0202065-01 - 551-4 low
L0202070-02 - 553 high, need 5x #2933
↓ -02 4PK - 553 high
L02020571-01 - 551.5 low (concrete sample)
↓ -02 - 551.5 low

Reviewed By: FJC 4/2/02

Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
 Date/Time Extracted: 4-01-02 @ 12:45 Date TV/KD: 04/01/02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-08#15 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-38 #2 Spike #: B = ---

Analytical Work Group WG 1-546

Extract Relinquished By: DP
 Extract Received By & Date: 2/4/1/02

	Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					30.06g	500 uL	1mL	T				WG 115413-01	
2	LCS					1.03g	500 uL		C				WG 1-02	
3	LCS DUP					1.06g			C				WG 1-03	
4	04-001-01	827-7CL				1.02g			C					
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
04/01/02

Methylene Chloride Lot #: 42015
 Hexane Lot #: _____
 Ether Lot #: _____
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Reagent: _____ Lot #: _____
 Acid: _____ Lot #: _____
 Florisil Lot #: _____
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: ER 2005

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	✓			
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	
Sulfur 3660B			✓

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

General Comments: *None*

Extraction Anomalies: *None*

Concentration Anomalies: *None*

Clean-Up Anomalies: *None applicable*

Supervisor Review: _____ Date: _____

Semi-Volatile GCMS Checklist

Run Date: 4/1/02

Analyst: m lc

Instrument: HPMS4

Workorders:	Due Date:	Priority:
03-556	4/8	
03-454	4/3	A1
03-511	4/5	
03-517	4/4	A1
03-335 RE	3/29	

		Analyst
System Performance Check:	DFTPP	✓
	Tailing	✓
	DDT Breakdown	✓
Initial Calibration:	Average RF	✓
	Linear or quadratic regression	✓
	Alt Source Check	✓
Continuing Calibration:	Continuing Calibration	
	Client Specific Requirements	
	Special Standards	✓
Blanks:	Quant Report/Chromatogram	✓
	Surrogates	✓
	Library search	NA
LCS/LCS DUP:	Quant Report/Chromatogram	✓
	Surrogates	✓
	Spike Compounds	✓
	MS/MSD	
	Excel Spreadsheet	✓
Samples:	Quant Reports/Chromatograms	✓
	Spectra of TCL Hits	✓
	Surrogates	✓
	Internal Standards	✓
	Library searches	✓
	Correct Factors	✓
	Check Sample Histories	✓
Data Package:	Run logs	✓
	Bench sheets	✓
	Upload results	✓
	Seedpak workgroups	✓
	Level 2	✓
	Level 3	
	Level 4 copies	
	Level x	✓
	Case narratives	✓
Corrective Action:		Supervisor
Results Reporting/Data Qualifiers:		✓
Client Data Package Assembly:		✓
Check for Completeness:		✓
Check for compliance with method and project requirements:		✓
Check the reasonableness of results:		✓

✓ = Checked & OK
NA = Not Applicable

Comments:
03-335 RE not reported, use 1st extraction
03-556-64 needs RE

Primary Reviewer: m lc 4/2/02
 Secondary Reviewer: CCX 4/2/02
 Supervisor Review: [Signature] 4/2/02

Semi-volatile GCMS Checklist

Run Date: 4/2/02
 Analyst: mdc
 Instrument: HPMS4

Workorders: 03-568 Due Date: 4/5 Priority:
04-001 4/5 P1
03-560 4/5 A1
03-511 4/5

		Analyst
System Performance Check:	DFTPP	✓
	Tailing	✓
	DDT Breakdown	✓
Initial Calibration:	Average RF	
	Linear or quadratic regression	
	Alt Source Check	
Continuing Calibration:	Continuing Calibration	✓
	Client Specific Requirements	✓
	Special Standards	✓
Blanks:	Quant Report/Chromatogram	✓
	Surrogates	✓
	Library search	
LCS/LCS DUP:	Quant Report/Chromatogram	✓
	Surrogates	✓
	Spike Compounds	✓
	MS/MSD	
	Excel Spreadsheet	✓
Samples:	Quant Reports/Chromatograms	✓
	Spectra of TCL Hits	✓
	Surrogates	✓
	Internal Standards	✓
	Library searches	
	Correct Factors	✓
	Check Sample Histories	
Data Package:	Run logs	✓
	Bench sheets	✓
	Upload results	✓
	Seedpak workgroups	✓
	Level 2	✓
	Level 3	✓
	Level 4 copies	✓
	Level x	
	Case narratives	
		Supervisor
Corrective Action:		✓
Results Reporting/Data Qualifiers:		✓
Client Data Package Assembly:		✓
Check for Completeness:		✓
Check for compliance with method and project requirements:		✓
Check the reasonableness of results:		✓

✓ = Checked & OK
 NA = Not Applicable

Comments:

03-568 needs P1
03-560-02 needs A1

Primary Reviewer: mdc 4/3/02
 Secondary Reviewer: [Signature] 4/3/02
 Supervisor Review: [Signature] 4/3/02

Example 8270 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax)(Cis)] / [(Ais)(Cx)]$$

Where:

Ax = Area of the characteristic ion for the compound being measured
 Cis = Concentration of the specific internal standard (ng/ml).
 Ais = Area of the characteristic ion for the specific internal standard.
 Cx = Concentration of the compound being measured (ng/ml).

Example:

10000
 100
 5000
 100

RF 2

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

$$C = [(Ax)(Cis)(Vf)(D)] / [(Ais)(RF)(Vi)]$$

Where:

Ax = Area of the characteristic ion for for the compound being measured
 Cis = Concentration of the specific internal standard in ng/ml (ug/L).
 Vf = Final volume of sample extract (mL). (prep log)
 D = Dilution factor for sample as a multiplier (10X = 10).
 Ais = Area of the characteristic ion for for the specific internal standard.
 RF = Response factor from ICAL calculated above.
 Vi = Initial volume of sample (mL). (prep log)

Example:

10000
 4000
 1
 1
 5000
 2
 1000

C (ug/L) = 4

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:

$$C = [(Ax)(Cis)(Vf)(D)] / [(Ais)(RF)(Wi)]$$

Where:

Ax = Area of the characteristic ion for for the compound being measured
 Cis = Concentration of the specific internal standard in ng/ml (ug/L).
 Vf = Final volume of sample extract (mL).
 D = Dilution factor for sample as a multiplier (10X = 10).
 Ais = Area of the characteristic ion for for the specific internal standard.
 RF = Response factor from ICAL calculated above.
 Wi = Initial weight of sample (g).

Example:

10000
 4000
 1
 1
 5000
 2
 30

C (ug/kg) 133.3333

2.2.2 Pesticide GC Data (8081)

REPORT NARRATIVE
GC PESTICIDES

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8081

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Samples: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.

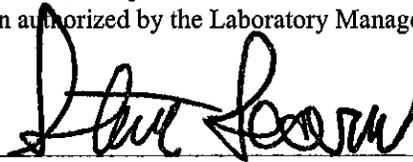
Endrin/ DDT Breakdown : All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED:



DATE:

4/3/02

Rev. 7/14/00

Pesticides – GC DATA (8081)

Login Number 04-001

A. QC Summary

- Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Holding Time Summary
- Surrogate Recovery Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Instrument Run Log
- Extraction Bench Sheet

B. Sample Data

- Target compound and surrogate results summary (See Summary Report)
- Chromatograms and quantitation report

C. Standards Data

- Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- Retention Time Window Summary

D. Raw QC Data

- Endrin/DDT Breakdown chromatogram and quantitation report
- Method blank chromatogram and quantitation report
- LCS chromatogram and quantitation report
- MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: ECZ Date: 4/3/02

2.2.2.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0204001
Blank File ID: 9G19327.R
Date Analyzed: 04/01/02
Time Analyzed: 18:29
Analyst: ECL

Work Group: WG115454
Blank Sample ID: WG115410-01
Instrument ID: HP9
Method: 8081A

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115410-02	9G19328.R	04/01/02 18:53	01
LCS2	WG115410-03	9G19329.R	04/01/02 19:17	01
027-EQBFS-01	L0204001-01	9G19330.R	04/01/02 19:41	01

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KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/01/2002 Sample ID: WG115410-01
 Instrument ID: HP9 Run Time: 18:29 Method: 8081A
 File ID: 9G19327.R Analyst: ECL Matrix: Solid
 Workgroup (AAB#): WG115454 Units: ug/kg
 Contract #: _____ Cal ID: HP9-27-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
4,4'-DDD	0.825	3.30	0.825	1.00	ND
4,4'-DDE	0.825	3.30	0.825	1.00	ND
4,4'-DDT	0.825	3.30	0.825	1.00	ND
Aldrin	0.400	1.65	0.400	1.00	ND
alpha-BHC	0.400	1.65	0.400	1.00	ND
alpha-Chlordane	0.400	1.65	0.400	1.00	ND
beta-BHC	0.400	1.65	0.400	1.00	ND
delta-BHC	0.400	1.65	0.400	1.00	ND
Dieldrin	0.825	3.30	0.825	1.00	ND
Endosulfan I	0.400	1.65	0.400	1.00	ND
Endosulfan II	0.825	3.30	0.825	1.00	ND
Endosulfan Sulfate	0.825	3.30	0.825	1.00	ND
Endrin	0.825	3.30	0.825	1.00	ND
Endrin Aldehyde	0.825	3.30	0.825	1.00	ND
Endrin Ketone	0.825	3.30	0.825	1.00	ND
gamma-BHC	0.400	1.65	0.400	1.00	ND
gamma-Chlordane	0.400	1.65	0.400	1.00	ND
Heptachlor	0.400	1.65	0.400	1.00	ND
Heptachlor Epoxide	0.400	1.65	0.400	1.00	ND
Methoxychlor	0.825	16.5	0.825	1.00	ND
Toxaphene	16.7	33.0	16.7	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
Decachlorobiphenyl	94.8	30 - 173	PASS
2,4,5,6-Tetrachloro-M-Xylene	76.4	29 - 133	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 _____ Run Date: 04/01/2002 _____ Sample ID: WG115410-02 _____
 Instrument ID: HP9 _____ Run Time: 18:53 _____ Method: 8081A _____
 File ID: 9G19328.R _____ Analyst: ECL _____ Matrix: Solid _____
 Workgroup (AAB#): WG115454 _____ Units: ug/kg _____
 Contract #: _____ Cal ID: HP9-27-MAR-2002 _____

Analytes	Expected	Found	% Rec	LCS Limits	Q
4,4'-DDD	16.7	16.3	97.9	69 - 128	
4,4'-DDE	16.7	16.8	101	65 - 127	
4,4'-DDT	16.7	17.3	104	70 - 126	
Aldrin	16.7	16.4	98.7	45 - 122	
alpha-BHC	16.7	16.3	97.6	62 - 117	
alpha-Chlordane	16.7	16.2	97.4	59 - 131	
beta-BHC	16.7	16.1	96.7	64 - 112	
delta-BHC	16.7	16.1	96.5	57 - 124	
Dieldrin	16.7	16.6	99.8	70 - 120	
Endosulfan I	16.7	12.8	76.6	56 - 128	
Endosulfan II	16.7	12.0	72.2	56 - 113	
Endosulfan Sulfate	16.7	11.0	65.7	49 - 109	
Endrin	16.7	15.4	92.3	72 - 126	
Endrin Aldehyde	16.7	10.4	62.6	32 - 100	
Endrin Ketone	16.7	13.4	80.4	59 - 106	
gamma-BHC	16.7	15.9	95.3	64 - 114	
gamma-Chlordane	16.7	16.4	98.4	65 - 121	
Heptachlor	16.7	15.6	93.4	63 - 121	
Heptachlor Epoxide	16.7	16.4	98.6	66 - 119	
Methoxychlor	16.7	16.7	100	69 - 131	
Toxaphene	NS	-----	-----	-----	NO LIM

Surrogates	% Recovery	Surrogate Limits	Qualifier
Decachlorobiphenyl	97.8	30 - 173	PASS
2,4,5,6-Tetrachloro-M-Xylene	78.9	29 - 133	PASS

* Analyte outside control limits
 NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginum: L0204001 Worknum: WG115454 Method: 8081A
 Instrument ID: HP9 Cal ID: HP9-27-MAR-2002 Matrix: Solid
 Analyst: ECL Contract #: Units: ug/kg
 Sample ID: WG115410-02 LCS File ID: 9G19328.R Run Date: 04/01/2002 18:53
 Sample ID: WG115410-03 LCS2 File ID: 9G19329.R Run Date: 04/01/2002 19:17

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
4,4'-DDD	16.7	16.3	97.9	16.6	15.8	94.8	3.51	69 - 128	40	
4,4'-DDE	16.7	16.8	101	16.6	16.2	97.2	3.7	65 - 127	40	
4,4'-DDT	16.7	17.3	104	16.6	16.8	101	2.77	70 - 126	40	
Aldrin	16.7	16.4	98.7	16.6	15.8	95.1	4	45 - 122	40	
alpha-BHC	16.7	16.3	97.6	16.6	15.3	92.0	6.17	62 - 117	40	
alpha-Chlordane	16.7	16.2	97.4	16.6	15.6	94.1	3.74	59 - 131	40	
beta-BHC	16.7	16.1	96.7	16.6	15.4	92.4	4.84	64 - 112	40	
delta-BHC	16.7	16.1	96.5	16.6	15.3	92.1	4.95	57 - 124	40	
Dieldrin	16.7	16.6	99.8	16.6	16.0	96.1	4.15	70 - 120	40	
Endosulfan I	16.7	12.8	76.6	16.6	12.3	73.9	3.92	56 - 128	40	
Endosulfan II	16.7	12.0	72.2	16.6	11.6	70.0	3.45	56 - 113	40	
Endosulfan Sulfate	16.7	11.0	65.7	16.6	10.6	63.9	3.16	49 - 109	40	
Endrin	16.7	15.4	92.3	16.6	14.8	89.3	3.65	72 - 126	40	
Endrin Aldehyde	16.7	10.4	62.6	16.6	9.89	59.5	5.27	32 - 100	40	
Endrin Ketone	16.7	13.4	80.4	16.6	13.0	78.2	3.11	59 - 106	40	
gamma-BHC	16.7	15.9	95.3	16.6	15.4	92.8	2.96	64 - 114	40	
gamma-Chlordane	16.7	16.4	98.4	16.6	15.8	95.0	3.74	65 - 121	40	
Heptachlor	16.7	15.6	93.4	16.6	14.9	89.6	4.52	63 - 121	40	
Heptachlor Epoxide	16.7	16.4	98.6	16.6	15.8	94.9	4.11	66 - 119	40	
Methoxychlor	16.7	16.7	100	16.6	16.5	99.4	1.01	69 - 131	40	
Toxaphene								25 - 138	40	*

Surrogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Decachlorobiphenyl	97.8	103	30 - 173	PASS
2,4,5,6-Tetrachloro-M-Xylene	78.9	80.7	29 - 133	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8081A

AAB#: WG115454

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	01-APR-02	14	3.09	01-APR-02	40	0.303	
027-EQBFS-01	29-MAR-02	30-MAR-02	01-APR-02	14	3.09	01-APR-02	40	0.320	

* EXT = MISSED EXTRACTION HOLD TIME
 *ANAL = MISSED ANALYTICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0204001
Instrument Id: HP9
Workgroup (AAB#): WG115454

Method: 8081
Matrix: SOLID

Sample Number	Dilution	Tag	1	2
L0204001-01	1.00	01	86.3	111
WG115410-01	1.00	01	76.4	94.8
WG115410-02	1.00	01	78.9	97.8
WG115410-03	1.00	01	80.7	103

Surrogates	Surrogate Limits
1 - 2,4,5,6-Tetrachloro-m-x	29 - 133
2 - Decachlorobiphenyl	30 - 173

Underline = Result out of surrogate limits

DL = surrogate diluted out

442

Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002

Calibration Files

100 =9G19259.D 250 =9G19258.D 500 =9G19257.D
 1000 =9G19256.D 2000 =9G19255.D

Compound	100	250	500	1000	2000	Avg		%RSD
1) L1 TOXAPHENE-1	2.775	2.772	3.026	2.912	3.106	2.918	E5	5.11
2) L1 TOXAPHENE-2	4.706	4.523	4.606	4.458	4.573	4.573	E5	2.02
3) L1 TOXAPHENE-3	6.585	6.442	6.659	6.595	6.935	6.643	E5	2.73
4) L1 TOXAPHENE-4	6.489	6.496	6.639	6.684	7.163	6.694	E5	4.12
5) L1 TOXAPHENE-5	7.602	7.772	8.149	8.032	8.376	7.986	E5	3.83

Signal #2 Calibration Files

100 =9G19259.D 250 =9G19258.D 500 =9G19257.D
 1000 =9G19256.D 2000 =9G19255.D

Compound	100	250	500	1000	2000	Avg		%RSD
1) L1 TOXAPHENE-1	2.598	2.569	2.621	2.552	2.936	2.655	E5	5.99
2) L1 TOXAPHENE-2	0.849	0.911	0.996	1.061	1.112	0.986	E6	10.88
3) L1 TOXAPHENE-3	4.565	5.036	5.504	5.932	6.199	5.447	E5	12.14
4) L1 TOXAPHENE-4	4.770	5.123	5.842	6.341	6.889	5.793	E5	14.95
5) L1 TOXAPHENE-5	6.480	6.814	7.352	7.776	8.200	7.324	E5	9.52

Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002

Calibration Files

4 =9G19266.D 10 =9G19265.D 20 =9G19264.D
 50 =9G19263.D 100 =9G19262.D 200 =9G19261.D

Compound	4	10	20	50	100	200	Avg	%RSD	
1) S 2,4,5,6-Tetrachloro	4.111	4.224	4.472	4.606	4.743	4.946	4.517	E7	6.97
2) alpha-BHC	4.848	5.091	5.762	6.237	6.458	6.844	5.873	E7	13.39
3) gamma-BHC	4.554	4.669	5.146	5.514	5.675	6.008	5.261	E7	10.94
4) beta-BHC	2.272	2.253	2.318	2.382	2.380	2.466	2.345	E7	3.40
5) Heptachlor	4.091	4.175	4.548	4.895	5.078	5.421	4.701	E7	11.13
6) delta-BHC	3.970	4.205	4.824	5.237	5.428	5.815	4.913	E7	14.63
7) Aldrin	3.918	4.002	4.433	4.748	4.884	5.145	4.522	E7	10.89
8) Heptachlor Epoxide	3.880	3.869	4.131	4.322	4.396	4.606	4.201	E7	7.02
9) gamma-Chlordane	3.652	3.764	4.026	4.224	4.311	4.527	4.084	E7	8.19
10) alpha-Chlordane	3.587	3.605	3.857	4.019	4.075	4.225	3.895	E7	6.67
11) Endosulfan I	3.498	3.507	3.754	3.917	3.981	4.158	3.802	E7	6.99
12) 4,4'-DDE	3.218	3.326	3.696	4.006	4.138	4.377	3.794	E7	12.16
13) Dieldrin	3.467	3.575	3.909	4.180	4.298	4.529	3.993	E7	10.47
14) Endrin	1.431	1.455	1.587	1.685	1.723	1.792	1.612	E7	9.12
15) 4,4'-DDD	2.655	2.740	3.050	3.272	3.363	3.555	3.106	E7	11.48
16) Endosulfan II	3.100	3.146	3.332	3.491	3.552	3.739	3.393	E7	7.28
17) 4,4'-DDT	2.126	2.421	2.715	3.050	3.217	3.504	2.839	E7	18.15
18) Endrin Aldehyde	2.968	2.716	2.748	2.736	2.729	2.922	2.803	E7	3.97
19) Endosulfan Sulfate	2.500	2.621	2.849	2.978	2.984	3.109	2.840	E7	8.27
20) Methoxychlor	1.333	1.473	1.620	1.671	1.685	1.828	1.601	E7	10.88
21) Endrin Ketone	3.050	3.314	3.537	3.598	3.587	3.699	3.464	E7	6.92
22) S Decachlorobiphenyl	2.905	2.966	3.036	2.890	2.757	2.733	2.881	E7	4.08

Signal #2 Calibration Files

4 =9G19266.D 10 =9G19265.D 20 =9G19264.D
 50 =9G19263.D 100 =9G19262.D 200 =9G19261.D

Compound	4	10	20	50	100	200	Avg	%RSD	
1) S 2,4,5,6-Tetrachloro	5.710	5.858	5.990	6.174	6.393	6.678	6.134	E7	5.84
2) alpha-BHC	6.814	7.635	8.244	8.924	9.453	9.870	8.490	E7	13.55
3) gamma-BHC	6.108	6.700	7.131	7.655	8.080	8.462	7.356	E7	11.96
4) beta-BHC	3.096	3.114	3.126	3.176	3.273	3.401	3.197	E7	3.70
5) Heptachlor	5.763	6.062	6.326	6.705	7.074	7.419	6.558	E7	9.55
6) delta-BHC	5.354	5.984	6.480	7.059	7.500	7.937	6.719	E7	14.38
7) Aldrin	5.222	5.738	6.111	6.580	6.974	7.320	6.324	E7	12.42
8) Heptachlor Epoxide	4.992	5.260	5.455	5.739	6.037	6.334	5.636	E7	8.86
9) gamma-Chlordane	4.810	4.985	5.171	5.482	5.795	6.078	5.387	E7	9.07
10) alpha-Chlordane	4.634	4.826	4.983	5.204	5.464	5.738	5.141	E7	8.00
11) Endosulfan I	4.298	4.539	4.731	4.987	5.261	5.533	4.891	E7	9.41
12) 4,4'-DDE	3.942	4.355	4.676	5.059	5.412	5.733	4.863	E7	13.76
13) Dieldrin	4.306	4.680	4.980	5.362	5.708	6.052	5.181	E7	12.58
14) Endrin	1.849	1.973	2.063	2.210	2.356	2.578	2.172	E7	12.29
15) 4,4'-DDD	3.214	3.532	3.754	4.039	4.319	4.673	3.922	E7	13.58
16) Endosulfan II	3.836	3.983	4.034	4.334	4.594	4.925	4.284	E7	9.70

Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002

Calibration Files

4	=9G19266.D	10	=9G19265.D	20	=9G19264.D
50	=9G19263.D	100	=9G19262.D	200	=9G19261.D

	Compound	4	10	20	50	100	200	Avg		%RSD
17)	4,4'-DDT	2.996	3.128	3.132	3.688	3.989	4.339	3.545	E7	15.42
18)	Endrin Aldehyde	2.830	2.961	3.054	3.198	3.403	3.647	3.182	E7	9.48
19)	Endosulfan Sulfate	3.011	3.172	3.290	3.489	3.762	4.073	3.466	E7	11.40
20)	Methoxychlor	1.595	1.651	1.685	1.747	1.847	1.983	1.751	E7	8.14
21)	Endrin Ketone	3.591	3.818	3.967	4.193	4.440	4.718	4.121	E7	10.06
22) S	Decachlorobiphenyl	3.686	3.598	3.479	3.382	3.426	3.534	3.517	E7	3.20

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD1A.CH Vial: 11
 Acq On : 27 Mar 2002 16:13 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD2B.CH Vial: 11
 Acq On : 27 Mar 2002 16:37 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	L1 TOXAPHENE-1	500.000	541.982	-8.4	105	-0.02
2	L1 TOXAPHENE-2	500.000	456.509	8.7	91	-0.02
3	L1 TOXAPHENE-3	500.000	441.129	11.8	88	-0.01
4	L1 TOXAPHENE-4	500.000	477.021	4.6	96	-0.01
5	L1 TOXAPHENE-5	500.000	415.534	16.9#	81	-0.01

Signal #2

1	L1 TOXAPHENE-1	500.000	431.884	13.6	88	0.00
2	L1 TOXAPHENE-2	500.000	429.863	14.0	85	0.00
3	L1 TOXAPHENE-3	500.000	481.353	3.7	95	0.00
4	L1 TOXAPHENE-4	500.000	520.677	-4.1	103	0.00
5	L1 TOXAPHENE-5	500.000	400.325	19.9#	80	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD1A.CH Vial: 18
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD2B.CH Vial: 18
 Acq On : 27 Mar 2002 19:26 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
2	alpha-BHC	20.000	17.832	10.8	91	0.00
3	gamma-BHC	20.000	17.985	10.1	92	0.00
4	beta-BHC	20.000	18.552	7.2	94	-0.01
5	Heptachlor	20.000	17.573	12.1	91	0.00
6	delta-BHC	20.000	17.763	11.2	90	-0.01
7	Aldrin	20.000	17.644	11.8	90	-0.01
8	Heptachlor Epoxide	20.000	17.918	10.4	91	-0.01
9	gamma-Chlordane	20.000	18.109	9.5	92	-0.01
10	alpha-Chlordane	20.000	18.263	8.7	92	-0.01
11	Endosulfan I	20.000	18.065	9.7	92	-0.01
12	4,4'-DDE	20.000	17.722	11.4	91	-0.01
13	Dieldrin	20.000	18.041	9.8	92	-0.01
14	Endrin	20.000	17.410	13.0	88	-0.01
15	4,4'-DDD	20.000	17.845	10.8	91	-0.01
16	Endosulfan II	20.000	18.252	8.7	93	-0.01
17	4,4'-DDT	20.000	17.655	11.7	92	-0.01
18	Endrin Aldehyde	20.000	17.057	14.7	87	-0.01
19	Endosulfan Sulfate	20.000	18.809	6.0	94	-0.01
20	Methoxychlor	20.000	18.639	6.8	92	-0.01
21	Endrin Ketone	20.000	18.441	7.8	90	-0.01

	Signal #2	Amount	Calc.	%Dev	Area%	Dev(min)
2	alpha-BHC	20.000	18.916	5.4	97	0.00
3	gamma-BHC	20.000	18.903	5.5	97	0.00
4	beta-BHC	20.000	19.085	4.6	98	0.00
5	Heptachlor	20.000	18.589	7.1	96	0.00
6	delta-BHC	20.000	18.627	6.9	97	0.00
7	Aldrin	20.000	18.687	6.6	97	0.00
8	Heptachlor Epoxide	20.000	18.679	6.6	96	0.00
9	gamma-Chlordane	20.000	18.677	6.6	97	0.00
10	alpha-Chlordane	20.000	18.805	6.0	97	0.00
11	Endosulfan I	20.000	18.738	6.3	97	0.00
12	4,4'-DDE	20.000	18.592	7.0	97	0.00
13	Dieldrin	20.000	18.864	5.7	98	0.00

Evaluate Continuing Calibration report

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD1A.CH Vial: 18
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD2B.CH Vial: 18
 Acq On : 27 Mar 2002 19:26 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
14	Endrin	20.000	18.075	9.6	95	0.00
15	4,4'-DDD	20.000	18.546	7.3	97	0.00
16	Endosulfan II	20.000	18.814	5.9	100	0.00
17	4,4'-DDT	20.000	18.250	8.8	103	0.00
18	Endrin Aldehyde	20.000	17.432	12.8	91	0.00
19	Endosulfan Sulfate	20.000	18.370	8.1	97	0.00
20	Methoxychlor	20.000	18.739	6.3	97	0.00
21	Endrin Ketone	20.000	18.532	7.3	96	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	50.000	60.463	-20.9#	119	0.00
2	alpha-BHC	50.000	61.892	-23.8#	117	0.00
3	gamma-BHC	50.000	60.935	-21.9#	116	0.00
4	beta-BHC	50.000	59.360	-18.7#	117	0.00
5	Heptachlor	50.000	61.688	-23.4#	118	0.00
6	delta-BHC	50.000	61.893	-23.8#	116	0.00
7	Aldrin	50.000	61.315	-22.6#	117	0.00
8	Heptachlor Epoxide	50.000	59.622	-19.2#	116	0.00
9	gamma-Chlordane	50.000	59.881	-19.8#	116	0.00
10	alpha-Chlordane	50.000	59.614	-19.2#	116	0.00
11	Endosulfan I	50.000	59.679	-19.4#	116	0.00
12	4,4'-DDE	50.000	61.227	-22.5#	116	0.00
13	Dieldrin	50.000	60.468	-20.9#	116	0.00
14	Endrin	50.000	67.428	-34.9#	129	0.00
15	4,4'-DDD	50.000	60.416	-20.8#	115	0.00
16	Endosulfan II	50.000	59.233	-18.5#	115	0.00
17	4,4'-DDT	50.000	63.183	-26.4#	118	0.00
18	Endrin Aldehyde	50.000	55.635	-11.3	114	0.00
19	Endosulfan Sulfate	50.000	58.913	-17.8#	112	0.00
20	Methoxychlor	50.000	59.970	-19.9#	115	0.00
21	Endrin Ketone	50.000	58.122	-16.2#	112	0.00
22 S	Decachlorobiphenyl	50.000	56.889	-13.8	113	0.00

Signal #2

1 S	2,4,5,6-Tetrachloro-M-Xyl	50.000	52.863	-5.7	105	0.00
2	alpha-BHC	50.000	56.693	-13.4	108	0.00
3	gamma-BHC	50.000	56.212	-12.4	108	0.00
4	beta-BHC	50.000	53.641	-7.3	108	0.00
5	Heptachlor	50.000	53.481	-7.0	105	0.00
6	delta-BHC	50.000	56.750	-13.5	108	0.00
7	Aldrin	50.000	55.976	-12.0	108	0.00
8	Heptachlor Epoxide	50.000	54.701	-9.4	107	0.00
9	gamma-Chlordane	50.000	54.926	-9.9	108	0.00
10	alpha-Chlordane	50.000	54.179	-8.4	107	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
11	Endosulfan I	50.000	54.542	-9.1	107	0.00
12	4,4'-DDE	50.000	55.671	-11.3	107	0.00
13	Dieldrin	50.000	55.407	-10.8	107	0.00
14	Endrin	50.000	49.674	0.7	98	0.00
15	4,4'-DDD	50.000	54.965	-9.9	107	0.00
16	Endosulfan II	50.000	53.864	-7.7	106	0.00
17	4,4'-DDT	50.000	56.029	-12.1	108	0.00
18	Endrin Aldehyde	50.000	54.675	-9.3	109	0.00
19	Endosulfan Sulfate	50.000	53.171	-6.3	106	0.00
20	Methoxychlor	50.000	54.034	-8.1	108	0.00
21	Endrin Ketone	50.000	54.158	-8.3	106	0.00
22 S	Decachlorobiphenyl	50.000	51.387	-2.8	107	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD1A.CH Vial: 15
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD2B.CH Vial: 15
 Acq On : 01 Apr 2002 17:16 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 L1 TOXAPHENE-1	250.000	282.286	-12.9	119	-0.02
2 L1 TOXAPHENE-2	250.000	280.670	-12.3	114	-0.02
3 L1 TOXAPHENE-3	250.000	264.702	-5.9	109	-0.02
4 L1 TOXAPHENE-4	250.000	269.735	-7.9	111	-0.02
5 L1 TOXAPHENE-5	250.000	276.270	-10.5	114	-0.02

Signal #2

1 L1 TOXAPHENE-1	250.000	235.057	6.0	97	0.00
2 L1 TOXAPHENE-2	250.000	247.665	0.9	107	0.00
3 L1 TOXAPHENE-3	250.000	242.109	3.2	105	0.00
4 L1 TOXAPHENE-4	250.000	243.221	2.7	110	0.00
5 L1 TOXAPHENE-5	250.000	251.657	-0.7	108	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	20.000	22.341	-11.7	113	0.00
2	alpha-BHC	20.000	22.582	-12.9	115	0.00
3	gamma-BHC	20.000	22.415	-12.1	115	0.00
4	beta-BHC	20.000	22.451	-12.3	114	0.00
5	Heptachlor	20.000	22.715	-13.6	117	0.00
6	delta-BHC	20.000	22.455	-12.3	114	0.00
7	Aldrin	20.000	22.581	-12.9	115	0.00
8	Heptachlor Epoxide	20.000	22.436	-12.2	114	0.00
9	gamma-Chlordane	20.000	22.390	-12.0	114	0.00
10	alpha-Chlordane	20.000	22.151	-10.8	112	0.00
11	Endosulfan I	20.000	22.469	-12.3	114	0.00
12	4,4'-DDE	20.000	22.211	-11.1	114	0.00
13	Dieldrin	20.000	22.219	-11.1	113	0.00
14	Endrin	20.000	25.277	-26.4#	128	0.00
15	4,4'-DDD	20.000	22.293	-11.5	113	0.00
16	Endosulfan II	20.000	22.397	-12.0	114	0.00
17	4,4'-DDT	20.000	22.538	-12.7	118	0.00
18	Endrin Aldehyde	20.000	21.804	-9.0	111	0.00
19	Endosulfan Sulfate	20.000	22.158	-10.8	110	0.00
20	Methoxychlor	20.000	22.775	-13.9	113	0.00
21	Endrin Ketone	20.000	22.014	-10.1	108	0.00
22 S	Decachlorobiphenyl	20.000	24.160	-20.8#	115	0.00

Signal #2

1 S	2,4,5,6-Tetrachloro-M-Xyl	20.000	19.727	1.4	101	0.00
2	alpha-BHC	20.000	20.204	-1.0	104	0.00
3	gamma-BHC	20.000	20.207	-1.0	104	0.00
4	beta-BHC	20.000	20.418	-2.1	104	0.00
5	Heptachlor	20.000	19.089	4.6	99	0.00
6	delta-BHC	20.000	20.098	-0.5	104	0.00
7	Aldrin	20.000	20.111	-0.6	104	0.00
8	Heptachlor Epoxide	20.000	20.102	-0.5	104	0.00
9	gamma-Chlordane	20.000	19.905	0.5	104	0.52
10	alpha-Chlordane	20.000	20.075	-0.4	104	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
11	Endosulfan I	20.000	20.028	-0.1	104	0.00
12	4,4'-DDE	20.000	19.792	1.0	103	0.00
13	Dieldrin	20.000	20.049	-0.2	104	0.00
14	Endrin	20.000	17.434	12.8	92	0.00
15	4,4'-DDD	20.000	19.724	1.4	103	0.00
16	Endosulfan II	20.000	19.481	2.6	103	0.00
17	4,4'-DDT	20.000	19.010	4.9	108	0.00
18	Endrin Aldehyde	20.000	20.334	-1.7	106	0.00
19	Endosulfan Sulfate	20.000	19.282	3.6	102	0.00
20	Methoxychlor	20.000	20.026	-0.1	104	0.00
21	Endrin Ketone	20.000	19.822	0.9	103	0.00
22 S	Decachlorobiphenyl	20.000	20.300	-1.5	103	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD1A.CH Vial: 24
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD2B.CH Vial: 24
 Acq On : 01 Apr 2002 20:54 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 L1 TOXAPHENE-1	500.000	573.639	-14.7	111	-0.02
2 L1 TOXAPHENE-2	500.000	557.333	-11.5	111	-0.02
3 L1 TOXAPHENE-3	500.000	547.982	-9.6	109	-0.01
4 L1 TOXAPHENE-4	500.000	561.121	-12.2	113	-0.02
5 L1 TOXAPHENE-5	500.000	565.463	-13.1	111	-0.02

Signal #2

1 L1 TOXAPHENE-1	500.000	533.927	-6.8	108	0.00
2 L1 TOXAPHENE-2	500.000	527.487	-5.5	104	0.00
3 L1 TOXAPHENE-3	500.000	524.503	-4.9	104	0.00
4 L1 TOXAPHENE-4	500.000	536.743	-7.3	106	0.00
5 L1 TOXAPHENE-5	500.000	528.600	-5.7	105	0.00

ENDRIN/ 4-4' DDT BREAKDOWN

INSTRUMENT: HP 9

COLUMN: RTx-CLP (FRONT)

Data File Name: 9G19254.D

ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	ENDRIN BREAKDOWN
843156244	0	47369608	5.32 %
4-4' DDT	4-4' DDE	4-4' DDD	4-4' DDT BREAKDOWN
1519976330	63982426	0	4.04 %

COLUMN: RTx-CLP II (REAR)

Data File Name: 9G19254.D

ENDRIN #2	ENDRIN ALDEHYDE #2	ENDRIN KETONE #2	ENDRIN #2 BREAKDOWN
1266333902	0	62397186	4.70 %
4-4' DDT #2	4-4' DDE #2	4-4' DDD #2	4-4' DDT #2 BREAKDOWN
1672516895	0	62122711	3.58 %

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ENDRIN/ 4-4' DDT BREAKDOWN

INSTRUMENT: HP 9

COLUMN: RTx-CLP (FRONT)

Data File Name: 9G19331.D

ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	ENDRIN BREAKDOWN
1095757830	0	86435371	7.31 %
4-4' DDT	4-4' DDE	4-4' DDD	4-4' DDT BREAKDOWN
1622390774	73185452.75	35172456.43	6.26 %

COLUMN: RTx-CLP II (REAR)

Data File Name: 9G19331.D

ENDRIN #2	ENDRIN ALDEHYDE #2	ENDRIN KETONE #2	ENDRIN #2 BREAKDOWN
1226160811	0	80117107	6.13 %
4-4' DDT #2	4-4' DDE #2	4-4' DDD #2	4-4' DDT #2 BREAKDOWN
1809919837	0	60834053	3.25 %

456

Injection Log

Directory: C:\HPCHEM1\DATA\032702

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9G19250.D	1.	✓ENDRIN/DDT	SOS58-31	27 Mar 2110 10:34
2	2	9G19251.D	1.	✓PEST CCV 20 PPB	SOS59-08	27 Mar 2110 10:58
3	3	9G19252.D	1.	✓L0203505-01	1,1 WATER PRELIMINARY	27 Mar 2111 11:22
4	4	9G19253.D	1.	✓L0203513-01	1,1 WATER PRELIMINARY	27 Mar 2112 12:35
5	5	9G19254.D	1.	✓ENDRIN/DDT	SOS58-31	27 Mar 2021 01:48
6	6	9G19255.D	1.	TOX ICAL 2.0 PPM	SOS57-11	27 Mar 2022 02:12
7	7	9G19256.D	1.	TOX ICAL 1.0 PPM	SOS57-11	27 Mar 2022 02:36
8	8	9G19257.D	1.	TOX ICAL 0.5 PPM	SOS57-11	27 Mar 2023 03:00
9	9	9G19258.D	1.	TOX ICAL 0.25 PPM	SOS57-11	27 Mar 2023 03:25
10	10	9G19259.D	1.	TOX ICAL 0.1 PPM	SOS57-11	27 Mar 2023 03:49
11	11	9G19260.D	1.	TOX ALT ICV 0.5 PPM	SOS57-10	27 Mar 2024 04:13
12	12	9G19261.D	1.	✓WG115221-01 PEST ICAL 200 PPB	1,1 SOS59-08	27 Mar 2024 04:37
13	13	9G19262.D	1.	WG115221-02 PEST ICAL 100 PPB	1,1 SOS59-08	27 Mar 2025 05:01
14	14	9G19263.D	1.	WG115221-03 PEST ICAL 50 PPB	1,1 SOS59-08	27 Mar 2025 05:25
15	15	9G19264.D	1.	WG115221-04 PEST ICAL 20 PPB	1,1 SOS59-08	27 Mar 2025 05:49
16	16	9G19265.D	1.	WG115221-05 PEST ICAL 10 PPB	1,1 SOS59-08	27 Mar 2026 06:13
17	17	9G19266.D	1.	WG115221-06 PEST ICAL 4 PPB	1,1 SOS59-08	27 Mar 2026 06:38
18	18	9G19267.D	1.	✓WG115221-07 PEST ALT ICV 20 PPB	1,1 SOS57-09	27 Mar 2027 07:02
19	19	9G19268.D	1.	WG115162-01 BLANK V182 P111	1,1 WATER	27 Mar 2027 07:26
20	20	9G19269.D	1.	WG115162-02 LCS V182 P111	1,1 WATER	27 Mar 2027 07:50
21	21	9G19270.D	1.	WG115162-03 LCS DUP V182 P111	1,1 WATER	27 Mar 2028 08:14
22	22	9G19271.D	1.	L0203505-01	1,1 WATER	27 Mar 2028 08:38
23	23	9G19272.D	1.	WG115205-01 BLANK V182 P115	1,1 WATER	27 Mar 2029 09:03
24	24	9G19273.D	1.	WG115205-02 LCS V182 P115	1,1 WATER	27 Mar 2029 09:27
25	25	9G19274.D	1.	WG115205-03 LCS DUP V182 P115	1,1 WATER	27 Mar 2029 09:51
26	26	9G19275.D	20.	L0203513-01 20x	1,20 WATER	27 Mar 2110 10:15
27	27	9G19276.D	1.	✓ENDRIN/DDT	SOS58-31	27 Mar 2110 10:39
28	28	9G19277.D	1.	✓WG115221-08 PEST CCV 20 PPB	1,1 SOS59-08	27 Mar 2111 11:03
29	29	9G19278.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	27 Mar 2111 11:27
30	30	9G19279.D	1.	WG115053-02 BLANK V182 P91	7,1 SOIL	27 Mar 2111 11:51
31	31	9G19280.D	1.	WG115053-03 LCS V182 P91	7,1 SOIL	28 Mar 2112 12:15
32	32	9G19281.D	1.	WG115053-01 L0203450-01	7,1 SOIL	28 Mar 2112 12:40
33	33	9G19282.D	1.	WG115053-04 L0203450-01 MS	7,1 SOIL	28 Mar 2021 01:04
34	34	9G19283.D	1.	WG115053-05 L0203450-01 MSD	7,1 SOIL	28 Mar 2021 01:28
35	35	9G19284.D	1.	L0203451-01	1,1 WATER	28 Mar 2021 01:52
36	36	9G19285.D	1.	✓ENDRIN/DDT	SOS58-31	28 Mar 2022 02:16
37	37	9G19286.D	1.	✓WG115221-09 PEST CCV 50 PPB	1,1 SOS59-08	28 Mar 2022 02:40
38	38	9G19287.D	1.	✓TOX CCV 0.25 PPM	SOS57-11	28 Mar 2023 03:04

ECZ 3/28/02
 JAR 3/28/02

Injection Log

Directory: C:\HPCHEM1\DATA\040102

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9G19310.D	1.	✓ENDRIN/DDT	SOS58-31	1 Apr 2110 10:47
2	2	9G19311.D	1.	✓WG115409-01 PEST CCV 20 PPB -A	1,1 SOS59-08	1 Apr 2111 11:11
3	3	9G19312.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2111 11:35
4	4	9G19313.D	1.	WG115333-01 BLANK V182 P141	2,1 WATER	1 Apr 2112 12:26
5	5	9G19314.D	1.	WG115333-02 LCS V182 P141	2,1 WATER	1 Apr 2112 12:50
6	6	9G19315.D	1.	WG115333-03 LCS DUP V182 P141	2,1 WATER	1 Apr 2021 01:14
7	7	9G19316.D	1.	L0203556-01	2,1 WATER	1 Apr 2021 01:39
8	8	9G19317.D	1.	L0203556-02	2,1 WATER	1 Apr 2022 02:03
9	9	9G19318.D	1.	L0203556-03	2,1 WATER	1 Apr 2022 02:27
10	10	9G19319.D	1.	L0203556-04	2,1 WATER	1 Apr 2022 02:51
11	11	9G19320.D	1.	RE L0203556-05 -*	2,1 WATER	1 Apr 2023 03:15
12	12	9G19321.D	1.	✓L0203556-06	2,1 WATER	1 Apr 2023 03:40
13	13	9G19322.D	1.	✓L0203556-07	2,1 WATER	1 Apr 2024 04:04
14	14	9G19323.D	1.	✓WG115409-02 PEST CCV 50 PPB -B	1,1 SOS59-08	1 Apr 2024 04:28
15	15	9G19324.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2024 04:52
16	16	9G19325.D	1.	L0203556-08	2,1 WATER	1 Apr 2025 05:16
17	17	9G19326.D	1.	L0203556-09	2,1 WATER	1 Apr 2025 05:40
18	18	9G19327.D	1.	WG115410-01 BLANK V182 P153	7,1 SOIL	1 Apr 2026 06:04
19	19	9G19328.D	1.	WG115410-02 LCS V182 P153	7,1 SOIL	1 Apr 2026 06:29
20	20	9G19329.D	1.	WG115410-03 LCS DUP V182 P153	7,1 SOIL	1 Apr 2026 06:53
21	21	9G19330.D	1.	L0204001-01	7,1 SOIL	1 Apr 2027 07:17
22	22	9G19331.D	1.	✓ENDRIN/DDT	SOS58-31	1 Apr 2027 07:41
23	23	9G19332.D	1.	✓WG115409-03 PEST CCV 20 PPB -A	1,1 SOS59-08	1 Apr 2028 08:05
24	24	9G19333.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2028 08:30

EC2 4/2/02
made 4/2/02

Parameter: REST-S SOP #: EXP02 Revision #: 11
 Extraction Analyst(s): CAF TV/KD Analyst(s): CAF, DP
 Date/Time Extracted: 4-01-02 @ 12:00 Date TV/KD: 4-01-02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-49 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-42 Spike #: B = ---

Extraction Work Group WG 115410
 Analytical Work Group WG 115454

Extract Relinquished By: DP
 Extract Received By & Date: EQ 4/1/02

	Sample ID	Test Code	pH			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					30.00g	200 uL		10mL	T				WG 115410-01
2	LCS					1.00g	|	250 uL	|	|				WG | -02
3	LCS Dup					1.09g	|	|	|	|				WG | -03
4	04-001-01	8082				1.0705g	|		|	|				
5						1.0708g								
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
04/01/02

Methylene Chloride Lot #: _____
 Hexane Lot #: 41304
 Ether Lot #: _____
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: 94.6 Lot #: DP/ ER 2124
 Reagent: 50.50 Lot #: DP/ ER 2122
 Reagent: _____ Lot #: _____
 Acid: _____ Lot #: _____
 Florisil Lot #: 94.6 V28522
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: ER 2085

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B			<input checked="" type="checkbox"/>	
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		<input checked="" type="checkbox"/>	GPC 3640A
Silica Gel 3630C			Other
Acid 3664A			N/A
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

Extraction Notes For Volume # 182 Page # 153

General Comments: *None*

Extraction Anomalies: *None*

Concentration Anomalies: *None*

Clean-Up Anomalies: *None*

Supervisor Review: _____ Date: _____

2.2.2.2 Sample Data

Data File : C:\HPCHEM\1\DATA\040102\9G19330.D\ECD1A.CH Vial: 21
 Acq On : 01 Apr 2002 19:17 Operator: ECL
 Sample : L0204001-01 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19330.D\ECD2B.CH Vial: 21
 Acq On : 01 Apr 2002 19:41 Operator: ECL
 Sample : L0204001-01 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:20 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

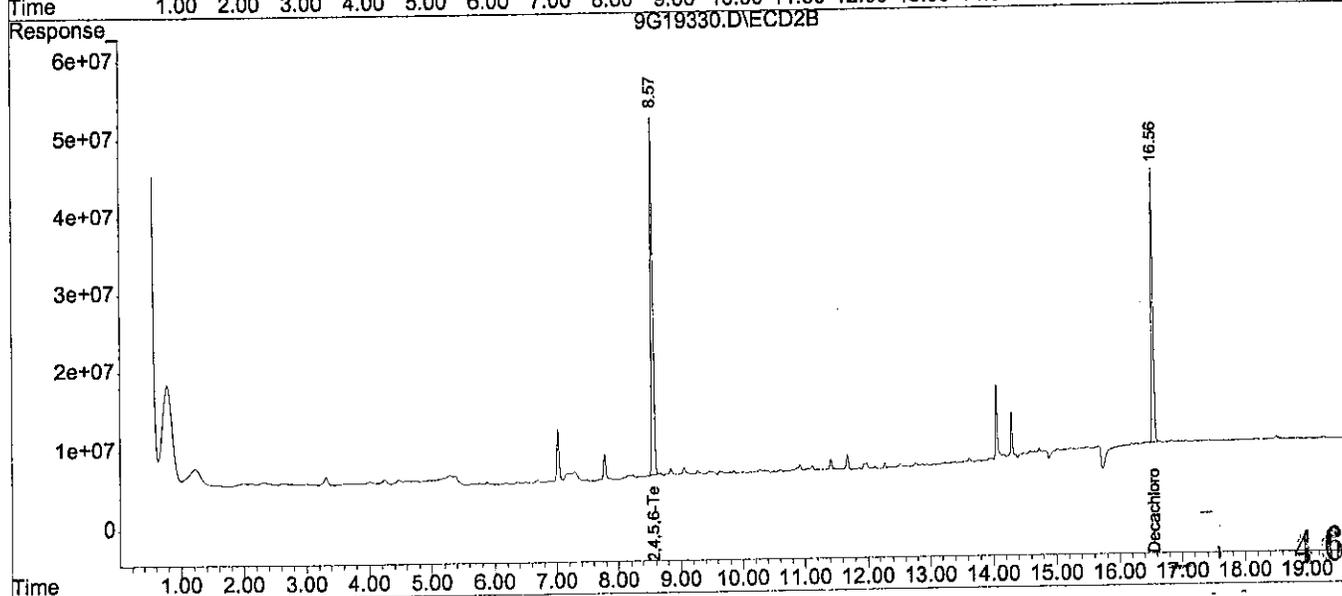
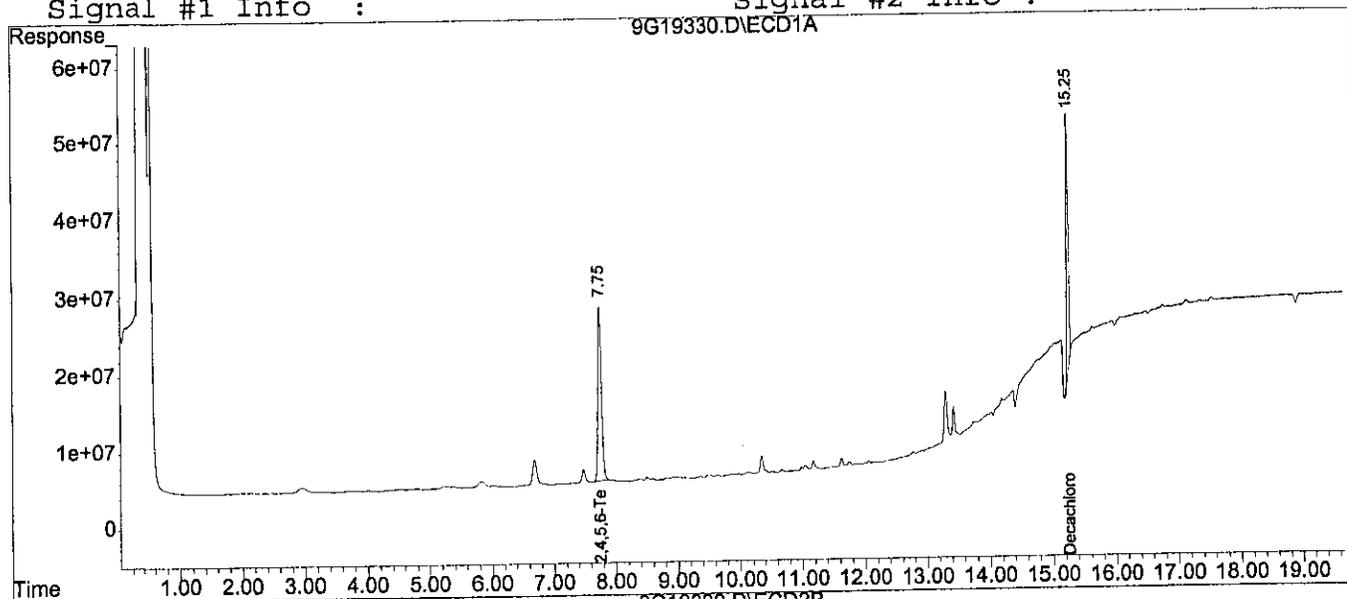
Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.57	898.3E6	1058.4E6	19.8869	17.2546
Spiked Amount	20.000	Range 30 - 132	Recovery =		99.43%	86.27%
22) S Decachlorobiphen	15.25	16.56	673.7E6	778.4E6	23.3838	22.1294
Spiked Amount	20.000	Range 36 - 144	Recovery =		116.92%	110.65%
Target Compounds						
2) alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3) gamma-BHC	0.00	0.00	0	0	N.D.	N.D.
4) beta-BHC	0.00	0.00	0	0	N.D.	N.D.
5) Heptachlor	0.00	0.00	0	0	N.D.	N.D.
6) delta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) Aldrin	0.00	0.00	0	0	N.D.	N.D.
8) Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.
9) gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
10) alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11) Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
12) 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13) Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14) Endrin	0.00	0.00	0	0	N.D.	N.D.
15) 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
16) Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17) 4,4'-DDT	0.00	0.00	0	0	N.D.	N.D.
18) Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19) Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.
20) Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21) Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

Data File : C:\HPCHEM\1\DATA\040102\9G19330.D\ECD1A.CH Vial: 21
Acq On : 01 Apr 2002 19:17 Operator: ECL
Sample : L0204001-01 Inst : HP9
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19330.D\ECD2B.CH Vial: 21
Acq On : 01 Apr 2002 19:41 Operator: ECL
Sample : L0204001-01 Inst : HP9
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : autoint2.e
Quant Time: Apr 2 11:20 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Tue Apr 02 08:23:07 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



2.2.2.3 Standards Data

Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002

Calibration Files
 100 =9G19259.D 250 =9G19258.D 500 =9G19257.D
 1000 =9G19256.D 2000 =9G19255.D

Compound	100	250	500	1000	2000	Avg		%RSD
1) L1 TOXAPHENE-1	2.775	2.772	3.026	2.912	3.106	2.918	E5	5.11
2) L1 TOXAPHENE-2	4.706	4.523	4.606	4.458	4.573	4.573	E5	2.02
3) L1 TOXAPHENE-3	6.585	6.442	6.659	6.595	6.935	6.643	E5	2.73
4) L1 TOXAPHENE-4	6.489	6.496	6.639	6.684	7.163	6.694	E5	4.12
5) L1 TOXAPHENE-5	7.602	7.772	8.149	8.032	8.376	7.986	E5	3.83

Signal #2 Calibration Files
 100 =9G19259.D 250 =9G19258.D 500 =9G19257.D
 1000 =9G19256.D 2000 =9G19255.D

Compound	100	250	500	1000	2000	Avg		%RSD
1) L1 TOXAPHENE-1	2.598	2.569	2.621	2.552	2.936	2.655	E5	5.99
2) L1 TOXAPHENE-2	0.849	0.911	0.996	1.061	1.112	0.986	E6	10.88
3) L1 TOXAPHENE-3	4.565	5.036	5.504	5.932	6.199	5.447	E5	12.14
4) L1 TOXAPHENE-4	4.770	5.123	5.842	6.341	6.889	5.793	E5	14.95
5) L1 TOXAPHENE-5	6.480	6.814	7.352	7.776	8.200	7.324	E5	9.52

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\032702\9G19255.D\ECD1A.CH Vial: 6
 Acq On : 27 Mar 2002 14:12 Operator: ECL
 Sample : TOX ICAL 2.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19255.D\ECD2B.CH Vial: 6
 Acq On : 27 Mar 2002 14:36 Operator: ECL
 Sample : TOX ICAL 2.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:43 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

Target Compounds						
1) L1 TOXAPHENE-1	12.55f	13.98	621.2E6	587.1E6	2128.5847	2211.4184
2) L1 TOXAPHENE-2	12.76f	14.35	914.6E6	2223.8E6	1999.9206	2255.8777
3) L1 TOXAPHENE-3	13.79f	14.57	1387.0E6	1239.7E6	2087.8258	2275.9115
4) L1 TOXAPHENE-4	13.89f	14.93	1432.6E6	1377.8E6	2140.0556	2378.4422
5) L1 TOXAPHENE-5	14.27f	15.30	1675.2E6	1640.1E6	2097.5914	2239.2362
Sum TOXAPHENE-1			6030.5E6	7068.5E6	10453.9781	11360.8861
Average TOXAPHENE-1					2090.796	2272.177

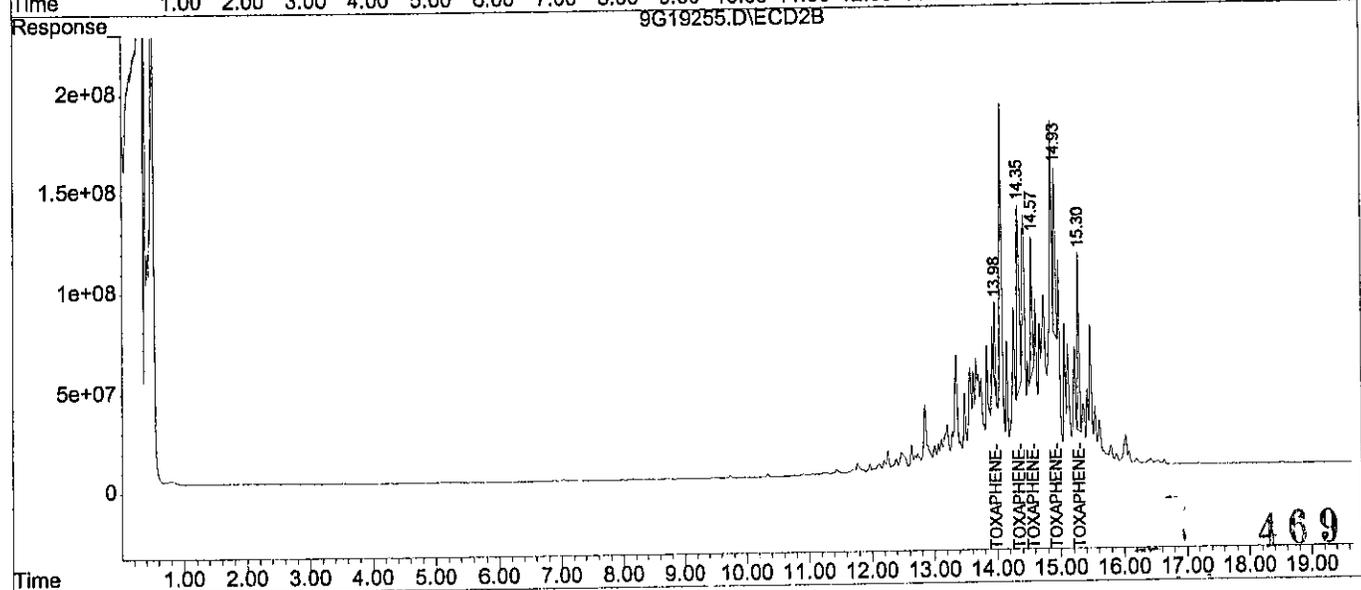
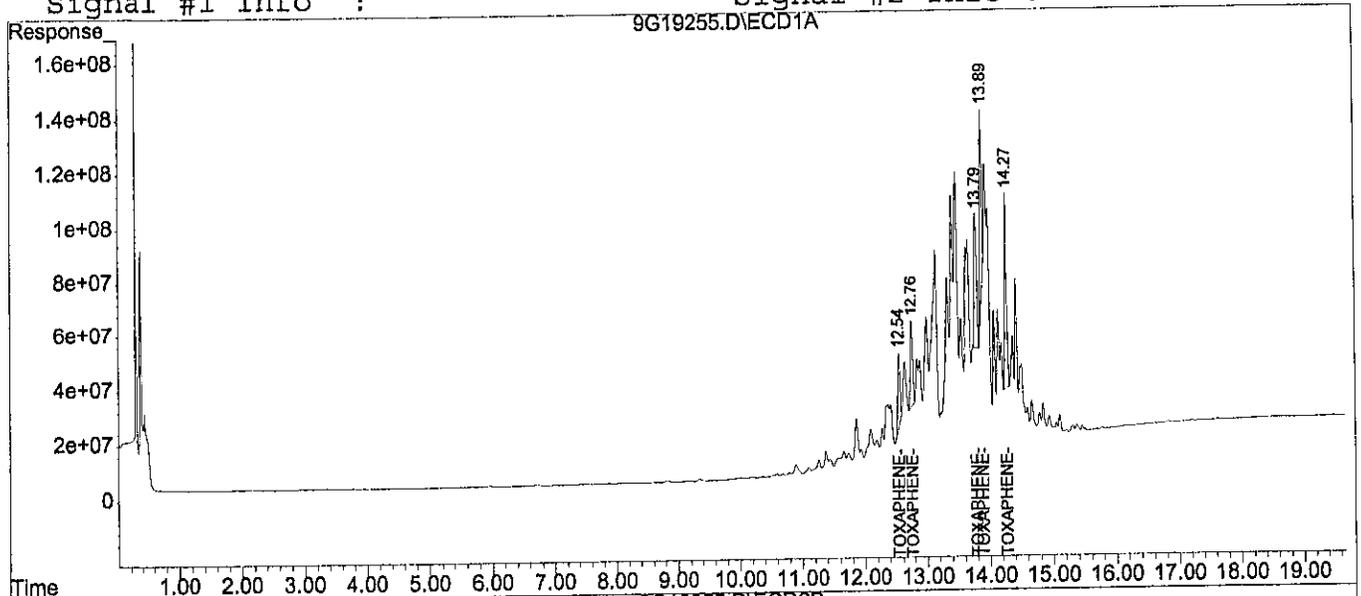
468

Data File : C:\HPCHEM\1\DATA\032702\9G19255.D\ECD1A.CH Vial: 6
 Acq On : 27 Mar 2002 14:12 Operator: ECL
 Sample : TOX ICAL 2.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19255.D\ECD2B.CH Vial: 6
 Acq On : 27 Mar 2002 14:36 Operator: ECL
 Sample : TOX ICAL 2.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:43 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



469

Data File : C:\HPCHEM\1\DATA\032702\9G19256.D\ECD1A.CH Vial: 7
 Acq On : 27 Mar 2002 14:36 Operator: ECL
 Sample : TOX ICAL 1.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19256.D\ECD2B.CH Vial: 7
 Acq On : 27 Mar 2002 15:00 Operator: ECL
 Sample : TOX ICAL 1.0 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:43 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

Target Compounds						
1) L1 TOXAPHENE-1	12.55f	13.99	291.2E6	255.2E6	997.9853	961.0496
2) L1 TOXAPHENE-2	12.76f	14.36	445.8E6	1060.8E6	974.9159	1076.0693
3) L1 TOXAPHENE-3	13.79f	14.58	659.5E6	593.2E6	992.7369	1088.9840
4) L1 TOXAPHENE-4	13.89f	14.94	668.4E6	634.1E6	998.4440	1094.6448
5) L1 TOXAPHENE-5	14.27f	15.30	803.2E6	777.6E6	1005.7109	1061.6240
Sum TOXAPHENE-1			2868.1E6	3320.8E6	4969.7929	5282.3716
Average TOXAPHENE-1					993.959	1056.474

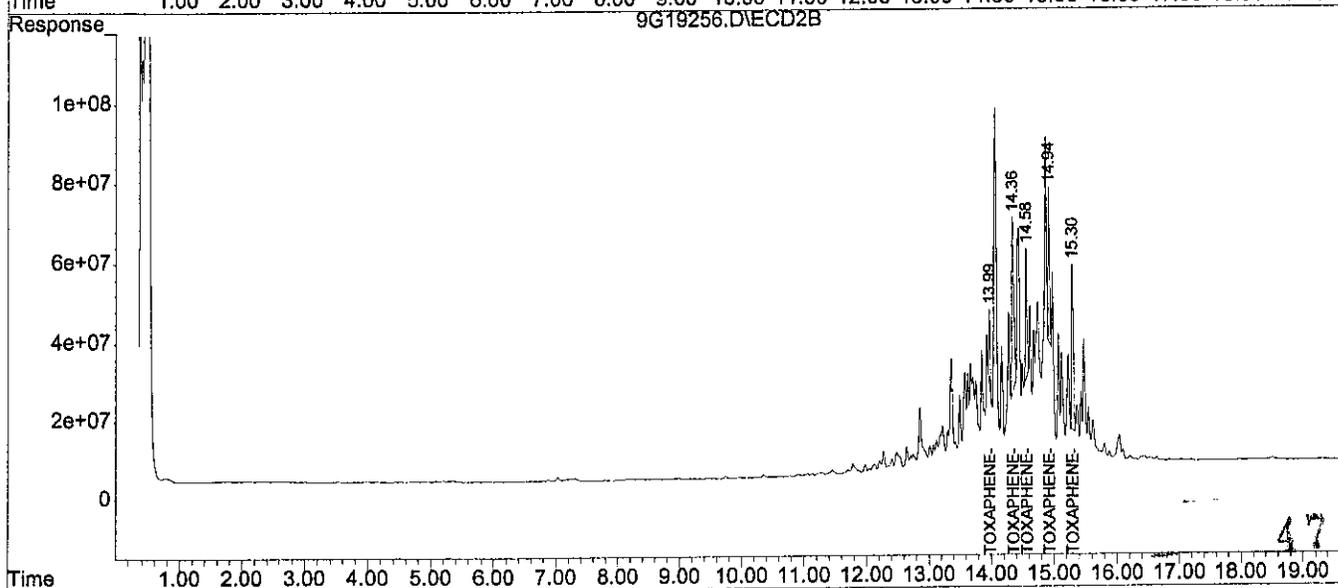
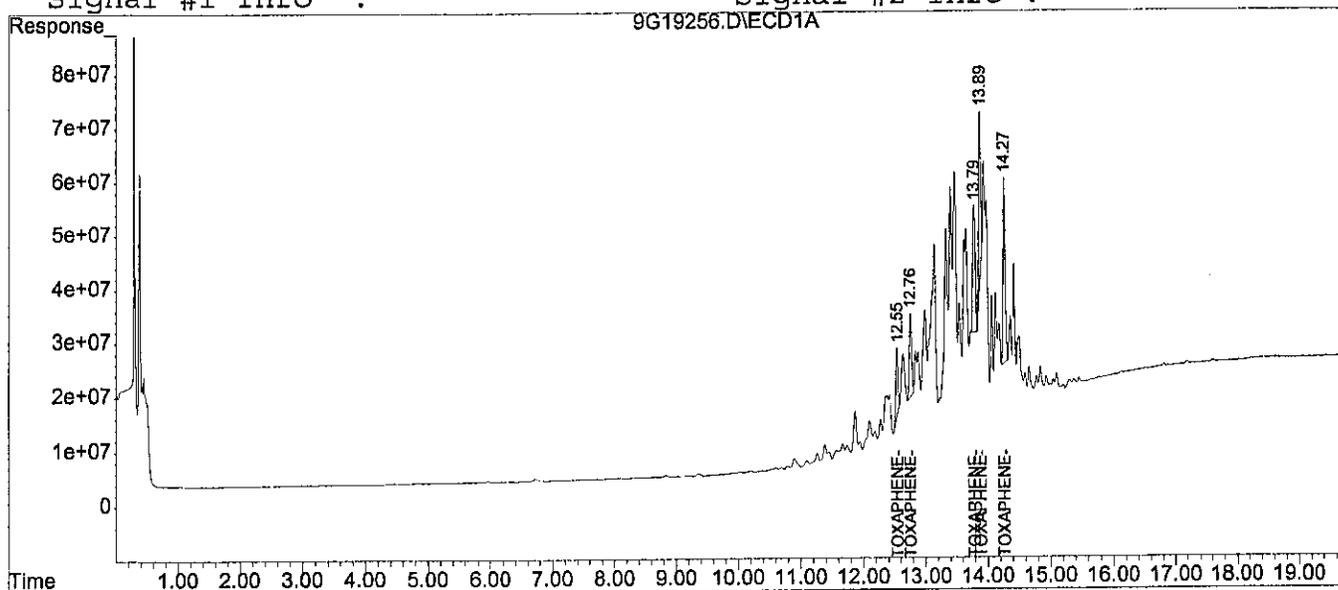
470

Data File : C:\HPCHEM\1\DATA\032702\9G19256.D\ECD1A.CH Vial: 7
Acq On : 27 Mar 2002 14:36 Operator: ECL
Sample : TOX ICAL 1.0 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19256.D\ECD2B.CH Vial: 7
Acq On : 27 Mar 2002 15:00 Operator: ECL
Sample : TOX ICAL 1.0 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Mar 28 10:43 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 10:42:59 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19257.D\ECD1A.CH Vial: 8
 Acq On : 27 Mar 2002 15:00 Operator: ECL
 Sample : TOX ICAL 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19257.D\ECD2B.CH Vial: 8
 Acq On : 27 Mar 2002 15:25 Operator: ECL
 Sample : TOX ICAL 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

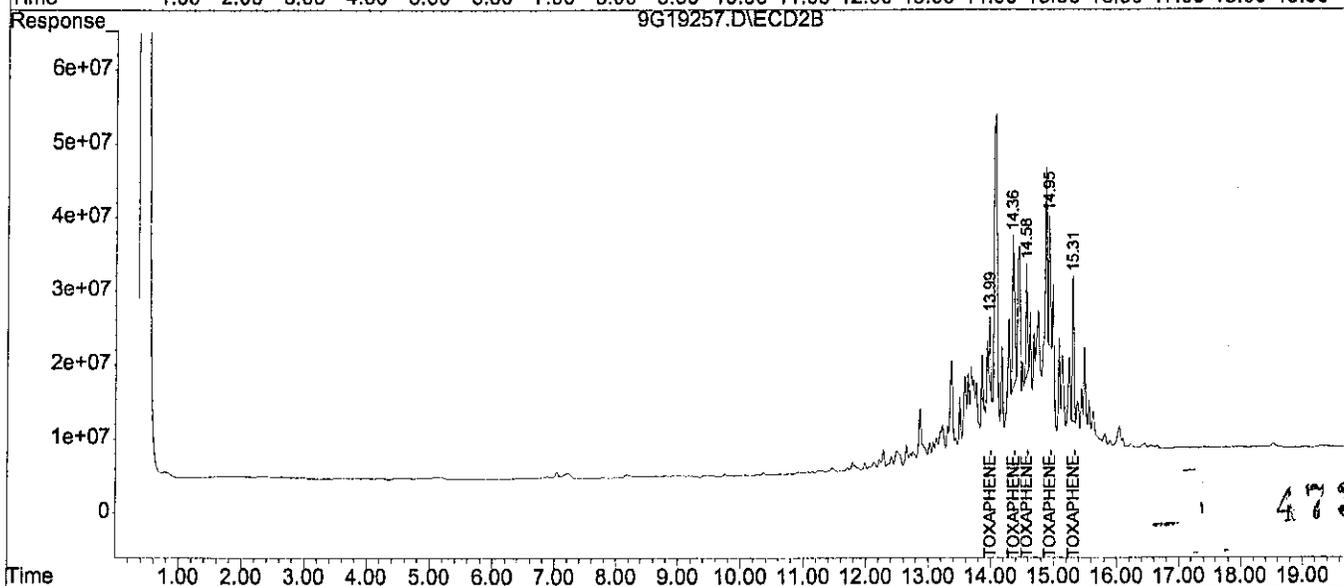
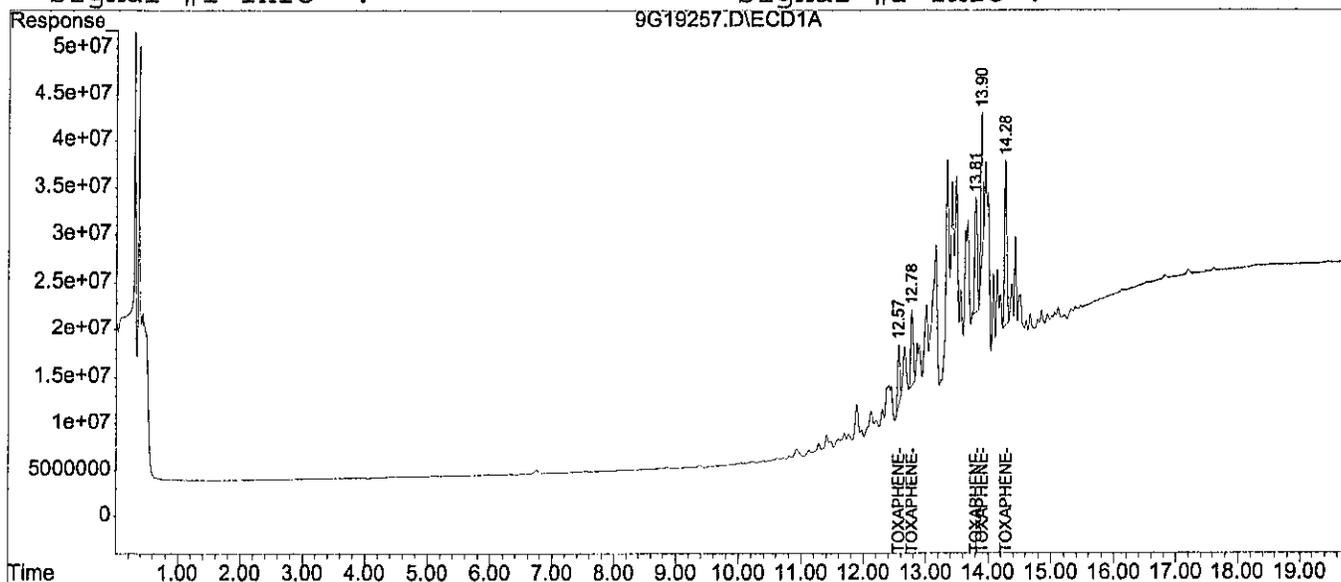
Target Compounds						
1) L1 TOXAPHENE-1	12.57	13.99	151.3E6	131.0E6	518.4824	493.5360
2) L1 TOXAPHENE-2	12.78	14.36	230.3E6	498.2E6	503.5527	505.4176
3) L1 TOXAPHENE-3	13.81	14.58	332.9E6	275.2E6	501.1921	505.1973
4) L1 TOXAPHENE-4	13.90	14.95	331.9E6	292.1E6	495.8747	504.2219
5) L1 TOXAPHENE-5	14.28	15.31	407.5E6	367.6E6	510.2076	501.8767
Sum TOXAPHENE-1			1453.9E6	1564.1E6	2529.3095	2510.2494
Average TOXAPHENE-1					505.862	502.050

Data File : C:\HPCHEM\1\DATA\032702\9G19257.D\ECD1A.CH Vial: 8
Acq On : 27 Mar 2002 15:00 Operator: ECL
Sample : TOX ICAL 0.5 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19257.D\ECD2B.CH Vial: 8
Acq On : 27 Mar 2002 15:25 Operator: ECL
Sample : TOX ICAL 0.5 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 10:42:59 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19258.D\ECD1A.CH Vial: 9
 Acq On : 27 Mar 2002 15:25 Operator: ECL
 Sample : TOX ICAL 0.25 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19258.D\ECD2B.CH Vial: 9
 Acq On : 27 Mar 2002 15:49 Operator: ECL
 Sample : TOX ICAL 0.25 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

Target Compounds						
1) L1 TOXAPHENE-1	12.58	13.99	69306097	64233283	237.4943	241.9270
2) L1 TOXAPHENE-2	12.79	14.36	113.1E6	227.7E6	247.2720	230.9985
3) L1 TOXAPHENE-3	13.82	14.58	161.1E6	125.9E6	242.4366	231.1461
4) L1 TOXAPHENE-4	13.91	14.94	162.4E6	128.1E6	242.6050	221.0787
5) L1 TOXAPHENE-5	14.29	15.31	194.3E6	170.3E6	243.2975	232.5800
Sum TOXAPHENE-1			700.1E6	716.3E6	1213.1054	1157.7304
Average TOXAPHENE-1					242.621	231.546

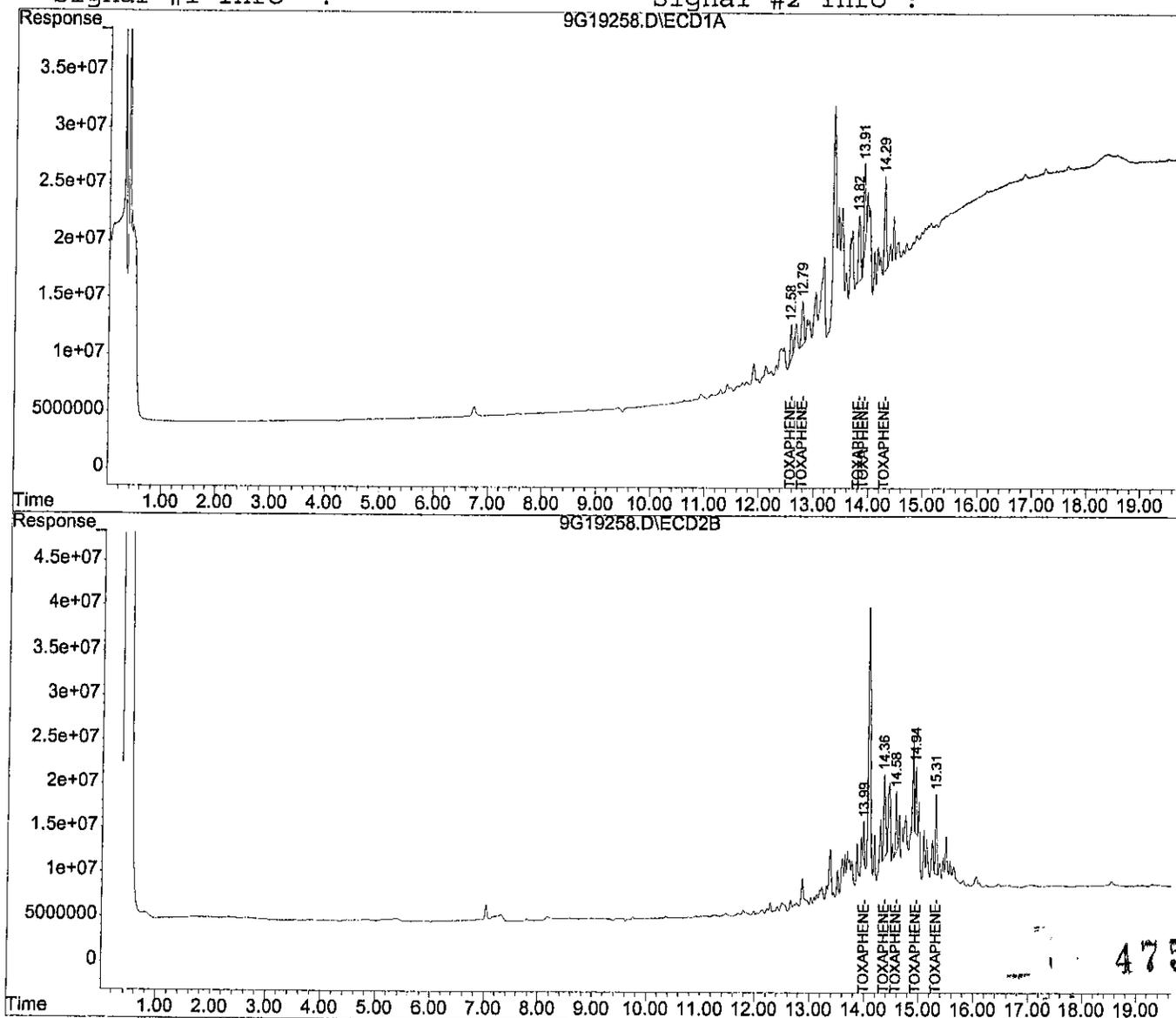
474

Data File : C:\HPCHEM\1\DATA\032702\9G19258.D\ECD1A.CH Vial: 9
Acq On : 27 Mar 2002 15:25 Operator: ECL
Sample : TOX ICAL 0.25 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19258.D\ECD2B.CH Vial: 9
Acq On : 27 Mar 2002 15:49 Operator: ECL
Sample : TOX ICAL 0.25 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 10:42:59 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19259.D\ECD1A.CH Vial: 10
 Acq On : 27 Mar 2002 15:49 Operator: ECL
 Sample : TOX ICAL 0.1 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19259.D\ECD2B.CH Vial: 10
 Acq On : 27 Mar 2002 16:13 Operator: ECL
 Sample : TOX ICAL 0.1 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

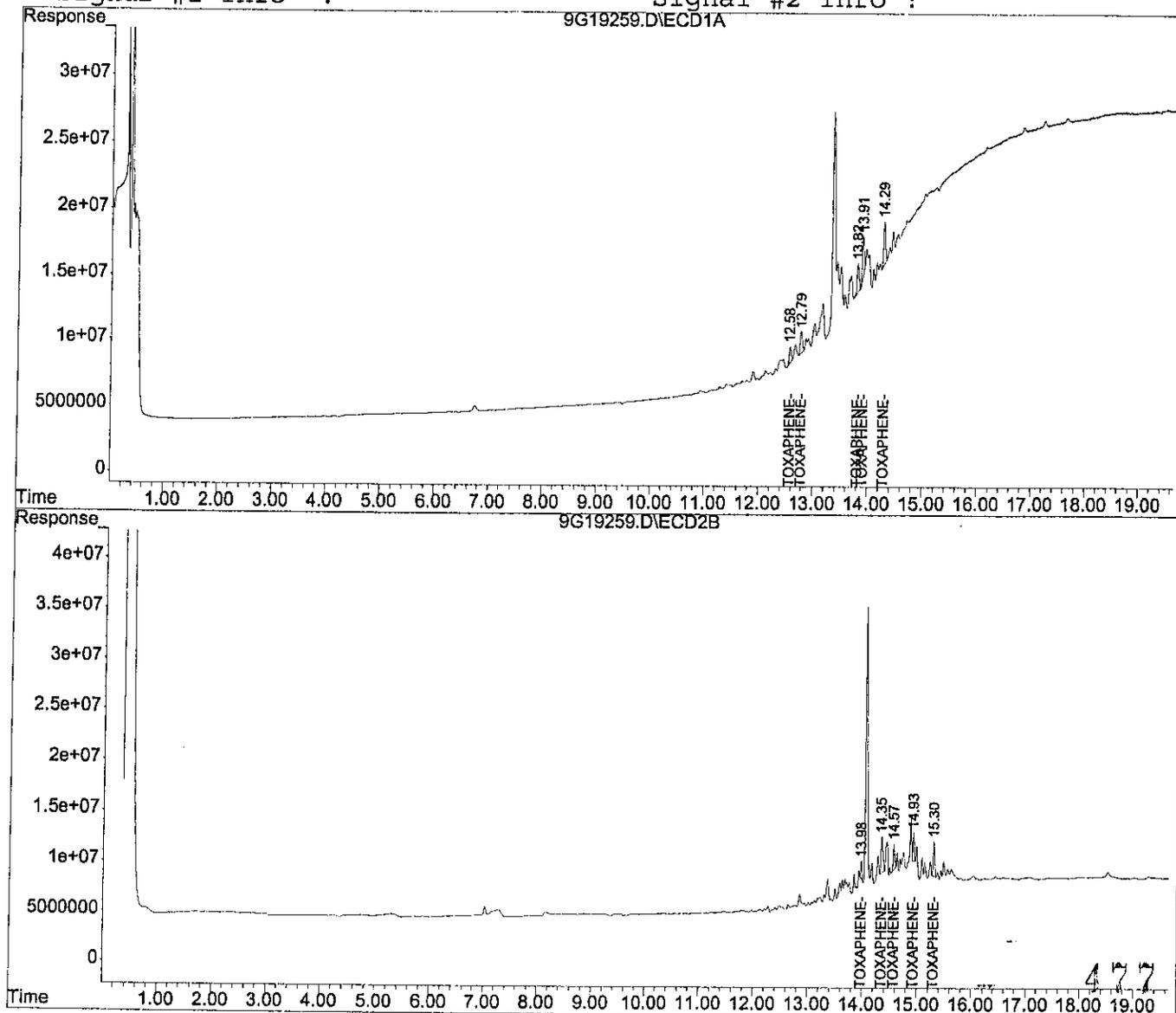
Target Compounds						
1) L1 TOXAPHENE-1	12.58	13.98	27745882	25978816	95.0780	97.8461
2) L1 TOXAPHENE-2	12.79	14.35	47055120	84891424	102.8930	86.1162
3) L1 TOXAPHENE-3	13.82	14.57	65847472	45650947	99.1220	83.8081
4) L1 TOXAPHENE-4	13.91	14.93	64888852	47695619	96.9359	82.3376
5) L1 TOXAPHENE-5	14.29	15.30	76019495	64795663	95.1888	88.4684
Sum TOXAPHENE-1			281.6E6	269.0E6	489.2178	438.5765
Average TOXAPHENE-1					97.844	87.715

Data File : C:\HPCHEM\1\DATA\032702\9G19259.D\ECD1A.CH Vial: 10
Acq On : 27 Mar 2002 15:49 Operator: ECL
Sample : TOX ICAL 0.1 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19259.D\ECD2B.CH Vial: 10
Acq On : 27 Mar 2002 16:13 Operator: ECL
Sample : TOX ICAL 0.1 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Mar 28 10:44 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 10:42:59 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD1A.CH Vial: 11
 Acq On : 27 Mar 2002 16:13 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD2B.CH Vial: 11
 Acq On : 27 Mar 2002 16:37 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 L1 TOXAPHENE-1	500.000	541.982	-8.4	105	-0.02
2 L1 TOXAPHENE-2	500.000	456.509	8.7	91	-0.02
3 L1 TOXAPHENE-3	500.000	441.129	11.8	88	-0.01
4 L1 TOXAPHENE-4	500.000	477.021	4.6	96	-0.01
5 L1 TOXAPHENE-5	500.000	415.534	16.9#	81	-0.01

Signal #2

1 L1 TOXAPHENE-1	500.000	431.884	13.6	88	0.00
2 L1 TOXAPHENE-2	500.000	429.863	14.0	85	0.00
3 L1 TOXAPHENE-3	500.000	481.353	3.7	95	0.00
4 L1 TOXAPHENE-4	500.000	520.677	-4.1	103	0.00
5 L1 TOXAPHENE-5	500.000	400.325	19.9#	80	0.00

478

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD1A.CH Vial: 11
 Acq On : 27 Mar 2002 16:13 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD2B.CH Vial: 11
 Acq On : 27 Mar 2002 16:37 Operator: ECL
 Sample : TOX ALT ICV 0.5 PPM Inst : HP9
 Misc : SOS57-10 Multiplr: 1.00
 IntFile : EVENTS.E

Quant Time: Mar 28 10:48 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:42:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

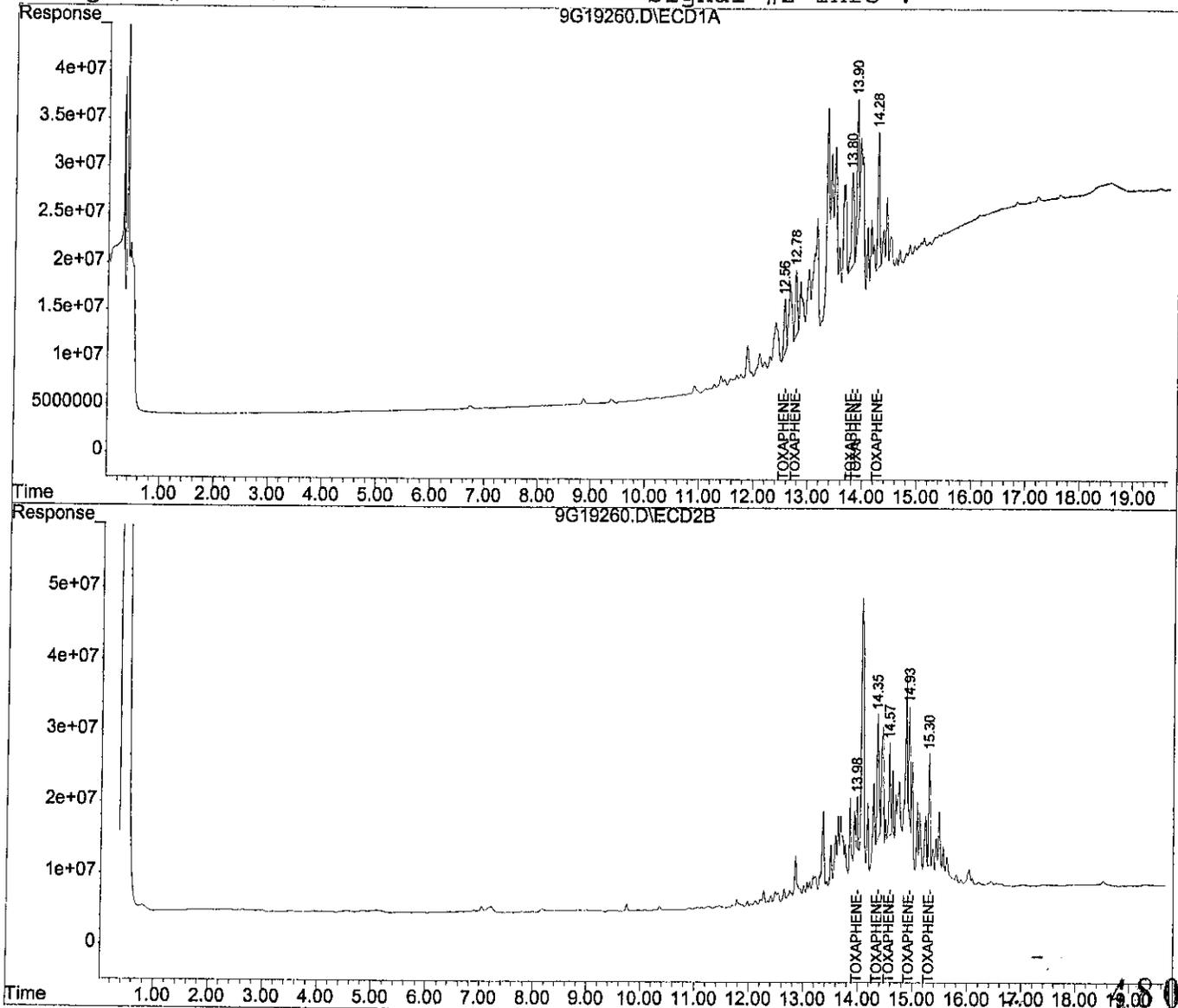
Target Compounds						
1) L1 TOXAPHENE-1	12.56	13.98	158.2E6	114.7E6	541.9822	431.8836
2) L1 TOXAPHENE-2	12.78	14.35	208.8E6	423.7E6	456.5094	429.8625
3) L1 TOXAPHENE-3	13.80	14.57	293.0E6	262.2E6	441.1287	481.3533
4) L1 TOXAPHENE-4	13.90	14.93	319.3E6	301.6E6	477.0207	520.6769
5) L1 TOXAPHENE-5	14.28	15.30	331.9E6	293.2E6	415.5335	400.3250
Sum TOXAPHENE-1			1311.1E6	1395.4E6	2332.1746	2264.1014
Average TOXAPHENE-1					466.435	452.820

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD1A.CH Vial: 11
Acq On : 27 Mar 2002 16:13 Operator: ECL
Sample : TOX ALT ICV 0.5 PPM Inst : HP9
Misc : SOS57-10 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\032702\9G19260.D\ECD2B.CH Vial: 11
Acq On : 27 Mar 2002 16:37 Operator: ECL
Sample : TOX ALT ICV 0.5 PPM Inst : HP9
Misc : SOS57-10 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Mar 28 10:48 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 10:42:59 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002

Calibration Files

4 =9G19266.D 10 =9G19265.D 20 =9G19264.D
 50 =9G19263.D 100 =9G19262.D 200 =9G19261.D

Compound	4	10	20	50	100	200	Avg	%RSD
1) S 2,4,5,6-Tetrachloro	4.111	4.224	4.472	4.606	4.743	4.946	4.517 E7	6.97
2) alpha-BHC	4.848	5.091	5.762	6.237	6.458	6.844	5.873 E7	13.39
3) gamma-BHC	4.554	4.669	5.146	5.514	5.675	6.008	5.261 E7	10.94
4) beta-BHC	2.272	2.253	2.318	2.382	2.380	2.466	2.345 E7	3.40
5) Heptachlor	4.091	4.175	4.548	4.895	5.078	5.421	4.701 E7	11.13
6) delta-BHC	3.970	4.205	4.824	5.237	5.428	5.815	4.913 E7	14.63
7) Aldrin	3.918	4.002	4.433	4.748	4.884	5.145	4.522 E7	10.89
8) Heptachlor Epoxide	3.880	3.869	4.131	4.322	4.396	4.606	4.201 E7	7.02
9) gamma-Chlordane	3.652	3.764	4.026	4.224	4.311	4.527	4.084 E7	8.19
10) alpha-Chlordane	3.587	3.605	3.857	4.019	4.075	4.225	3.895 E7	6.67
11) Endosulfan I	3.498	3.507	3.754	3.917	3.981	4.158	3.802 E7	6.99
12) 4,4'-DDE	3.218	3.326	3.696	4.006	4.138	4.377	3.794 E7	12.16
13) Dieldrin	3.467	3.575	3.909	4.180	4.298	4.529	3.993 E7	10.47
14) Endrin	1.431	1.455	1.587	1.685	1.723	1.792	1.612 E7	9.12
15) 4,4'-DDD	2.655	2.740	3.050	3.272	3.363	3.555	3.106 E7	11.48
16) Endosulfan II	3.100	3.146	3.332	3.491	3.552	3.739	3.393 E7	7.28
17) 4,4'-DDT	2.126	2.421	2.715	3.050	3.217	3.504	2.839 E7	18.15
18) Endrin Aldehyde	2.968	2.716	2.748	2.736	2.729	2.922	2.803 E7	3.97
19) Endosulfan Sulfate	2.500	2.621	2.849	2.978	2.984	3.109	2.840 E7	8.27
20) Methoxychlor	1.333	1.473	1.620	1.671	1.685	1.828	1.601 E7	10.88
21) Endrin Ketone	3.050	3.314	3.537	3.598	3.587	3.699	3.464 E7	6.92
22) S Decachlorobiphenyl	2.905	2.966	3.036	2.890	2.757	2.733	2.881 E7	4.08

Signal #2 Calibration Files

4 =9G19266.D 10 =9G19265.D 20 =9G19264.D
 50 =9G19263.D 100 =9G19262.D 200 =9G19261.D

Compound	4	10	20	50	100	200	Avg	%RSD
1) S 2,4,5,6-Tetrachloro	5.710	5.858	5.990	6.174	6.393	6.678	6.134 E7	5.84
2) alpha-BHC	6.814	7.635	8.244	8.924	9.453	9.870	8.490 E7	13.55
3) gamma-BHC	6.108	6.700	7.131	7.655	8.080	8.462	7.356 E7	11.96
4) beta-BHC	3.096	3.114	3.126	3.176	3.273	3.401	3.197 E7	3.70
5) Heptachlor	5.763	6.062	6.326	6.705	7.074	7.419	6.558 E7	9.55
6) delta-BHC	5.354	5.984	6.480	7.059	7.500	7.937	6.719 E7	14.38
7) Aldrin	5.222	5.738	6.111	6.580	6.974	7.320	6.324 E7	12.42
8) Heptachlor Epoxide	4.992	5.260	5.455	5.739	6.037	6.334	5.636 E7	8.86
9) gamma-Chlordane	4.810	4.985	5.171	5.482	5.795	6.078	5.387 E7	9.07
10) alpha-Chlordane	4.634	4.826	4.983	5.204	5.464	5.738	5.141 E7	8.00
11) Endosulfan I	4.298	4.539	4.731	4.987	5.261	5.533	4.891 E7	9.41
12) 4,4'-DDE	3.942	4.355	4.676	5.059	5.412	5.733	4.863 E7	13.76
13) Dieldrin	4.306	4.680	4.980	5.362	5.708	6.052	5.181 E7	12.58
14) Endrin	1.849	1.973	2.063	2.210	2.356	2.578	2.172 E7	12.29
15) 4,4'-DDD	3.214	3.532	3.754	4.039	4.319	4.673	3.922 E7	13.58
16) Endosulfan II	3.836	3.983	4.034	4.334	4.594	4.925	4.284 E7	9.70

481

(#) = Out of Range

Response Factor Report HP9

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002

Calibration Files

4 =9G19266.D 10 =9G19265.D 20 =9G19264.D
 50 =9G19263.D 100 =9G19262.D 200 =9G19261.D

Compound	4	10	20	50	100	200	Avg	%RSD
17) 4,4'-DDT	2.996	3.128	3.132	3.688	3.989	4.339	3.545 E7	15.42
18) Endrin Aldehyde	2.830	2.961	3.054	3.198	3.403	3.647	3.182 E7	9.48
19) Endosulfan Sulfate	3.011	3.172	3.290	3.489	3.762	4.073	3.466 E7	11.40
20) Methoxychlor	1.595	1.651	1.685	1.747	1.847	1.983	1.751 E7	8.14
21) Endrin Ketone	3.591	3.818	3.967	4.193	4.440	4.718	4.121 E7	10.06
22) S Decachlorobiphenyl	3.686	3.598	3.479	3.382	3.426	3.534	3.517 E7	3.20

Data File : C:\HPCHEM\1\DATA\032702\9G19261.D\ECD1A.CH Vial: 12
 Acq On : 27 Mar 2002 16:37 Operator: ECL
 Sample : WG115221-01 PEST ICAL 200 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19261.D\ECD2B.CH Vial: 12
 Acq On : 27 Mar 2002 17:01 Operator: ECL
 Sample : WG115221-01 PEST ICAL 200 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:50 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
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System Monitoring Compounds

1) S	2,4,5,6-Tetrachl	7.80f	8.58	9892.3E6	13356.6E6	223.2364	221.6893
	Spiked Amount	20.000	Range 30 -	132	Recovery =	1116.18%#	1108.45%#
22) S	Decachlorobiphen	15.30f	16.57f	5466.1E6	7067.2E6	187.7969	201.1098
	Spiked Amount	20.000	Range 36 -	144	Recovery =	938.98%#	1005.55%#

Target Compounds

2)	alpha-BHC	8.86	9.75	13688.8E6	19739.5E6	241.0338	240.3190
3)	gamma-BHC	9.41f	10.38	12015.0E6	16923.1E6	235.0587	237.1820
4)	beta-BHC	9.59f	10.51	4931.1E6	6801.2E6	212.4576	215.4411
5)	Heptachlor	10.18f	11.11	10841.1E6	14838.1E6	237.8742	232.3488
6)	delta-BHC	9.88f	11.01	11629.7E6	15873.8E6	245.7312	245.1369
7)	Aldrin	10.65f	11.63f	10289.2E6	14640.1E6	234.0056	239.0217
8)	Heptachlor Epoxi	11.55f	12.52f	9212.9E6	12667.6E6	223.6410	230.4696
9)	gamma-Chlordane	11.73	12.77	9053.7E6	12155.6E6	226.5998	231.5996
10)	alpha-Chlordane	11.92f	12.97f	8450.1E6	11476.1E6	220.7151	228.5086
11)	Endosulfan I	12.11	13.06	8315.0E6	11066.3E6	222.8427	232.3310
12)	4,4'-DDE	12.04f	13.15f	8754.0E6	11466.7E6	238.0794	244.5549
13)	Dieldrin	12.44f	13.41f	9058.9E6	12104.1E6	233.1406	241.7309
14)	Endrin	12.75	13.78	3583.1E6	5155.3E6	227.3239	246.6320
15)	4,4'-DDD	12.84f	13.84	7110.2E6	9346.3E6	235.7442	247.8157
16)	Endosulfan II	13.04f	14.01f	7478.5E6	9849.7E6	224.9771	236.9998
17)	4,4'-DDT	13.19	14.19	7008.4E6	8678.1E6	259.0001	256.2511
18)	Endrin Aldehyde	13.52	14.37	5844.3E6	7294.6E6	210.2923	236.1383
19)	Endosulfan Sulfa	14.00	14.65	6218.7E6	8145.9E6	223.1827	243.5516
20)	Methoxychlor	13.75f	14.86	3655.7E6	3965.7E6	234.9166	232.5903
21)	Endrin Ketone	14.30	15.22	7398.0E6	9435.2E6	216.5049	235.7642

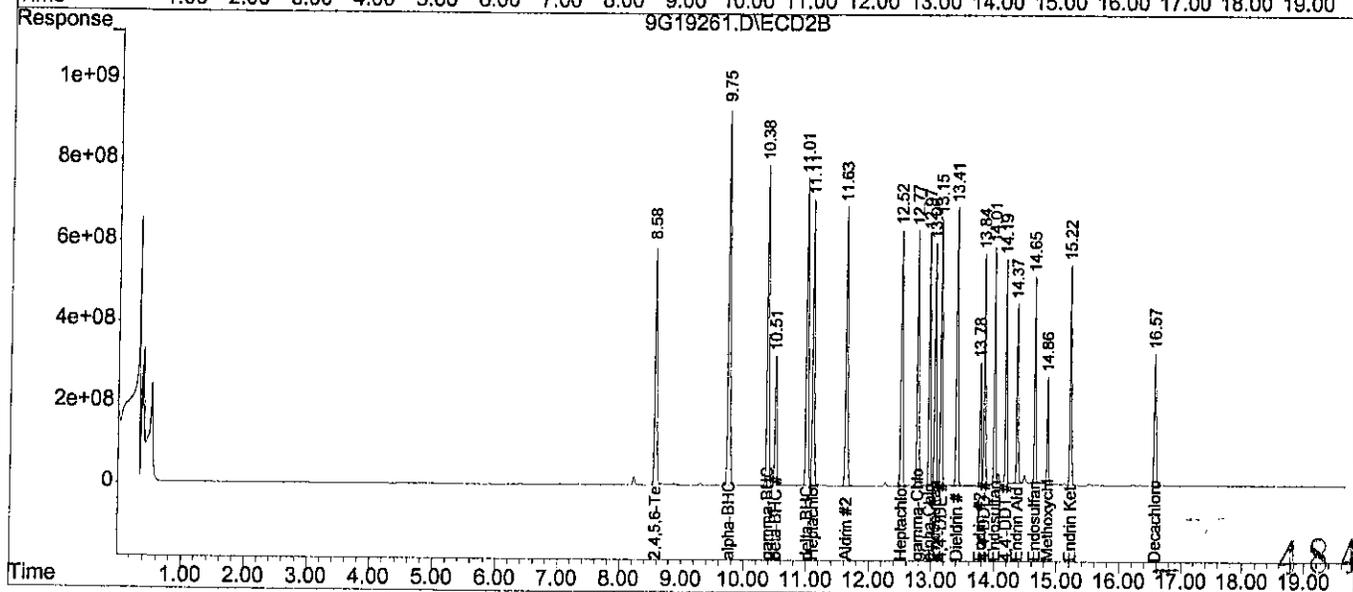
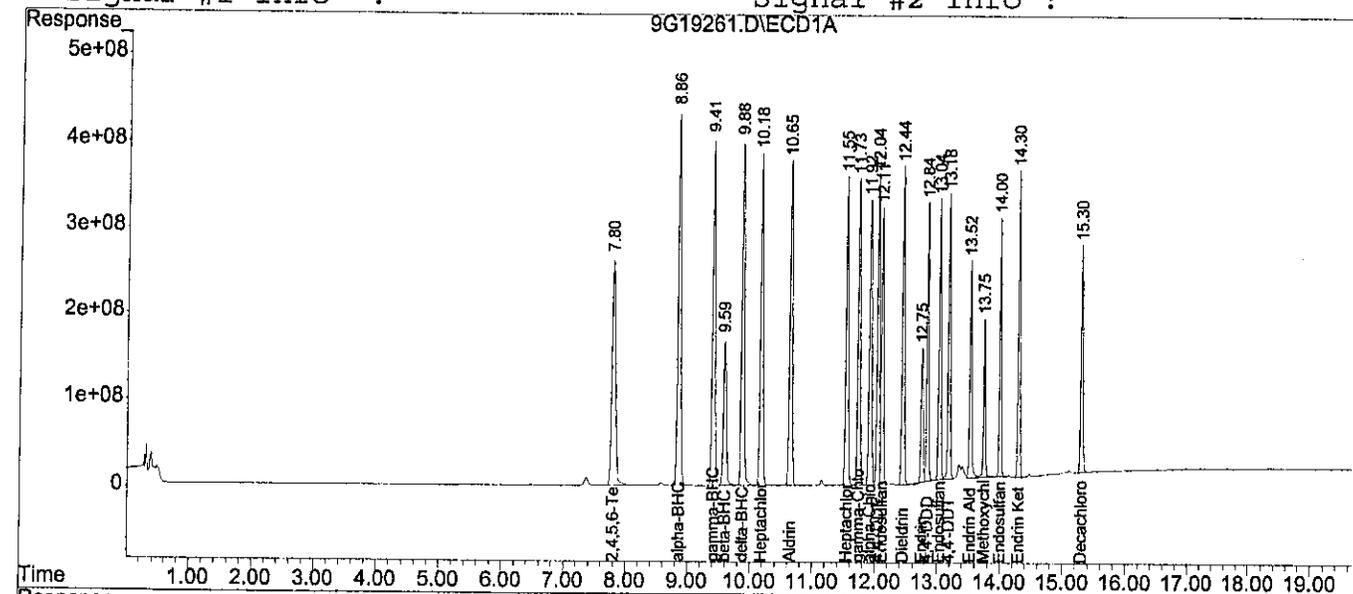
Data File : C:\HPCHEM\1\DATA\032702\9G19261.D\ECD1A.CH Vial: 12
 Acq On : 27 Mar 2002 16:37 Operator: ECL
 Sample : WG115221-01 PEST ICAL 200 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19261.D\ECD2B.CH Vial: 12
 Acq On : 27 Mar 2002 17:01 Operator: ECL
 Sample : WG115221-01 PEST ICAL 200 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:50 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19262.D\ECD1A.CH Vial: 13
 Acq On : 27 Mar 2002 17:01 Operator: ECL
 Sample : WG115221-02 PEST ICAL 100 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19262.D\ECD2B.CH Vial: 13
 Acq On : 27 Mar 2002 17:25 Operator: ECL
 Sample : WG115221-02 PEST ICAL 100 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:45 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.80f	8.58	4743.3E6	6393.2E6	108.9587	107.7593
Spiked Amount	20.000	Range	30 - 132	Recovery	= 544.79%#	538.80%#
22) S Decachlorobiphen	15.31	16.57f	2756.7E6	3425.8E6	93.4731	96.8798
Spiked Amount	20.000	Range	36 - 144	Recovery	= 467.37%#	484.40%#
Target Compounds						
2) alpha-BHC	8.86	9.75	6457.8E6	9452.8E6	117.7439	119.5932
3) gamma-BHC	9.41	10.38	5674.6E6	8079.8E6	114.1613	117.1174
4) beta-BHC	9.60f	10.51	2379.7E6	3272.9E6	103.1805	104.6356
5) Heptachlor	10.19	11.11	5077.6E6	7074.1E6	114.6846	113.8388
6) delta-BHC	9.88f	11.01	5427.6E6	7500.2E6	119.0535	120.5963
7) Aldrin	10.65	11.63	4884.1E6	6973.7E6	114.2419	117.9416
8) Heptachlor Epoxi	11.55	12.51	4395.9E6	6037.0E6	108.5293	112.6039
9) gamma-Chlordane	11.74	12.77	4311.1E6	5794.6E6	110.0739	113.3515
10) alpha-Chlordane	11.93	12.97	4075.3E6	5464.2E6	108.1889	111.2501
11) Endosulfan I	12.12	13.06	3980.5E6	5261.2E6	108.4894	113.4217
12) 4,4'-DDE	12.05	13.15	4138.3E6	5412.1E6	116.1917	120.0549
13) Dieldrin	12.45	13.41	4297.6E6	5707.6E6	113.6159	118.1174
14) Endrin	12.76	13.78	1723.1E6	2356.5E6	111.9290	116.4439
15) 4,4'-DDD	12.85	13.84	3363.2E6	4318.9E6	114.8140	118.8268
16) Endosulfan II	13.05	14.01	3551.5E6	4593.8E6	108.6988	113.5230
17) 4,4'-DDT	13.19	14.19	3217.2E6	3988.9E6	124.7893	123.2669
18) Endrin Aldehyde	13.53	14.37	2728.8E6	3402.6E6	97.7463	113.0162
19) Endosulfan Sulfa	14.01	14.65	2983.9E6	3762.0E6	109.0214	116.1000
20) Methoxychlor	13.76	14.86	1684.6E6	1847.4E6	110.5288	110.6614
21) Endrin Ketone	14.31	15.22	3586.5E6	4440.4E6	106.2778	114.0793

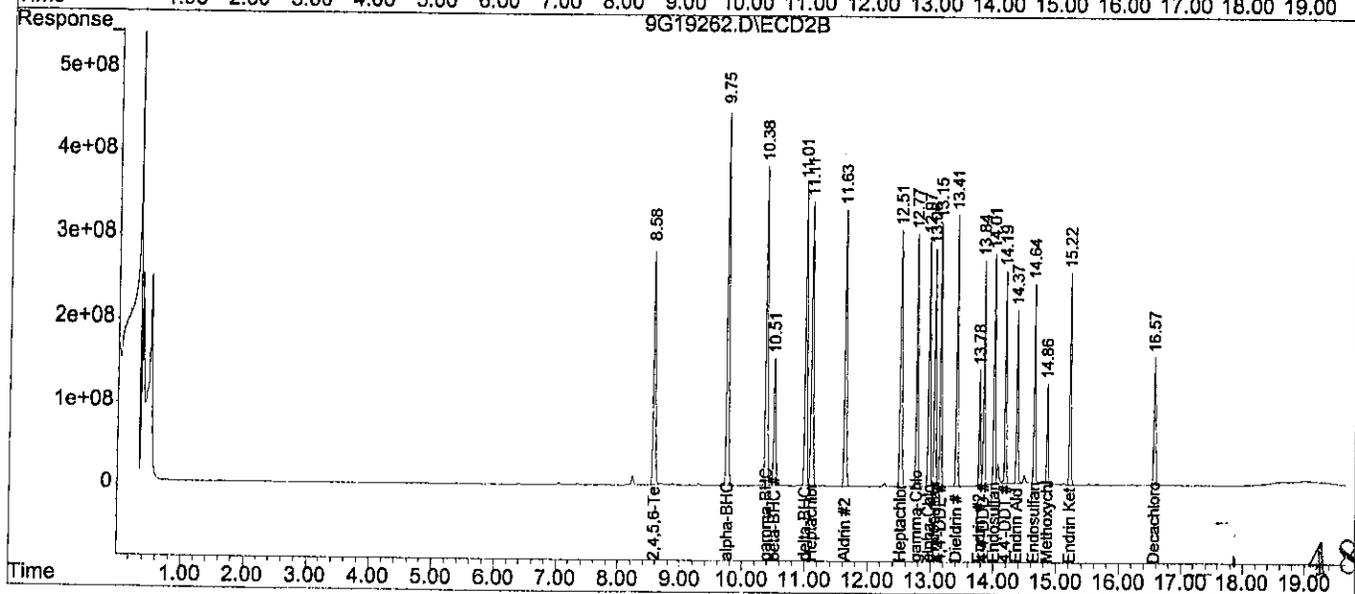
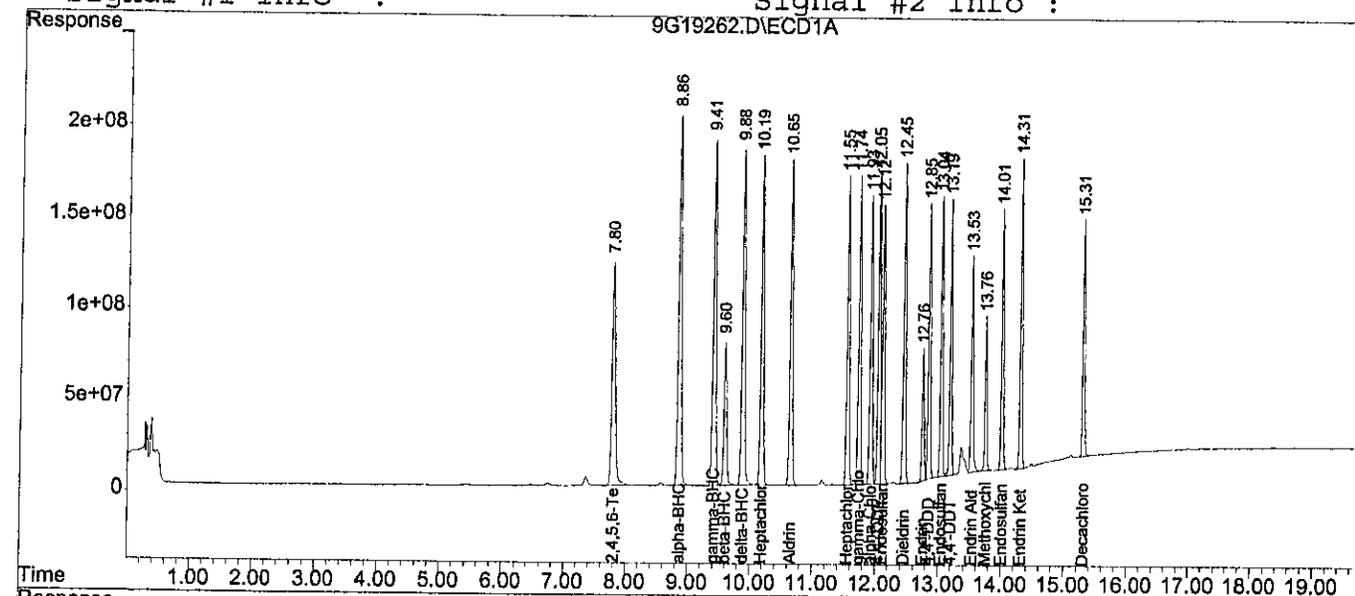
Data File : C:\HPCHEM\1\DATA\032702\9G19262.D\ECD1A.CH Vial: 13
 Acq On : 27 Mar 2002 17:01 Operator: ECL
 Sample : WG115221-02 PEST ICAL 100 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19262.D\ECD2B.CH Vial: 13
 Acq On : 27 Mar 2002 17:25 Operator: ECL
 Sample : WG115221-02 PEST ICAL 100 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:45 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19263.D\ECD1A.CH Vial: 14
 Acq On : 27 Mar 2002 17:25 Operator: ECL
 Sample : WG115221-03 PEST ICAL 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19263.D\ECD2B.CH Vial: 14
 Acq On : 27 Mar 2002 17:49 Operator: ECL
 Sample : WG115221-03 PEST ICAL 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:39 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

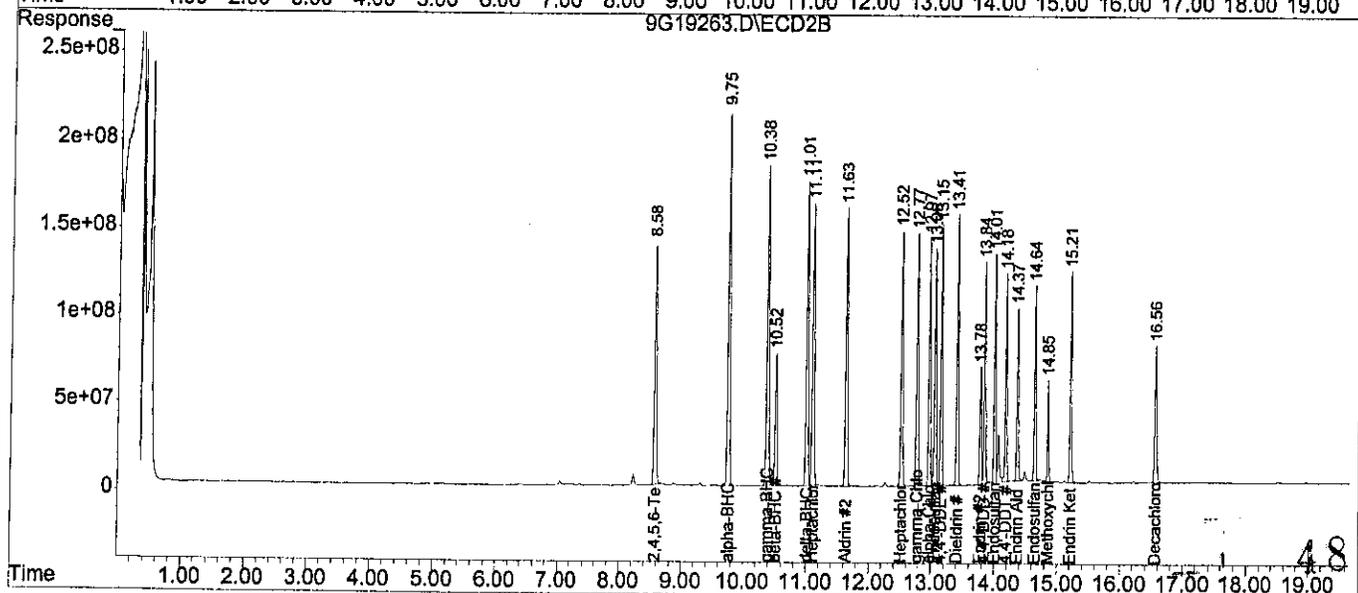
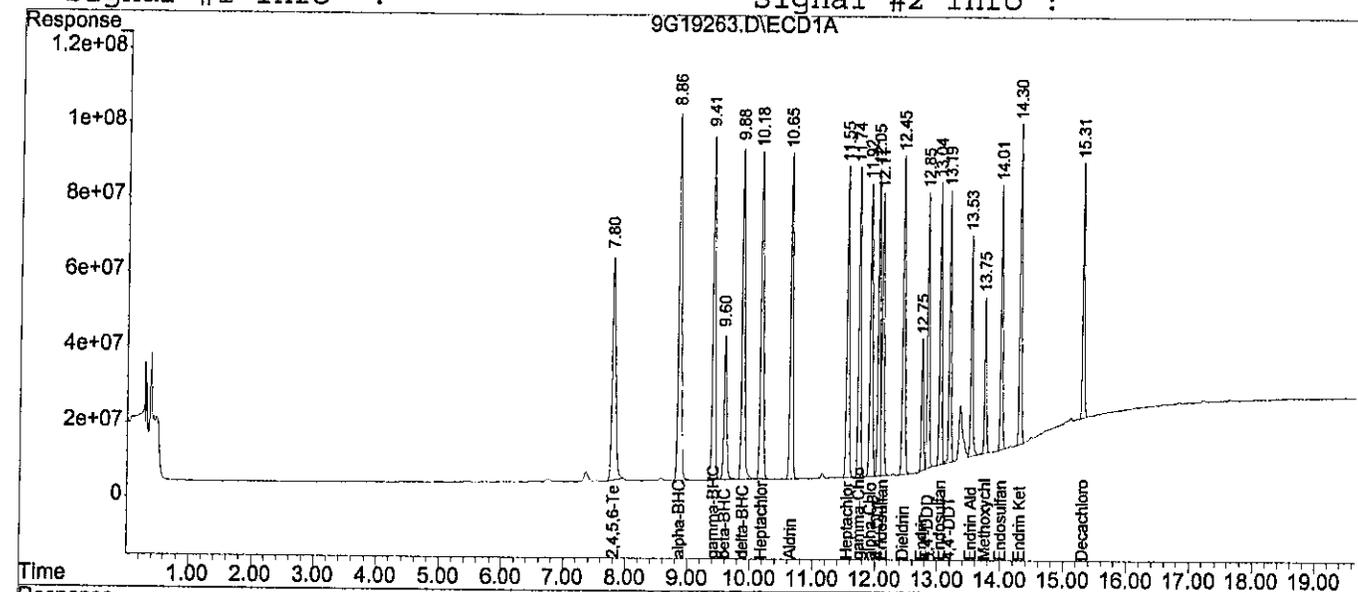
Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.81f	8.58	2303.2E6	3086.8E6	53.9520	52.7418
Spiked Amount	20.000	Range	30 - 132	Recovery =	269.76%#	263.71%#
22) S Decachlorobiphen	15.31	16.56	1445.0E6	1691.1E6	48.6712	47.1375
Spiked Amount	20.000	Range	36 - 144	Recovery =	243.36%#	235.69%#
Target Compounds						
2) alpha-BHC	8.86	9.75	3118.3E6	4461.8E6	59.5797	58.9846
3) gamma-BHC	9.41	10.38	2756.9E6	3827.7E6	57.5597	57.5869
4) beta-BHC	9.60f	10.52	1191.2E6	1587.8E6	52.2239	51.0229
5) Heptachlor	10.19	11.11f	2447.7E6	3352.5E6	57.3045	55.4091
6) delta-BHC	9.88f	11.01f	2618.5E6	3529.6E6	60.4314	59.4270
7) Aldrin	10.65	11.64f	2373.8E6	3290.1E6	57.6480	57.8189
8) Heptachlor Epoxi	11.55	12.52f	2161.0E6	2869.3E6	54.5737	54.8057
9) gamma-Chlordane	11.74	12.77	2112.1E6	2741.1E6	55.3759	54.9454
10) alpha-Chlordane	11.92	12.97	2009.4E6	2602.2E6	54.5616	54.0544
11) Endosulfan I	12.11	13.06	1958.7E6	2493.7E6	54.6178	55.1406
12) 4,4'-DDE	12.05f	13.15	2002.9E6	2529.5E6	58.6762	58.4938
13) Dieldrin	12.45	13.41	2089.8E6	2681.1E6	57.2502	57.5897
14) Endrin	12.75	13.78	842.7E6	1105.2E6	56.5208	56.3422
15) 4,4'-DDD	12.85	13.84	1635.9E6	2019.6E6	58.1096	57.7067
16) Endosulfan II	13.04	14.01	1745.4E6	2166.9E6	54.6667	54.8472
17) 4,4'-DDT	13.19	14.18	1525.2E6	1843.8E6	63.0066	59.7602
18) Endrin Aldehyde	13.53	14.37	1368.1E6	1598.9E6	48.6818	54.2309
19) Endosulfan Sulfa	14.01	14.64	1488.8E6	1744.3E6	56.0358	55.2435
20) Methoxychlor	13.75	14.85	835.3E6	873.4E6	56.6171	53.1354
21) Endrin Ketone	14.30	15.21	1798.8E6	2096.6E6	54.5047	55.2893

Data File : C:\HPCHEM\1\DATA\032702\9G19263.D\ECD1A.CH Vial: 14
 Acq On : 27 Mar 2002 17:25 Operator: ECL
 Sample : WG115221-03 PEST ICAL 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19263.D\ECD2B.CH Vial: 14
 Acq On : 27 Mar 2002 17:49 Operator: ECL
 Sample : WG115221-03 PEST ICAL 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:39 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19264.D\ECD1A.CH Vial: 15
 Acq On : 27 Mar 2002 17:49 Operator: ECL
 Sample : WG115221-04 PEST ICAL 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19264.D\ECD2B.CH Vial: 15
 Acq On : 27 Mar 2002 18:13 Operator: ECL
 Sample : WG115221-04 PEST ICAL 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:33 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

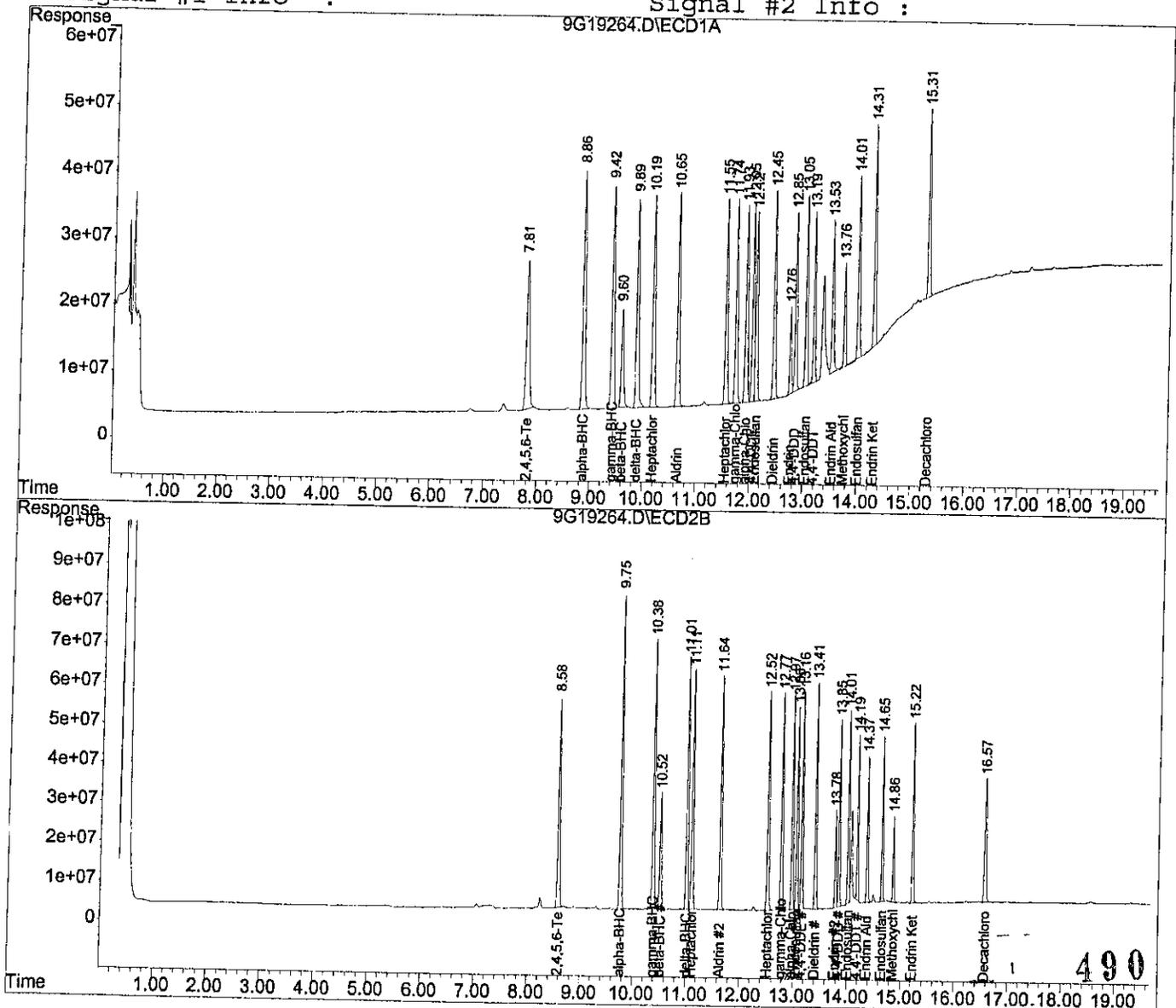
Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.81	8.58	894.3E6	1198.1E6	21.4586	20.7140
Spiked Amount	20.000	Range	30 - 132	Recovery	= 107.29%	103.57%
22) S Decachlorobiphen	15.31	16.57f	607.2E6	695.8E6	20.6863	19.1069
Spiked Amount	20.000	Range	36 - 144	Recovery	= 103.43%	95.53%
Target Compounds						
2) alpha-BHC	8.87	9.75f	1152.4E6	1648.7E6	23.1889	22.8211
3) gamma-BHC	9.42	10.38f	1029.2E6	1426.3E6	22.3197	22.2706
4) beta-BHC	9.60	10.52f	463.6E6	625.1E6	20.4929	20.1319
5) Heptachlor	10.19	11.11f	909.6E6	1265.3E6	22.0063	21.4001
6) delta-BHC	9.89	11.01f	964.8E6	1296.0E6	23.6058	22.8615
7) Aldrin	10.65	11.64f	886.6E6	1222.2E6	22.3894	22.3037
8) Heptachlor Epoxi	11.55	12.52f	826.1E6	1091.0E6	21.3219	21.2852
9) gamma-Chlordane	11.74	12.78	805.2E6	1034.3E6	21.7151	21.1196
10) alpha-Chlordane	11.93	12.97f	771.4E6	996.5E6	21.4517	21.0686
11) Endosulfan I	12.12	13.06	750.7E6	946.1E6	21.4333	21.4136
12) 4,4'-DDE	12.05	13.16f	739.3E6	935.2E6	22.5946	22.5430
13) Dieldrin	12.45	13.41f	781.8E6	996.0E6	22.2058	22.1670
14) Endrin	12.76	13.78	317.4E6	412.5E6	21.9969	21.5853
15) 4,4'-DDD	12.85	13.85	610.1E6	750.8E6	22.6159	22.2604
16) Endosulfan II	13.05	14.01f	666.5E6	806.8E6	21.3415	20.6391
17) 4,4'-DDT	13.20	14.19	542.9E6	626.5E6	23.8787	20.4602
18) Endrin Aldehyde	13.53	14.37	549.5E6	610.8E6	19.3379	21.0959
19) Endosulfan Sulfa	14.01	14.65	569.8E6	658.0E6	22.2523	21.2853
20) Methoxychlor	13.76	14.86	324.0E6	336.9E6	23.0948	20.7554
21) Endrin Ketone	14.31	15.22	707.3E6	793.5E6	22.2283	21.4204

Data File : C:\HPCHEM\1\DATA\032702\9G19264.D\ECD1A.CH Vial: 15
 Acq On : 27 Mar 2002 17:49 Operator: ECL
 Sample : WG115221-04 PEST ICAL 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19264.D\ECD2B.CH Vial: 15
 Acq On : 27 Mar 2002 18:13 Operator: ECL
 Sample : WG115221-04 PEST ICAL 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:33 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase :
 Signal #1 Info :
 Signal #2 Phase :
 Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032702\9G19265.D\ECD1A.CH Vial: 16
 Acq On : 27 Mar 2002 18:13 Operator: ECL
 Sample : WG115221-05 PEST ICAL 10 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19265.D\ECD2B.CH Vial: 16
 Acq On : 27 Mar 2002 18:38 Operator: ECL
 Sample : WG115221-05 PEST ICAL 10 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:27 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:27 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.81	8.58	422.4E6	585.8E6	10.2757	10.2594
Spiked Amount	20.000	Range 30 -	132	Recovery =	51.38%	51.30%
22) S Decachlorobiphen	15.31	16.57f	296.6E6	359.8E6	10.2082	9.7605
Spiked Amount	20.000	Range 36 -	144	Recovery =	51.04%	48.80%
Target Compounds						
2) alpha-BHC	8.86	9.75	509.1E6	763.5E6	10.5017	11.2038
3) gamma-BHC	9.41	10.38f	466.9E6	670.0E6	10.2525	10.9693
4) beta-BHC	9.60	10.52f	225.3E6	311.4E6	9.9141	10.0602
5) Heptachlor	10.19	11.11f	417.5E6	606.2E6	10.2048	10.5174
6) delta-BHC	9.89	11.01f	420.5E6	598.4E6	10.5926	11.1777
7) Aldrin	10.65	11.64f	400.2E6	573.8E6	10.2152	10.9891
8) Heptachlor Epoxi	11.55	12.52f	386.9E6	526.0E6	9.9709	10.5366
9) gamma-Chlordane	11.74	12.78	376.4E6	498.5E6	10.3059	10.3631
10) alpha-Chlordane	11.93	12.97f	360.5E6	482.6E6	10.0493	10.4149
11) Endosulfan I	12.12	13.06	350.7E6	453.9E6	10.0244	10.5596
12) 4,4'-DDE	12.05	13.16f	332.6E6	435.5E6	10.3364	11.0482
13) Dieldrin	12.45	13.41f	357.5E6	468.0E6	10.3131	10.8698
14) Endrin	12.76	13.78	145.5E6	197.3E6	10.1632	10.6742
15) 4,4'-DDD	12.85	13.85	274.0E6	353.2E6	10.3181	10.9905
16) Endosulfan II	13.04	14.01f	314.6E6	398.3E6	10.1488	10.3839
17) 4,4'-DDT	13.19	14.19	242.1E6	312.8E6	11.3860	10.4381
18) Endrin Aldehyde	13.53	14.37	271.6E6	296.1E6	9.1506	10.4645
19) Endosulfan Sulfa	14.01	14.65	262.1E6	317.2E6	10.4832	10.5353
20) Methoxychlor	13.76	14.86	147.3E6	165.1E6	11.0450	10.3506
21) Endrin Ketone	14.31	15.22	331.4E6	381.8E6	10.8634	10.6329

Data File : C:\HPCHEM\1\DATA\032702\9G19266.D\ECD1A.CH Vial: 17
 Acq On : 27 Mar 2002 18:38 Operator: ECL
 Sample : WG115221-06 PEST ICAL 4 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19266.D\ECD2B.CH Vial: 17
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-06 PEST ICAL 4 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:32 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.82	8.57	164.4E6	228.4E6	3.6404	3.7234
Spiked Amount	20.000	Range	30 - 132	Recovery =	18.20%#	18.62%#
22) S Decachlorobiphen	15.31	16.56	116.2E6	147.4E6	4.0333	4.1916
Spiked Amount	20.000	Range	36 - 144	Recovery =	20.17%#	20.96%#
Target Compounds						
2) alpha-BHC	8.87	9.75	193.9E6	272.6E6	3.3018	3.2106
3) gamma-BHC	9.42	10.37	182.2E6	244.3E6	3.4625	3.3215
4) beta-BHC	9.61	10.51	90885338	123.8E6	3.8755	3.8728
5) Heptachlor	10.19	11.10	163.7E6	230.5E6	3.4810	3.5152
6) delta-BHC	9.89	11.00	158.8E6	214.1E6	3.2320	3.1872
7) Aldrin	10.66	11.63	156.7E6	208.9E6	3.4659	3.3027
8) Heptachlor Epoxi	11.56	12.51	155.2E6	199.7E6	3.6948	3.5428
9) gamma-Chlordane	11.75	12.76	146.1E6	192.4E6	3.5770	3.5717
10) alpha-Chlordane	11.93	12.96	143.5E6	185.3E6	3.6840	3.6049
11) Endosulfan I	12.12	13.05	139.9E6	171.9E6	3.6801	3.5147
12) 4,4'-DDE	12.06	13.15	128.7E6	157.7E6	3.3930	3.2425
13) Dieldrin	12.46	13.40	138.7E6	172.2E6	3.4727	3.3242
14) Endrin	12.76	13.77	57247256	73948284	3.5511	3.4054
15) 4,4'-DDD	12.86	13.84	106.2E6	128.5E6	3.4197	3.2777
16) Endosulfan II	13.05	14.00	124.0E6	153.4E6	3.6541	3.5812
17) 4,4'-DDT	13.20	14.18	85054209	119.9E6	2.9959	3.3806
18) Endrin Aldehyde	13.54	14.36	118.7E6	113.2E6	4.2350	3.5571
19) Endosulfan Sulfa	14.02	14.64	100.0E6	120.4E6	3.5213	3.4746
20) Methoxychlor	13.76	14.85	53330354	63810767	3.3301	3.6435
21) Endrin Ketone	14.31	15.21	121.1E6	143.6E6	3.4967	3.4851

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD1A.CH Vial: 18
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD2B.CH Vial: 18
 Acq On : 27 Mar 2002 19:26 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
2	alpha-BHC	20.000	17.832	10.8	91	0.00
3	gamma-BHC	20.000	17.985	10.1	92	0.00
4	beta-BHC	20.000	18.552	7.2	94	-0.01
5	Heptachlor	20.000	17.573	12.1	91	0.00
6	delta-BHC	20.000	17.763	11.2	90	-0.01
7	Aldrin	20.000	17.644	11.8	90	-0.01
8	Heptachlor Epoxide	20.000	17.918	10.4	91	-0.01
9	gamma-Chlordane	20.000	18.109	9.5	92	-0.01
10	alpha-Chlordane	20.000	18.263	8.7	92	-0.01
11	Endosulfan I	20.000	18.065	9.7	92	-0.01
12	4,4'-DDE	20.000	17.722	11.4	91	-0.01
13	Dieldrin	20.000	18.041	9.8	92	-0.01
14	Endrin	20.000	17.410	13.0	88	-0.01
15	4,4'-DDD	20.000	17.845	10.8	91	-0.01
16	Endosulfan II	20.000	18.252	8.7	93	-0.01
17	4,4'-DDT	20.000	17.655	11.7	92	-0.01
18	Endrin Aldehyde	20.000	17.057	14.7	87	-0.01
19	Endosulfan Sulfate	20.000	18.809	6.0	94	-0.01
20	Methoxychlor	20.000	18.639	6.8	92	-0.01
21	Endrin Ketone	20.000	18.441	7.8	90	-0.01
Signal #2						
2	alpha-BHC	20.000	18.916	5.4	97	0.00
3	gamma-BHC	20.000	18.903	5.5	97	0.00
4	beta-BHC	20.000	19.085	4.6	98	0.00
5	Heptachlor	20.000	18.589	7.1	96	0.00
6	delta-BHC	20.000	18.627	6.9	97	0.00
7	Aldrin	20.000	18.687	6.6	97	0.00
8	Heptachlor Epoxide	20.000	18.679	6.6	96	0.00
9	gamma-Chlordane	20.000	18.677	6.6	97	0.00
10	alpha-Chlordane	20.000	18.805	6.0	97	0.00
11	Endosulfan I	20.000	18.738	6.3	97	0.00
12	4,4'-DDE	20.000	18.592	7.0	97	0.00
13	Dieldrin	20.000	18.864	5.7	98	0.00

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD1A.CH Vial: 18
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD2B.CH Vial: 18
 Acq On : 27 Mar 2002 19:26 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
14	Endrin	20.000	18.075	9.6	95	0.00
15	4,4'-DDD	20.000	18.546	7.3	97	0.00
16	Endosulfan II	20.000	18.814	5.9	100	0.00
17	4,4'-DDT	20.000	18.250	8.8	103	0.00
18	Endrin Aldehyde	20.000	17.432	12.8	91	0.00
19	Endosulfan Sulfate	20.000	18.370	8.1	97	0.00
20	Methoxychlor	20.000	18.739	6.3	97	0.00
21	Endrin Ketone	20.000	18.532	7.3	96	0.00

496

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Page 2

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD1A.CH Vial: 18
 Acq On : 27 Mar 2002 19:02 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19267.D\ECD2B.CH Vial: 18
 Acq On : 27 Mar 2002 19:26 Operator: ECL
 Sample : WG115221-07 PEST ALT ICV 20 PPB Inst : HP9
 Misc : 1,1 SOS57-09 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:29 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	30 - 132	Recovery	=	0.00%# 0.00%#
22) S Decachlorobiphen	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	36 - 144	Recovery	=	0.00%# 0.00%#
Target Compounds						
2) alpha-BHC	8.86	9.75	1047.4E6	1606.0E6	17.8322	18.9165
3) gamma-BHC	9.41	10.38	946.2E6	1390.6E6	17.9851	18.9033
4) beta-BHC	9.60f	10.51	435.1E6	610.2E6	18.5516	19.0853
5) Heptachlor	10.18f	11.11	826.2E6	1219.1E6	17.5729	18.5894
6) delta-BHC	9.88f	11.01	872.7E6	1251.5E6	17.7629	18.6267
7) Aldrin	10.65f	11.63	797.8E6	1181.8E6	17.6445	18.6868
8) Heptachlor Epoxi	11.55f	12.51	752.7E6	1052.8E6	17.9177	18.6792
9) gamma-Chlordane	11.73	12.77	739.6E6	1006.1E6	18.1086	18.6769
10) alpha-Chlordane	11.92f	12.97	711.3E6	966.9E6	18.2630	18.8050
11) Endosulfan I	12.11	13.06	686.9E6	916.6E6	18.0653	18.7378
12) 4,4'-DDE	12.04f	13.15	672.3E6	904.1E6	17.7217	18.5917
13) Dieldrin	12.44f	13.41	720.3E6	977.4E6	18.0408	18.8644
14) Endrin	12.75	13.78	280.7E6	392.5E6	17.4098	18.0750
15) 4,4'-DDD	12.85	13.84	554.2E6	727.3E6	17.8447	18.5456
16) Endosulfan II	13.04f	14.01	619.4E6	806.0E6	18.2521	18.8143
17) 4,4'-DDT	13.19	14.18	501.2E6	647.0E6	17.6546	18.2495
18) Endrin Aldehyde	13.52	14.37	478.1E6	554.7E6	17.0574	17.4321
19) Endosulfan Sulfa	14.00	14.64	534.2E6	636.7E6	18.8092	18.3699
20) Methoxychlor	13.75	14.85	298.5E6	328.2E6	18.6391	18.7387
21) Endrin Ketone	14.30	15.22	638.8E6	763.7E6	18.4407	18.5319

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	50.000	60.463	-20.9#	119	0.00
2	alpha-BHC	50.000	61.892	-23.8#	117	0.00
3	gamma-BHC	50.000	60.935	-21.9#	116	0.00
4	beta-BHC	50.000	59.360	-18.7#	117	0.00
5	Heptachlor	50.000	61.688	-23.4#	118	0.00
6	delta-BHC	50.000	61.893	-23.8#	116	0.00
7	Aldrin	50.000	61.315	-22.6#	117	0.00
8	Heptachlor Epoxide	50.000	59.622	-19.2#	116	0.00
9	gamma-Chlordane	50.000	59.881	-19.8#	116	0.00
10	alpha-Chlordane	50.000	59.614	-19.2#	116	0.00
11	Endosulfan I	50.000	59.679	-19.4#	116	0.00
12	4,4'-DDE	50.000	61.227	-22.5#	116	0.00
13	Dieldrin	50.000	60.468	-20.9#	116	0.00
14	Endrin	50.000	67.428	-34.9#	129	0.00
15	4,4'-DDD	50.000	60.416	-20.8#	115	0.00
16	Endosulfan II	50.000	59.233	-18.5#	115	0.00
17	4,4'-DDT	50.000	63.183	-26.4#	118	0.00
18	Endrin Aldehyde	50.000	55.635	-11.3	114	0.00
19	Endosulfan Sulfate	50.000	58.913	-17.8#	112	0.00
20	Methoxychlor	50.000	59.970	-19.9#	115	0.00
21	Endrin Ketone	50.000	58.122	-16.2#	112	0.00
22 S	Decachlorobiphenyl	50.000	56.889	-13.8	113	0.00

	Signal #2	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xyl	50.000	52.863	-5.7	105	0.00
2	alpha-BHC	50.000	56.693	-13.4	108	0.00
3	gamma-BHC	50.000	56.212	-12.4	108	0.00
4	beta-BHC	50.000	53.641	-7.3	108	0.00
5	Heptachlor	50.000	53.481	-7.0	105	0.00
6	delta-BHC	50.000	56.750	-13.5	108	0.00
7	Aldrin	50.000	55.976	-12.0	108	0.00
8	Heptachlor Epoxide	50.000	54.701	-9.4	107	0.00
9	gamma-Chlordane	50.000	54.926	-9.9	108	0.00
10	alpha-Chlordane	50.000	54.179	-8.4	107	0.00

(#) = Out of Range

499

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
11 Endosulfan I	50.000	54.542	-9.1	107	0.00
12 4,4'-DDE	50.000	55.671	-11.3	107	0.00
13 Dieldrin	50.000	55.407	-10.8	107	0.00
14 Endrin	50.000	49.674	0.7	98	0.00
15 4,4'-DDD	50.000	54.965	-9.9	107	0.00
16 Endosulfan II	50.000	53.864	-7.7	106	0.00
17 4,4'-DDT	50.000	56.029	-12.1	108	0.00
18 Endrin Aldehyde	50.000	54.675	-9.3	109	0.00
19 Endosulfan Sulfate	50.000	53.171	-6.3	106	0.00
20 Methoxychlor	50.000	54.034	-8.1	108	0.00
21 Endrin Ketone	50.000	54.158	-8.3	106	0.00
22 S Decachlorobiphenyl	50.000	51.387	-2.8	107	0.00

500

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:23 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

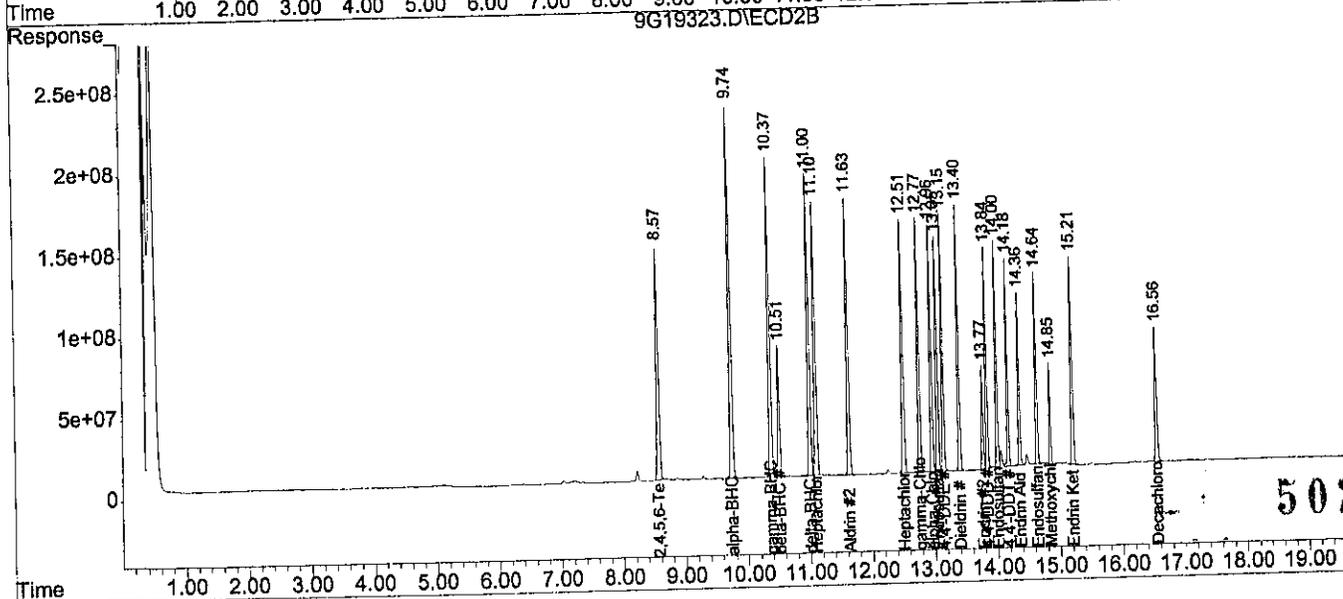
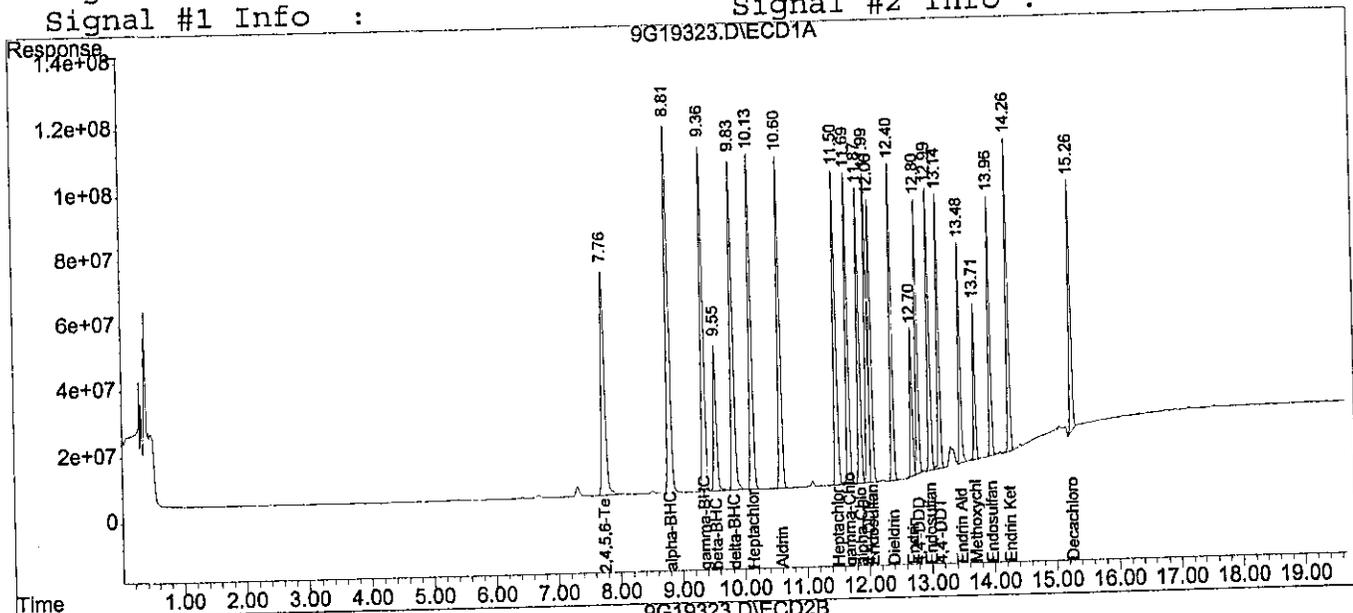
Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.57	2731.2E6	3242.5E6	60.4627	52.8629
Spiked Amount	20.000	Range 30 - 132	Recovery =		302.31%#	264.31%#
22) S Decachlorobiphen	15.26	16.56	1639.0E6	1807.5E6	56.8893	51.3873
Spiked Amount	20.000	Range 36 - 144	Recovery =		284.45%#	256.94%#
Target Compounds						
2) alpha-BHC	8.81	9.74	3635.2E6	4813.1E6	61.8918	56.6927
3) gamma-BHC	9.36	10.37	3205.7E6	4135.0E6	60.9348	56.2119
4) beta-BHC	9.55	10.51	1392.1E6	1715.2E6	59.3602	53.6408
5) Heptachlor	10.13	11.10	2900.2E6	3507.5E6	61.6884	53.4814
6) delta-BHC	9.83	11.00	3040.8E6	3813.0E6	61.8930	56.7495
7) Aldrin	10.60	11.63	2772.4E6	3540.1E6	61.3150	55.9764
8) Heptachlor Epoxi	11.50	12.51	2504.5E6	3082.9E6	59.6218	54.7009
9) gamma-Chlordane	11.69	12.77	2445.6E6	2958.8E6	59.8811	54.9265
10) alpha-Chlordane	11.87	12.96	2321.7E6	2785.6E6	59.6138	54.1786
11) Endosulfan I	12.06	13.05	2269.2E6	2667.9E6	59.6788	54.5421
12) 4,4'-DDE	12.00	13.15	2322.7E6	2707.2E6	61.2274	55.6712
13) Dieldrin	12.40	13.40	2414.4E6	2870.9E6	60.4680	55.4072
14) Endrin	12.70	13.77	1087.0E6	1078.7E6	67.4277	49.6741 #
15) 4,4'-DDD	12.80	13.84	1876.5E6	2155.6E6	60.4155	54.9648
16) Endosulfan II	12.99	14.00	2010.0E6	2307.6E6	59.2332	53.8640
17) 4,4'-DDT	13.14	14.18	1793.8E6	1986.4E6	63.1834	56.0286
18) Endrin Aldehyde	13.48	14.36	1559.4E6	1739.8E6	55.6354	54.6754
19) Endosulfan Sulfa	13.96	14.64	1673.2E6	1842.9E6	58.9127	53.1707
20) Methoxychlor	13.71	14.85	960.4E6	946.3E6	59.9697	54.0342
21) Endrin Ketone	14.26	15.21	2013.3E6	2232.0E6	58.1217	54.1579

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD1A.CH Vial: 14
 Acq On : 01 Apr 2002 16:28 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19323.D\ECD2B.CH Vial: 14
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : WG115409-02 PEST CCV 50 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:23 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



502

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD1A.CH Vial: 15
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD2B.CH Vial: 15
 Acq On : 01 Apr 2002 17:16 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 L1 TOXAPHENE-1	250.000	282.286	-12.9	119	-0.02
2 L1 TOXAPHENE-2	250.000	280.670	-12.3	114	-0.02
3 L1 TOXAPHENE-3	250.000	264.702	-5.9	109	-0.02
4 L1 TOXAPHENE-4	250.000	269.735	-7.9	111	-0.02
5 L1 TOXAPHENE-5	250.000	276.270	-10.5	114	-0.02

Signal #2

1 L1 TOXAPHENE-1	250.000	235.057	6.0	97	0.00
2 L1 TOXAPHENE-2	250.000	247.665	0.9	107	0.00
3 L1 TOXAPHENE-3	250.000	242.109	3.2	105	0.00
4 L1 TOXAPHENE-4	250.000	243.221	2.7	110	0.00
5 L1 TOXAPHENE-5	250.000	251.657	-0.7	108	0.00

503

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Page 1

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD1A.CH Vial: 15
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD2B.CH Vial: 15
 Acq On : 01 Apr 2002 17:16 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Apr 2 8:30 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
Target Compounds						
1) L1 TOXAPHENE-1	12.52	13.98	82377299	62409114	282.2859	235.0565
2) L1 TOXAPHENE-2	12.73	14.36	128.4E6	244.1E6	280.6703	247.6648
3) L1 TOXAPHENE-3	13.76	14.58	175.8E6	131.9E6	264.7023	242.1086
4) L1 TOXAPHENE-4	13.86	14.94	180.6E6	140.9E6	269.7351	243.2214
5) L1 TOXAPHENE-5	14.24	15.30	220.6E6	184.3E6	276.2699	251.6568
Sum TOXAPHENE-1			787.8E6	763.6E6	1373.6635	1219.7081
Average TOXAPHENE-1					274.733	243.942

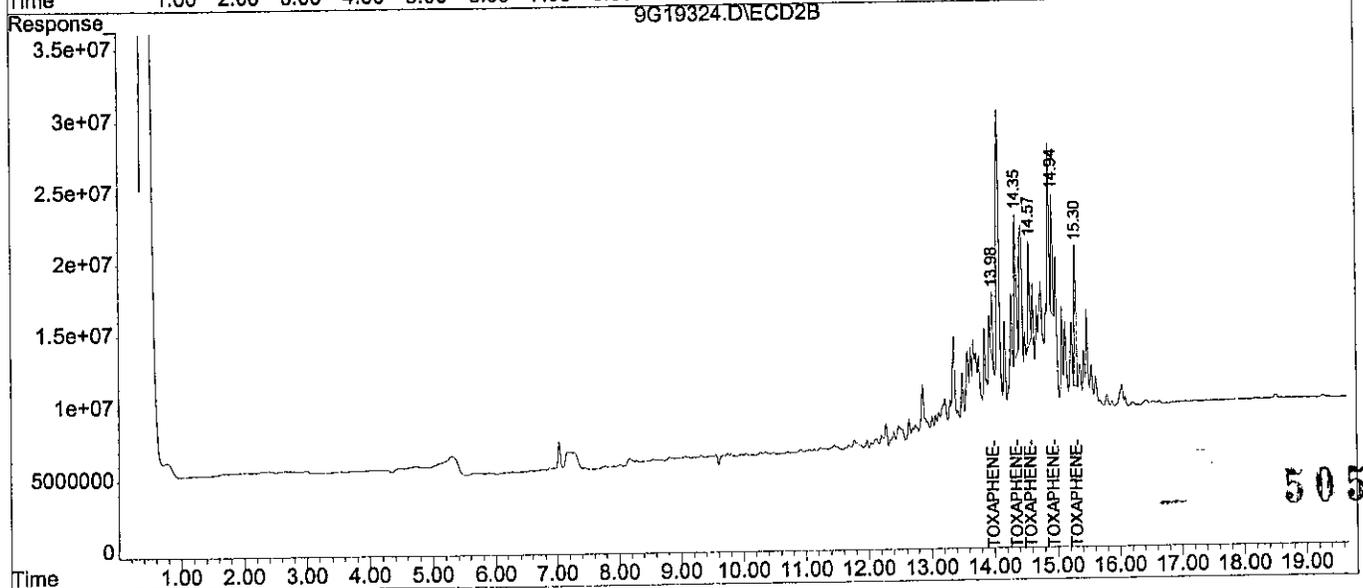
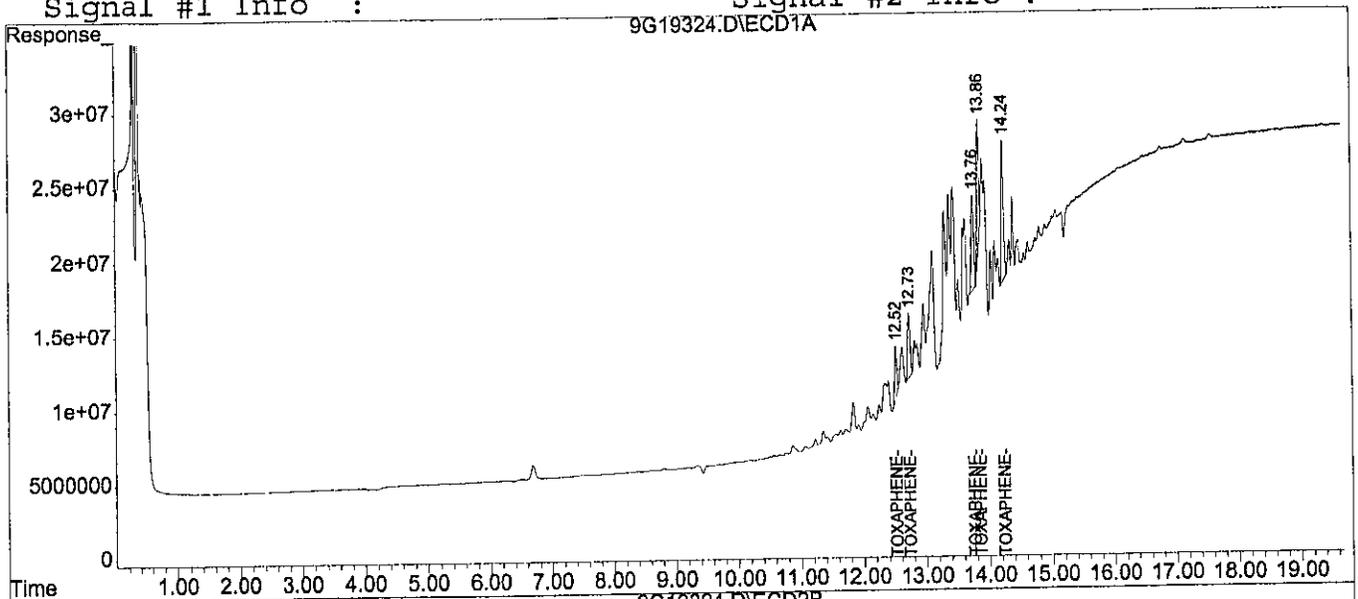
504

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD1A.CH Vial: 15
 Acq On : 01 Apr 2002 16:52 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19324.D\ECD2B.CH Vial: 15
 Acq On : 01 Apr 2002 17:16 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Apr 2 8:30 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev (min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	20.000	22.341	-11.7	113	0.00
2	alpha-BHC	20.000	22.582	-12.9	115	0.00
3	gamma-BHC	20.000	22.415	-12.1	115	0.00
4	beta-BHC	20.000	22.451	-12.3	114	0.00
5	Heptachlor	20.000	22.715	-13.6	117	0.00
6	delta-BHC	20.000	22.455	-12.3	114	0.00
7	Aldrin	20.000	22.581	-12.9	115	0.00
8	Heptachlor Epoxide	20.000	22.436	-12.2	114	0.00
9	gamma-Chlordane	20.000	22.390	-12.0	114	0.00
10	alpha-Chlordane	20.000	22.151	-10.8	112	0.00
11	Endosulfan I	20.000	22.469	-12.3	114	0.00
12	4,4'-DDE	20.000	22.211	-11.1	114	0.00
13	Dieldrin	20.000	22.219	-11.1	113	0.00
14	Endrin	20.000	25.277	-26.4#	128	0.00
15	4,4'-DDD	20.000	22.293	-11.5	113	0.00
16	Endosulfan II	20.000	22.397	-12.0	114	0.00
17	4,4'-DDT	20.000	22.538	-12.7	118	0.00
18	Endrin Aldehyde	20.000	21.804	-9.0	111	0.00
19	Endosulfan Sulfate	20.000	22.158	-10.8	110	0.00
20	Methoxychlor	20.000	22.775	-13.9	113	0.00
21	Endrin Ketone	20.000	22.014	-10.1	108	0.00
22 S	Decachlorobiphenyl	20.000	24.160	-20.8#	115	0.00

	Signal #2	Amount	Calc.	%Dev	Area%	Dev (min)
1 S	2,4,5,6-Tetrachloro-M-Xyl	20.000	19.727	1.4	101	0.00
2	alpha-BHC	20.000	20.204	-1.0	104	0.00
3	gamma-BHC	20.000	20.207	-1.0	104	0.00
4	beta-BHC	20.000	20.418	-2.1	104	0.00
5	Heptachlor	20.000	19.089	4.6	99	0.00
6	delta-BHC	20.000	20.098	-0.5	104	0.00
7	Aldrin	20.000	20.111	-0.6	104	0.00
8	Heptachlor Epoxide	20.000	20.102	-0.5	104	0.00
9	gamma-Chlordane	20.000	19.905	0.5	104	0.00
10	alpha-Chlordane	20.000	20.075	-0.4	104	0.00

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e

Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.02min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
11	Endosulfan I	20.000	20.028	-0.1	104	0.00
12	4,4'-DDE	20.000	19.792	1.0	103	0.00
13	Dieldrin	20.000	20.049	-0.2	104	0.00
14	Endrin	20.000	17.434	12.8	92	0.00
15	4,4'-DDD	20.000	19.724	1.4	103	0.00
16	Endosulfan II	20.000	19.481	2.6	103	0.00
17	4,4'-DDT	20.000	19.010	4.9	108	0.00
18	Endrin Aldehyde	20.000	20.334	-1.7	106	0.00
19	Endosulfan Sulfate	20.000	19.282	3.6	102	0.00
20	Methoxychlor	20.000	20.026	-0.1	104	0.00
21	Endrin Ketone	20.000	19.822	0.9	103	0.00
22 S	Decachlorobiphenyl	20.000	20.300	-1.5	103	0.00

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Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:28 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.57	1009.2E6	1210.0E6	22.3412	19.7271
Spiked Amount	20.000	Range 30 - 132	Recovery =	111.71%	98.64%	
22) S Decachlorobiphen	15.26	16.55	696.1E6	714.0E6	24.1598	20.2997
Spiked Amount	20.000	Range 36 - 144	Recovery =	120.80%	101.50%	
Target Compounds						
2) alpha-BHC	8.81	9.74	1326.3E6	1715.2E6	22.5816	20.2035
3) gamma-BHC	9.36	10.37	1179.2E6	1486.5E6	22.4154	20.2073
4) beta-BHC	9.55	10.51	526.5E6	652.9E6	22.4505	20.4184
5) Heptachlor	10.13	11.10	1067.9E6	1251.9E6	22.7149	19.0888
6) delta-BHC	9.83	11.00	1103.2E6	1350.4E6	22.4553	20.0980
7) Aldrin	10.59f	11.62	1021.0E6	1271.8E6	22.5814	20.1107
8) Heptachlor Epoxi	11.49f	12.51	942.5E6	1132.9E6	22.4358	20.1018
9) gamma-Chlordane	11.68	12.76	914.4E6	1072.2E6	22.3899	19.9050
10) alpha-Chlordane	11.87	12.96	862.7E6	1032.1E6	22.1513	20.0750
11) Endosulfan I	12.05	13.05	854.3E6	979.7E6	22.4685	20.0283
12) 4,4'-DDE	11.99f	13.14	842.6E6	962.5E6	22.2115	19.7918
13) Dieldrin	12.39f	13.40	887.2E6	1038.8E6	22.2191	20.0488
14) Endrin	12.70	13.77	407.5E6	378.6E6	25.2771	17.4344 #
15) 4,4'-DDD	12.80	13.84	692.4E6	773.5E6	22.2929	19.7236
16) Endosulfan II	12.99	14.00	760.0E6	834.6E6	22.3969	19.4814
17) 4,4'-DDT	13.14	14.18	639.8E6	673.9E6	22.5380	19.0096
18) Endrin Aldehyde	13.48	14.36	611.1E6	647.0E6	21.8036	20.3338
19) Endosulfan Sulfa	13.96	14.64	629.3E6	668.3E6	22.1576	19.2818
20) Methoxychlor	13.71	14.85	364.7E6	350.7E6	22.7752	20.0265
21) Endrin Ketone	14.26	15.21	762.6E6	816.9E6	22.0141	19.8222

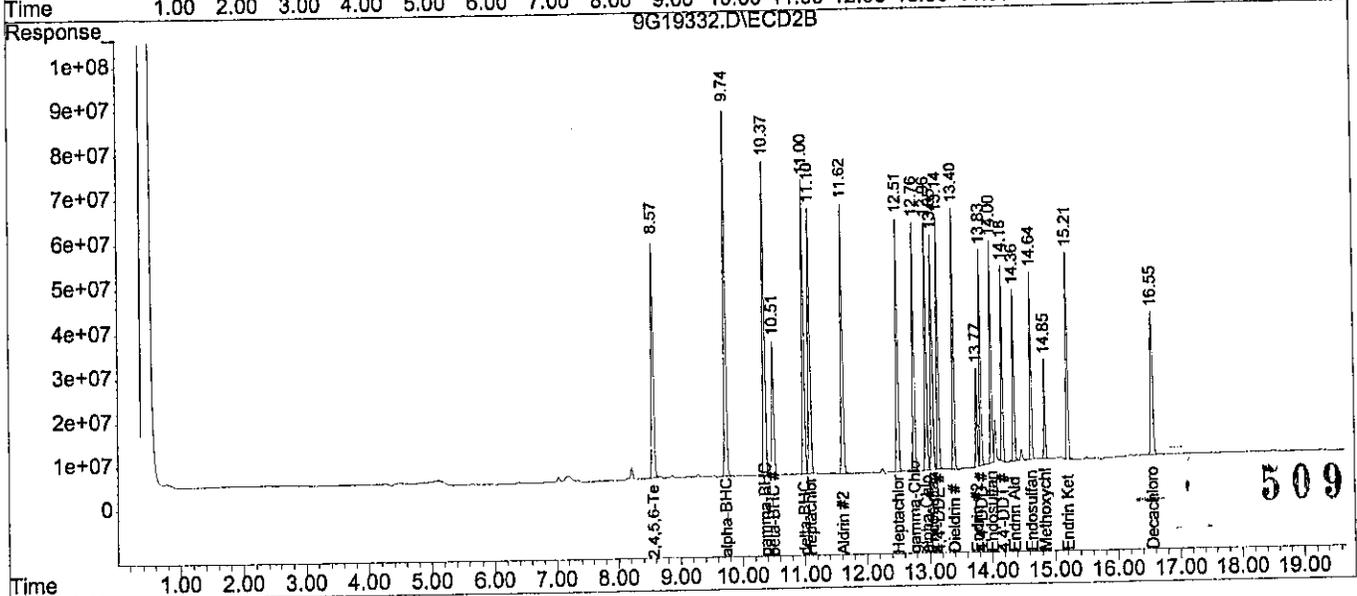
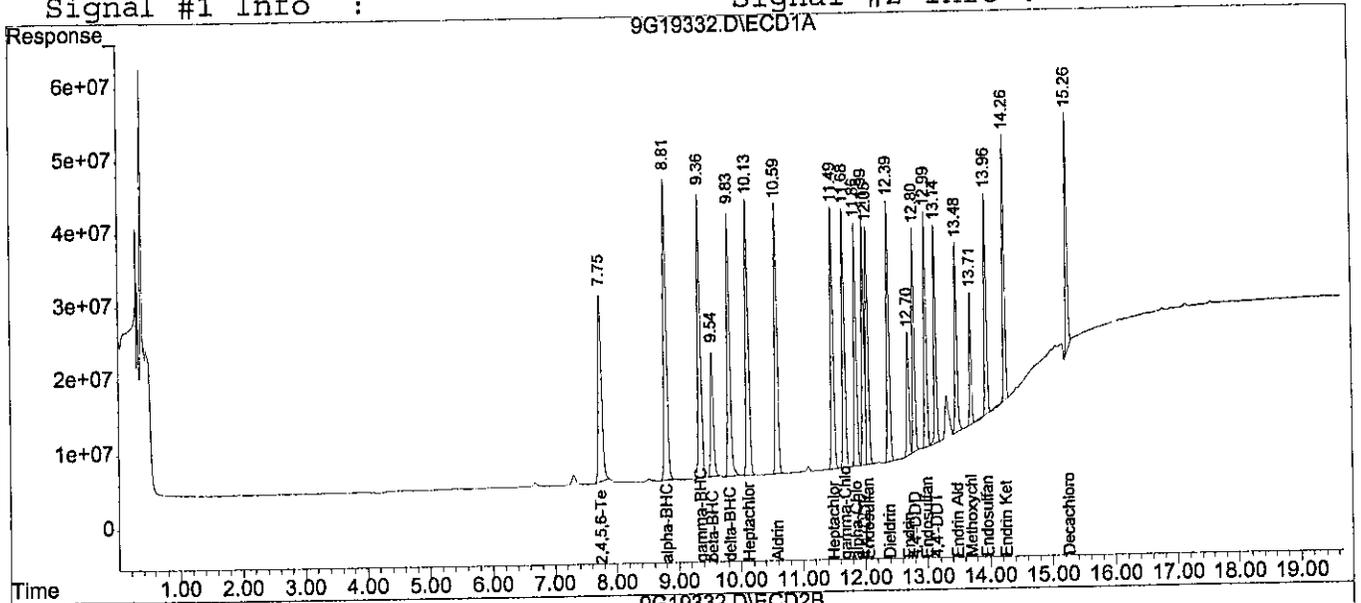
508

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD1A.CH Vial: 23
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19332.D\ECD2B.CH Vial: 23
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : WG115409-03 PEST CCV 20 PPB Inst : HP9
 Misc : 1,1 SOS59-08 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:28 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD1A.CH Vial: 24
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD2B.CH Vial: 24
 Acq On : 01 Apr 2002 20:54 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E

Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev (min)
1 L1 TOXAPHENE-1	500.000	573.639	-14.7	111	-0.02
2 L1 TOXAPHENE-2	500.000	557.333	-11.5	111	-0.02
3 L1 TOXAPHENE-3	500.000	547.982	-9.6	109	-0.01
4 L1 TOXAPHENE-4	500.000	561.121	-12.2	113	-0.02
5 L1 TOXAPHENE-5	500.000	565.463	-13.1	111	-0.02

Signal #2

1 L1 TOXAPHENE-1	500.000	533.927	-6.8	108	0.00
2 L1 TOXAPHENE-2	500.000	527.487	-5.5	104	0.00
3 L1 TOXAPHENE-3	500.000	524.503	-4.9	104	0.00
4 L1 TOXAPHENE-4	500.000	536.743	-7.3	106	0.00
5 L1 TOXAPHENE-5	500.000	528.600	-5.7	105	0.00

510

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Page 1

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD1A.CH Vial: 24
 Acq On : 01 Apr 2002 20:30 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD2B.CH Vial: 24
 Acq On : 01 Apr 2002 20:54 Operator: ECL
 Sample : TOX CCV 0.5 PPM Inst : HP9
 Misc : SOS57-11 Multiplr: 1.00
 IntFile : EVENTS.E
 Quant Time: Apr 2 8:31 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 14:50:08 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

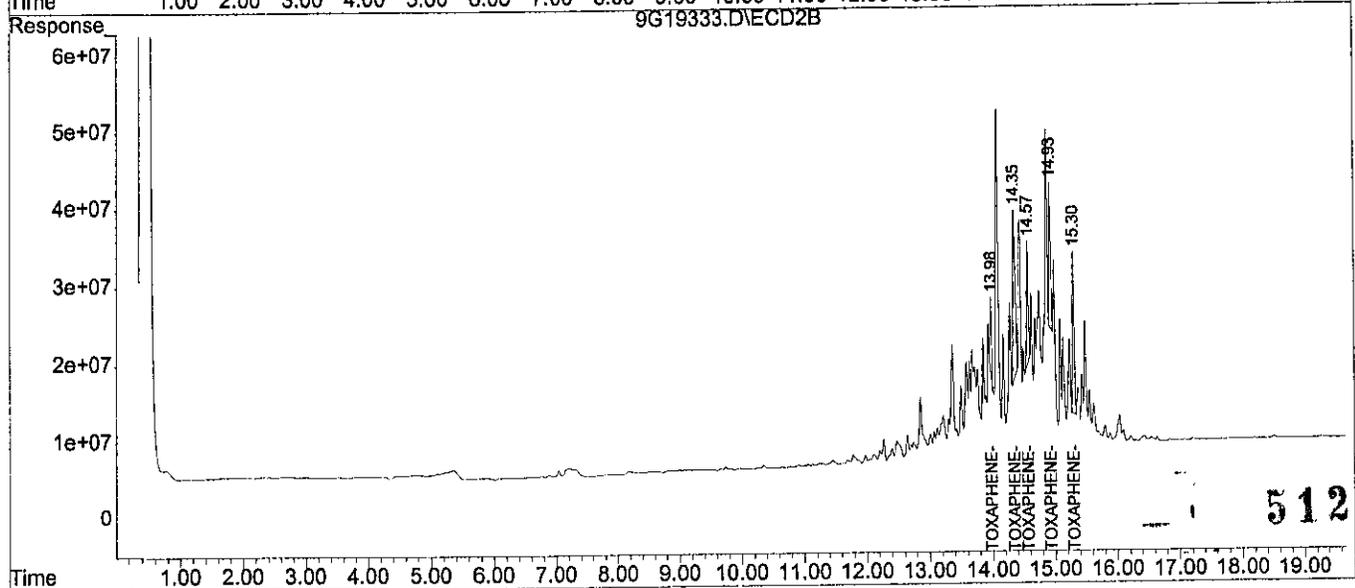
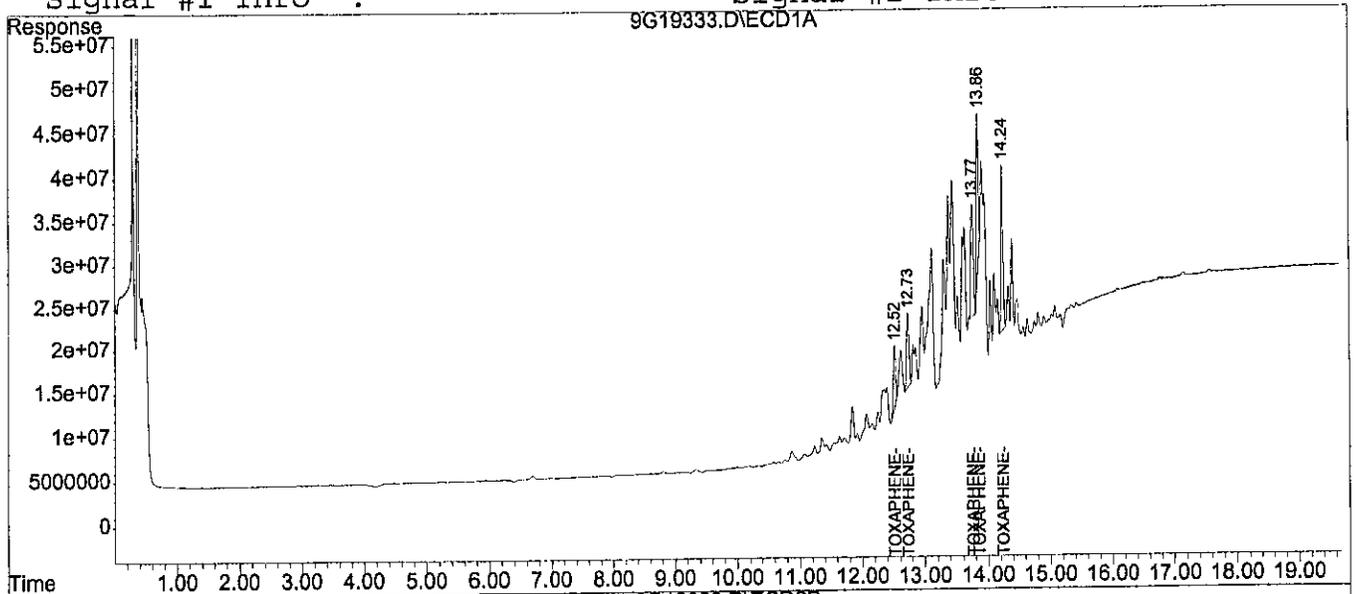
Target Compounds						
1) L1 TOXAPHENE-1	12.52	13.98	167.4E6	141.8E6	573.6391	533.9271
2) L1 TOXAPHENE-2	12.73	14.35	254.9E6	520.0E6	557.3329	527.4869
3) L1 TOXAPHENE-3	13.77	14.57	364.0E6	285.7E6	547.9819	524.5028
4) L1 TOXAPHENE-4	13.86	14.93	375.6E6	310.9E6	561.1209	536.7433
5) L1 TOXAPHENE-5	14.24	15.30	451.6E6	387.2E6	565.4632	528.5996
Sum TOXAPHENE-1			1613.5E6	1645.5E6	2805.5380	2651.2597
Average TOXAPHENE-1					561.108	530.252

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD1A.CH Vial: 24
Acq On : 01 Apr 2002 20:30 Operator: ECL
Sample : TOX CCV 0.5 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : .E

Data File : C:\HPCHEM\1\DATA\040102\9G19333.D\ECD2B.CH Vial: 24
Acq On : 01 Apr 2002 20:54 Operator: ECL
Sample : TOX CCV 0.5 PPM Inst : HP9
Misc : SOS57-11 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Apr 2 8:31 2002 Quant Results File: TOX.RES

Quant Method : C:\HPCHEM\1\METHODS\TOX.M (Chemstation Integrator)
Title : CALIBRATION March 27, 2002
Last Update : Thu Mar 28 14:50:08 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8081.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



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RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP-9

GC Column: RTx-CLP

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	04/02/01	04/04/01	04/05/01
File #	9G14975	9G15000	9G15010

COMPOUND	STD #1	STD #2	STD #3	RT WIN
	RT	RT	RT	
ALPHA-BHC	8.90	8.90	8.90	0.000
GAMMA-BHC	9.45	9.45	9.44	0.017
BETA-BHC	9.61	9.61	9.61	0.000
HEPTACHLOR	10.23	10.23	10.23	0.000
DELTA-BHC	9.90	9.90	9.90	0.000
ALDRIN	10.70	10.70	10.70	0.000
HEPTACHLOR EPOXIDE	11.62	11.62	11.62	0.000
GAMMA-CHLORDANE	11.81	11.81	11.80	0.017
ALPHA-CHLORDANE	12.00	12.00	12.00	0.000
ENDOSULFAN I	12.20	12.20	12.20	0.000
4,4-DDE	12.12	12.12	12.11	0.017
DIELDRIN	12.54	12.54	12.54	0.000
ENDRIN	12.85	12.85	12.84	0.017
4,4-DDD	12.93	12.93	12.93	0.000
ENDOSULFAN II	13.14	13.14	13.13	0.017
4,4-DDT	13.28	13.28	13.27	0.017
ENDRIN ALDEHYDE	13.63	13.63	13.63	0.000
ENDOSULFAN SULFATE	14.11	14.11	14.11	0.000
METHOXYCHLOR	13.83	13.83	13.82	0.017
ENDRIN KETONE	14.4	14.4	14.4	0.000

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RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP-9

GC Column: RTx-CLP II

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	04/02/01	04/04/01	04/05/01
File #	9G14975	9G15000	9G15010

COMPOUND	STD #1	STD #2	STD #3	RT WIN
	RT	RT	RT	
ALPHA-BHC	8.01	8.00	8.00	0.017
GAMMA-BHC	8.62	8.62	8.61	0.017
BETA-BHC	8.77	8.77	8.76	0.017
HEPTACHLOR	9.33	9.33	9.32	0.017
DELTA-BHC	9.24	9.24	9.24	0.000
ALDRIN	9.83	9.83	9.83	0.000
HEPTACHLOR EPOXIDE	10.72	10.72	10.71	0.017
GAMMA-CHLORDANE	11.00	11.00	10.99	0.017
ALPHA-CHLORDANE	11.22	11.22	11.21	0.017
ENDOSULFAN I	11.30	11.30	11.29	0.017
4,4-DDE	11.48	11.48	11.48	0.000
DIELDRIN	11.70	11.70	11.69	0.017
ENDRIN	12.14	12.15	12.13	0.030
4,4-DDD	12.32	12.32	12.31	0.017
ENDOSULFAN II	12.45	12.45	12.44	0.017
4,4-DDT	12.74	12.75	12.74	0.017
ENDRIN ALDEHYDE	12.89	12.9	12.89	0.017
ENDOSULFAN SULFATE	13.22	13.23	13.22	0.017
METHOXYCHLOR	13.55	13.56	13.55	0.017
ENDRIN KETONE	13.81	13.81	13.81	0.000

2.2.2.4 Raw QC Data

ENDRIN/ 4-4' DDT BREAKDOWN

INSTRUMENT: HP 9

COLUMN: RTx-CLP (FRONT)

Data File Name: 9G19254.D

ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	ENDRIN BREAKDOWN
843156244	0	47369608	5.32 %
4-4' DDT	4-4' DDE	4-4' DDD	4-4' DDT BREAKDOWN
1519976330	63982426	0	4.04 %

COLUMN: RTx-CLP II (REAR)

Data File Name: 9G19254.D

ENDRIN #2	ENDRIN ALDEHYDE #2	ENDRIN KETONE #2	ENDRIN #2 BREAKDOWN
1266333902	0	62397186	4.70 %
4-4' DDT #2	4-4' DDE #2	4-4' DDD #2	4-4' DDT #2 BREAKDOWN
1672516895	0	62122711	3.58 %

516

Data File : C:\HPCHEM\1\DATA\032702\9G19254.D\ECD1A.CH Vial: 5
 Acq On : 27 Mar 2002 13:48 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19254.D\ECD2B.CH Vial: 5
 Acq On : 27 Mar 2002 14:12 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:30 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	30 - 132	Recovery	=	0.00%# 0.00%#
22) S Decachlorobiphen	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	36 - 144	Recovery	=	0.00%# 0.00%#
Target Compounds						
2) alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3) gamma-BHC	0.00	0.00	0	0	N.D.	N.D.
4) beta-BHC	0.00	0.00	0	0	N.D.	N.D.
5) Heptachlor	0.00	0.00	0	0	N.D.	N.D.
6) delta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) Aldrin	0.00	0.00	0	0	N.D.	N.D.
8) Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.
9) gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
10) alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11) Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
12) 4,4'-DDE	12.03f	0.00	63982426	0	1.6866	N.D. #
13) Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14) Endrin	12.73f	13.77	843.2E6	1266.3E6	52.3013	58.3160
15) 4,4'-DDD	0.00	13.84	0	62122711	N.D.	1.5840 #
16) Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17) 4,4'-DDT	13.17f	14.18	1520.0E6	1672.5E6	53.5395	47.1754
18) Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19) Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.
20) Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21) Endrin Ketone	14.29f	15.21	47369608	62397186	1.3675	1.5140

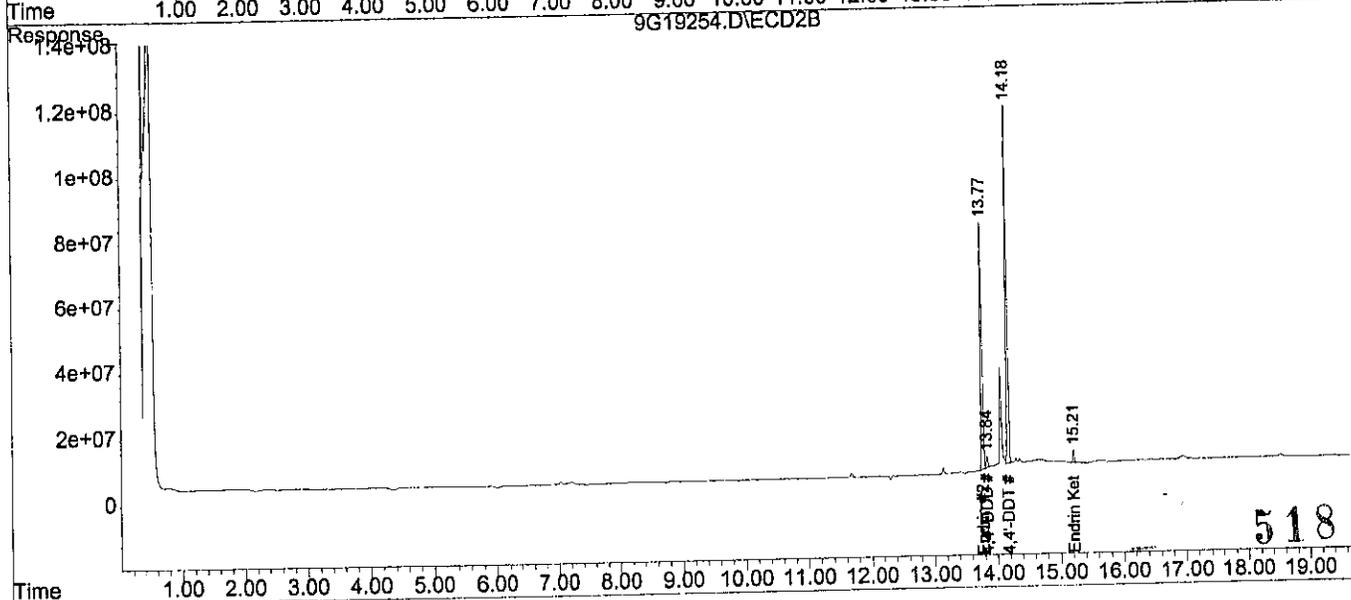
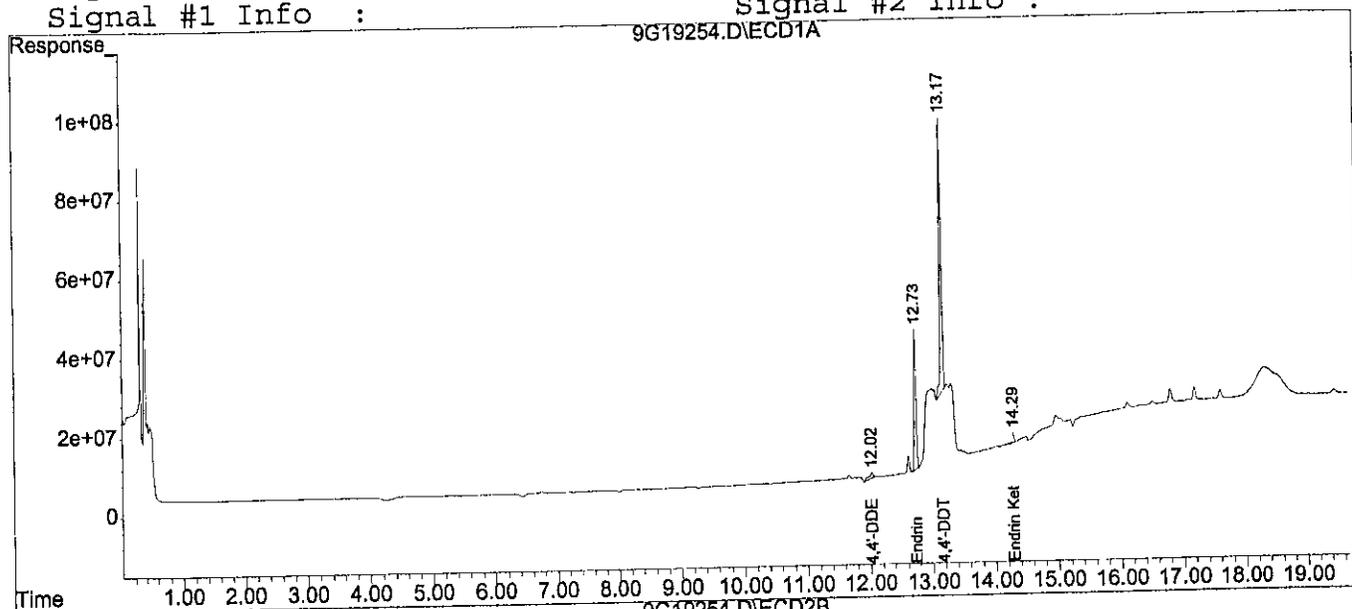
517

Data File : C:\HPCHEM\1\DATA\032702\9G19254.D\ECD1A.CH Vial: 5
 Acq On : 27 Mar 2002 13:48 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\032702\9G19254.D\ECD2B.CH Vial: 5
 Acq On : 27 Mar 2002 14:12 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Mar 28 10:30 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Thu Mar 28 10:27:56 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



518

ENDRIN/ 4-4' DDT BREAKDOWN

INSTRUMENT: HP 9

COLUMN: RTx-CLP (FRONT)

Data File Name: 9G19331.D

ENDRIN	ENDRIN ALDEHYDE	ENDRIN KETONE	ENDRIN BREAKDOWN
1095757830	0	86435371	7.31 %
4-4' DDT	4-4' DDE	4-4' DDD	4-4' DDT BREAKDOWN
1622390774	73185452.75	35172456.43	6.26 %

COLUMN: RTx-CLP II (REAR)

Data File Name: 9G19331.D

ENDRIN #2	ENDRIN ALDEHYDE #2	ENDRIN KETONE #2	ENDRIN #2 BREAKDOWN
1226160811	0	80117107	6.13 %
4-4' DDT #2	4-4' DDE #2	4-4' DDD #2	4-4' DDT #2 BREAKDOWN
1809919837	0	60834053	3.25 %

Data File : C:\HPCHEM\1\DATA\040102\9G19331.D\ECD1A.CH Vial: 22
 Acq On : 01 Apr 2002 19:41 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19331.D\ECD2B.CH Vial: 22
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:28 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

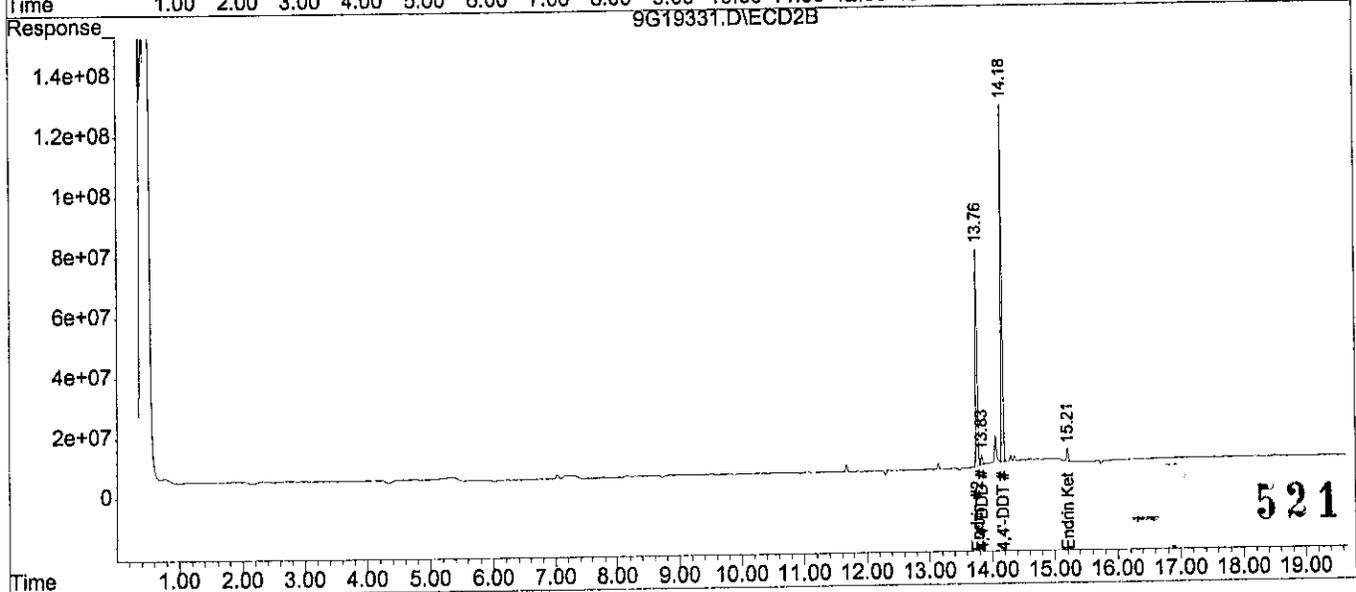
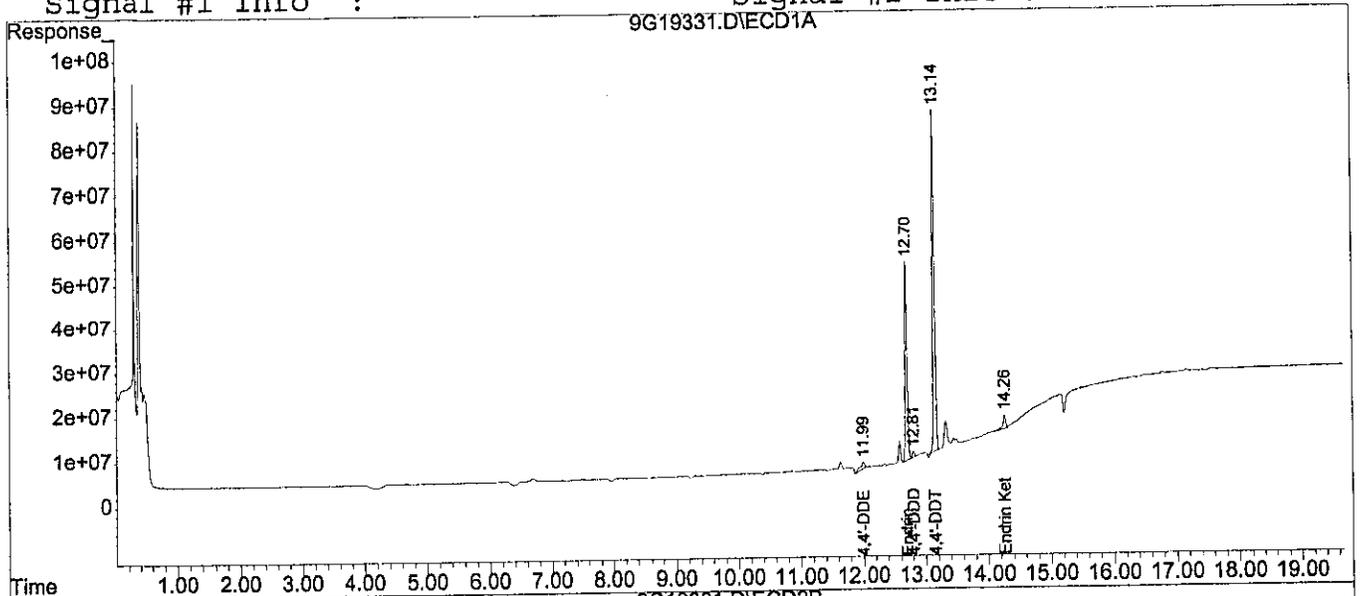
Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	30 - 132	Recovery	=	0.00%#
22) S Decachlorobiphen	0.00	0.00	0	0	N.D.	N.D.
Spiked Amount	20.000	Range	36 - 144	Recovery	=	0.00%#
Target Compounds						
2) alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3) gamma-BHC	0.00	0.00	0	0	N.D.	N.D.
4) beta-BHC	0.00	0.00	0	0	N.D.	N.D.
5) Heptachlor	0.00	0.00	0	0	N.D.	N.D.
6) delta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) Aldrin	0.00	0.00	0	0	N.D.	N.D.
8) Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.
9) gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
10) alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11) Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
12) 4,4'-DDE	12.00	0.00	73185453	0	1.9292	N.D. #
13) Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14) Endrin	12.70	13.77	1095.8E6	1226.2E6	67.9703	56.4660
15) 4,4'-DDD	12.81	13.83	35172456	60834053	1.1324	1.5512 #
16) Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17) 4,4'-DDT	13.14	14.18	1622.4E6	1809.9E6	57.1470	51.0510
18) Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19) Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.
20) Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21) Endrin Ketone	14.26	15.21	86435371	80117107	2.4952	1.9440

Data File : C:\HPCHEM\1\DATA\040102\9G19331.D\ECD1A.CH Vial: 22
 Acq On : 01 Apr 2002 19:41 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19331.D\ECD2B.CH Vial: 22
 Acq On : 01 Apr 2002 20:05 Operator: ECL
 Sample : ENDRIN/DDT Inst : HP9
 Misc : SOS58-31 Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 8:28 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040102\9G19327.D\ECD1A.CH Vial: 18
 Acq On : 01 Apr 2002 18:04 Operator: ECL
 Sample : WG115410-01 BLANK V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19327.D\ECD2B.CH Vial: 18
 Acq On : 01 Apr 2002 18:29 Operator: ECL
 Sample : WG115410-01 BLANK V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:18 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.56f	842.4E6	936.7E6	18.6481	15.2705
Spiked Amount	20.000	Range	29 - 133	Recovery	= 93.24%	76.35%
22) S Decachlorobiphen	15.26	16.54f	625.7E6	666.7E6	21.7163	18.9548
Spiked Amount	20.000	Range	30 - 173	Recovery	= 108.58%	94.77%
Target Compounds						
2) alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3) gamma-BHC	0.00	0.00	0	0	N.D.	N.D.
4) beta-BHC	0.00	0.00	0	0	N.D.	N.D.
5) Heptachlor	0.00	0.00	0	0	N.D.	N.D.
6) delta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) Aldrin	0.00	0.00	0	0	N.D.	N.D.
8) Heptachlor Epoxi	0.00	0.00	0	0	N.D.	N.D.
9) gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
10) alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11) Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
12) 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13) Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14) Endrin	0.00	0.00	0	0	N.D.	N.D.
15) 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
16) Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17) 4,4'-DDT	0.00	0.00	0	0	N.D.	N.D.
18) Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19) Endosulfan Sulfa	0.00	0.00	0	0	N.D.	N.D.
20) Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21) Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

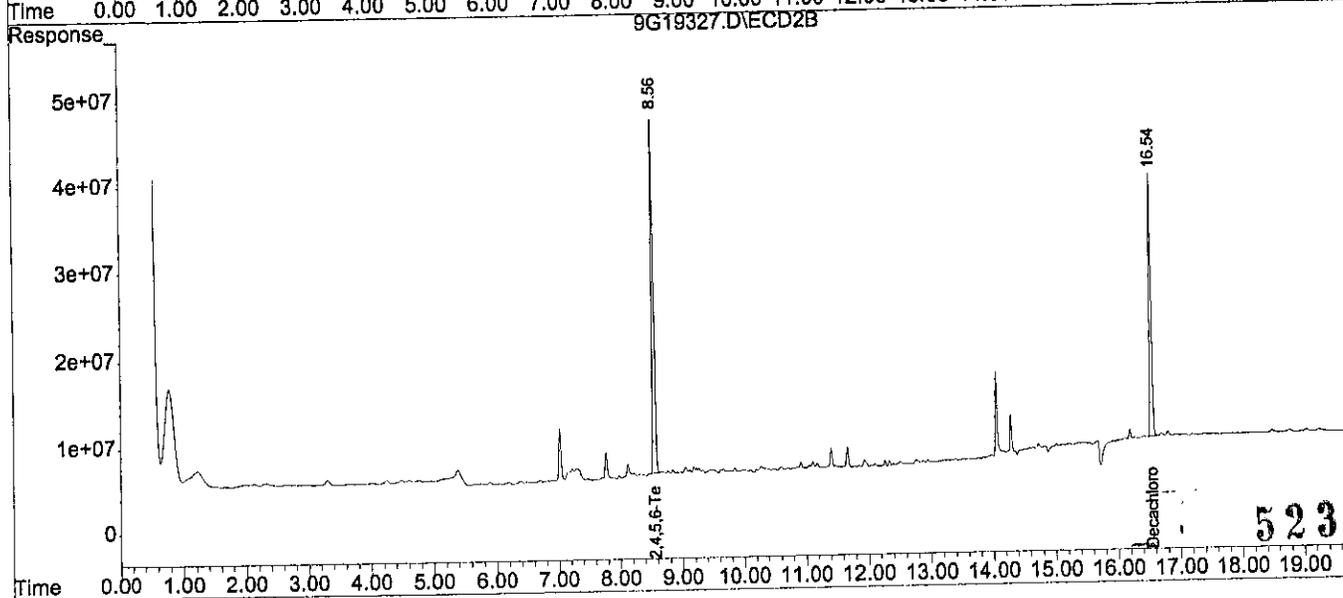
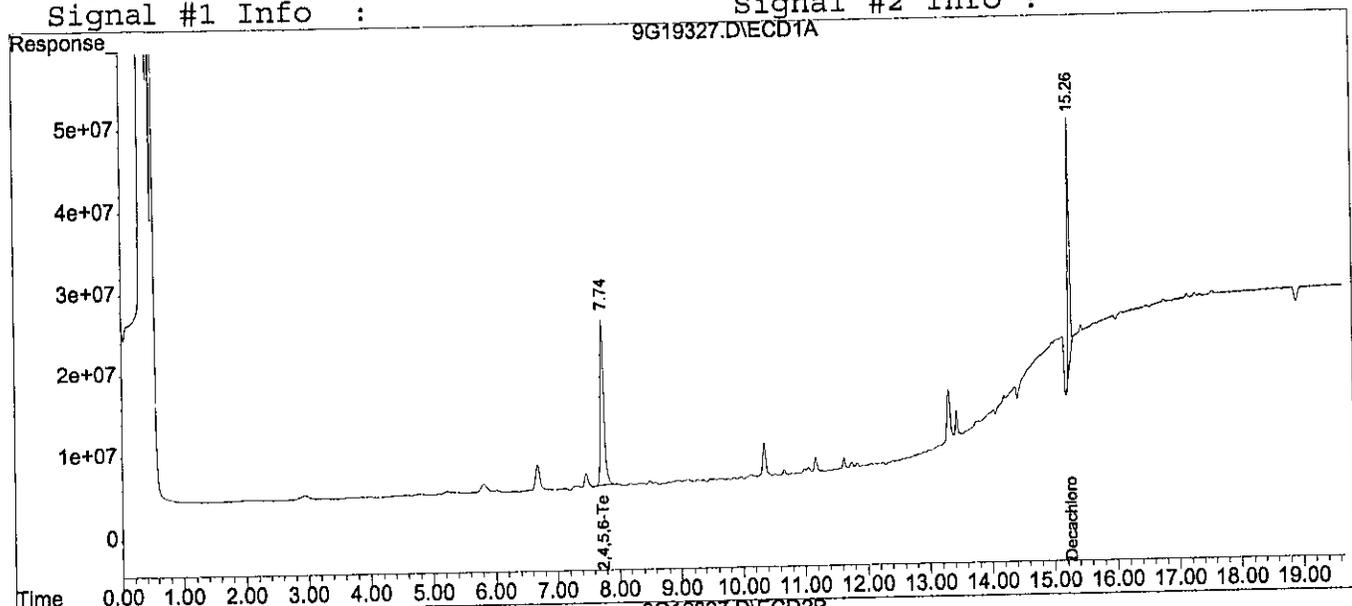
522

Data File : C:\HPCHEM\1\DATA\040102\9G19327.D\ECD1A.CH Vial: 18
 Acq On : 01 Apr 2002 18:04 Operator: ECL
 Sample : WG115410-01 BLANK V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19327.D\ECD2B.CH Vial: 18
 Acq On : 01 Apr 2002 18:29 Operator: ECL
 Sample : WG115410-01 BLANK V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:18 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040102\9G19328.D\ECD1A.CH Vial: 19
 Acq On : 01 Apr 2002 18:29 Operator: ECL
 Sample : WG115410-02 LCS V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19328.D\ECD2B.CH Vial: 19
 Acq On : 01 Apr 2002 18:53 Operator: ECL
 Sample : WG115410-02 LCS V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:19 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

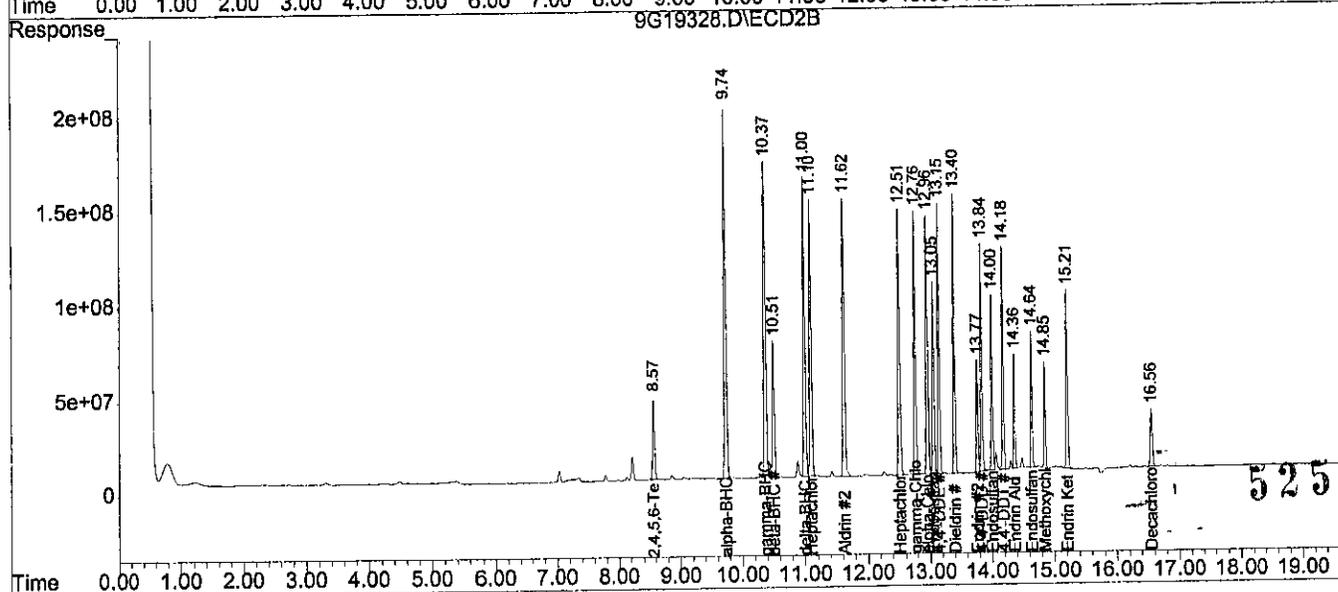
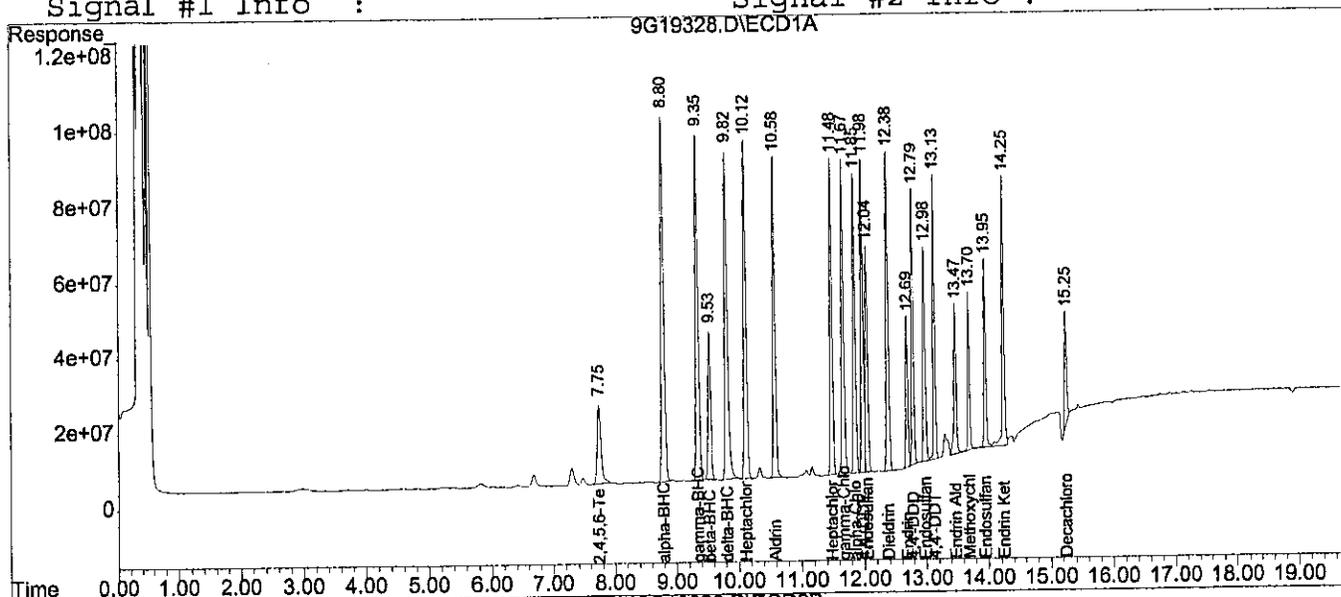
System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.57	857.5E6	968.4E6	18.9828	15.7885
Spiked Amount	20.000	Range 29 -	133	Recovery =	94.91%	78.94%
22) S Decachlorobiphen	15.25f	16.56	643.9E6	687.8E6	22.3488	19.5554
Spiked Amount	20.000	Range 30 -	173	Recovery =	111.74%	97.78%
Target Compounds						
2) alpha-BHC	8.80f	9.74	3063.7E6	4141.3E6	52.1620	48.7792
3) gamma-BHC	9.35f	10.37	2740.9E6	3505.1E6	52.1004	47.6481
4) beta-BHC	9.53f	10.51	1192.2E6	1545.6E6	50.8398	48.3370
5) Heptachlor	10.12f	11.10	2519.4E6	3063.9E6	53.5899	46.7179
6) delta-BHC	9.82f	11.00	2683.0E6	3241.3E6	54.6103	48.2404
7) Aldrin	10.58f	11.62	2338.7E6	3120.2E6	51.7237	49.3379
8) Heptachlor Epoxi	11.48f	12.51	2179.4E6	2777.9E6	51.8824	49.2889
9) gamma-Chlordane	11.67f	12.76	2164.4E6	2649.1E6	52.9970	49.1775
10) alpha-Chlordane	11.86f	12.96	2034.7E6	2503.0E6	52.2433	48.6817
11) Endosulfan I	12.04f	13.05	1553.7E6	1874.5E6	40.8616	38.3212
12) 4,4'-DDE	11.98f	13.15	2042.9E6	2446.1E6	53.8503	50.3012
13) Dieldrin	12.38f	13.40	2111.5E6	2586.5E6	52.8825	49.9191
14) Endrin	12.69	13.77	974.0E6	1002.7E6	60.4195	46.1740
15) 4,4'-DDD	12.79	13.84	1641.2E6	1920.4E6	52.8417	48.9678
16) Endosulfan II	12.98f	14.00	1338.2E6	1546.5E6	39.4355	36.0982
17) 4,4'-DDT	13.13	14.18	1616.7E6	1841.9E6	56.9480	51.9532
18) Endrin Aldehyde	13.47	14.36	998.1E6	995.5E6	35.6099	31.2827
19) Endosulfan Sulfa	13.95	14.64	1097.1E6	1139.4E6	38.6291	32.8725
20) Methoxychlor	13.70	14.85	846.9E6	876.3E6	52.8802	50.0347
21) Endrin Ketone	14.25	15.21	1686.7E6	1657.7E6	48.6930	40.2220

Data File : C:\HPCHEM\1\DATA\040102\9G19328.D\ECD1A.CH Vial: 19
 Acq On : 01 Apr 2002 18:29 Operator: ECL
 Sample : WG115410-02 LCS V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19328.D\ECD2B.CH Vial: 19
 Acq On : 01 Apr 2002 18:53 Operator: ECL
 Sample : WG115410-02 LCS V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:19 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040102\9G19329.D\ECD1A.CH Vial: 20
 Acq On : 01 Apr 2002 18:53 Operator: ECL
 Sample : WG115410-03 LCS DUP V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint1.e

Data File : C:\HPCHEM\1\DATA\040102\9G19329.D\ECD2B.CH Vial: 20
 Acq On : 01 Apr 2002 19:17 Operator: ECL
 Sample : WG115410-03 LCS DUP V182 P153 Inst : HP9
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : autoint2.e
 Quant Time: Apr 2 11:19 2002 Quant Results File: 8081.RES

Quant Method : C:\HPCHEM\1\METHODS\8081.M (Chemstation Integrator)
 Title : CALIBRATION March 27, 2002
 Last Update : Tue Apr 02 08:23:07 2002
 Response via : Initial Calibration
 DataAcq Meth : 8081.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	UG/L	UG/L

System Monitoring Compounds						
1) S 2,4,5,6-Tetrachl	7.75	8.56f	883.2E6	990.4E6	19.5532	16.1470
Spiked Amount	20.000	Range 29 -	133	Recovery =	97.77%	80.73%
22) S Decachlorobiphen	15.26	16.55f	650.4E6	724.6E6	22.5741	20.6000
Spiked Amount	20.000	Range 30 -	173	Recovery =	112.87%	103.00%
Target Compounds						
2) alpha-BHC	8.81	9.74f	2914.6E6	3904.5E6	49.6237	45.9905
3) gamma-BHC	9.36	10.36	2628.7E6	3412.7E6	49.9679	46.3919
4) beta-BHC	9.55	10.50	1142.3E6	1477.2E6	48.7112	46.1974
5) Heptachlor	10.13	11.09f	2420.5E6	2937.4E6	51.4852	44.7890
6) delta-BHC	9.83	10.99	2578.5E6	3094.0E6	52.4823	46.0480
7) Aldrin	10.59	11.62f	2275.0E6	3007.0E6	50.3136	47.5472
8) Heptachlor Epoxi	11.50	12.50	2111.6E6	2674.1E6	50.2678	47.4460
9) gamma-Chlordane	11.68	12.76	2112.0E6	2559.5E6	51.7129	47.5147
10) alpha-Chlordane	11.87	12.95	1983.6E6	2418.5E6	50.9316	47.0382
11) Endosulfan I	12.06	13.05	1511.3E6	1808.1E6	39.7460	36.9636
12) 4,4'-DDE	11.99	13.14	1995.9E6	2364.2E6	52.6124	48.6166
13) Dieldrin	12.40	13.39	2055.5E6	2488.9E6	51.4788	48.0358
14) Endrin	12.70	13.76	946.2E6	969.7E6	58.6940	44.6553
15) 4,4'-DDD	12.80	13.83	1604.6E6	1859.8E6	51.6636	47.4231
16) Endosulfan II	12.99	13.99	1313.0E6	1498.7E6	38.6933	34.9819
17) 4,4'-DDT	13.15	14.17	1583.1E6	1796.8E6	55.7631	50.6822
18) Endrin Aldehyde	13.48	14.35	962.8E6	946.9E6	34.3507	29.7579
19) Endosulfan Sulfa	13.97	14.63	1068.7E6	1107.2E6	37.6270	31.9448
20) Methoxychlor	13.71	14.84	832.4E6	870.1E6	51.9789	49.6794
21) Endrin Ketone	14.26	15.20	1567.9E6	1611.7E6	45.2613	39.1077

Injection Log

Directory: C:\HPCHEM\1\DATA\032702

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9G19250.D	1.	✓ ENDRIN/DDT	SOS58-31	27 Mar 2110 10:34
2	2	9G19251.D	1.	✓ PEST CCV 20 PPB	SOS59-08	27 Mar 2110 10:58
3	3	9G19252.D	1.	✓ L0203505-01	1,1 WATER PRELIMINARY	27 Mar 2111 11:22
4	4	9G19253.D	1.	✓ L0203513-01	1,1 WATER PRELIMINARY	27 Mar 2112 12:35
5	5	9G19254.D	1.	✓ ENDRIN/DDT	SOS58-31	27 Mar 2021 01:48
6	6	9G19255.D	1.	TOX ICAL 2.0 PPM	SOS57-11	27 Mar 2022 02:12
7	7	9G19256.D	1.	TOX ICAL 1.0 PPM	SOS57-11	27 Mar 2022 02:36
8	8	9G19257.D	1.	TOX ICAL 0.5 PPM	SOS57-11	27 Mar 2023 03:00
9	9	9G19258.D	1.	TOX ICAL 0.25 PPM	SOS57-11	27 Mar 2023 03:25
10	10	9G19259.D	1.	TOX ICAL 0.1 PPM	SOS57-11	27 Mar 2023 03:49
11	11	9G19260.D	1.	TOX ALT ICV 0.5 PPM	SOS57-10	27 Mar 2024 04:13
12	12	9G19261.D	1.	✓ WG115221-01 PEST ICAL 200 PPB	1,1 SOS59-08	27 Mar 2024 04:37
13	13	9G19262.D	1.	✓ WG115221-02 PEST ICAL 100 PPB	1,1 SOS59-08	27 Mar 2025 05:01
14	14	9G19263.D	1.	✓ WG115221-03 PEST ICAL 50 PPB	1,1 SOS59-08	27 Mar 2025 05:25
15	15	9G19264.D	1.	✓ WG115221-04 PEST ICAL 20 PPB	1,1 SOS59-08	27 Mar 2025 05:49
16	16	9G19265.D	1.	✓ WG115221-05 PEST ICAL 10 PPB	1,1 SOS59-08	27 Mar 2026 06:13
17	17	9G19266.D	1.	✓ WG115221-06 PEST ICAL 4 PPB	1,1 SOS59-08	27 Mar 2026 06:38
18	18	9G19267.D	1.	✓ WG115221-07 PEST ALT ICV 20 PPB	1,1 SOS57-09	27 Mar 2027 07:02
19	19	9G19268.D	1.	✓ WG115162-01 BLANK V182 P111	1,1 WATER	27 Mar 2027 07:26
20	20	9G19269.D	1.	WG115162-02 LCS V182 P111	1,1 WATER	27 Mar 2027 07:50
21	21	9G19270.D	1.	WG115162-03 LCS DUP V182 P111	1,1 WATER	27 Mar 2028 08:14
22	22	9G19271.D	1.	L0203505-01	1,1 WATER	27 Mar 2028 08:38
23	23	9G19272.D	1.	WG115205-01 BLANK V182 P115	1,1 WATER	27 Mar 2029 09:03
24	24	9G19273.D	1.	WG115205-02 LCS V182 P115	1,1 WATER	27 Mar 2029 09:27
25	25	9G19274.D	1.	WG115205-03 LCS DUP V182 P115	1,1 WATER	27 Mar 2029 09:51
26	26	9G19275.D	20.	L0203513-01 20x	1,20 WATER	27 Mar 2110 10:15
27	27	9G19276.D	1.	✓ ENDRIN/DDT	SOS58-31	27 Mar 2110 10:39
28	28	9G19277.D	1.	✓ WG115221-08 PEST CCV 20 PPB	1,1 SOS59-08	27 Mar 2111 11:03
29	29	9G19278.D	1.	✓ TOX CCV 0.5 PPM	SOS57-11	27 Mar 2111 11:27
30	30	9G19279.D	1.	WG115053-02 BLANK V182 P91	7,1 SOIL	27 Mar 2111 11:51
31	31	9G19280.D	1.	WG115053-03 LCS V182 P91	7,1 SOIL	28 Mar 2112 12:15
32	32	9G19281.D	1.	WG115053-01 L0203450-01	7,1 SOIL	28 Mar 2112 12:40
33	33	9G19282.D	1.	WG115053-04 L0203450-01 MS	7,1 SOIL	28 Mar 2021 01:04
34	34	9G19283.D	1.	WG115053-05 L0203450-01 MSD	7,1 SOIL	28 Mar 2021 01:28
35	35	9G19284.D	1.	L0203451-01	1,1 WATER	28 Mar 2021 01:52
36	36	9G19285.D	1.	✓ ENDRIN/DDT	SOS58-31	28 Mar 2022 02:16
37	37	9G19286.D	1.	✓ WG115221-09 PEST CCV 50 PPB	1,1 SOS59-08	28 Mar 2022 02:40
38	38	9G19287.D	1.	✓ TOX CCV 0.25 PPM	SOS57-11	28 Mar 2023 03:04

ECZ 3/28/02
 JAR 3/28/02

Injection Log

Directory: C:\HPCHEM\1\DATA\040102

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	9G19310.D	1.	✓ENDRIN/DDT	SOS58-31	1 Apr 2110 10:47
2	2	9G19311.D	1.	✓WG115409-01 PEST CCV 20 PPB -A	1,1 SOS59-08	1 Apr 2111 11:11
3	3	9G19312.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2111 11:35
4	4	9G19313.D	1.	WG115333-01 BLANK V182 P141	2,1 WATER	1 Apr 2112 12:26
5	5	9G19314.D	1.	WG115333-02 LCS V182 P141	2,1 WATER	1 Apr 2112 12:50
6	6	9G19315.D	1.	WG115333-03 LCS DUP V182 P141	2,1 WATER	1 Apr 2021 01:14
7	7	9G19316.D	1.	L0203556-01	2,1 WATER	1 Apr 2021 01:39
8	8	9G19317.D	1.	L0203556-02	2,1 WATER	1 Apr 2022 02:03
9	9	9G19318.D	1.	L0203556-03	2,1 WATER	1 Apr 2022 02:27
10	10	9G19319.D	1.	L0203556-04	2,1 WATER	1 Apr 2022 02:51
11	11	9G19320.D	1.	RE L0203556-05 -*	2,1 WATER	1 Apr 2023 03:15
12	12	9G19321.D	1.	✓L0203556-06	2,1 WATER	1 Apr 2023 03:40
13	13	9G19322.D	1.	✓L0203556-07	2,1 WATER	1 Apr 2024 04:04
14	14	9G19323.D	1.	✓WG115409-02 PEST CCV 50 PPB -B	1,1 SOS59-08	1 Apr 2024 04:28
15	15	9G19324.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2024 04:52
16	16	9G19325.D	1.	L0203556-08	2,1 WATER	1 Apr 2025 05:16
17	17	9G19326.D	1.	L0203556-09	2,1 WATER	1 Apr 2025 05:40
18	18	9G19327.D	1.	WG115410-01 BLANK V182 P153	7,1 SOIL	1 Apr 2026 06:04
19	19	9G19328.D	1.	WG115410-02 LCS V182 P153	7,1 SOIL	1 Apr 2026 06:29
20	20	9G19329.D	1.	WG115410-03 LCS DUP V182 P153	7,1 SOIL	1 Apr 2026 06:53
21	21	9G19330.D	1.	L0204001-01	7,1 SOIL	1 Apr 2027 07:17
22	22	9G19331.D	1.	✓ENDRIN/DDT	SOS58-31	1 Apr 2027 07:41
23	23	9G19332.D	1.	✓WG115409-03 PEST CCV 20 PPB -A	1,1 SOS59-08	1 Apr 2028 08:05
24	24	9G19333.D	1.	✓TOX CCV 0.5 PPM	SOS57-11	1 Apr 2028 08:30

EC2 4/2/02
note 4/2/02

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KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 4/1/02 Instrument ID HP9 Column ID RTX-CLP Data Subdirectory 040102
 Analyst Initials ECL
 SOP # GCS09 Rev. # 1 8081A
 SOP # GCS04 Rev. # 8151A _____
 SOP # GCS03 Rev. # PRO _____
 SOP # GCS02 Rev. # 8015B Mod (Alcohol) _____

Front
 SOP # GCS10 Rev. # 8082 _____
 SOP # GCS01 Rev. # 8100 _____
 SOP # GCS02 Rev. # 8015B Mod (DRO) _____
 SOP # GCS07 Rev. # 8011 _____

Analysis Date/Time 4/1/02 Instrument ID HP9 Column ID RTX-CLP II Data Subdirectory 040102
 Rear

Daily Check	Additional Maintenance
<input checked="" type="checkbox"/> Gases >500 psi	Problem: _____
Preventative Maintenance	_____
<input type="checkbox"/> Change o-ring	_____
<input type="checkbox"/> Change liner	_____
<input type="checkbox"/> Change septum	Action Taken: _____
<input type="checkbox"/> Clip column (____ cm)	_____
<input type="checkbox"/> Injection port seal (goldseal)	_____
<input type="checkbox"/> Change gases _____	_____
Returned To Control?	_____
Yes ___ No ___	_____

Comments

A - Endrin failed high on front column.
 Rear column was good

B - ~~Rear col~~ ^{RT 4/1/02} Front column failed, high
 Rear column was good

RE - sent for reextraction due to
 * - Sample failed T-M-X surrogate high due to SMI.
 sample failed PCB surrogate low.

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Reviewed By: [Signature] 4/2/02

Parameter: EST-S SOP #: EXP02 Revision #: 11
 Extraction Analyst(s): CAF TV/KD Analyst(s): CAF, DP
 Date/Time Extracted: 4-01-02 @ 12:00 Date TV/KD: 4-01-02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-49 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-42 Spike #: B =

Extraction Work Group WG 115410
 Analytical Work Group WG 115454
 Extract Relinquished By: DP
 Extract Received By & Date: EQ 4/1/02

	Sample ID	Test Code	pH			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					30.00g	200 uL		10mL	T				WG 115410-01
2	LCS					1.00g		250 uL						WG 115410-02
3	LCS DUP					1.09g								WG 115410-03
4	04-001-01	8082				1.0705g								
5						11.008								
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
04/01/02

Methylene Chloride Lot #: _____
 Hexane Lot #: 41304
 Ether Lot #: _____
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: 94.6 Lot #: PP- ER 2124
 Reagent: 50.50 Lot #: PP- ER 2122
 Reagent: _____ Lot #: _____
 Acid: _____ Lot #: _____
 Florisil Lot #: PP- V29522
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: ER 2085

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B		<input checked="" type="checkbox"/>		
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B	<input checked="" type="checkbox"/>	GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02 532

Extraction Notes For Volume # 182 Page # 153

General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

Supervisor Review: _____ Date: 5/3/3

Example 8081 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = A_s / C_s$$

Where:

A_s = Area of the compound being measured in the standard
 C_s = Concentration of the compound being measured (ng/ml).

Example:

	10000
	100
RF	100

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(V_i)]$$

Example:

Where:

A_x = Area of the compound being measured
 V_f = Final volume of sample extract (mL). (prep log)
 D = Dilution factor for sample as a multiplier (10X = 10).
 RF = Response factor from ICAL calculated above.
 V_i = Initial volume of sample (mL). (prep log)

10000
1
1
100
1000

C (ug/L) = 0.1

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(W_i)]$$

Example:

Where:

A_x = Area of the compound being measured
 V_f = Final volume of sample extract (mL).
 D = Dilution factor for sample as a multiplier (10X = 10).
 RF = Response factor from ICAL calculated above.
 W_i = Initial weight of sample (g).

10000
1
1
100
30

C (ug/kg) 3.333333

2.2.3 PCB GC Data (8082)

REPORT NARRATIVE
GC PCB

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8082

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

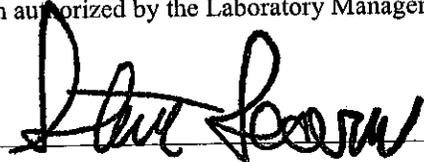
SAMPLES

Surrogates: All acceptance criteria were met.
Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED: _____



DATE: _____



Rev. 7/14/00

PCB - GC DATA (8082)

Login Number 04-001

A. **QC Summary**

- Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Holding Time Summary
- Surrogate Recovery Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Instrument Run Log
- Extraction Bench Sheet

B. **Sample Data**

- Target compound and surrogate results summary (See Summary Report)
- Chromatograms and quantitation report

C. **Standards Data**

- Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- Retention Time Window Summary

D. **Raw QC Data**

- Method blank chromatogram and quantitation report
- LCS chromatogram and quantitation report
- MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: EC2 Date: 4/3/02

2.2.3.1 QC Summary

AMERON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0204001
Blank File ID: 4GF13835
Date Analyzed: 04/02/02
Time Analyzed: 13:33
Analyst: ECL

Work Group: WG115489
Blank Sample ID: WG115411-01
Instrument ID: HP4
Method: 8082

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115411-02	4GF13836	04/02/02 13:51	01
LCS2	WG115411-03	4GF13837	04/02/02 14:09	01
027-EQBFS-01	L0204001-01	4GF13838	04/02/02 14:26	01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115411-01
 Instrument ID: HP4 Run Time: 13:33 Method: 8082
 File ID: 4GF13835 Analyst: ECL Matrix: Solid
 Workgroup (AAB#): WG115489 Units: ug/kg
 Contract #: Cal ID: HP4-19-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aroclor-1016	8.25	16.5	8.25	1.00	ND
Aroclor-1221	8.25	16.5	8.25	1.00	ND
Aroclor-1232	8.25	16.5	8.25	1.00	ND
Aroclor-1242	8.25	16.5	8.25	1.00	ND
Aroclor-1248	8.25	16.5	8.25	1.00	ND
Aroclor-1254	8.25	16.5	8.25	1.00	ND
Aroclor-1260	8.25	16.5	8.25	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	85.7	29 - 133	PASS
Decachlorobiphenyl	86.7	30 - 173	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 _____ Run Date: 04/02/2002 _____ Sample ID: WG115411-02 _____
 Instrument ID: HP4 _____ Run Time: 13:51 _____ Method: 8082 _____
 File ID: 4GF13836 _____ Analyst: ECL _____ Matrix: Solid _____
 Workgroup (AAB#): WG115489 _____ Units: ug/kg _____
 Contract #: _____ Cal ID: HP4-19-MAR-2002 _____

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aroclor-1016	83.1	97.1	117	64 - 136	
Aroclor-1221	NS	-----	-----	----- - -----	NO LIM
Aroclor-1232	NS	-----	-----	----- - -----	NO LIM
Aroclor-1242	NS	-----	-----	----- - -----	NO LIM
Aroclor-1248	NS	-----	-----	----- - -----	NO LIM
Aroclor-1254	NS	-----	-----	----- - -----	NO LIM
Aroclor-1260	83.1	95.0	114	63 - 137	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	110	29 - 133	PASS
Decachlorobiphenyl	112	30 - 173	PASS

* Analyte outside control limits
 NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginum:L0204001

Worknum:WG115489

Method:8082

Instrument ID:HP4

Cal ID: HP4-19-MAR-2002

Matrix:Solid

Analyst:ECL

Contract #:

Units:ug/kg

Sample ID:WG115411-02 LCS File ID:4GF13836 Run Date:04/02/2002 13:51

Sample ID:WG115411-03 LCS2 File ID:4GF13837 Run Date:04/02/2002 14:09

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Aroclor-1016	83.1	97.1	117	83.1	88.8	107	8.95	64 - 136	40	
Aroclor-1254								60 - 130	40	*
Aroclor-1260	83.1	95.0	114	83.1	86.5	104	9.37	63 - 137	40	

Surogates	LCS	LCS2	Surrogate Limits		Qualifier
	% Recovery	% Recovery			
2,4,5,6-Tetrachloro-m-xylene	110	94.9	29	- 133	PASS
Decachlorobiphenyl	112	102	30	- 173	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

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KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8082

AAB#: WG115489

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	01-APR-02	14	3.09	02-APR-02	40	1.10	

* EXT = MISSED EXTRACTION HOLD TIME
 *ANAL = MISSED ANALYTICAL HOLD TIME

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KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0204001
Instrument Id: HP4
Workgroup (AAB#): WG115489

Method: 8082
Matrix: SOLID

Sample Number	Dilution	Tag	1	2
L0204001-01	1.00	01	104	109
WG115411-01	1.00	01	85.7	86.7
WG115411-02	1.00	01	110	112
WG115411-03	1.00	01	94.9	102

Surrogates	Surrogate Limits
1 - 2,4,5,6-Tetrachloro-M-X	29 - 133
2 - Decachlorobiphenyl	30 - 173

Underline = Result out of surrogate limits

DL = surrogate diluted out

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Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 12:47:40 2002

Calibration Files

2000 =4GF13526.D 1000 =4GF13527.D 500 =4GF13528.D
 250 =4GF13529.D 100 =4GF13530.D 50 =4GF13531.D

	Compound	2000	1000	500	250	100	50	Avg	%RSD
1)	S 2,4,5,6-Tetrachloro	6.968	7.198	6.952	6.847	6.763	6.784	6.919#E3	2.32
2)	L1 Aroclor-1016-1	1.339	1.529	1.661	1.769	1.842	1.877	1.669#E2	12.31
3)	L1 Aroclor-1016-2	2.600	2.868	3.226	3.519	3.798	3.930	3.324#E2	15.76
4)	L1 Aroclor-1016-3	5.572	6.146	6.460	6.790	7.152	7.614	6.622#E2	10.99
5)	L1 Aroclor-1016-4	2.369	2.613	2.752	2.920	3.080	3.026	2.793#E2	9.69
6)	L1 Aroclor-1016-5	1.500	1.561	1.565	1.566	1.537	1.526	1.543#E2	1.72
7)	L2 Aroclor-1260-1	3.444	3.914	4.240	4.500	4.796	5.118	4.335#E2	13.97
8)	L2 Aroclor-1260-2	3.619	4.092	4.477	4.875	5.307	5.561	4.655#E2	15.83
9)	L2 Aroclor-1260-3	4.340	4.660	4.847	4.961	5.126	5.119	4.842#E2	6.24
10)	L2 Aroclor-1260-4	6.692	7.108	7.365	7.628	8.538	8.717	7.675#E2	10.45
11)	L2 Aroclor-1260-5	2.732	2.822	2.857	2.860	2.765	2.816	2.809#E2	1.81
12)	S Decachlorobiphenyl	0.917	0.993	1.044	1.081	1.100	1.093	1.038#E4	6.89

(#) = Out of Range
 1660F.M

Tue Mar 19 12:48:04 2002

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Page 1

Login Number: L0204001
File ID: 4GF13532
ALT ID: WG114783-07
Units: ug/L

Instrument ID: HP4
Run Date: 03/19/2002
Run Time: 12:35
Analyst: ECL
Cal ID: HP4 - 19-MAR-02

Analyte	Expected	Found	RF	%D	Q
Aroclor-1260-5	500	405	227	19.0	
Aroclor-1260-4	500	422	648	15.6	
Aroclor-1260-3	500	536	519	7.2	
Aroclor-1260-2	500	474	441	5.2	
Aroclor-1260-1	500	496	430	0.8	
Aroclor-1016-5	500	498	154	0.4	
Aroclor-1016-4	500	484	271	3.2	
Aroclor-1016-3	500	484	641	3.2	
Aroclor-1016-2	500	473	314	5.4	
Aroclor-1016-1	500	491	164	1.8	

548

Login Number: L0204001
File ID: 4GF13830
CCV ID: WG115506-01
Units: ug/L

Instrument ID: HP4
Run Date: 04/02/2002
Run Time: 11:32
Analyst: ECL
Cal ID: HP4 - 19-MAR-02

Analyte	Expected	Found	RF	%D	Q
Aroclor-1260-5	500	473	266	5.4	
Aroclor-1260-4	500	459	704	8.2	
Aroclor-1260-3	500	448	434	10.4	
Aroclor-1260-2	500	457	426	8.6	
Aroclor-1260-1	500	458	397	8.4	
Aroclor-1016-5	500	458	141	8.4	
Aroclor-1016-4	500	459	256	8.2	
Aroclor-1016-3	500	461	611	7.8	
Aroclor-1016-2	500	446	297	10.8	
Aroclor-1016-1	500	477	159	4.6	

* Exceeds %D Limit

549

Login Number: L0204001
File ID: 4GF13839
CCV ID: WG115506-02
Units: ug/L

Instrument ID: HP4
Run Date: 04/02/2002
Run Time: 14:44
Analyst: ECL
Cal ID: HP4 - 19-MAR-02

Analyte	Expected	Found	RF	%D	Q
Aroclor-1260-5	250	202	227	19.2	*
Aroclor-1260-4	250	246	755	1.6	
Aroclor-1260-3	250	266	515	6.4	
Aroclor-1260-2	250	271	505	8.4	
Aroclor-1260-1	250	274	475	9.6	
Aroclor-1016-5	250	267	164	6.8	
Aroclor-1016-4	250	275	307	10.0	
Aroclor-1016-3	250	274	725	9.6	
Aroclor-1016-2	250	284	378	13.6	
Aroclor-1016-1	250	287	192	14.8	

* Exceeds %D Limit

550

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4GF13526.D	1.	✓ WG114783-01 1660 ICAL 2.0 PPM	1,1 SOS57-19	19 Mar 2002 10:44
2	2	4GF13527.D	1.	WG114783-02 1660 ICAL 1.0 PPM	1,1 SOS57-19	19 Mar 2002 11:02
3	3	4GF13528.D	1.	WG114783-03 1660 ICAL 0.5 PPM	1,1 SOS57-19	19 Mar 2002 11:21
4	4	4GF13529.D	1.	WG114783-04 1660 ICAL 0.25 PPM	1,1 SOS57-19	19 Mar 2002 11:39
5	5	4GF13530.D	1.	WG114783-05 1660 ICAL 0.1 PPM	1,1 SOS57-19	19 Mar 2002 11:58
6	6	4GF13531.D	1.	WG114783-06 1660 ICAL 0.05 PPM	1,1 SOS57-19	19 Mar 2002 12:17
7	7	4GF13532.D	1.	WG114783-07 1660 ALT ICV 0.5 PPM		
8	8	4GF13533.D	1.	✓ 1254 ICAL 2.0 PPM	1,1 SOS57-33 SOS58-23	19 Mar 2002 12:35 19 Mar 2002 12:54
9	9	4GF13534.D	1.	1254 ICAL 1.0 PPM	SOS58-23	19 Mar 2002 13:13
10	10	4GF13535.D	1.	1254 ICAL 0.5 PPM	SOS58-23	19 Mar 2002 13:31
11	11	4GF13536.D	1.	1254 ICAL 0.25 PPM	SOS58-23	19 Mar 2002 13:50
12	12	4GF13537.D	1.	1254 ICAL 0.1 PPM	SOS58-23	19 Mar 2002 14:08
13	13	4GF13538.D	1.	1254 ICAL 0.05 PPM	SOS58-23	19 Mar 2002 14:27
14	14	4GF13539.D	1.	✓ 1254 ALT ICV 0.5 PPM	SOS57-12	19 Mar 2002 14:46
15	15	4GF13540.D	1.	✓ 1248 0.5 PPM	SOS55-50	19 Mar 2002 15:04
16	16	4GF13541.D	1.	1248 ALT 0.5 PPM	SOS58-21	19 Mar 2002 15:23
17	17	4GF13542.D	1.	1242 0.5 PPM	SOS55-49	19 Mar 2002 15:42
18	18	4GF13543.D	1.	1242 ALT 0.5 PPM	SOS57-13	19 Mar 2002 16:00
19	19	4GF13544.D	1.	1232 0.5 PPM	SOS58-40	19 Mar 2002 16:19
20	20	4GF13545.D	1.	1232 ALT 0.5 PPM	SOS58-41	19 Mar 2002 16:37
21	21	4GF13546.D	1.	1221 0.5 PPM	SOS58-22	19 Mar 2002 16:56
22	22	4GF13547.D	1.	✓ 1221 ALT 0.5 PPM	SOS56-01	19 Mar 2002 17:14
23	23	4GF13548.D	1.	✓ WG114783-08 1660 CCV 0.5 PPM	1,1 SOS57-19	19 Mar 2002 17:33
24	24	4GF13549.D	1.	WG114635-01 BLANK V182 P09	7,1 SOIL	19 Mar 2002 17:51
25	25	4GF13550.D	1.	WG114635-02 LCS V182 P09	7,1 SOIL	19 Mar 2002 18:10
26	26	4GF13551.D	1.	WG114635-03 LCS DUP V182 P09	7,1 SOIL	19 Mar 2002 18:28
27	27	4GF13552.D	1.	L0203272-01 - CF	10,1 SOIL	19 Mar 2002 18:47
28	28	4GF13553.D	1.	L0203273-01 - CF	10,1 SOIL	19 Mar 2002 19:05
29	29	4GF13554.D	1.	L0203271-01 - CF	10,1 SOIL	19 Mar 2002 19:23
30	30	4GF13555.D	1.	L0202412-01 - CF	7,1 SOIL	19 Mar 2002 19:42
31	31	4GF13556.D	1.	L0202412-02 - CF	7,1 SOIL	19 Mar 2002 20:01
32	32	4GF13557.D	1.	L0202412-03 - CF	7,1 SOIL	19 Mar 2002 20:19
33	33	4GF13558.D	1.	✓ WG114783-09 1660 CCV 0.25 PPM - A	1,1 SOS57-19	19 Mar 2002 20:38
34	34	4GF13559.D	1.	✓ INSTRUMENT BLANK	SOS56-27	19 Mar 2002 20:56
35	35	4GF13560.D	1.	RR WG114616-01 BLANK V181 P197	7,1 SOIL	19 Mar 2002 21:14
36	36	4GF13561.D	1.	WG114616-02 LCS V181 P197	7,1 SOIL	19 Mar 2002 21:33
37	37	4GF13562.D	1.	WG114616-03 LCS DUP V181 P197	7,1 SOIL	19 Mar 2002 21:51
38	38	4GF13563.D	1.	RR100 L0203267-01 - CF	7,1 SOIL	19 Mar 2002 22:09
39	39	4GF13564.D	1.	RR100 L0203267-02	7,1 SOIL	19 Mar 2002 22:28
40	40	4GF13565.D	1.	RR100 L0203267-03	7,1 SOIL	19 Mar 2002 22:46
41	41	4GF13566.D	1.	RR100 L0203267-04	7,1 SOIL	19 Mar 2002 23:05
42	42	4GF13567.D	1.	RR20 L0203267-05	7,1 SOIL	19 Mar 2002 23:23
43	43	4GF13568.D	1.	RR20 L0203267-06	7,1 SOIL	19 Mar 2002 23:41
44	44	4GF13569.D	1.	RR100 L0203267-07	7,1 SOIL	20 Mar 2002 00:00
45	45	4GF13570.D	1.	CC 1254 CCV 0.5 PPM	SOS58-23	20 Mar 2002 00:18
46	46	4GF13571.D	1.	CC 1660 CCV 0.5 PPM	SOS57-19	20 Mar 2002 00:36
47	47	4GF13572.D	1.	✓ INSTRUMENT BLANK	SOS56-27	20 Mar 2002 00:55
48	48	4GF13573.D	1.	RR WG114637-01 BLANK V182 P03	1,1 WATER	20 Mar 2002 01:13
49	49	4GF13574.D	1.	WG114637-02 LCS V182 P03	1,1 WATER	20 Mar 2002 01:31
50	50	4GF13575.D	1.	WG114637-03 LCS DUP V182 P03	1,1 WATER	20 Mar 2002 01:50
51	51	4GF13576.D	1.	RR L0203266-01 - CF	1,1 WATER	20 Mar 2002 02:08
52	52	4GF13577.D	20.	RR L0203240-18 20x - CF	7,20 SOIL	20 Mar 2002 02:26
53	53	4GF13578.D	10.	L0203242-07 10x	7,10 SOIL	20 Mar 2002 02:45
54	54	4GF13579.D	10.	L0203243-03 10x	7,10 SOIL	20 Mar 2002 03:03
55	55	4GF13580.D	20.	L0203243-07 20x	7,20 SOIL	20 Mar 2002 03:21
56	56	4GF13581.D	1.	✓ 1660 CCV 0.5 PPM	1,1 SOS57-19	20 Mar 2002 03:39
57	57	4GF13582.D	1.	✓ INSTRUMENT BLANK	SOS56-27	20 Mar 2002 03:58

EC2 3/20/02
 rdc 3/20/02

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4GF13830.D	1.	✓ WG115506-01 1660 CCV 0.5 PPM	1,1 SOS57-19	2 Apr 2002 11:32
2	2	4GF13831.D	1.	WG115461-01 BLANK V182 P163	1,1 WATER	2 Apr 2002 12:23
3	3	4GF13832.D	1.	WG115461-02 LCS V182 P163	1,1 WATER	2 Apr 2002 12:40
4	4	4GF13833.D	1.	WG115461-03 LCS DUP V182 P163	1,1 WATER	2 Apr 2002 12:58
5	5	4GF13834.D	1.	L0203540-01	1,1 WATER	2 Apr 2002 13:16
6	6	4GF13835.D	1.	WG115411-01 BLANK V182 P155	7,1 SOIL	2 Apr 2002 13:33
7	7	4GF13836.D	1.	WG115411-02 LCS V182 P155	7,1 SOIL	2 Apr 2002 13:51
8	8	4GF13837.D	1.	WG115411-03 LCS DUP V182 P155	7,1 SOIL	2 Apr 2002 14:09
9	9	4GF13838.D	1.	L0204001-01	7,1 SOIL	2 Apr 2002 14:26
10	10	4GF13839.D	1.	✓ WG115506-02 1660 CCV 0.25 PPM -A	1,1 SOS57-19	2 Apr 2002 14:44

EC2 4/3/02
 note 4/3/02

Parameter: TCU-J SOP #: EX402 Revision #: 11
 Extraction Analyst(s): CAF TV/KD Analyst(s): CAF DP
 Date/Time Extracted: 04-01-02 @ 12:07 Date TV/KD: 04-01-02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-49 Earliest Hold Date: 4/12/02
 Spike #: A = ESS0039-46 Spike #: B =

Extraction Work Group WG 115411
 Analytical Work Group WG 115489

Extract Relinquished By: DP
 Extract Received By & Date: EC 4/1/02

	Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					30.00g	200 uL		10 mL	T				WG 115411-01
2	LCS					1.07g								WG 115411-02
3	LCS DUP					1.08g								WG 115411-03
4	04-001-01	8081				1.05g								
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
04/01/02

Methylene Chloride Lot #:
 Hexane Lot #: 41304
 Ether Lot #:
 Methanol Lot #:
 Solvent: Lot #:
 Reagent: 94.6 Lot #: ER 2124
 Reagent: Lot #:
 Reagent: Lot #:
 Acid: Con. H₂SO₄ Lot #: V34030
 Florisil Lot #: V28572
 Silica Gel Lot #:
 IR Analyst / Date / Time:
 Dried Na₂SO₄ Lot #: ER 2085

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	✓			
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B	✓	GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A	✓	N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

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General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

Supervisor Review: _____ Date: 550

2.2.3.2 Sample Data

Acq On : 2 Apr 2002 14:26
Sample : L0204001-01
Misc : 7,1 SOIL
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Apr 3 8:30 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:29:48 2002
Response via : Initial Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.26	144054	20.8211 UG/L
Spiked Amount 20.000	Range 29 - 133	Recovery =	104.11%
12) S Decachlorobiphenyl	11.56	225996	21.7735 UG/L
Spiked Amount 20.000	Range 30 - 173	Recovery =	108.87%
Target Compounds			
2) L1 Aroclor-1016-1	0.00	0	N.D. UG/L
3) L1 Aroclor-1016-2	0.00	0	N.D. UG/L
4) L1 Aroclor-1016-3	0.00	0	N.D. UG/L
5) L1 Aroclor-1016-4	0.00	0	N.D. UG/L
6) L1 Aroclor-1016-5	0.00	0	N.D. UG/L
Sum Aroclor-1016-1		0	N.D. UG/L
Average Aroclor-1016-1			0.000 UG/L
7) L2 Aroclor-1260-1	0.00	0	N.D. UG/L
8) L2 Aroclor-1260-2	0.00	0	N.D. UG/L
9) L2 Aroclor-1260-3	0.00	0	N.D. UG/L
10) L2 Aroclor-1260-4	0.00	0	N.D. UG/L
11) L2 Aroclor-1260-5	0.00	0	N.D. UG/L
Sum Aroclor-1260-1		0	N.D. UG/L
Average Aroclor-1260-1			0.000 UG/L

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(f)=RT Delta > 1/2 Window

4GF13838.D 1660F.M

Wed Apr 03 08:34:10 2002

(m)=manual int.

Page 1

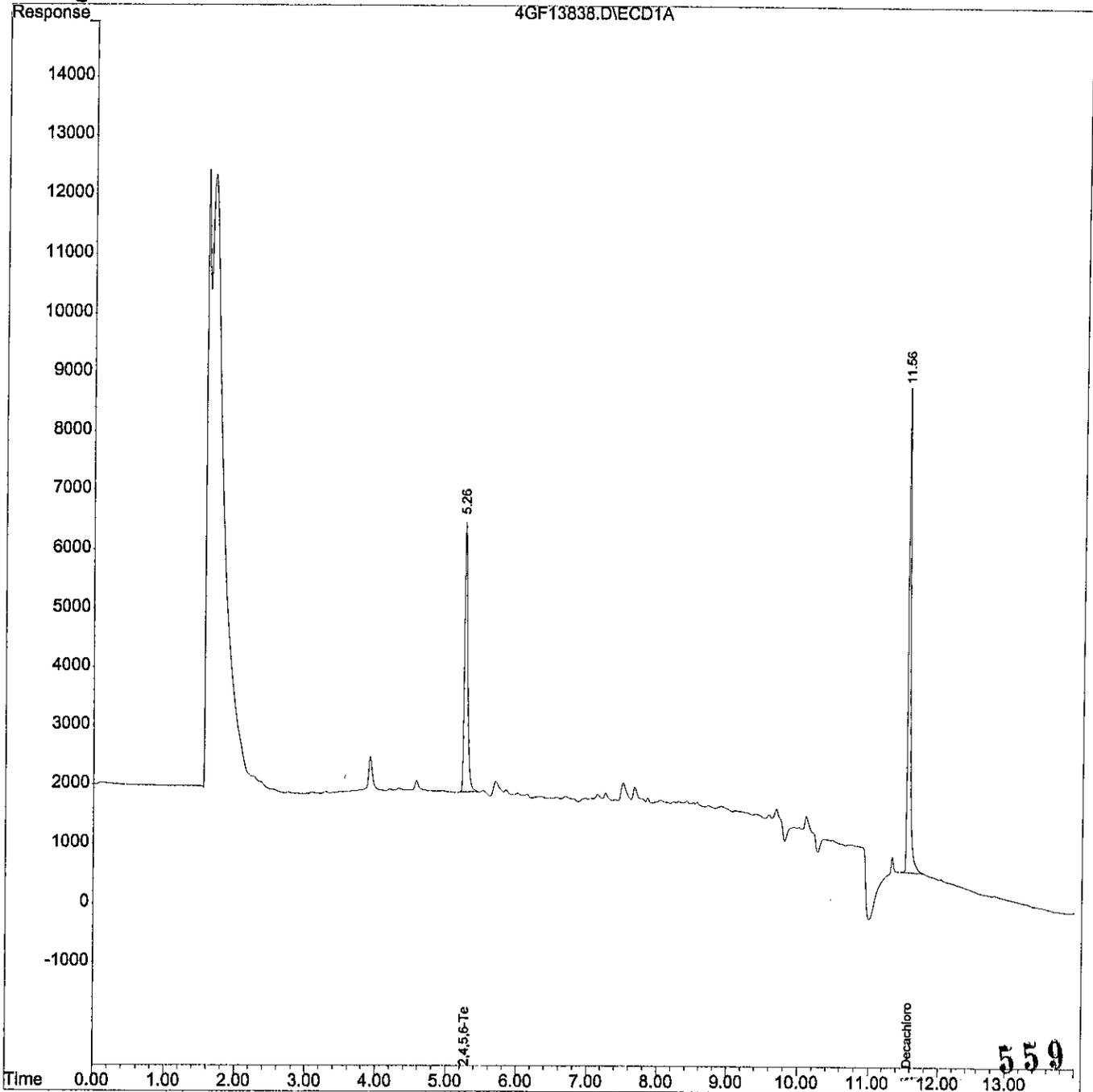
Acq On : 2 Apr 2002 14:26
Sample : L0204001-01
Misc : 7,1 SOIL
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Apr 3 8:30 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:29:48 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



2.2.3.3 Standards Data

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 12:47:40 2002

Calibration Files

2000 =4GF13526.D 1000 =4GF13527.D 500 =4GF13528.D
 250 =4GF13529.D 100 =4GF13530.D 50 =4GF13531.D

Compound		2000	1000	500	250	100	50	Avg	%RSD
1) S	2,4,5,6-Tetrachloro	6.968	7.198	6.952	6.847	6.763	6.784	6.919#E3	2.32
2) L1	Aroclor-1016-1	1.339	1.529	1.661	1.769	1.842	1.877	1.669#E2	12.31
3) L1	Aroclor-1016-2	2.600	2.868	3.226	3.519	3.798	3.930	3.324#E2	15.76
4) L1	Aroclor-1016-3	5.572	6.146	6.460	6.790	7.152	7.614	6.622#E2	10.99
5) L1	Aroclor-1016-4	2.369	2.613	2.752	2.920	3.080	3.026	2.793#E2	9.69
6) L1	Aroclor-1016-5	1.500	1.561	1.565	1.566	1.537	1.526	1.543#E2	1.72
7) L2	Aroclor-1260-1	3.444	3.914	4.240	4.500	4.796	5.118	4.335#E2	13.97
8) L2	Aroclor-1260-2	3.619	4.092	4.477	4.875	5.307	5.561	4.655#E2	15.83
9) L2	Aroclor-1260-3	4.340	4.660	4.847	4.961	5.126	5.119	4.842#E2	6.24
10) L2	Aroclor-1260-4	6.692	7.108	7.365	7.628	8.538	8.717	7.675#E2	10.45
11) L2	Aroclor-1260-5	2.732	2.822	2.857	2.860	2.765	2.816	2.809#E2	1.81
12) S	Decachlorobiphenyl	0.917	0.993	1.044	1.081	1.100	1.093	1.038#E4	6.89

561

(#) = Out of Range
 1660F.M

Tue Mar 19 12:48:04 2002

Page 1

Acq On : 19 Mar 2002 10:44
Sample : 1660 ICAL 2.0 PPM
Misc : 1,1 SOS57-19
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 12:46 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:45:47 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.23	696775	88.9824 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	444.91%#
12) S Decachlorobiphenyl	11.51	916547	92.9353 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	464.68%#
Target Compounds			
2) L1 Aroclor-1016-1	5.98	267855	1407.7491 UG/L
3) L1 Aroclor-1016-2	6.53	520006	1365.3007 UG/L
4) L1 Aroclor-1016-3	7.08	1114382	1562.7091 UG/L
5) L1 Aroclor-1016-4	7.24	473814	1521.6740 UG/L
6) L1 Aroclor-1016-5	7.36	300025	1677.1378 UG/L
Sum Aroclor-1016-1		2676081	7534.5707 UG/L
Average Aroclor-1016-1			1506.914 UG/L
7) L2 Aroclor-1260-1	9.01	688733	1547.4402 UG/L
8) L2 Aroclor-1260-2	9.20	723788	1541.0547 UG/L
9) L2 Aroclor-1260-3	9.54	868006	1631.2192 UG/L
10) L2 Aroclor-1260-4	10.11	1338403	1639.8922 UG/L
11) L2 Aroclor-1260-5	10.96	546460	1953.1149 UG/L
Sum Aroclor-1260-1		4165390	8312.7213 UG/L
Average Aroclor-1260-1			1662.544 UG/L

562

(f)=RT Delta > 1/2 Window

4GF13526.D 1660F.M

Tue Mar 19 12:48:15 2002

(m)=manual int.

Page 1

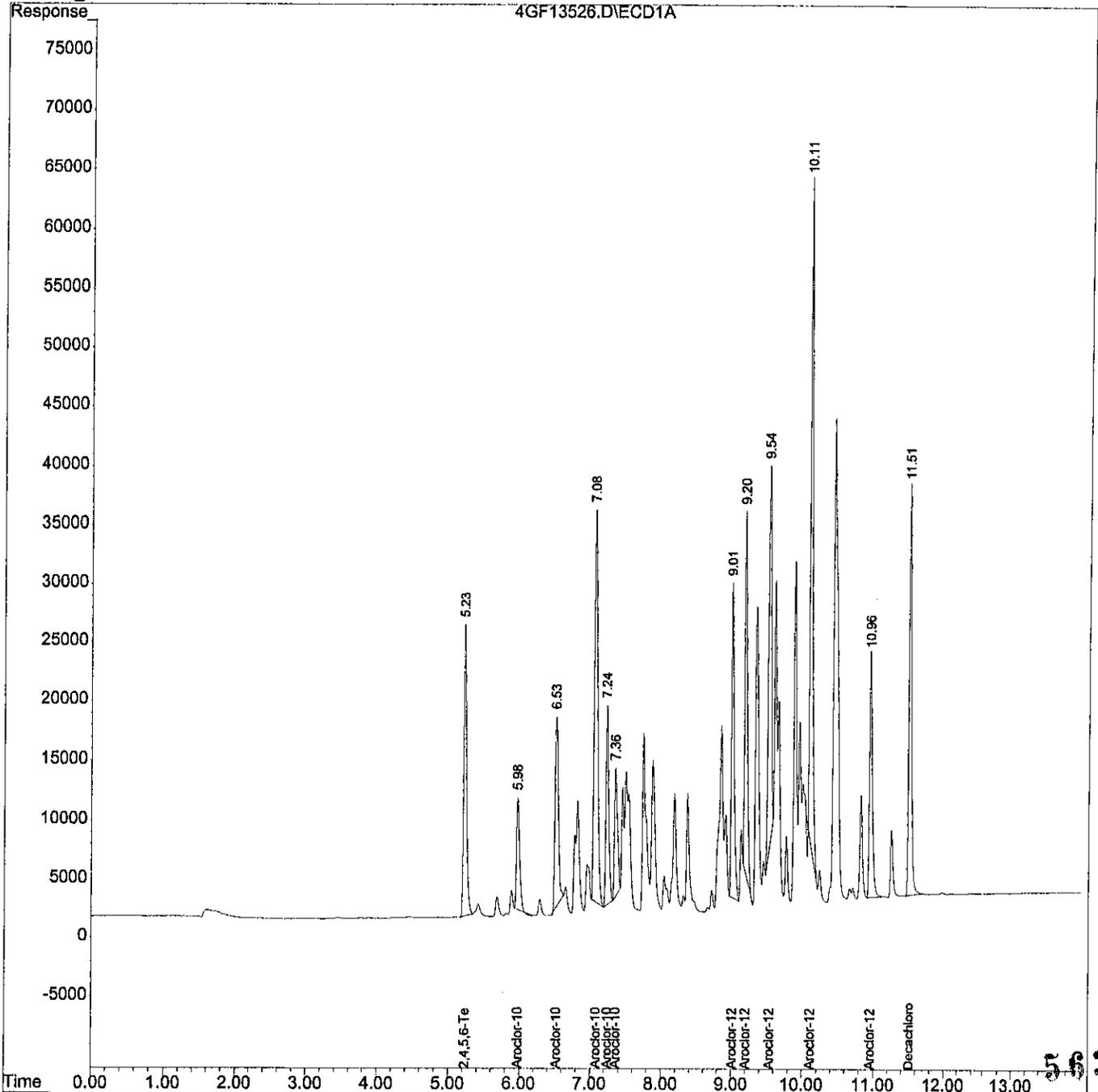
Acq On : 19 Mar 2002 10:44
Sample : 1660 ICAL 2.0 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:46 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:45:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 11:02
Sample : 1660 ICAL 1.0 PPM
Misc : 1,1 SOS57-19
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 12:46 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:46:23 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.21	359899	46.7878 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	233.94%#
12) S Decachlorobiphenyl	11.51	496555	50.2600 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	251.30%#
Target Compounds			
2) L1 Aroclor-1016-1	5.97	152933	815.9622 UG/L
3) L1 Aroclor-1016-2	6.52	286798	763.4537 UG/L
4) L1 Aroclor-1016-3	7.08	614596	860.5313 UG/L
5) L1 Aroclor-1016-4	7.24	261324	847.9067 UG/L
6) L1 Aroclor-1016-5	7.36	156135	884.2053 UG/L
Sum Aroclor-1016-1		1471785	4172.0591 UG/L
Average Aroclor-1016-1			834.412 UG/L
7) L2 Aroclor-1260-1	9.01	391421	882.9302 UG/L
8) L2 Aroclor-1260-2	9.20	409160	872.0790 UG/L
9) L2 Aroclor-1260-3	9.54	466045	882.6180 UG/L
10) L2 Aroclor-1260-4	10.11	710799	882.5199 UG/L
11) L2 Aroclor-1260-5	10.96	282205	1008.4268 UG/L
Sum Aroclor-1260-1		2259629	4528.5739 UG/L
Average Aroclor-1260-1			905.715 UG/L

564

(f)=RT Delta > 1/2 Window

4GF13527.D 1660F.M

Tue Mar 19 12:48:18 2002

(m)=manual int.

Page 1

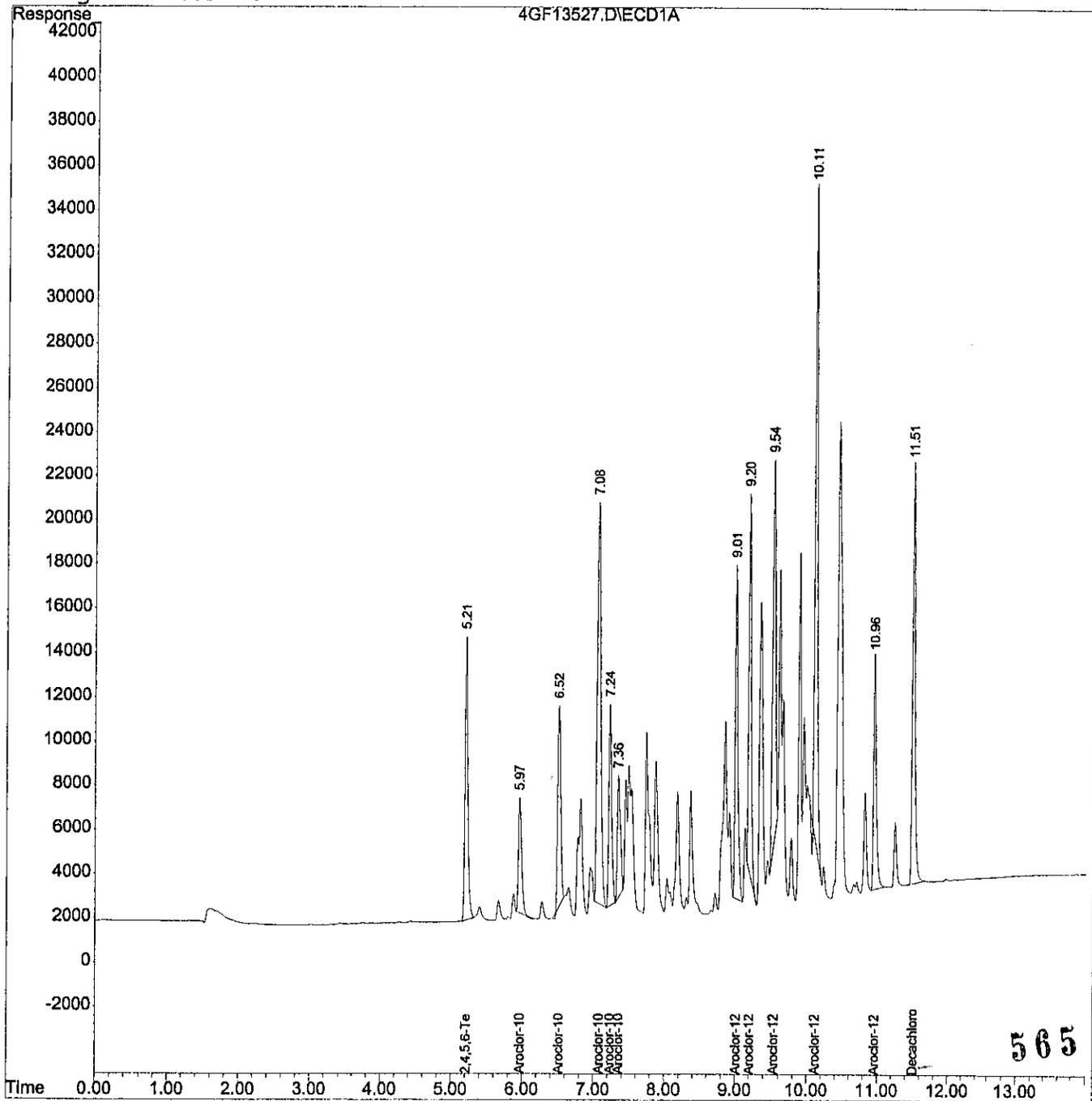
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Sample : 1660 ICAL 1.0 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:46 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:46:23 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 11:21
Sample : 1660 ICAL 0.5 PPM
Misc : 1,1 SOS57-19
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 12:46 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:46:39 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.19	173807	23.0855 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	115.43%
12) S Decachlorobiphenyl	11.48f	260998	26.3671 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	131.84%
Target Compounds			
2) L1 Aroclor-1016-1	5.95	83060	451.5799 UG/L
3) L1 Aroclor-1016-2	6.50	161311	440.1852 UG/L
4) L1 Aroclor-1016-3	7.06	323007	458.7276 UG/L
5) L1 Aroclor-1016-4	7.22	137615	453.6633 UG/L
6) L1 Aroclor-1016-5	7.34	78234	451.8106 UG/L
Sum Aroclor-1016-1		783227	2255.9666 UG/L
Average Aroclor-1016-1			451.193 UG/L
7) L2 Aroclor-1260-1	8.99	212017	480.6409 UG/L
8) L2 Aroclor-1260-2	9.18	223850	478.3967 UG/L
9) L2 Aroclor-1260-3	9.51	242341	464.6105 UG/L
10) L2 Aroclor-1260-4	10.09	368250	465.0540 UG/L
11) L2 Aroclor-1260-5	10.93	142862	511.8816 UG/L
Sum Aroclor-1260-1		1189320	2400.5837 UG/L
Average Aroclor-1260-1			480.117 UG/L

566

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13528.D 1660F.M

Tue Mar 19 12:48:21 2002

Page 1

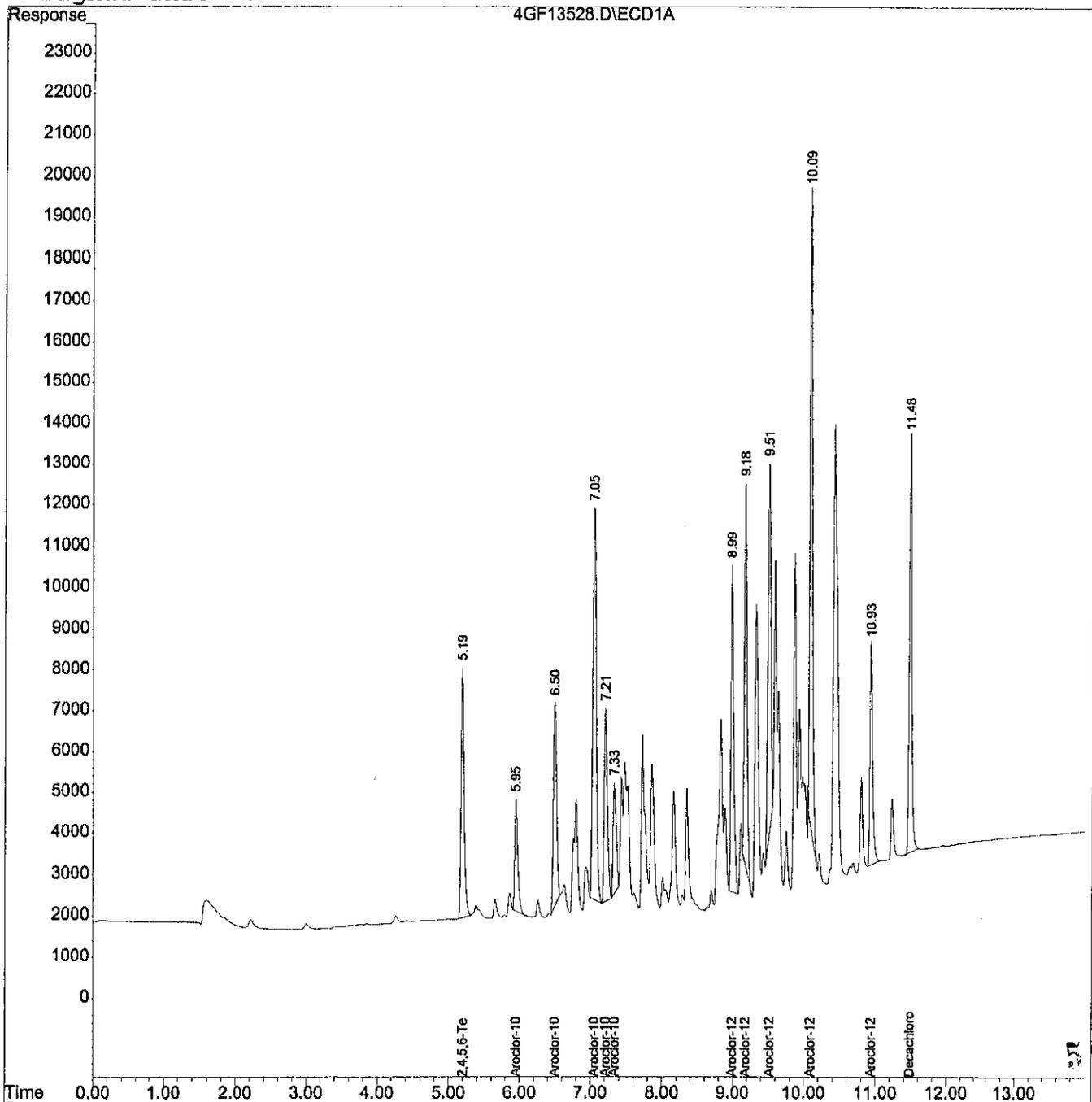
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Sample : 1660 ICAL 0.5 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:46 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:46:39 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 11:39
 Sample : 1660 ICAL 0.25 PPM
 Misc : 1,1 SOS57-19
 IntFile : events.e

Operator: ECL
 Inst : HP 4
 Multiplr: 1.00

Quant Time: Mar 19 12:47 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 12:46:54 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.19	85585	11.5410 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	57.71%
12) S Decachlorobiphenyl	11.48	135069	13.4834 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	67.42%
Target Compounds			
2) L1 Aroclor-1016-1	5.95	44213	243.6581 UG/L
3) L1 Aroclor-1016-2	6.50	87984	244.6741 UG/L
4) L1 Aroclor-1016-3	7.06	169746	243.1947 UG/L
5) L1 Aroclor-1016-4	7.22	73003	243.5012 UG/L
6) L1 Aroclor-1016-5	7.34	39160	230.2434 UG/L
Sum Aroclor-1016-1		414105	1205.2715 UG/L
Average Aroclor-1016-1			241.054 UG/L
7) L2 Aroclor-1260-1	9.00	112502	254.3850 UG/L
8) L2 Aroclor-1260-2	9.19	121867	259.7191 UG/L
9) L2 Aroclor-1260-3	9.52	124018	239.8869 UG/L
10) L2 Aroclor-1260-4	10.10	190692	243.5248 UG/L
11) L2 Aroclor-1260-5	10.94	71509	254.9514 UG/L
Sum Aroclor-1260-1		620587	1252.4671 UG/L
Average Aroclor-1260-1			250.493 UG/L

568

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13529.D 1660F.M

Tue Mar 19 12:48:25 2002

Page 1

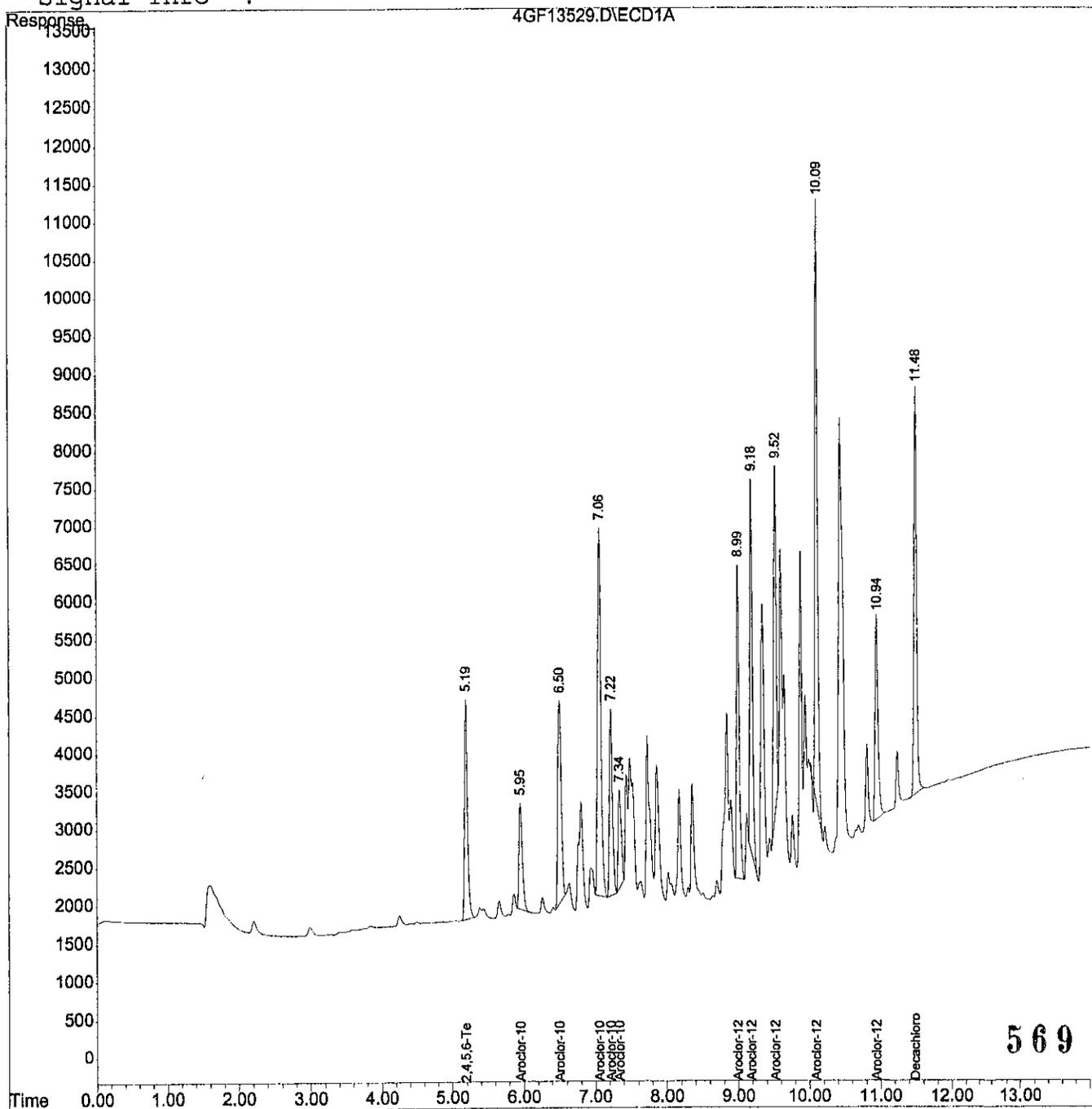
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Sample : 1660 ICAL 0.25 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:47 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:46:54 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



```

-----
Acq On      : 19 Mar 2002  11:58           Operator: ECL
Sample     : 1660 ICAL 0.1 PPM           Inst      : HP 4
Misc      : 1,1 SOS57-19                Multiplr: 1.00
IntFile    : events.e
Quant Time: Mar 19 12:47 2002  Quant Results File: 1660F.RES

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```

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title        : CALIBRATION March 19, 2002
Last Update  : Tue Mar 19 12:47:09 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

```

```

Volume Inj. :
Signal Phase :
Signal Info  :

```

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.17	33817	4.6480 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	23.24%#
12) S Decachlorobiphenyl	11.47	55017	5.4239 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	27.12%#
Target Compounds			
2) L1 Aroclor-1016-1	5.93	18417	104.3351 UG/L
3) L1 Aroclor-1016-2	6.48	37981	107.1917 UG/L
4) L1 Aroclor-1016-3	7.04	71525	103.9409 UG/L
5) L1 Aroclor-1016-4	7.20	30800	104.2996 UG/L
6) L1 Aroclor-1016-5	7.32	15370	92.6025 UG/L
Sum Aroclor-1016-1		174091	512.3698 UG/L
Average Aroclor-1016-1			102.474 UG/L
7) L2 Aroclor-1260-1	8.97	47960	108.6889 UG/L
8) L2 Aroclor-1260-2	9.17	53066	112.9370 UG/L
9) L2 Aroclor-1260-3	9.50	51256	100.7355 UG/L
10) L2 Aroclor-1260-4	10.08	85378	110.4657 UG/L
11) L2 Aroclor-1260-5	10.92	27654	98.3425 UG/L
Sum Aroclor-1260-1		265313	531.1696 UG/L
Average Aroclor-1260-1			106.234 UG/L

570

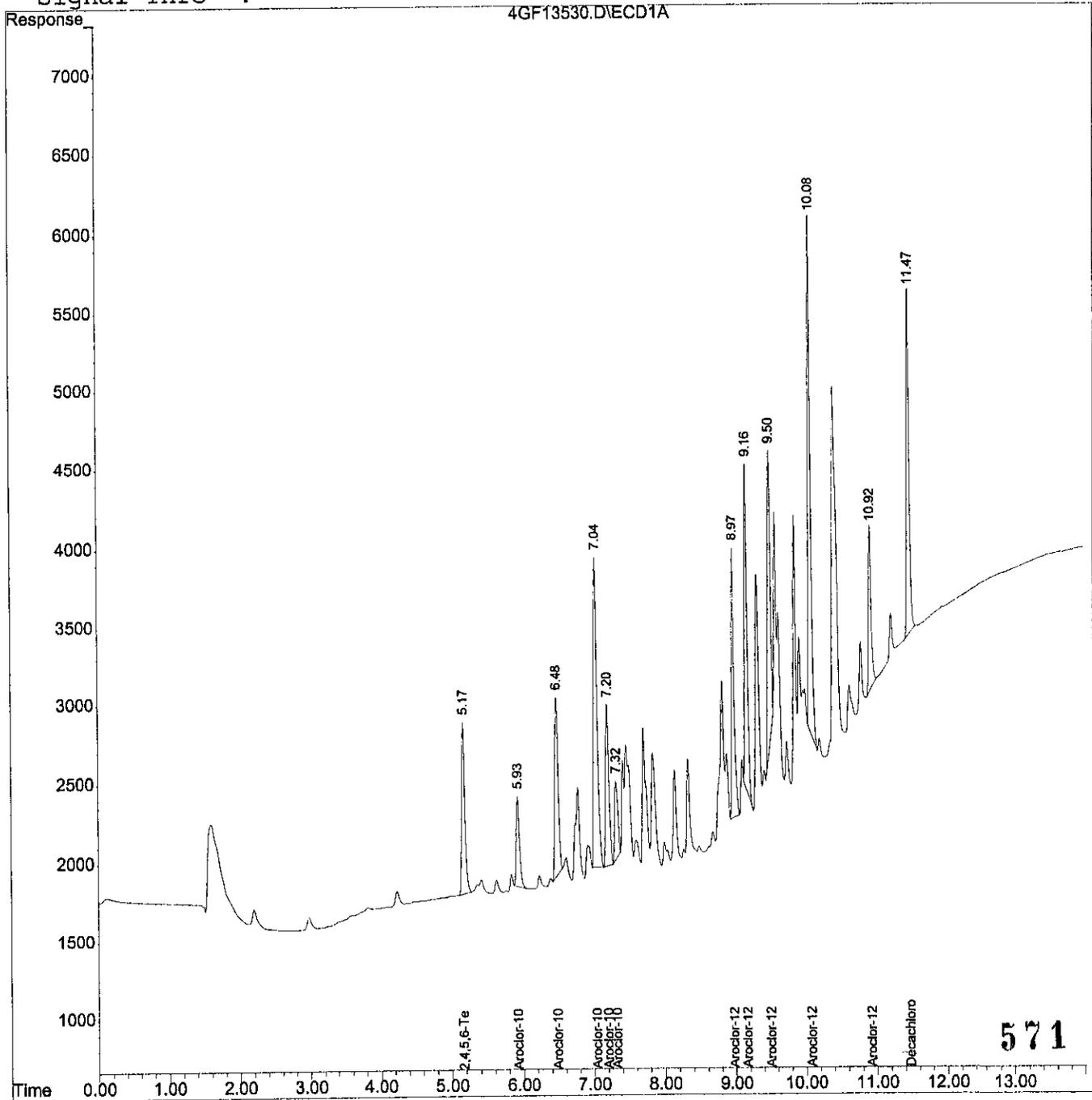
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Sample : 1660 ICAL 0.1 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:47 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:47:09 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 12:17
Sample : 1660 ICAL 0.05 PPM
Misc : 1,1 SOS57-19
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 12:47 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:47:23 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.19	16959	2.3984 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	11.99%#
12) S Decachlorobiphenyl	11.48	27328	2.6734 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	13.37%#
Target Compounds			
2) L1 Aroclor-1016-1	5.95	9384	54.9649 UG/L
3) L1 Aroclor-1016-2	6.50	19652	57.4062 UG/L
4) L1 Aroclor-1016-3	7.06	38071	56.8797 UG/L
5) L1 Aroclor-1016-4	7.22	15129	52.5714 UG/L
6) L1 Aroclor-1016-5	7.34	7630	47.8111 UG/L
Sum Aroclor-1016-1		89866	269.6334 UG/L
Average Aroclor-1016-1			53.927 UG/L
7) L2 Aroclor-1260-1	8.99	25589	58.6690 UG/L
8) L2 Aroclor-1260-2	9.18	27806	59.6525 UG/L
9) L2 Aroclor-1260-3	9.52	25595	51.6656 UG/L
10) L2 Aroclor-1260-4	10.09	43583	56.8025 UG/L
11) L2 Aroclor-1260-5	10.93	14078	50.5655 UG/L
Sum Aroclor-1260-1		136651	277.3552 UG/L
Average Aroclor-1260-1			55.471 UG/L

572

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13531.D 1660F.M Tue Mar 19 12:48:32 2002

Page 1

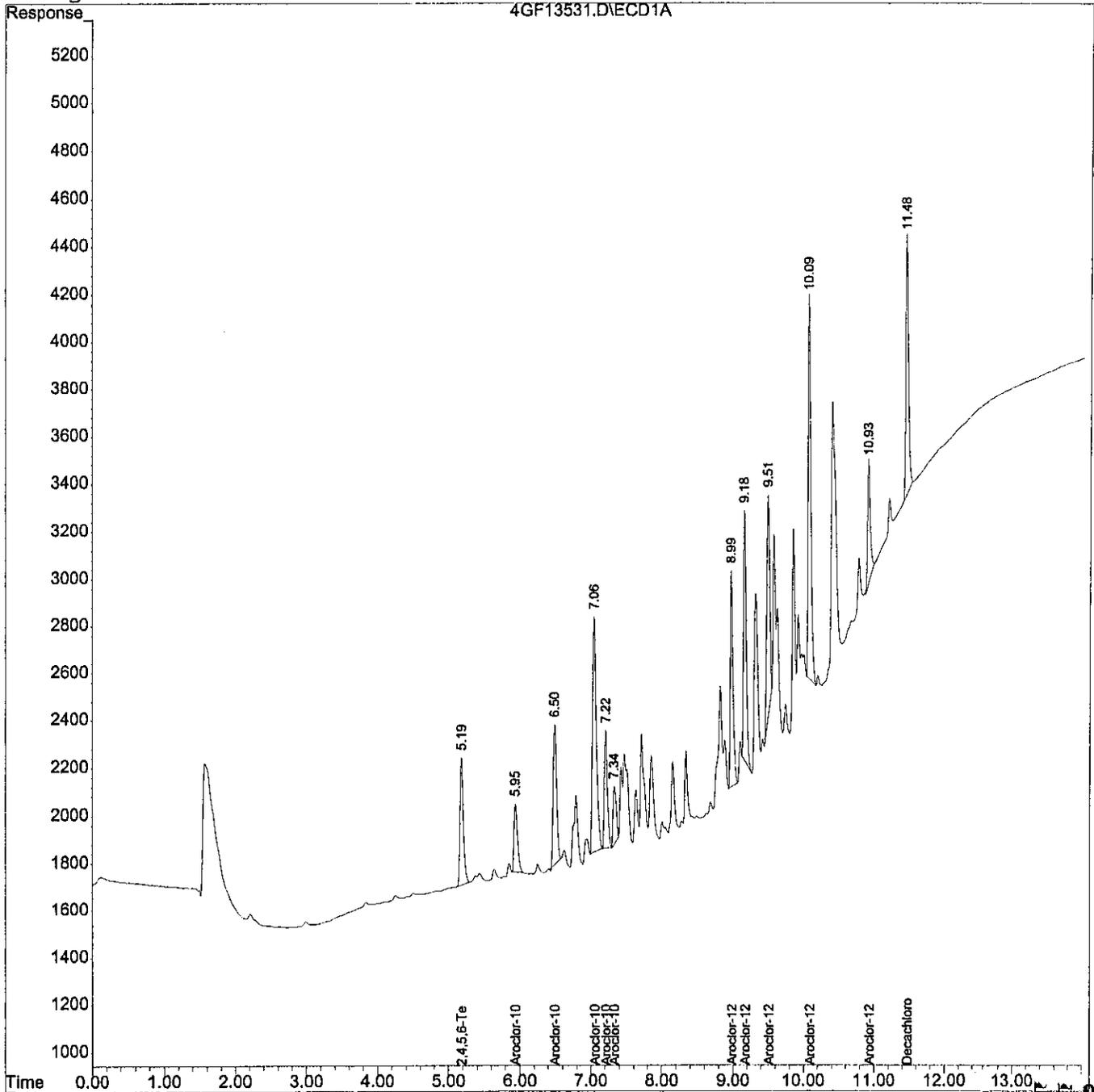
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Sample : 1660 ICAL 0.05 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Mar 19 12:47 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:47:23 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 12:35
Sample : 1660 ALT ICV 0.5 PPM
Misc : 1,1 SOS57-33
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:47:40 2002
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	25.000	24.286	2.9	97	-0.02
2 L1	Aroclor-1016-1	500.000	490.680	1.9	99	-0.03
3 L1	Aroclor-1016-2	500.000	472.708	5.5	97	-0.02
4 L1	Aroclor-1016-3	500.000	483.986	3.2	99	-0.01
5 L1	Aroclor-1016-4	500.000	484.177	3.2	98	0.00
6 L1	Aroclor-1016-5	500.000	497.798	0.4	98	0.00
7 L2	Aroclor-1260-1	500.000	495.586	0.9	101	0.00
8 L2	Aroclor-1260-2	500.000	473.528	5.3	98	0.00
9 L2	Aroclor-1260-3	500.000	536.161	-7.2	107	0.00
10 L2	Aroclor-1260-4	500.000	421.992	15.6#	88	0.00
11 L2	Aroclor-1260-5	500.000	404.964	19.0#	80	0.00
12 S	Decachlorobiphenyl	25.000	14.353	42.6#	57	0.00

574

(#) = Out of Range
4GF13532.D 1660F.M

SPCC's out = 0 CCC's out = 0
Tue Mar 19 16:13:20 2002

Page 1

Acq On : 19 Mar 2002 12:35 Operator: ECL
 Sample : 1660 ALT ICV 0.5 PPM Inst : HP 4
 Misc : 1,1 SOS57-33 Multiplr: 1.00
 IntFile : events.e
 Quant Time: Mar 19 16:13 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 12:47:40 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	168026	24.2860 UG/L
Spiked Amount	20.000	Range 30 - 132	Recovery = 121.43%
12) S Decachlorobiphenyl	11.48	148976	14.3530 UG/L
Spiked Amount	20.000	Range 36 - 144	Recovery = 71.77%
Target Compounds			
2) L1 Aroclor-1016-1	5.92f	81917	490.6802 UG/L
3) L1 Aroclor-1016-2	6.48	157113	472.7085 UG/L
4) L1 Aroclor-1016-3	7.05	320515	483.9857 UG/L
5) L1 Aroclor-1016-4	7.21	135250	484.1767 UG/L
6) L1 Aroclor-1016-5	7.33	76790	497.7979 UG/L
Sum Aroclor-1016-1		771586	2429.3490 UG/L
Average Aroclor-1016-1			485.870 UG/L
7) L2 Aroclor-1260-1	8.99	214854	495.5860 UG/L
8) L2 Aroclor-1260-2	9.18	220428	473.5283 UG/L
9) L2 Aroclor-1260-3	9.52	259614	536.1605 UG/L
10) L2 Aroclor-1260-4	10.09	323858	421.9918 UG/L
11) L2 Aroclor-1260-5	10.94	113748	404.9645 UG/L
Sum Aroclor-1260-1		1132501	2332.2311 UG/L
Average Aroclor-1260-1			466.446 UG/L

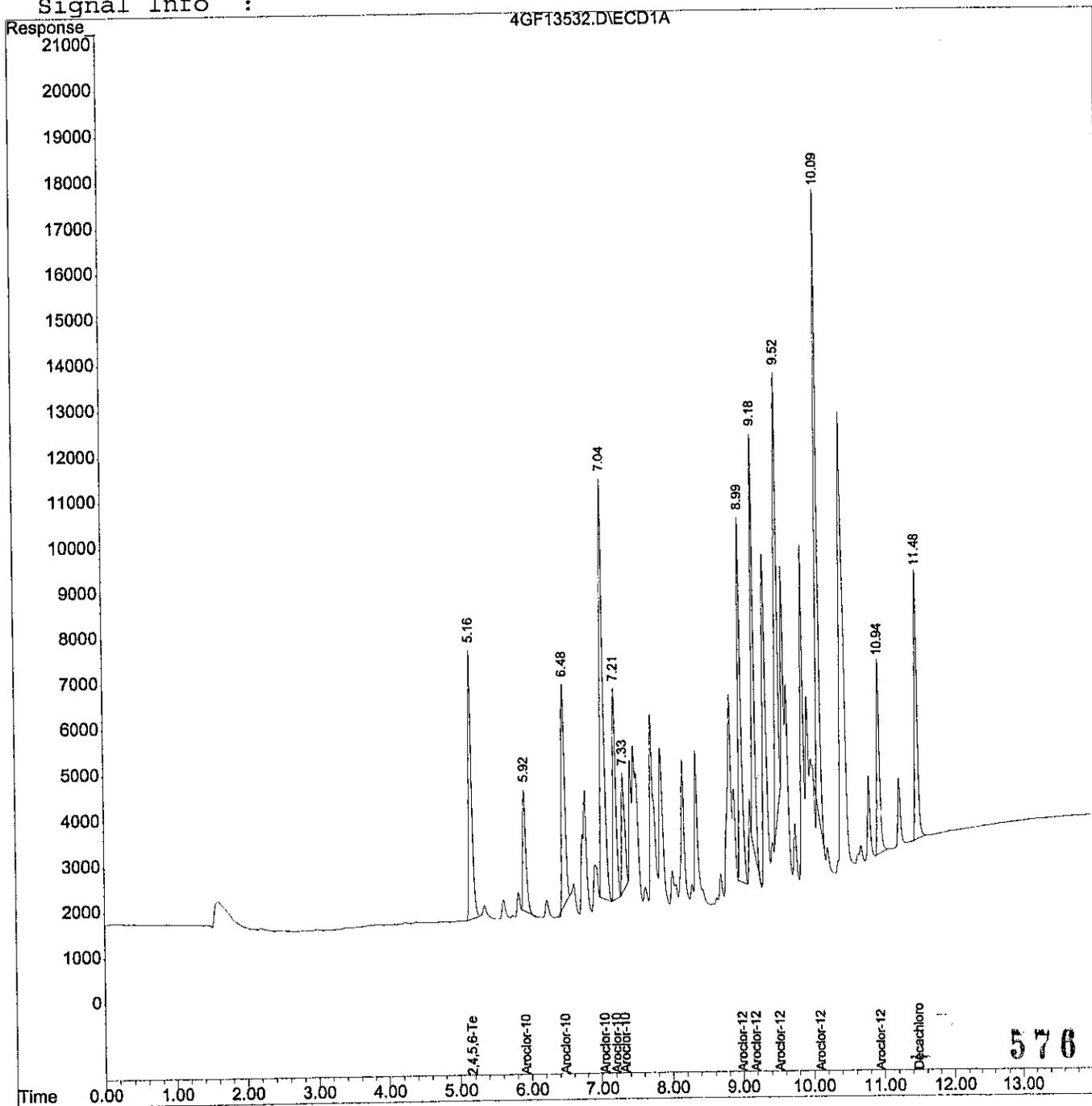
575

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Sample : 1660 ALT ICV 0.5 PPM
Misc : 1,1 SOS57-33
IntFile : events.e
Quant Time: Mar 19 16:13 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 12:47:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 16:16:49 2002

Calibration Files

2000 =4GF13533.D 1000 =4GF13534.D 500 =4GF13535.D
 250 =4GF13536.D 100 =4GF13537.D 50 =4GF13538.D

Compound		2000	1000	500	250	100	50	Avg		%RSD
1) S	2,4,5,6-Tetrachloro	7.598	7.715	7.238	7.113	6.956	7.096	7.286	E3	4.16
2) L1	Aroclor-1254-1	2.250	2.567	2.649	2.846	2.929	3.097	2.723	E2	11.03
3) L1	Aroclor-1254-2	1.774	1.976	2.093	2.253	2.380	2.513	2.165	E2	12.55
4) L1	Aroclor-1254-3	3.712	4.074	4.176	4.307	4.470	5.010	4.292	E2	10.13
5) L1	Aroclor-1254-4	1.660	1.877	2.015	2.147	2.293	2.408	2.067	E2	13.31
6) L1	Aroclor-1254-5	3.716	3.989	4.353	4.473	4.621	4.708	4.310	E2	8.93
7) S	Decachlorobiphenyl	7.025	7.708	7.947	8.061	8.164	8.169	7.846	E3	5.57

(#) = Out of Range
 1254F.M

Tue Mar 19 16:17:14 2002

577

Page 1

Data File : C:\HPCHEM\2\METHODS\1254F.M
 Acq On : 19 Mar 2002 12:54 Operator: ECL
 Sample : 1254 ICAL 2.0 PPM Inst : HP 4
 Misc : SOS58-23 Multiplr: 1.00
 IntFile : events.e
 Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Mar 19 16:16:49 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.17	759761	104.2773 UG/L
Spiked Amount	20.000	Range 30 - 132	Recovery = 521.39%#
7) S Decachlorobiphenyl	11.47	702483	89.5365 UG/L
Spiked Amount	20.000	Range 36 - 144	Recovery = 447.68%#
Target Compounds			
2) L1 Aroclor-1254-1	7.43	450045	1652.8072 UG/L
3) L1 Aroclor-1254-2	8.34	354755	1638.8816 UG/L
4) L1 Aroclor-1254-3	8.80	742400	1729.8981 UG/L
5) L1 Aroclor-1254-4	9.17	331975	1606.4096 UG/L
6) L1 Aroclor-1254-5	9.51	743193	1724.2870 UG/L
Sum Aroclor-1254-1		2622367	8352.2835 UG/L
Average Aroclor-1254-1			1670.457 UG/L

578

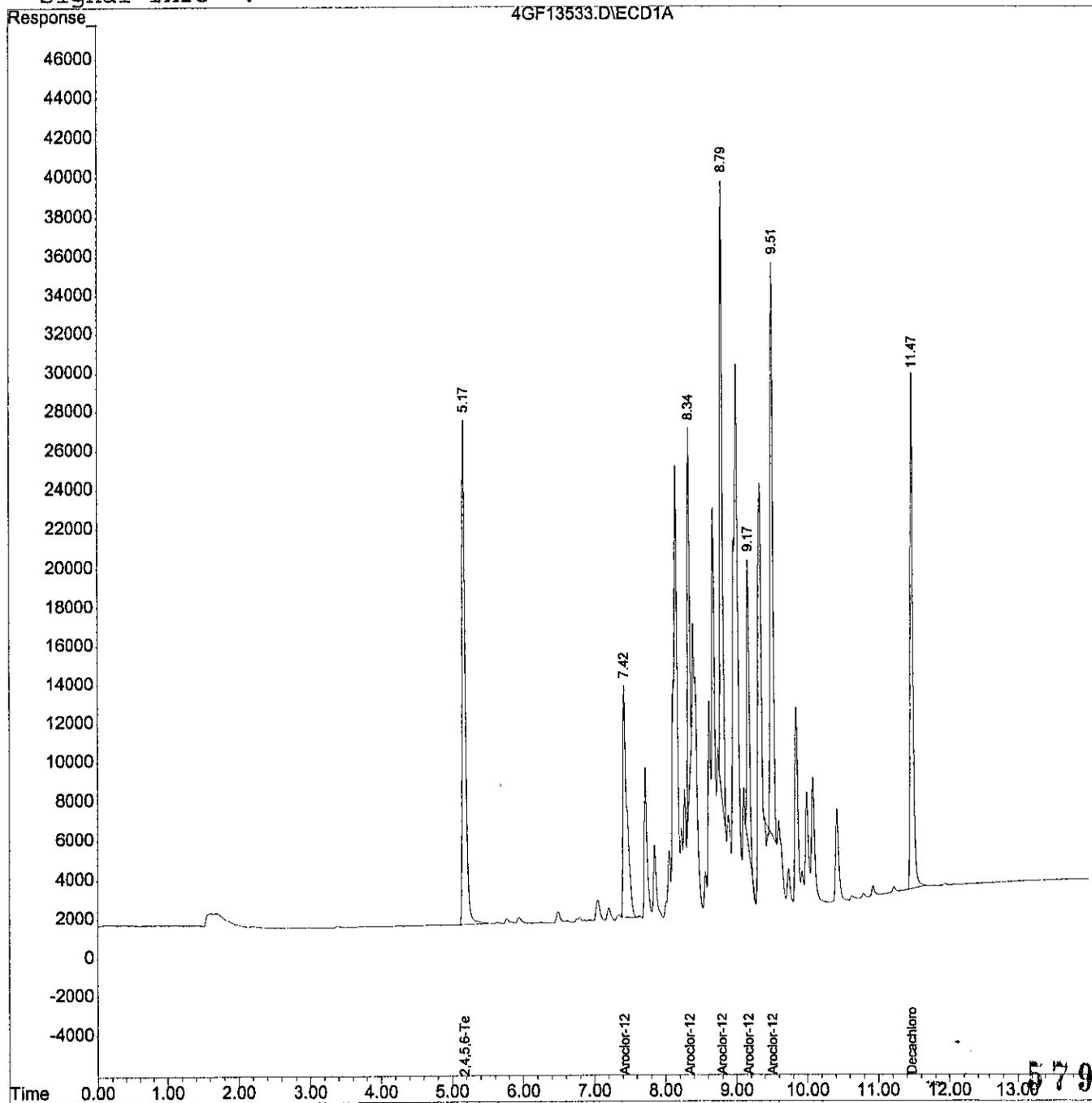
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Sample : 1254 ICAL 2.0 PPM
Misc : SOS58-23
IntFile : events.e
Quant Time: Mar 19 16:17 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 13:13
Sample : 1254 ICAL 1.0 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	385764	52.9462 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	264.73%#
7) S Decachlorobiphenyl	11.48	385422	49.1248 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	245.62%#
Target Compounds			
2) L1 Aroclor-1254-1	7.42	256664	942.6096 UG/L
3) L1 Aroclor-1254-2	8.33	197550	912.6348 UG/L
4) L1 Aroclor-1254-3	8.79	407382	949.2589 UG/L
5) L1 Aroclor-1254-4	9.16	187658	908.0688 UG/L
6) L1 Aroclor-1254-5	9.50	398918	925.5327 UG/L
Sum Aroclor-1254-1		1448173	4638.1049 UG/L
Average Aroclor-1254-1			927.621 UG/L

580

Acq On : 19 Mar 2002 13:31
Sample : 1254 ICAL 0.5 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.17	180938	24.8337 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	124.17%
7) S Decachlorobiphenyl	11.47	198669	25.3219 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	126.61%
Target Compounds			
2) L1 Aroclor-1254-1	7.42	132468	486.4930 UG/L
3) L1 Aroclor-1254-2	8.34	104634	483.3819 UG/L
4) L1 Aroclor-1254-3	8.79	208823	486.5875 UG/L
5) L1 Aroclor-1254-4	9.17	100756	487.5506 UG/L
6) L1 Aroclor-1254-5	9.51	217632	504.9305 UG/L
Sum Aroclor-1254-1		764312 2448.9435	UG/L
Average Aroclor-1254-1			489.789 UG/L

582

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13535.D 1254F.M

Tue Mar 19 16:17:34 2002

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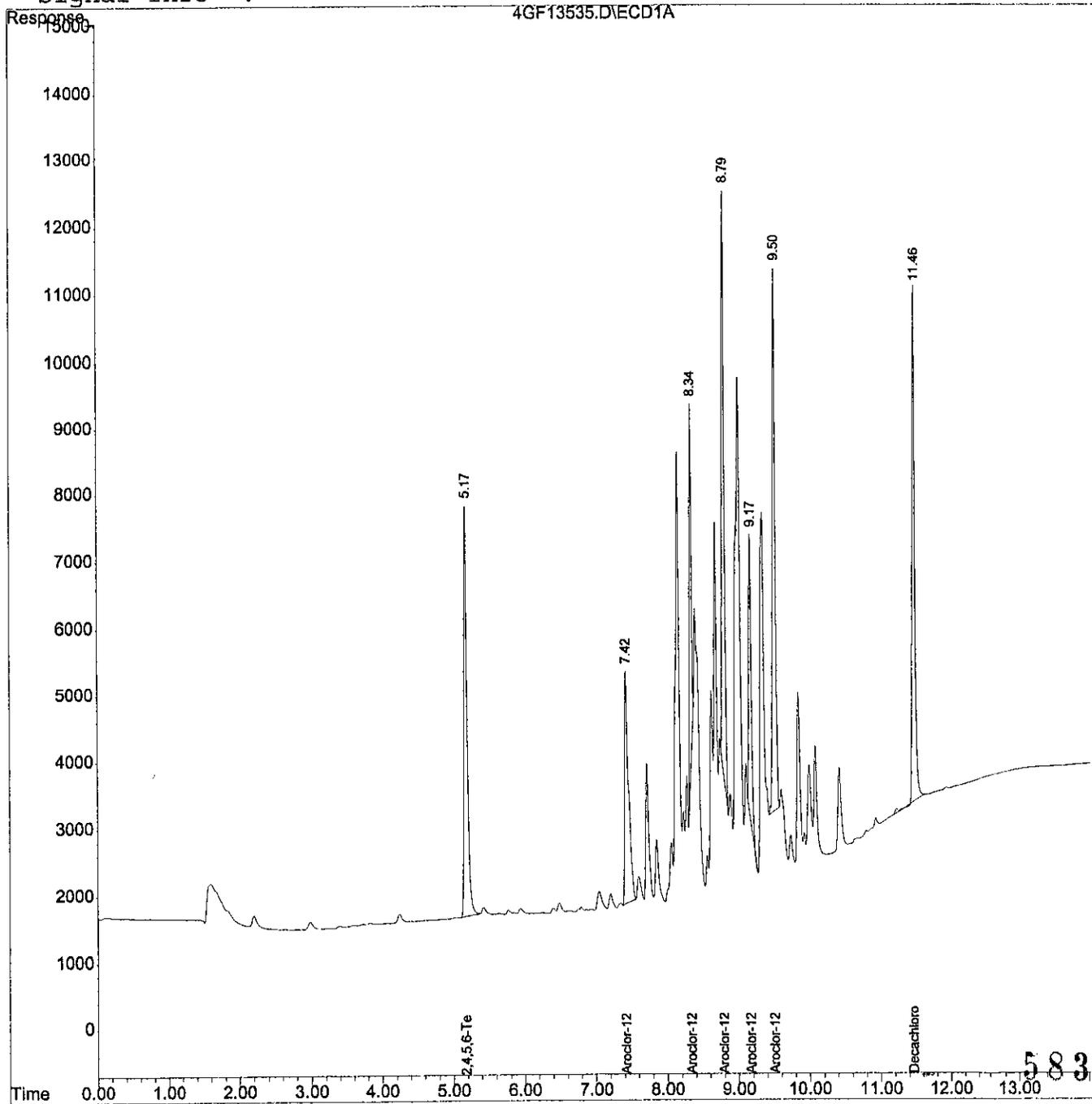
Acq On : 19 Mar 2002 13:31
Sample : 1254 ICAL 0.5 PPM
Misc : SOS58-23
IntFile : events.e
Quant Time: Mar 19 16:17 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 13:50
Sample : 1254 ICAL 0.25 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	88918	12.2040 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	61.02%
7) S Decachlorobiphenyl	11.48	100761	12.8427 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	64.21%
Target Compounds			
2) L1 Aroclor-1254-1	7.42	71141	261.2697 UG/L
3) L1 Aroclor-1254-2	8.34	56335	260.2540 UG/L
4) L1 Aroclor-1254-3	8.80	107669	250.8840 UG/L
5) L1 Aroclor-1254-4	9.17	53671	259.7116 UG/L
6) L1 Aroclor-1254-5	9.51	111837	259.4744 UG/L
Sum Aroclor-1254-1		400654	1291.5938 UG/L
Average Aroclor-1254-1			258.319 UG/L

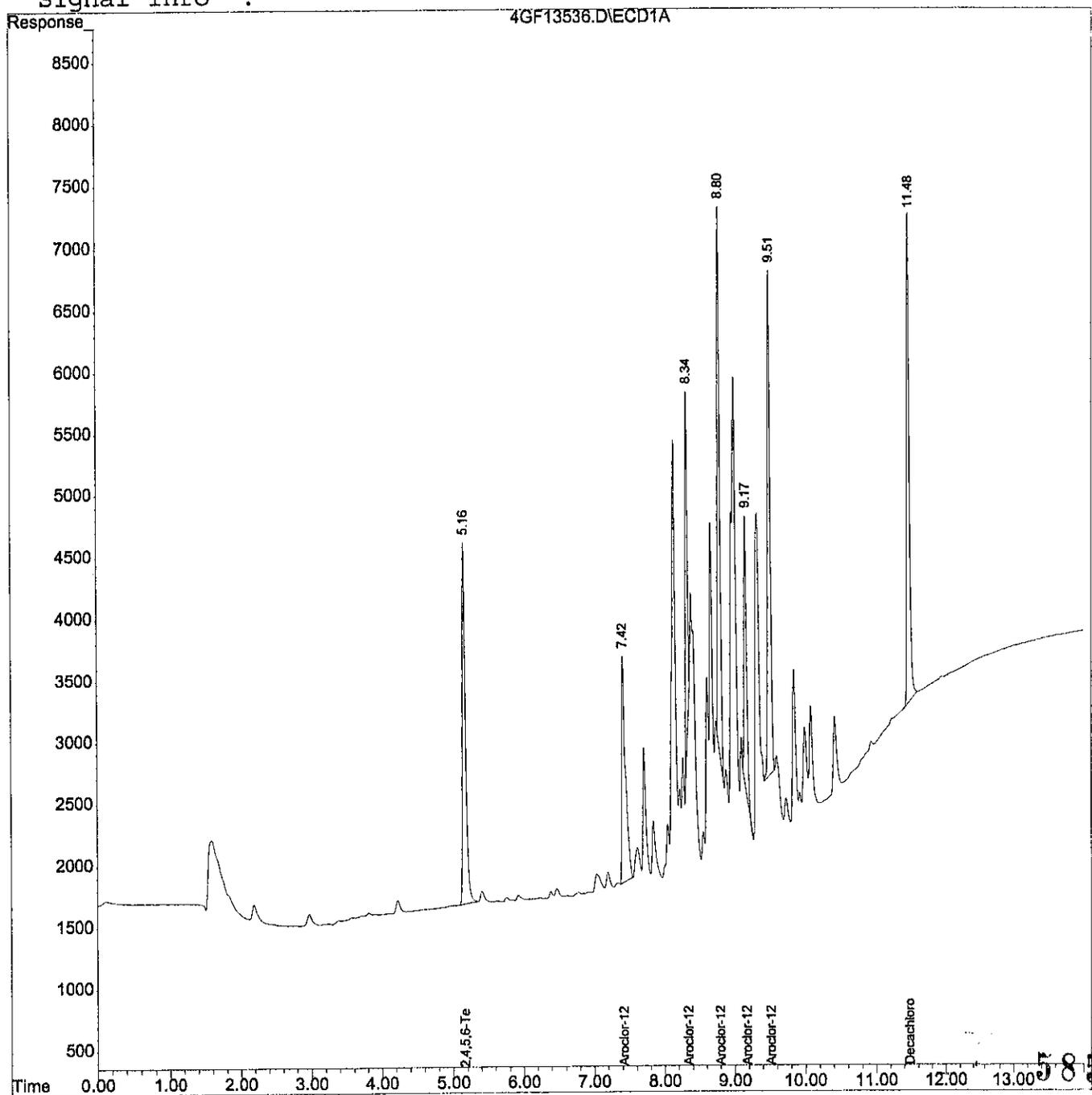
Acq On : 19 Mar 2002 13:50
Sample : 1254 ICAL 0.25 PPM
Misc : SOS58-23
IntFile : events.e
Quant Time: Mar 19 16:17 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 14:08
Sample : 1254 ICAL 0.1 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.18	34779	4.7734 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	23.87%#
7) S Decachlorobiphenyl	11.47	40822	5.2031 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	26.02%#
Target Compounds			
2) L1 Aroclor-1254-1	7.43	29285	107.5507 UG/L
3) L1 Aroclor-1254-2	8.34	23797	109.9360 UG/L
4) L1 Aroclor-1254-3	8.80	44703	104.1638 UG/L
5) L1 Aroclor-1254-4	9.17	22927	110.9434 UG/L
6) L1 Aroclor-1254-5	9.51	46212	107.2167 UG/L
Sum Aroclor-1254-1		166924	539.8107 UG/L
Average Aroclor-1254-1			107.962 UG/L

586

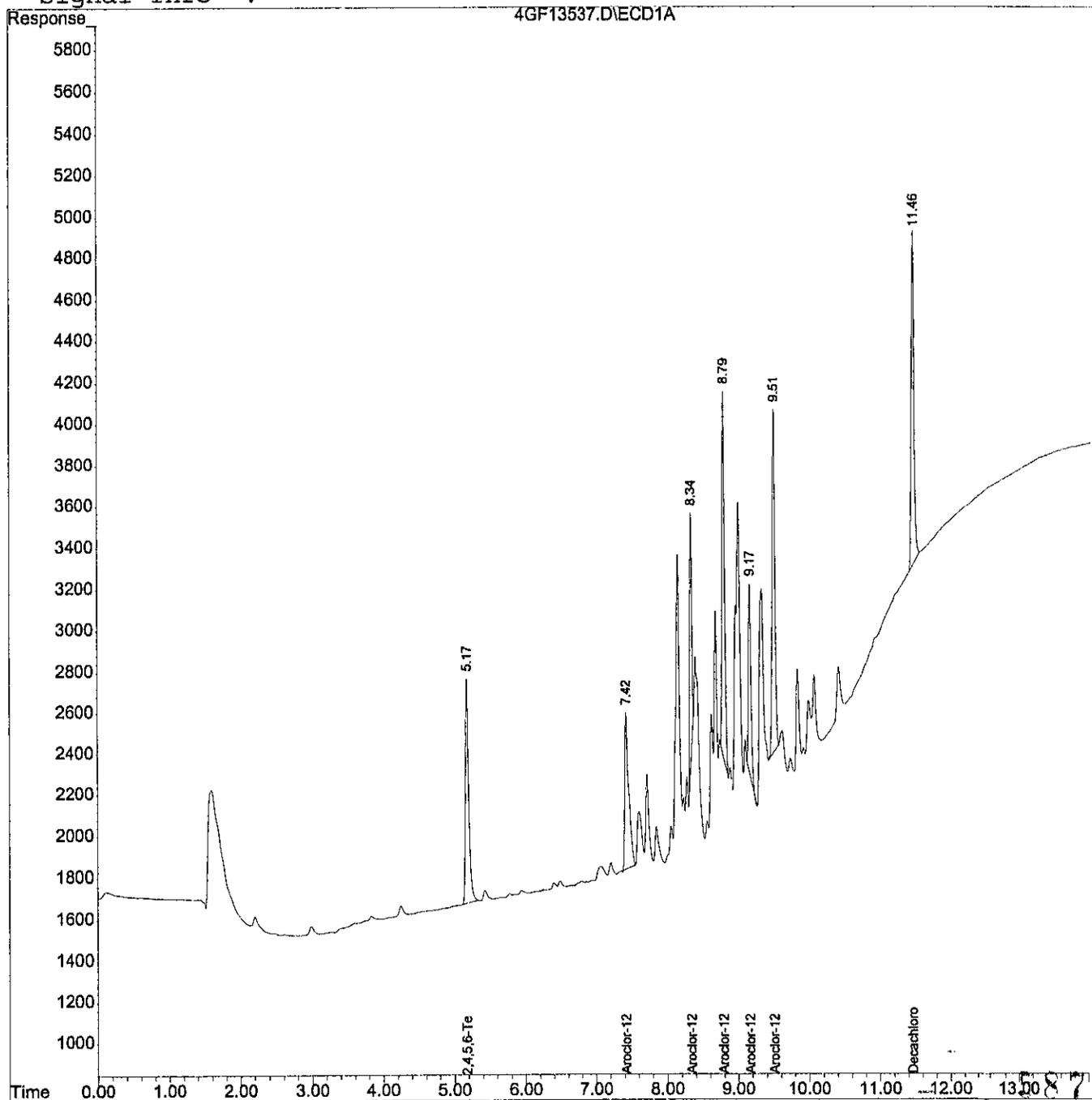
Acq On : 19 Mar 2002 14:08
Sample : 1254 ICAL 0.1 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 14:27
Sample : 1254 ICAL 0.05 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	17740	2.4349 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	12.17%#
7) S Decachlorobiphenyl	11.48	20423	2.6031 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	13.02%#
Target Compounds			
2) L1 Aroclor-1254-1	7.42	15485	56.8707 UG/L
3) L1 Aroclor-1254-2	8.34	12563	58.0392 UG/L
4) L1 Aroclor-1254-3	8.80	25051	58.3721 UG/L
5) L1 Aroclor-1254-4	9.17	12041	58.2672 UG/L
6) L1 Aroclor-1254-5	9.51	23542	54.6199 UG/L
Sum Aroclor-1254-1		88683	286.1692 UG/L
Average Aroclor-1254-1			57.234 UG/L

588

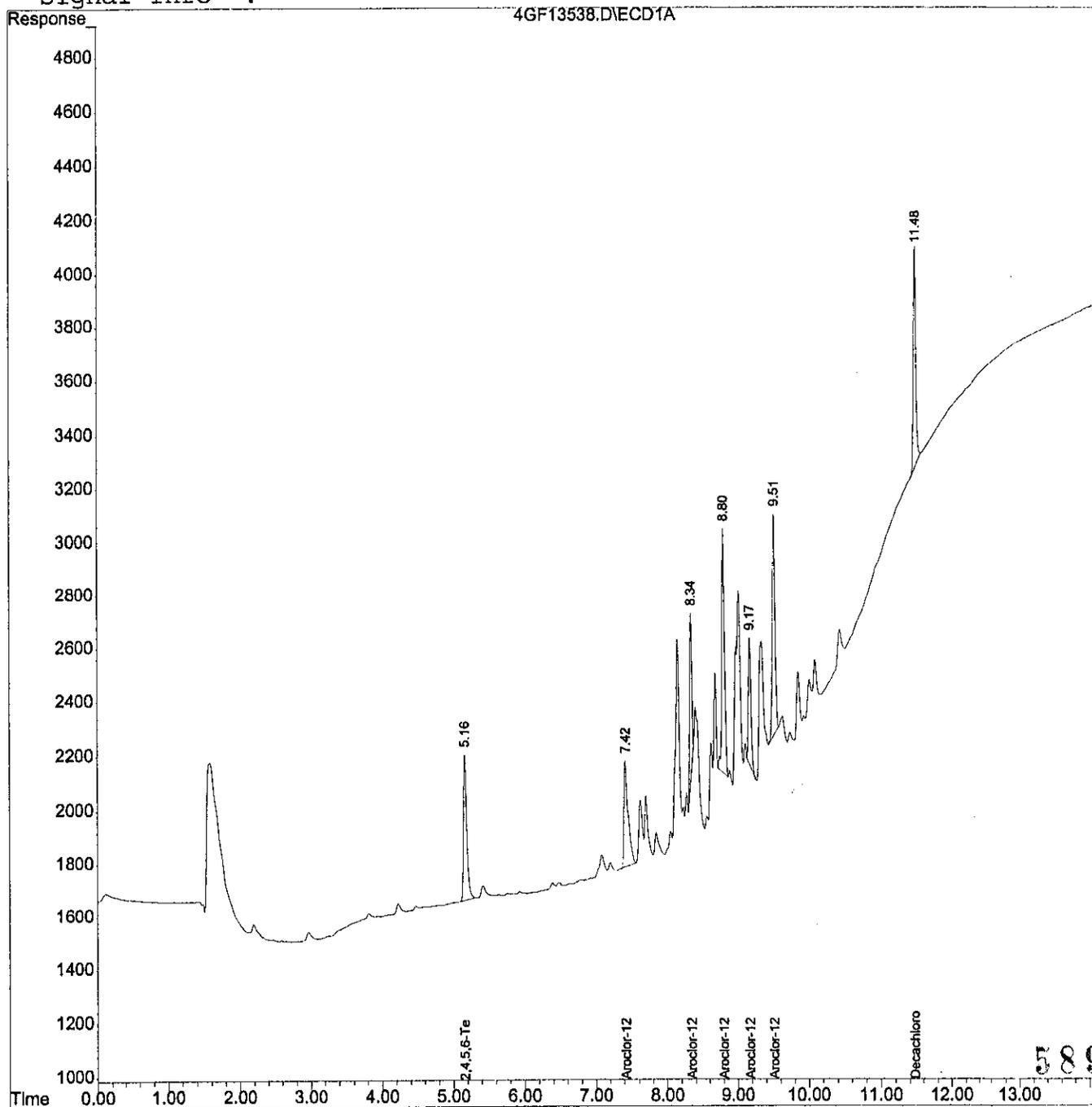
Acq On : 19 Mar 2002 14:27
Sample : 1254 ICAL 0.05 PPM
Misc : SOS58-23
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 14:46
Sample : 1254 ALT ICV 0.5 PPM
Misc : SOS57-12
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
2 L1 Aroclor-1254-1	500.000	488.480	2.3	100	-0.02
3 L1 Aroclor-1254-2	500.000	487.629	2.5	101	-0.02
4 L1 Aroclor-1254-3	500.000	491.210	1.8	101	-0.02
5 L1 Aroclor-1254-4	500.000	467.076	6.6	96	-0.02
6 L1 Aroclor-1254-5	500.000	495.382	0.9	98	-0.03

590

(#) = Out of Range
4GF13539.D 1254F.M

SPCC's out = 0 CCC's out = 0
Tue Mar 19 16:18:04 2002

Page 1

Acq On : 19 Mar 2002 14:46
Sample : 1254 ALT ICV 0.5 PPM
Misc : SOS57-12
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 16:17 2002 Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	0.00	0	N.D. UG/L
Spiked Amount 20.000 Range 30 - 132		Recovery =	0.00%#
7) S Decachlorobiphenyl	0.00	0	N.D. UG/L
Spiked Amount 20.000 Range 36 - 144		Recovery =	0.00%#
Target Compounds			
2) L1 Aroclor-1254-1	7.42	133009	488.4795 UG/L
3) L1 Aroclor-1254-2	8.34	105553	487.6292 UG/L
4) L1 Aroclor-1254-3	8.79	210807	491.2101 UG/L
5) L1 Aroclor-1254-4	9.16	96524	467.0761 UG/L
6) L1 Aroclor-1254-5	9.50	213517	495.3817 UG/L
Sum Aroclor-1254-1		759409	2429.7765 UG/L
Average Aroclor-1254-1			485.955 UG/L

591

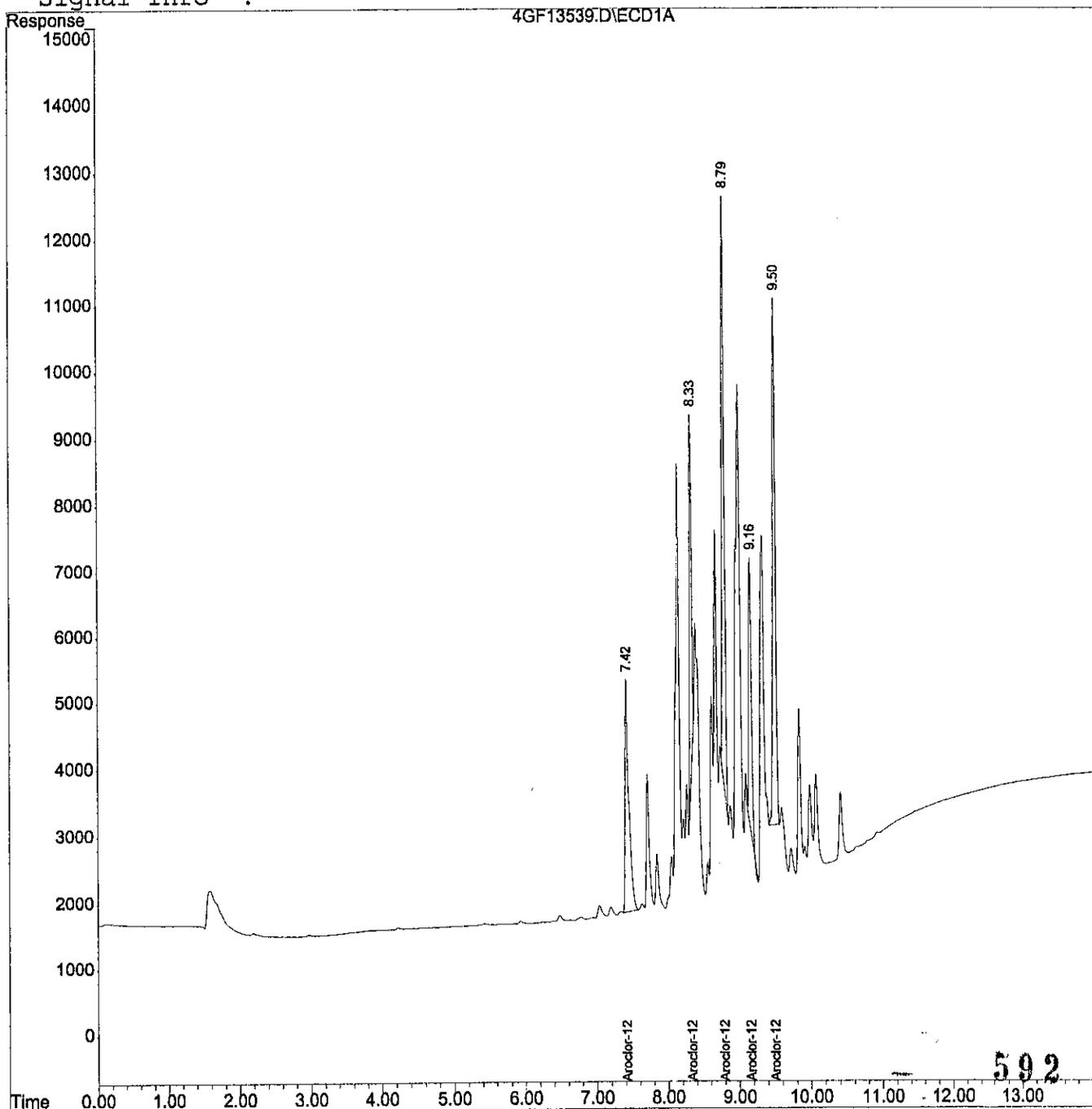
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Sample : 1254 ALT ICV 0.5 PPM
Misc : SOS57-12
IntFile : events.e
Quant Time: Mar 19 16:17 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1254F.RES

Quant Method : C:\HPCHEM\2\METHODS\1254F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 16:16:49 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002

Calibration Files

500 =4GF13540.D =
= =

	Compound	500	Avg	%RSD
1) S	2,4,5,6-Tetrachloro-M	7.425	7.425#E3	0.00
2) L1	Aroclor-1248-1	1.528	1.528#E2	0.00
3) L1	Aroclor-1248-2	4.482	4.482#E2	0.00
4) L1	Aroclor-1248-3	2.806	2.806#E2	0.00
5) L1	Aroclor-1248-4	3.088	3.088#E2	0.00
6) L1	Aroclor-1248-5	9.059	9.059#E1	0.00
7) S	Decachlorobiphenyl	1.120	1.120#E4	0.00

593

(#) = Out of Range
1248SF.M

Tue Mar 19 17:08:14 2002

Page 1

Acq On : 19 Mar 2002 15:04
Sample : 1248 0.5 PPM
Misc : SOS55-50
IntFile : events.e
Quant Time: Mar 19 17:08 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.17	185631	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S Decachlorobiphenyl	11.47	279936	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 Aroclor-1248-1	6.48	76385	500.0000 UG/L
3) L1 Aroclor-1248-2	7.04	224101	500.0000 UG/L
4) L1 Aroclor-1248-3	7.85	140275	500.0000 UG/L
5) L1 Aroclor-1248-4	8.40	154389	500.0000 UG/L
6) L1 Aroclor-1248-5	8.80	45294	500.0000 UG/L
Sum Aroclor-1248-1		640444	2500.0000 UG/L
Average Aroclor-1248-1			500.000 UG/L

594

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13540.D 1248SF.M Tue Mar 19 17:08:18 2002

Page 1

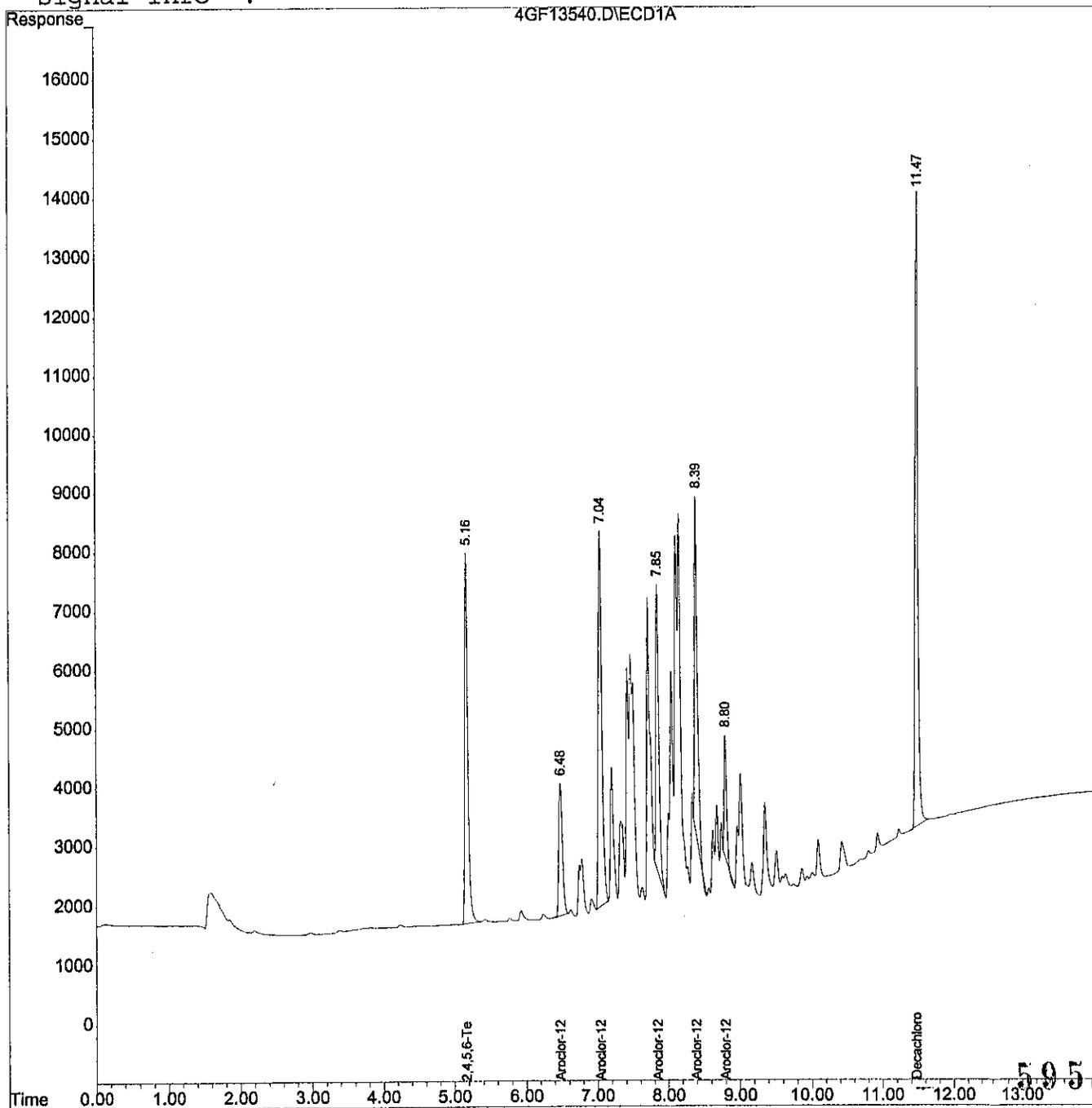
Acq On : 19 Mar 2002 15:04
Sample : 1248 0.5 PPM
Misc : SOS55-50
IntFile : events.e
Quant Time: Mar 19 17:08 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 15:23
Sample : 1248 ALT 0.5 PPM
Misc : SOS58-21
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
2 L1 Aroclor-1248-1	500.000	452.659	9.5	91	0.00
3 L1 Aroclor-1248-2	500.000	369.451	26.1#	74	0.00
4 L1 Aroclor-1248-3	500.000	488.599	2.3	98	0.00
5 L1 Aroclor-1248-4	500.000	447.404	10.5	89	0.00
6 L1 Aroclor-1248-5	500.000	605.067	-21.0#	121	0.00

596

(#) = Out of Range
4GF13541.D 1248SF.M

SPCC's out = 0 CCC's out = 0
Tue Mar 19 17:08:33 2002

Page 1

Acq On : 19 Mar 2002 15:23
Sample : 1248 ALT 0.5 PPM
Misc : SOS58-21
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 17:08 2002 Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
7) S Decachlorobiphenyl	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
2) L1 Aroclor-1248-1	6.48	69152	452.6591 UG/L
3) L1 Aroclor-1248-2	7.04	165589	369.4507 UG/L
4) L1 Aroclor-1248-3	7.84	137077	488.5992 UG/L
5) L1 Aroclor-1248-4	8.39	138148	447.4042 UG/L
6) L1 Aroclor-1248-5	8.79	54812	605.0666 UG/L
Sum Aroclor-1248-1		564778	2363.1798 UG/L
Average Aroclor-1248-1			472.636 UG/L

597

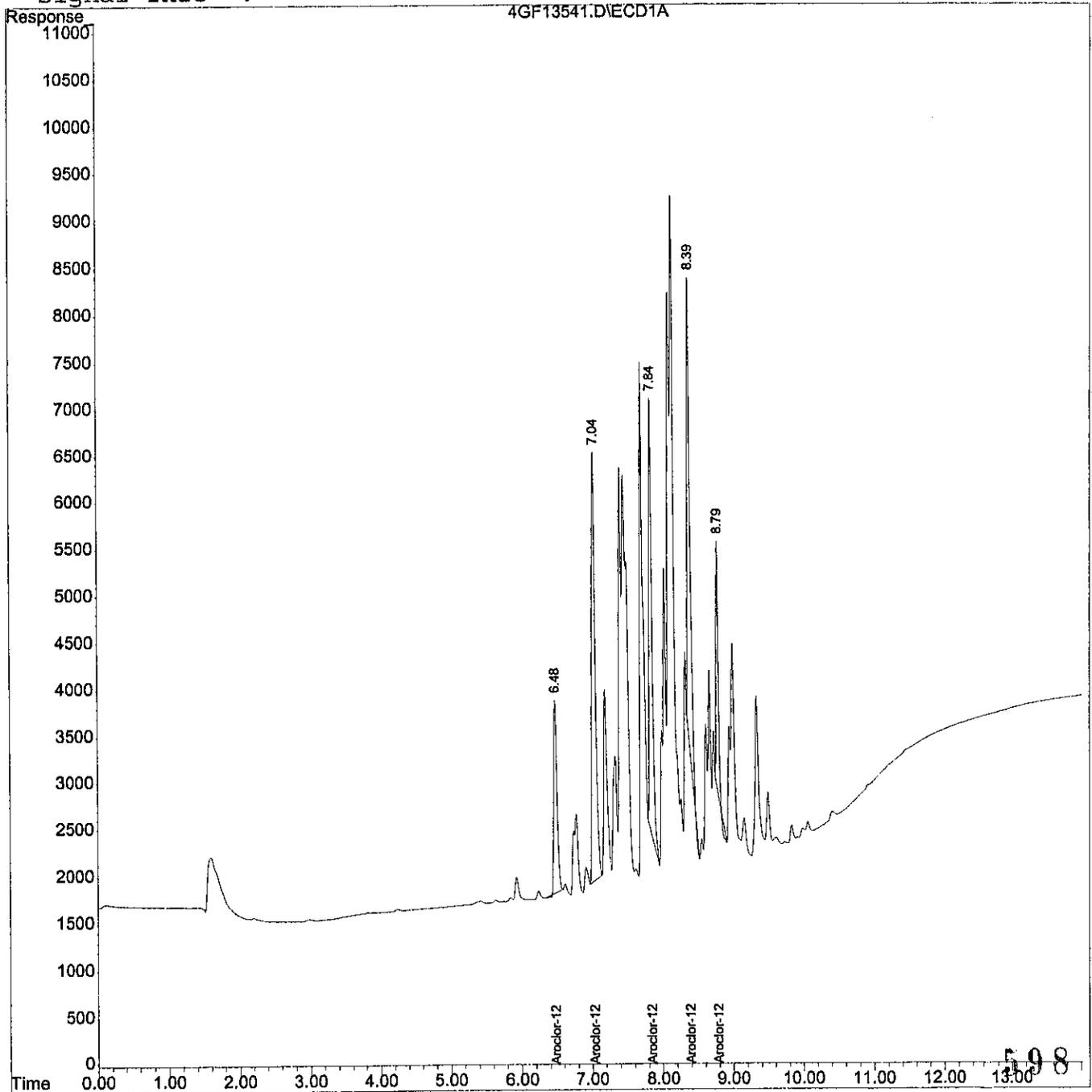
Acq On : 19 Mar 2002 15:23
Sample : 1248 ALT 0.5 PPM
Misc : SOS58-21
IntFile : events.e
Quant Time: Mar 19 17:08 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1248SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1248SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:08:03 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002

Calibration Files

500 =4GF13542.D =
= =

	Compound	500	Avg	%RSD
1) S	2,4,5,6-Tetrachloro-M	6.882	6.882#E3	0.00
2) L1	Aroclor-1242-1	1.404	1.404#E2	0.00
3) L1	Aroclor-1242-2	2.518	2.518#E2	0.00
4) L1	Aroclor-1242-3	5.059	5.059#E2	0.00
5) L1	Aroclor-1242-4	2.152	2.152#E2	0.00
6) L1	Aroclor-1242-5	1.561	1.561#E2	0.00
7) S	Decachlorobiphenyl	1.046	1.046#E4	0.00

(#) = Out of Range
1242SF.M

Tue Mar 19 17:09:29 2002

599

Page 1

Acq On : 19 Mar 2002 15:42
Sample : 1242 0.5 PPM
Misc : SOS55-49
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 17:09 2002 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	172054	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S Decachlorobiphenyl	11.47	261509	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 Aroclor-1242-1	5.92	70208	500.0000 UG/L
3) L1 Aroclor-1242-2	6.48	125892	500.0000 UG/L
4) L1 Aroclor-1242-3	7.04	252961	500.0000 UG/L
5) L1 Aroclor-1242-4	7.20	107581	500.0000 UG/L
6) L1 Aroclor-1242-5	7.85	78038	500.0000 UG/L
Sum Aroclor-1242-1		634679	2500.0000 UG/L
Average Aroclor-1242-1			500.000 UG/L

600

(f)=RT Delta > 1/2 Window

(m)=manual int.

4GF13542.D 1242SF.M Tue Mar 19 17:09:33 2002

Page 1

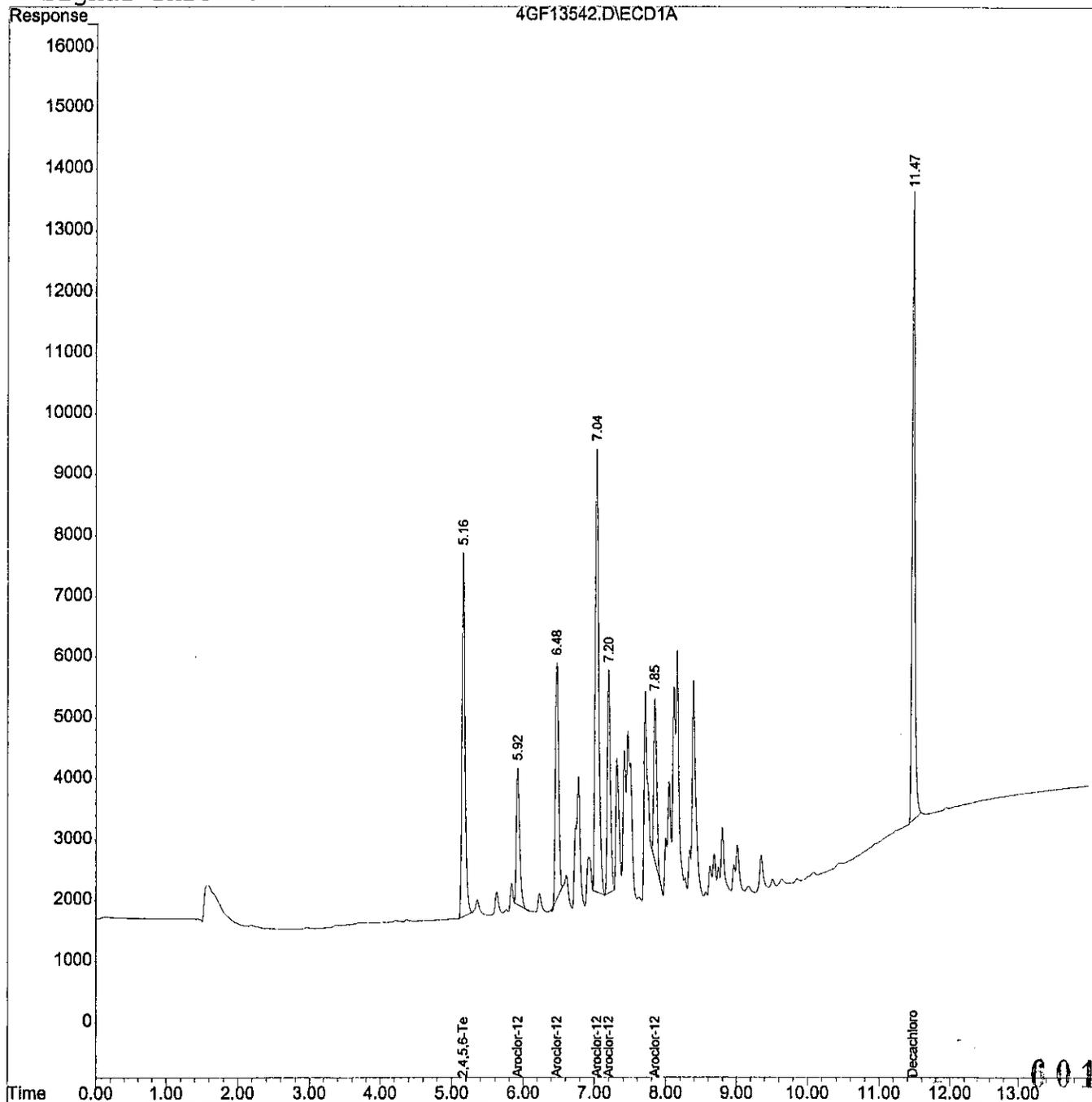
Acq On : 19 Mar 2002 15:42
Sample : 1242 0.5 PPM
Misc : SOS55-49
IntFile : events.e
Quant Time: Mar 19 17:09 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 16:00
Sample : 1242 ALT 0.5 PPM
Misc : SOS57-13
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
2 L1 Aroclor-1242-1	500.000	501.036	-0.2	100	0.00
3 L1 Aroclor-1242-2	500.000	503.284	-0.7	101	0.00
4 L1 Aroclor-1242-3	500.000	503.204	-0.6	101	0.00
5 L1 Aroclor-1242-4	500.000	503.845	-0.8	101	0.00
6 L1 Aroclor-1242-5	500.000	518.288	-3.7	104	0.00

002

(#) = Out of Range
4GF13543.D 1242SF.M

SPCC's out = 0 CCC's out = 0
Tue Mar 19 17:09:45 2002

Page 1

Acq On : 19 Mar 2002 16:00
Sample : 1242 ALT 0.5 PPM
Misc : SOS57-13
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 17:09 2002 Quant Results File: 1242SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
1) S 2,4,5,6-Tetrachloro-M-Xyle	0.00	0	N.D.	UG/L
Spiked Amount 20.000		Recovery =	0.00%	
7) S Decachlorobiphenyl	0.00	0	N.D.	UG/L
Spiked Amount 20.000		Recovery =	0.00%	
Target Compounds				
2) L1 Aroclor-1242-1	5.92	70353	501.0363	UG/L
3) L1 Aroclor-1242-2	6.48	126719	503.2844	UG/L
4) L1 Aroclor-1242-3	7.04	254582	503.2036	UG/L
5) L1 Aroclor-1242-4	7.20	108408	503.8449	UG/L
6) L1 Aroclor-1242-5	7.84	80892	518.2875	UG/L
Sum Aroclor-1242-1		640954 2529.6567		UG/L
Average Aroclor-1242-1			505.931	UG/L

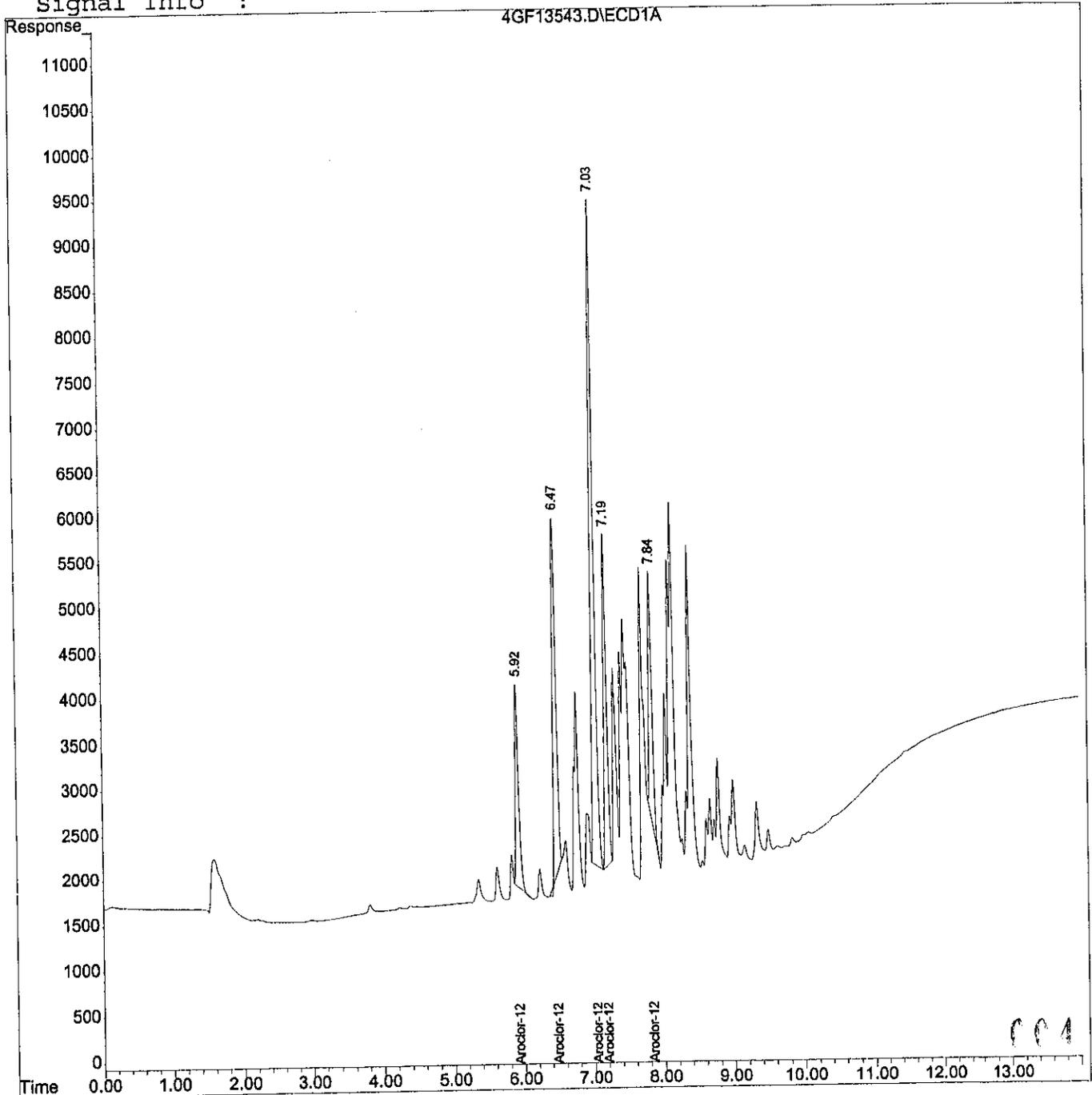
003

Acq On : 19 Mar 2002 16:00
Sample : 1242 ALT 0.5 PPM
Misc : SOS57-13
IntFile : events.e
Quant Time: Mar 19 17:09 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1242SF.RES
Quant Method : C:\HPCHEM\2\METHODS\1242SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:09:16 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002

Calibration Files

500 =4GF13544.D =
= =

	Compound	500	Avg	%RSD
1) S	2,4,5,6-Tetrachloro-M	6.727	6.727#E3	0.00
2) L1	Aroclor-1232-1	1.520	1.520#E2	0.00
3) L1	Aroclor-1232-2	1.307	1.307#E2	0.00
4) L1	Aroclor-1232-3	2.697	2.697#E2	0.00
5) L1	Aroclor-1232-4	1.146	1.146#E2	0.00
6) L1	Aroclor-1232-5	1.106	1.106#E2	0.00
7) S	Decachlorobiphenyl	7.898	7.898#E3	0.00

605

(#) = Out of Range
1232SF.M

Tue Mar 19 17:10:48 2002

Page 1

Acq On : 19 Mar 2002 16:19
Sample : 1232 0.5 PPM
Misc : SOS58-40
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Time: Mar 19 17:10 2002 Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	168180	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S Decachlorobiphenyl	11.47	197440	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 Aroclor-1232-1	5.92	75992	500.0000 UG/L
3) L1 Aroclor-1232-2	6.48	65368	500.0000 UG/L
4) L1 Aroclor-1232-3	7.04	134862	500.0000 UG/L
5) L1 Aroclor-1232-4	7.20	57277	500.0000 UG/L
6) L1 Aroclor-1232-5	7.72	55319	500.0000 UG/L
Sum Aroclor-1232-1		388818	2500.0000 UG/L
Average Aroclor-1232-1			500.000 UG/L

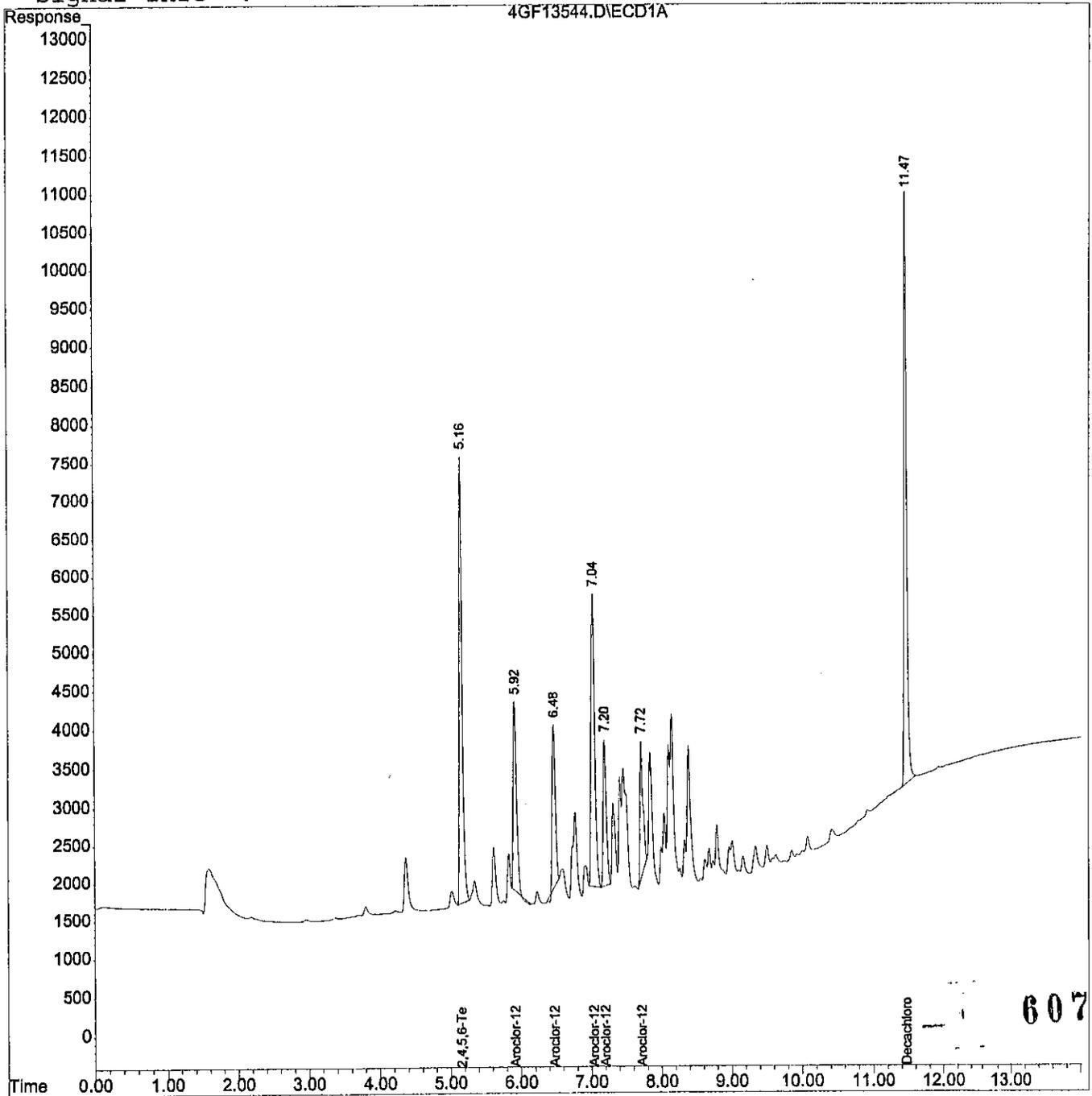
606

Acq On : 19 Mar 2002 16:19
Sample : 1232 0.5 PPM
Misc : SOS58-40
IntFile : events.e
Quant Time: Mar 19 17:10 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



607

Acq On : 19 Mar 2002 16:37
Sample : 1232 ALT 0.5 PPM
Misc : SOS58-41
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
2 L1 Aroclor-1232-1	500.000	618.848	-23.8#	124	0.00
3 L1 Aroclor-1232-2	500.000	516.700	-3.3	103	0.00
4 L1 Aroclor-1232-3	500.000	526.068	-5.2	105	0.00
5 L1 Aroclor-1232-4	500.000	527.076	-5.4	105	0.00
6 L1 Aroclor-1232-5	500.000	363.870	27.2#	73	0.00

608

(#) = Out of Range
4GF13545.D 1232SF.M

SPCC's out = 0 CCC's out = 0
Tue Mar 19 17:11:07 2002

Page 1

Acq On : 19 Mar 2002 16:37
Sample : 1232 ALT 0.5 PPM
Misc : SOS58-41
IntFile : events.e
Quant Time: Mar 19 17:10 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1232SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
7) S Decachlorobiphenyl	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
2) L1 Aroclor-1232-1	5.91	94055	618.8478 UG/L
3) L1 Aroclor-1232-2	6.47	67552	516.6996 UG/L
4) L1 Aroclor-1232-3	7.03	141893	526.0678 UG/L
5) L1 Aroclor-1232-4	7.19	60378	527.0758 UG/L
6) L1 Aroclor-1232-5	7.71	40258	363.8702 UG/L
Sum Aroclor-1232-1		404136 2552.5612	UG/L
Average Aroclor-1232-1			510.512 UG/L

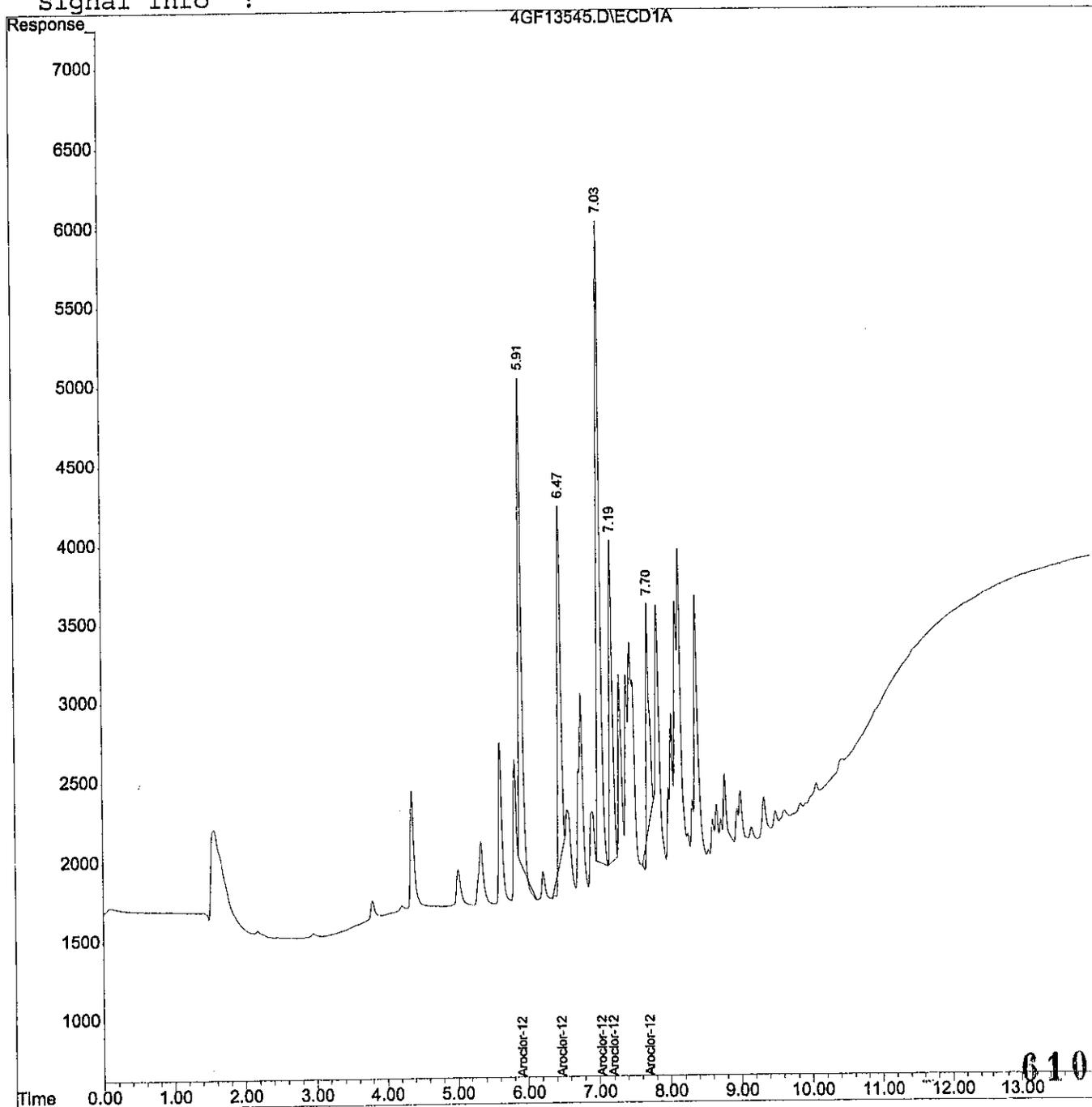
609

Acq On : 19 Mar 2002 16:37
Sample : 1232 ALT 0.5 PPM
Misc : SOS58-41
IntFile : events.e
Quant Time: Mar 19 17:10 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1232SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Mar 19 17:10:36 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Mar 20 08:12:48 2002

Calibration Files

500 =4GF13546.D =
= =

	Compound	500	Avg	%RSD
1) S	2,4,5,6-Tetrachloro-M	6.724	6.724#E3	0.00
2) L1	Aroclor-1221-1	9.923	9.923#E1	0.00
3) L1	Aroclor-1221-2	3.523	3.523#E1	0.00
4) L1	Aroclor-1221-3	9.277	9.277#E1	0.00
5) L1	Aroclor-1221-4	4.693	4.693#E1	0.00
6) L1	Aroclor-1221-5	2.196	2.196#E2	0.00
7) S	Decachlorobiphenyl	7.480	7.480#E3	0.00

(#) = Out of Range
1221SF.M

Wed Mar 20 08:13:03 2002

611

Page 1

Acq On : 19 Mar 2002 16:56
Sample : 1221 0.5 PPM
Misc : SOS58-22
IntFile : events.e
Quant Time: Mar 20 8:12 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Mar 20 08:12:48 2002
Response via : Initial Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.16	168102	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
7) S Decachlorobiphenyl	11.46	186994	25.0000 UG/L
Spiked Amount 20.000		Recovery =	125.00%
Target Compounds			
2) L1 Aroclor-1221-1	4.37	49614	500.0000 UG/L
3) L1 Aroclor-1221-2	5.35	17615	500.0000 UG/L
4) L1 Aroclor-1221-3	5.63	46387	500.0000 UG/L
5) L1 Aroclor-1221-4	5.84	23467	500.0000 UG/L
6) L1 Aroclor-1221-5	5.92	109822	500.0000 UG/L
Sum Aroclor-1221-1		246905	2500.0000 UG/L
Average Aroclor-1221-1			500.000 UG/L

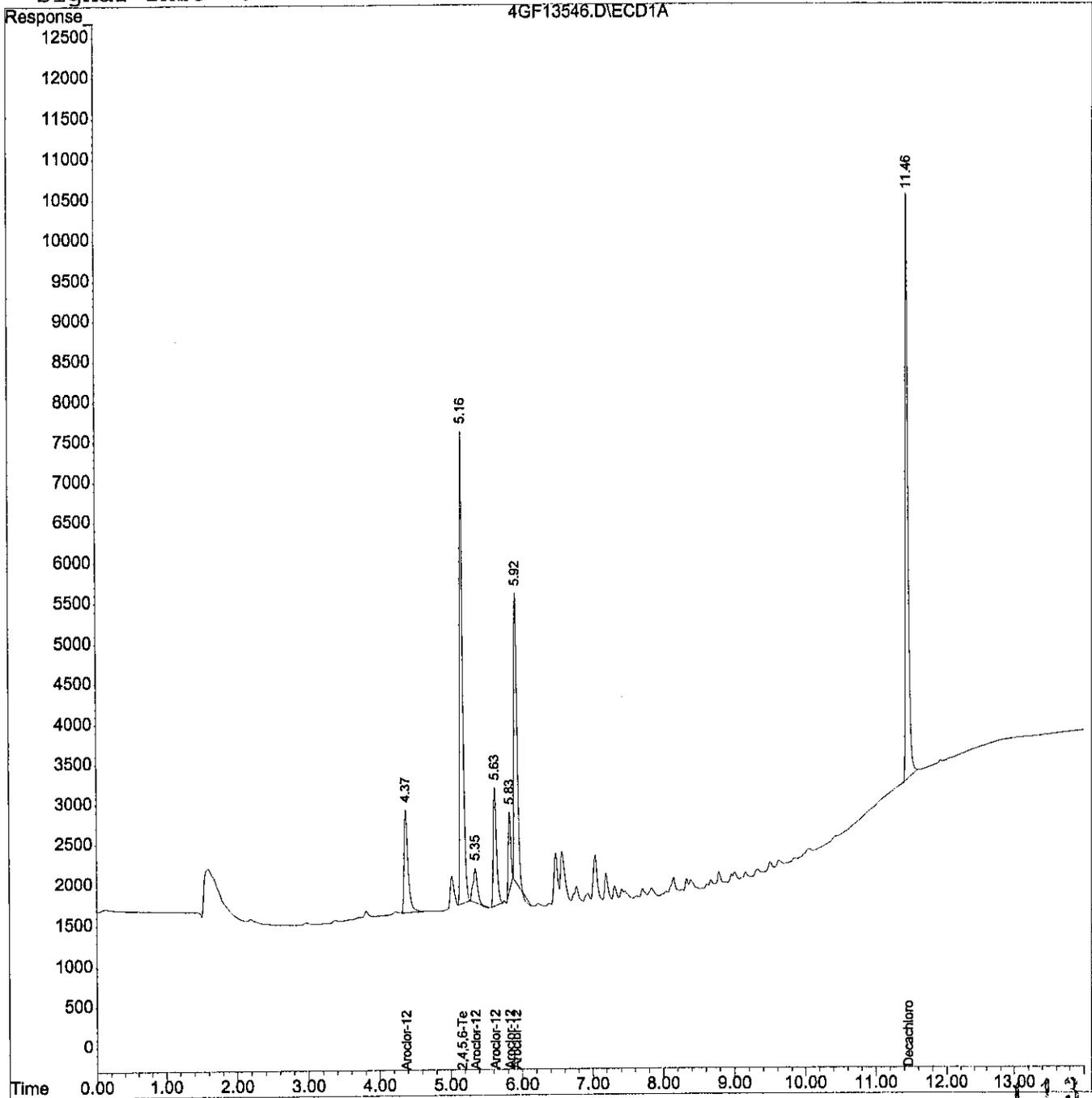
612

Acq On : 19 Mar 2002 16:56
Sample : 1221 0.5 PPM
Misc : SOS58-22
IntFile : events.e
Quant Time: Mar 20 8:12 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1221SF.RES
Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Mar 20 08:12:48 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 19 Mar 2002 17:14
Sample : 1221 ALT 0.5 PPM
Misc : SOS56-01
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Mar 20 08:12:48 2002
Response via : Single Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev (min)
2 L1 Aroclor-1221-1	500.000	490.631	1.9	98	0.00
3 L1 Aroclor-1221-2	500.000	671.220	-34.2#	134	-0.01
4 L1 Aroclor-1221-3	500.000	528.821	-5.8	106	-0.01
5 L1 Aroclor-1221-4	500.000	513.443	-2.7	103	-0.01
6 L1 Aroclor-1221-5	500.000	498.926	0.2	100	-0.01

(#) = Out of Range
4GF13547.D 1221SF.M

SPCC's out = 0 CCC's out = 0
Wed Mar 20 08:13:23 2002

614

Page 1

Acq On : 19 Mar 2002 17:14
 Sample : 1221 ALT 0.5 PPM
 Misc : SOS56-01
 IntFile : events.e
 Quant Time: Mar 20 8:13 2002

Operator: ECL
 Inst : HP 4
 Multiplr: 1.00

Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Wed Mar 20 08:12:48 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
7) S Decachlorobiphenyl	0.00	0	N.D. UG/L
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
2) L1 Aroclor-1221-1	4.37	48684	490.6310 UG/L
3) L1 Aroclor-1221-2	5.34	23647	671.2198 UG/L
4) L1 Aroclor-1221-3	5.62	49060	528.8205 UG/L
5) L1 Aroclor-1221-4	5.82	24098	513.4434 UG/L
6) L1 Aroclor-1221-5	5.91	109586	498.9262 UG/L
Sum Aroclor-1221-1		255077	2703.0410 UG/L
Average Aroclor-1221-1			540.608 UG/L

615

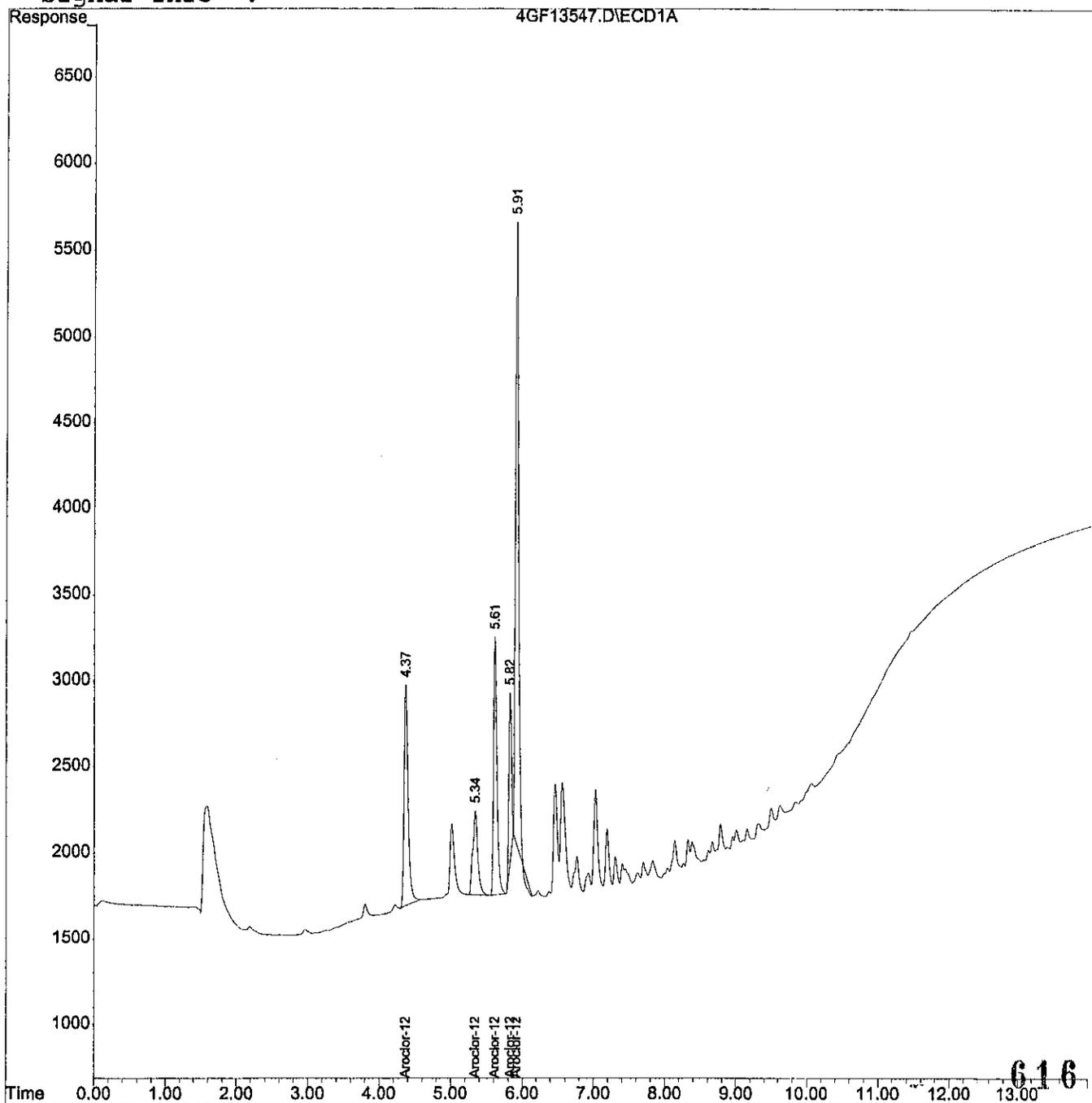
Acq On : 19 Mar 2002 17:14
Sample : 1221 ALT 0.5 PPM
Misc : SOS56-01
IntFile : events.e
Quant Time: Mar 20 8:13 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Results File: 1221SF.RES

Quant Method : C:\HPCHEM\2\METHODS\1221SF.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Mar 20 08:12:48 2002
Response via : Single Level Calibration
DataAcq Meth : 8082.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 11:32
 Sample : WG115506-01 1660 CCV 0.5 PPM
 Misc : 1,1 SOS57-19
 IntFile : events.e

Operator: ECL
 Inst : HP 4
 Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Apr 02 12:15:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	25.000	24.189	3.2	96	0.00
2 L1	Aroclor-1016-1	500.000	477.087	4.6	96	0.00
3 L1	Aroclor-1016-2	500.000	446.278	10.7	92	-0.01
4 L1	Aroclor-1016-3	500.000	461.031	7.8	95	-0.01
5 L1	Aroclor-1016-4	500.000	458.583	8.3	93	-0.01
6 L1	Aroclor-1016-5	500.000	458.491	8.3	90	-0.01
7 L2	Aroclor-1260-1	500.000	458.239	8.4	94	-0.01
8 L2	Aroclor-1260-2	500.000	457.307	8.5	95	-0.01
9 L2	Aroclor-1260-3	500.000	448.353	10.3	90	-0.01
10 L2	Aroclor-1260-4	500.000	458.536	8.3	96	-0.01
11 L2	Aroclor-1260-5	500.000	473.251	5.3	93	-0.01
12 S	Decachlorobiphenyl	25.000	23.255	7.0	92	0.00

617

(#) = Out of Range
 4GF13830.D 1660F.M

SPCC's out = 0 CCC's out = 0
 Tue Apr 02 12:16:07 2002

Page 1

Acq On : 2 Apr 2002 11:32 Operator: ECL
 Sample : WG115506-01 1660 CCV 0.5 PPM Inst : HP 4
 Misc : 1,1 SOS57-19 Multiplr: 1.00
 IntFile : events.e
 Quant Time: Apr 2 12:15 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Tue Apr 02 12:15:51 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082F.M

Volume Inj. :
 Signal Phase :
 Signal Info :

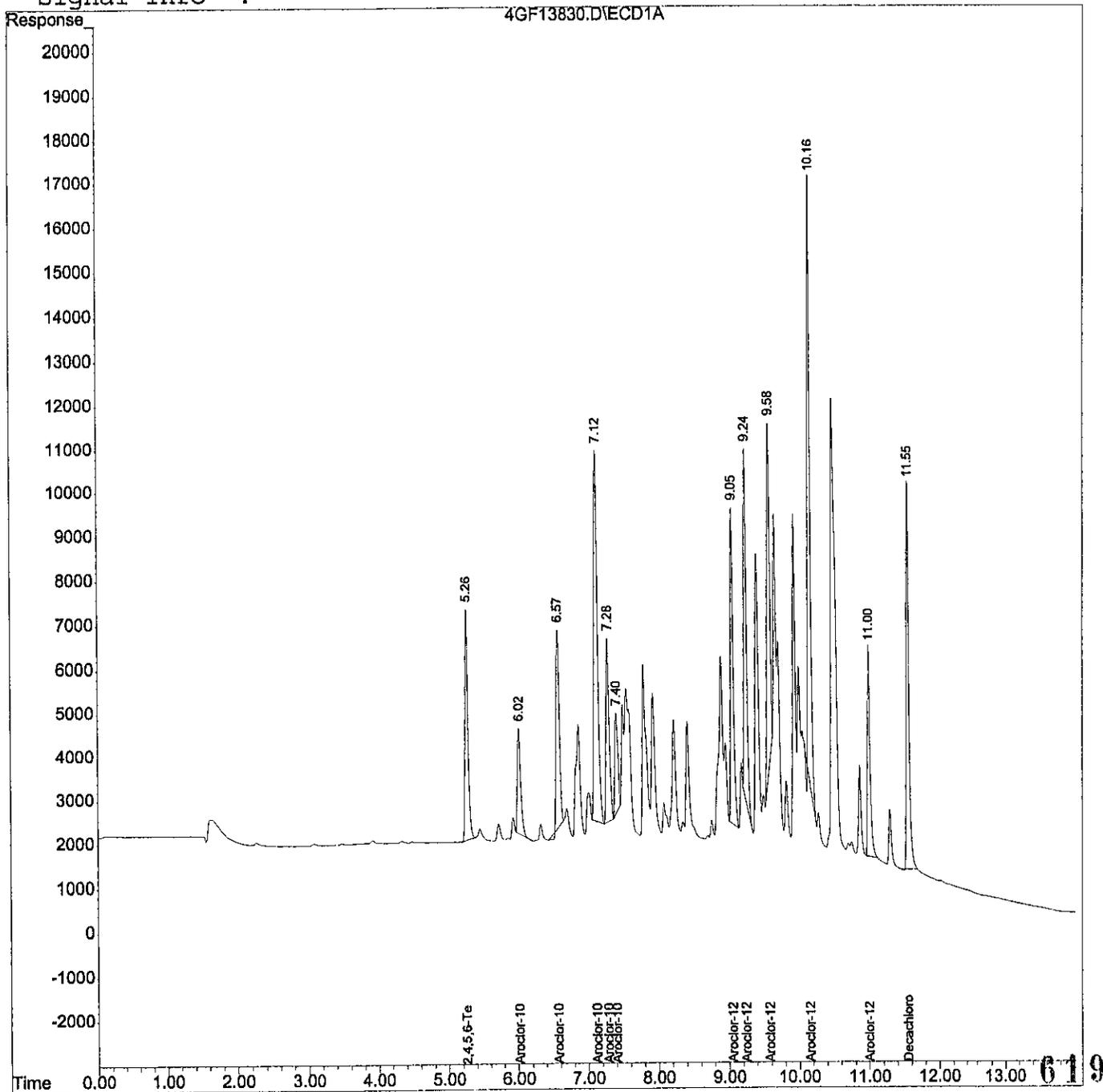
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.26	167355	24.1890 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	120.94%
12) S Decachlorobiphenyl	11.56	241375	23.2552 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	116.28%
Target Compounds			
2) L1 Aroclor-1016-1	6.02	79648	477.0868 UG/L
3) L1 Aroclor-1016-2	6.57	148329	446.2781 UG/L
4) L1 Aroclor-1016-3	7.13	305314	461.0307 UG/L
5) L1 Aroclor-1016-4	7.29	128101	458.5827 UG/L
6) L1 Aroclor-1016-5	7.41	70726	458.4912 UG/L
Sum Aroclor-1016-1		732117	2301.4695 UG/L
Average Aroclor-1016-1			460.294 UG/L
7) L2 Aroclor-1260-1	9.06	198663	458.2390 UG/L
8) L2 Aroclor-1260-2	9.25	212876	457.3066 UG/L
9) L2 Aroclor-1260-3	9.58	217097	448.3532 UG/L
10) L2 Aroclor-1260-4	10.16	351904	458.5360 UG/L
11) L2 Aroclor-1260-5	11.00	132928	473.2511 UG/L
Sum Aroclor-1260-1		1113467	2295.6860 UG/L
Average Aroclor-1260-1			459.137 UG/L

Acq On : 2 Apr 2002 11:32
Sample : WG115506-01 1660 CCV 0.5 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Apr 2 12:15 2002 Quant Results File: 1660F.RES

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Tue Apr 02 12:15:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 14:44
Sample : WG115506-02 1660 CCV 0.25 PPM
Misc : 1,1 SOS57-19
IntFile : events.e

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:23:43 2002
Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 S	2,4,5,6-Tetrachloro-M-Xylen	12.500	13.418	-7.3	108	0.00
2 L1	Aroclor-1016-1	250.000	286.883	-14.8	108	0.00
3 L1	Aroclor-1016-2	250.000	284.353	-13.7	107	0.00
4 L1	Aroclor-1016-3	250.000	273.801	-9.5	107	0.00
5 L1	Aroclor-1016-4	250.000	274.730	-9.9	105	0.00
6 L1	Aroclor-1016-5	250.000	266.537	-6.6	105	0.00
7 L2	Aroclor-1260-1	250.000	273.687	-9.5	105	0.00
8 L2	Aroclor-1260-2	250.000	271.183	-8.5	104	0.00
9 L2	Aroclor-1260-3	250.000	266.093	-6.4	104	0.00
10 L2	Aroclor-1260-4	250.000	245.869	1.7	99	0.00
11 L2	Aroclor-1260-5	250.000	202.162	19.1#	79	0.00
12 S	Decachlorobiphenyl	12.500	12.136	2.9	93	0.01

620

(#) = Out of Range
4GF13839.D 1660F.M

SPCC's out = 0 CCC's out = 0
Wed Apr 03 08:24:21 2002

Page 1

Acq On : 2 Apr 2002 14:44 Operator: ECL
 Sample : WG115506-02 1660 CCV 0.25 PPM Inst : HP 4
 Misc : 1,1 SOS57-19 Multiplr: 1.00
 IntFile : events.e
 Quant Time: Apr 3 8:24 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Wed Apr 03 08:23:43 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082F.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.26	92836	13.4182 UG/L
Spiked Amount 20.000	Range 30 - 132	Recovery =	67.09%
12) S Decachlorobiphenyl	11.56	125969	12.1365 UG/L
Spiked Amount 20.000	Range 36 - 144	Recovery =	60.68%
Target Compounds			
2) L1 Aroclor-1016-1	6.01	47894	286.8825 UG/L
3) L1 Aroclor-1016-2	6.56	94510	284.3529 UG/L
4) L1 Aroclor-1016-3	7.12	181322	273.8006 UG/L
5) L1 Aroclor-1016-4	7.28	76743	274.7303 UG/L
6) L1 Aroclor-1016-5	7.40	41116	266.5367 UG/L
Sum Aroclor-1016-1		441585	1386.3029 UG/L
Average Aroclor-1016-1			277.261 UG/L
7) L2 Aroclor-1260-1	9.06	118653	273.6867 UG/L
8) L2 Aroclor-1260-2	9.25	126236	271.1827 UG/L
9) L2 Aroclor-1260-3	9.58	128845	266.0933 UG/L
10) L2 Aroclor-1260-4	10.16	188693	245.8695 UG/L
11) L2 Aroclor-1260-5	11.01	56784	202.1617 UG/L
Sum Aroclor-1260-1		619210	1258.9938 UG/L
Average Aroclor-1260-1			251.799 UG/L

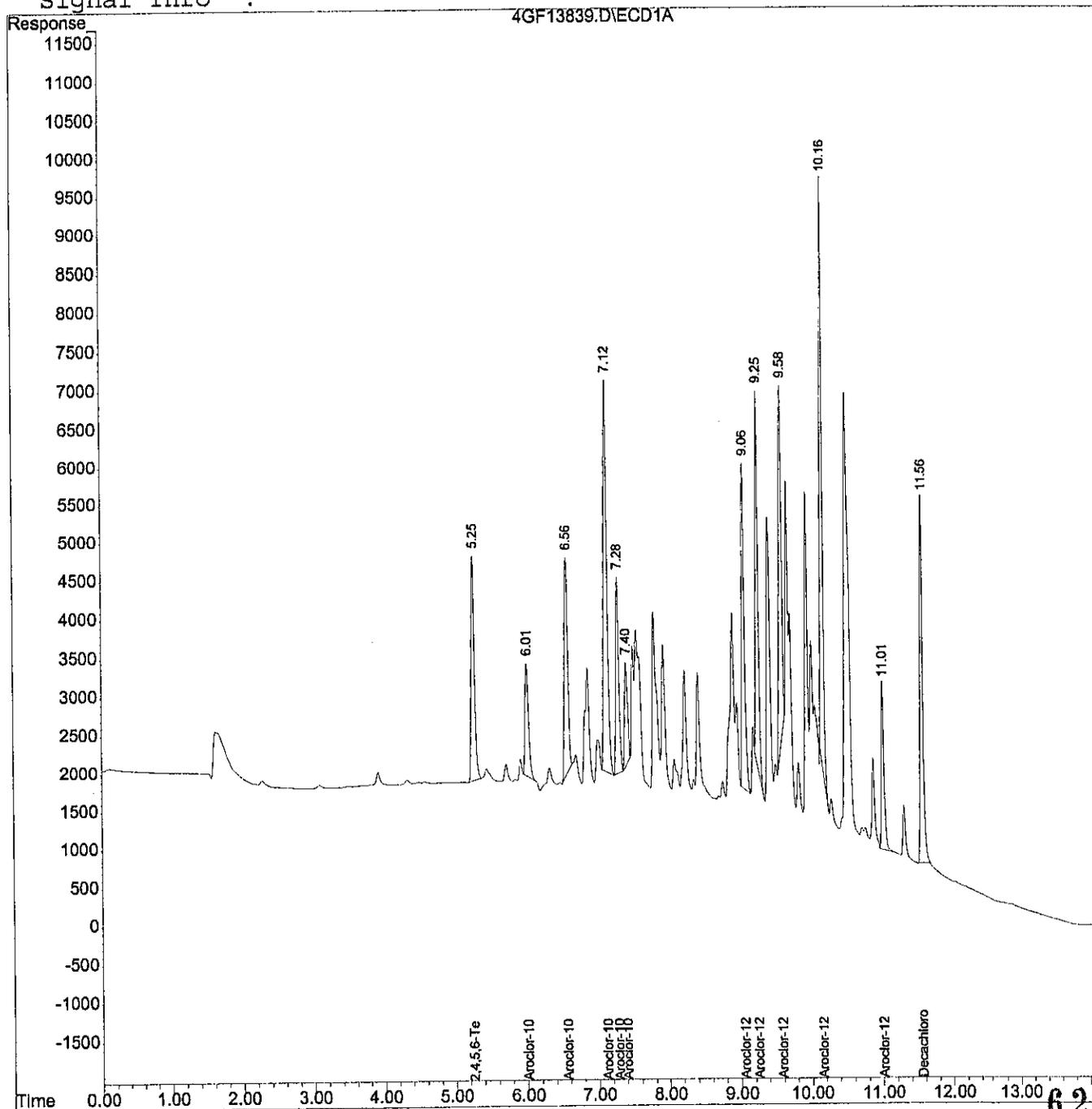
621

Acq On : 2 Apr 2002 14:44
Sample : WG115506-02 1660 CCV 0.25 PPM
Misc : 1,1 SOS57-19
IntFile : events.e
Quant Time: Apr 3 8:24 2002 Quant Results File: 1660F.RES

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:23:43 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP-4

GC Column: RTx-CLP II

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	01/30/02	02/06/02	02/08/02
File #	4GF12629	4GF12653	4GF12679

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
AR 1016 #1	5.94	6.02	6.02	0.139
AR 1016 #2	6.49	6.57	6.57	0.139
AR 1016 #3	7.05	7.13	7.13	0.139
AR 1016 #4	7.21	7.29	7.29	0.139
AR 1016 #5	7.33	7.41	7.41	0.139
AR 1260 #1	8.98	9.06	9.06	0.139
AR 1260 #2	9.17	9.25	9.25	0.139
AR 1260 #3	9.51	9.59	9.58	0.131
AR 1260 #4	10.08	10.16	10.16	0.139
AR 1260 #5	10.93	11.01	10.99	0.125

2.2.3.4 Raw QC Data

Acq On : 2 Apr 2002 13:33
 Sample : WG115411-01 BLANK V182 P155
 Misc : 7,1 SOIL
 IntFile : events.e
 Quant Time: Apr 3 8:29 2002 Quant Results File: 1660F.RES

Operator: ECL
 Inst : HP 4
 Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Wed Apr 03 08:27:35 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082F.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.27	118621	17.1451 UG/L
Spiked Amount	20.000	Range 29 - 133	Recovery = 85.73%
12) S Decachlorobiphenyl	11.56	180070	17.3487 UG/L
Spiked Amount	20.000	Range 30 - 173	Recovery = 86.74%
Target Compounds			
2) L1 Aroclor-1016-1	0.00	0	N.D. UG/L
3) L1 Aroclor-1016-2	0.00	0	N.D. UG/L
4) L1 Aroclor-1016-3	0.00	0	N.D. UG/L
5) L1 Aroclor-1016-4	0.00	0	N.D. UG/L
6) L1 Aroclor-1016-5	0.00	0	N.D. UG/L
Sum Aroclor-1016-1		0	N.D. UG/L
Average Aroclor-1016-1			0.000 UG/L
7) L2 Aroclor-1260-1	0.00	0	N.D. UG/L
8) L2 Aroclor-1260-2	0.00	0	N.D. UG/L
9) L2 Aroclor-1260-3	0.00	0	N.D. UG/L
10) L2 Aroclor-1260-4	0.00	0	N.D. UG/L
11) L2 Aroclor-1260-5	0.00	0	N.D. UG/L
Sum Aroclor-1260-1		0	N.D. UG/L
Average Aroclor-1260-1			0.000 UG/L

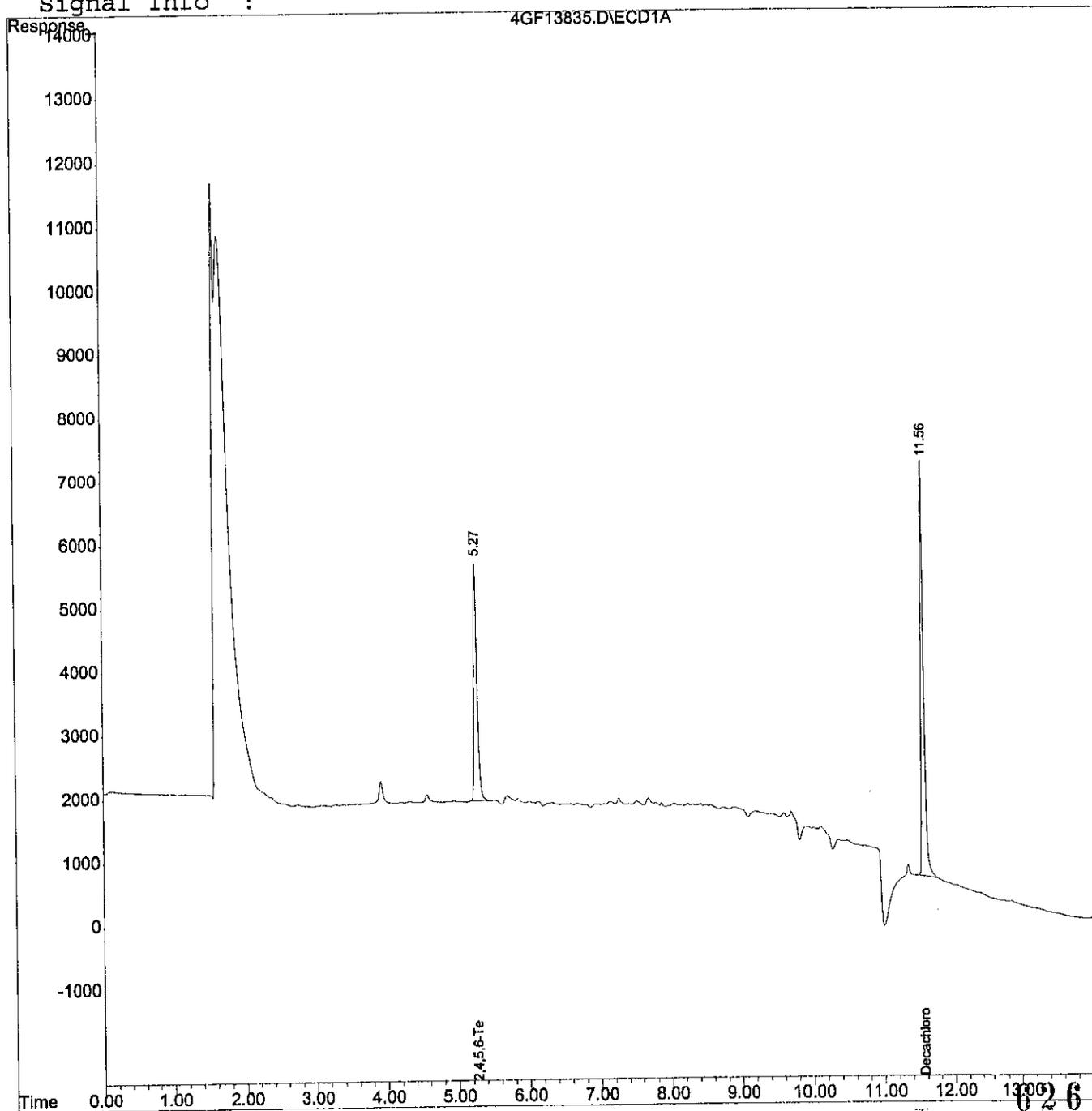
625

Acq On : 2 Apr 2002 13:33
Sample : WG115411-01 BLANK V182 P155
Misc : 7,1 SOIL
IntFile : events.e
Quant Time: Apr 3 8:29 2002 Quant Results File: 1660F.RES

Operator: ECH
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:27:35 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 13:51
 Sample : WG115411-02 LCS V182 P155
 Misc : 7,1 SOIL
 IntFile : events.e
 Quant Time: Apr 3 8:36 2002 Quant Results File: 1660F.RES

Operator: ECL
 Inst : HP 4
 Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Wed Apr 03 08:29:48 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082F.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.27	152679	22.0678 UG/L
Spiked Amount 20.000	Range 29 - 133	Recovery =	110.34%
12) S Decachlorobiphenyl	11.56	232306	22.3814 UG/L
Spiked Amount 20.000	Range 30 - 173	Recovery =	111.91%
Target Compounds			
2) L1 Aroclor-1016-1	6.02	51443	308.1444 UG/L
3) L1 Aroclor-1016-2	6.57	95422	287.0972 UG/L
4) L1 Aroclor-1016-3	7.13	190044	286.9702 UG/L
5) L1 Aroclor-1016-4	7.29	82152	294.0915 UG/L
6) L1 Aroclor-1016-5	7.41	43744	283.5731 UG/L
Sum Aroclor-1016-1		462805	1459.8764 UG/L
Average Aroclor-1016-1			291.975 UG/L
7) L2 Aroclor-1260-1	9.06	116798	269.4093 UG/L
8) L2 Aroclor-1260-2	9.25	134867	289.7254 UG/L
9) L2 Aroclor-1260-3	9.59	139682	288.4739 UG/L
10) L2 Aroclor-1260-4	10.16	226256	294.8154 UG/L
11) L2 Aroclor-1260-5	0.00	0	N.D. UG/L d
Sum Aroclor-1260-1		617603	1142.4239 UG/L
Average Aroclor-1260-1			285.606 UG/L

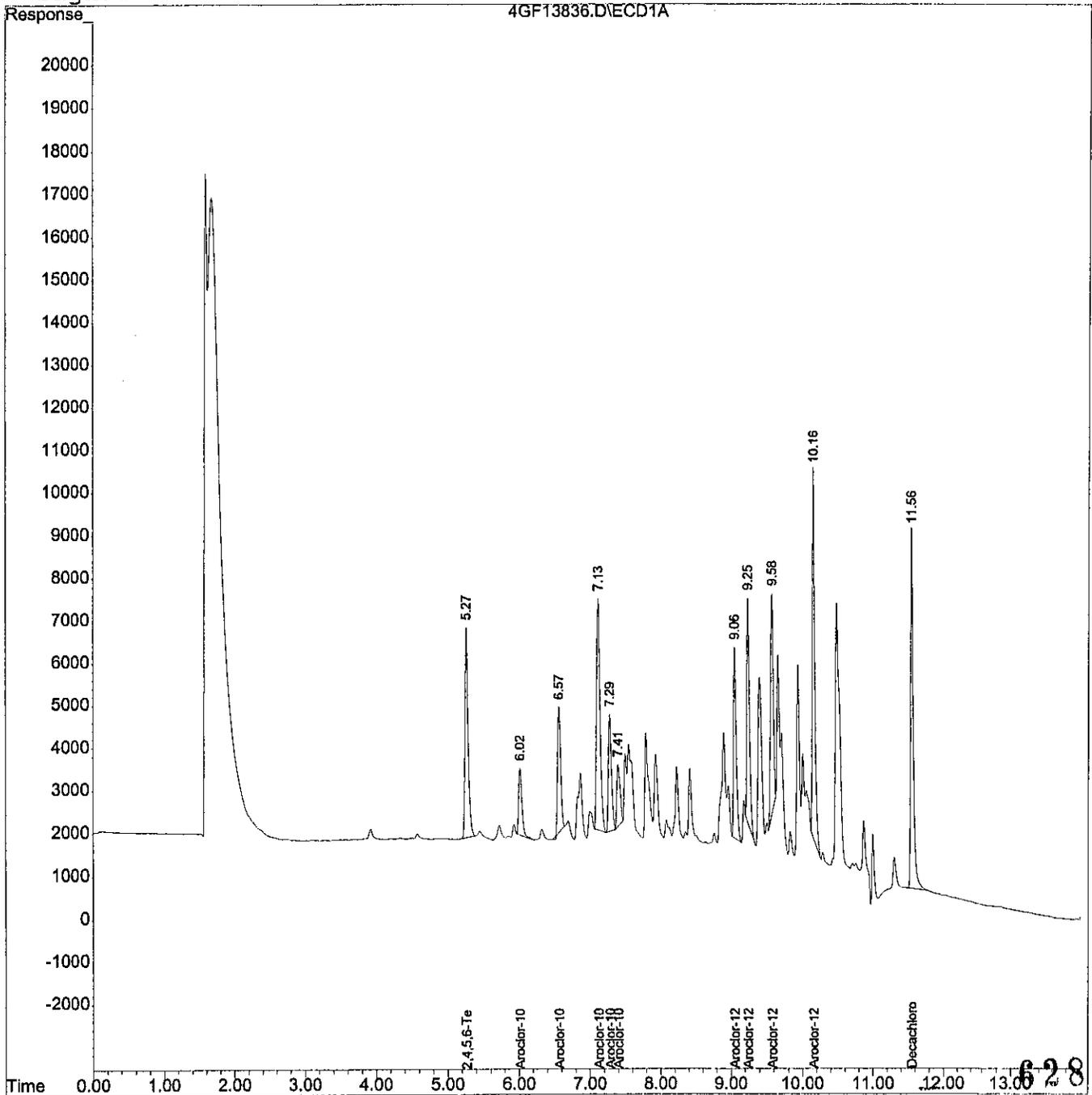
627

Acq On : 2 Apr 2002 13:51
Sample : WG115411-02 LCS V182 P155
Misc : 7,1 SOIL
IntFile : events.e
Quant Time: Apr 3 8:36 2002

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:29:48 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 14:09 Operator: ECL
 Sample : WG115411-03 LCS DUP V182 P155 Inst : HP 4
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e
 Quant Time: Apr 3 8:30 2002 Quant Results File: 1660F.RES

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
 Title : CALIBRATION March 19, 2002
 Last Update : Wed Apr 03 08:29:48 2002
 Response via : Initial Calibration
 DataAcq Meth : 8082F.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 2,4,5,6-Tetrachloro-M-Xyle	5.26	131365	18.9871 UG/L
Spiked Amount 20.000	Range 29 - 133	Recovery =	94.94%
12) S Decachlorobiphenyl	11.56	212411	20.4647 UG/L
Spiked Amount 20.000	Range 30 - 173	Recovery =	102.32%
Target Compounds			
2) L1 Aroclor-1016-1	6.01	46728	279.9000 UG/L
3) L1 Aroclor-1016-2	6.56	86049	258.8979 UG/L
4) L1 Aroclor-1016-3	7.12	176078	265.8819 UG/L
5) L1 Aroclor-1016-4	7.28	75912	271.7543 UG/L
6) L1 Aroclor-1016-5	7.40	39926	258.8218 UG/L
Sum Aroclor-1016-1		424693	1335.2558 UG/L
Average Aroclor-1016-1			267.051 UG/L
7) L2 Aroclor-1260-1	9.05	109499	252.5718 UG/L
8) L2 Aroclor-1260-2	9.24	125906	270.4741 UG/L
9) L2 Aroclor-1260-3	9.58	129158	266.7409 UG/L
10) L2 Aroclor-1260-4	10.16	192475	250.7982 UG/L
11) L2 Aroclor-1260-5	0.00	0	N.D. UG/L d
Sum Aroclor-1260-1		557038	1040.5851 UG/L
Average Aroclor-1260-1			260.146 UG/L

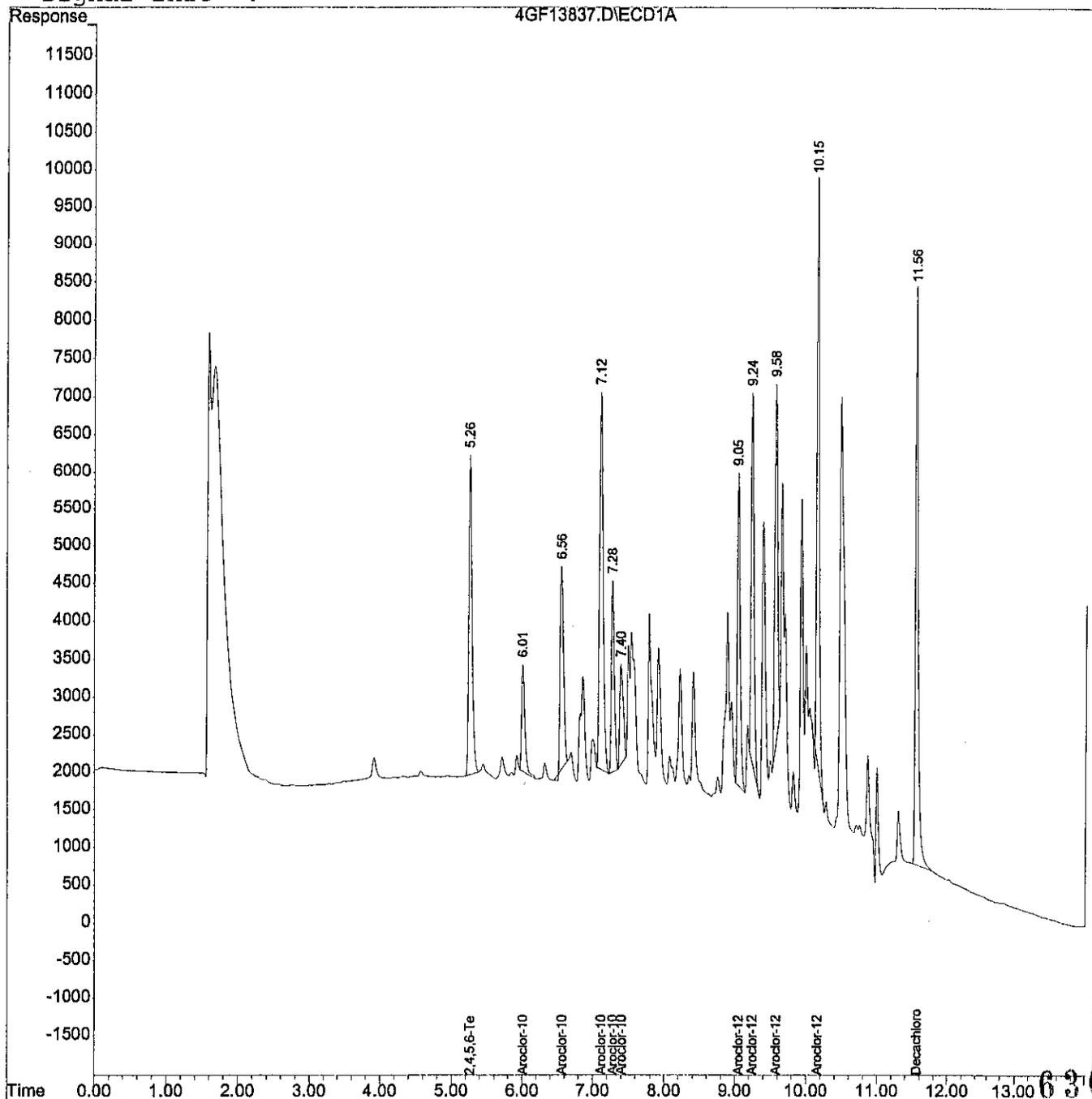
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Acq On : 2 Apr 2002 14:09
Sample : WG115411-03 LCS DUP V182 P155
Misc : 7,1 SOIL
IntFile : events.e
Quant Time: Apr 3 8:30 2002 Quant Results File: 1660F.RES

Operator: ECL
Inst : HP 4
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\1660F.M (Chemstation Integrator)
Title : CALIBRATION March 19, 2002
Last Update : Wed Apr 03 08:29:48 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8082F.M

Volume Inj. :
Signal Phase :
Signal Info :



Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4GF13526.D	1.	✓ WG114783-01 1660 ICAL 2.0 PPM	1,1 SOS57-19	19 Mar 2002 10:44
2	2	4GF13527.D	1.	WG114783-02 1660 ICAL 1.0 PPM	1,1 SOS57-19	19 Mar 2002 11:02
3	3	4GF13528.D	1.	WG114783-03 1660 ICAL 0.5 PPM	1,1 SOS57-19	19 Mar 2002 11:21
4	4	4GF13529.D	1.	WG114783-04 1660 ICAL 0.25 PPM	1,1 SOS57-19	19 Mar 2002 11:39
5	5	4GF13530.D	1.	WG114783-05 1660 ICAL 0.1 PPM	1,1 SOS57-19	19 Mar 2002 11:58
6	6	4GF13531.D	1.	WG114783-06 1660 ICAL 0.05 PPM	1,1 SOS57-19	19 Mar 2002 12:17
7	7	4GF13532.D	1.	WG114783-07 1660 ALT ICV 0.5 PPM		
					1,1 SOS57-33	19 Mar 2002 12:35
8	8	4GF13533.D	1.	✓ 1254 ICAL 2.0 PPM	SOS58-23	19 Mar 2002 12:54
9	9	4GF13534.D	1.	1254 ICAL 1.0 PPM	SOS58-23	19 Mar 2002 13:13
10	10	4GF13535.D	1.	1254 ICAL 0.5 PPM	SOS58-23	19 Mar 2002 13:31
11	11	4GF13536.D	1.	1254 ICAL 0.25 PPM	SOS58-23	19 Mar 2002 13:50
12	12	4GF13537.D	1.	1254 ICAL 0.1 PPM	SOS58-23	19 Mar 2002 14:08
13	13	4GF13538.D	1.	1254 ICAL 0.05 PPM	SOS58-23	19 Mar 2002 14:27
14	14	4GF13539.D	1.	✓ 1254 ALT ICV 0.5 PPM	SOS57-12	19 Mar 2002 14:46
15	15	4GF13540.D	1.	✓ 1248 0.5 PPM	SOS55-50	19 Mar 2002 15:04
16	16	4GF13541.D	1.	1248 ALT 0.5 PPM	SOS58-21	19 Mar 2002 15:23
17	17	4GF13542.D	1.	1242 0.5 PPM	SOS55-49	19 Mar 2002 15:42
18	18	4GF13543.D	1.	1242 ALT 0.5 PPM	SOS57-13	19 Mar 2002 16:00
19	19	4GF13544.D	1.	1232 0.5 PPM	SOS58-40	19 Mar 2002 16:19
20	20	4GF13545.D	1.	1232 ALT 0.5 PPM	SOS58-41	19 Mar 2002 16:37
21	21	4GF13546.D	1.	1221 0.5 PPM	SOS58-22	19 Mar 2002 16:56
22	22	4GF13547.D	1.	1221 ALT 0.5 PPM	SOS56-01	19 Mar 2002 17:14
23	23	4GF13548.D	1.	✓ WG114783-08 1660 CCV 0.5 PPM	1,1 SOS57-19	19 Mar 2002 17:33
24	24	4GF13549.D	1.	WG114635-01 BLANK V182 P09	7,1 SOIL	19 Mar 2002 17:51
25	25	4GF13550.D	1.	WG114635-02 LCS V182 P09	7,1 SOIL	19 Mar 2002 18:10
26	26	4GF13551.D	1.	WG114635-03 LCS DUP V182 P09	7,1 SOIL	19 Mar 2002 18:28
27	27	4GF13552.D	1.	L0203272-01 - CF	10,1 SOIL	19 Mar 2002 18:47
28	28	4GF13553.D	1.	L0203273-01 - CF	10,1 SOIL	19 Mar 2002 19:05
29	29	4GF13554.D	1.	L0203271-01 - CF	10,1 SOIL	19 Mar 2002 19:23
30	30	4GF13555.D	1.	L0202412-01 - CF	7,1 SOIL	19 Mar 2002 19:42
31	31	4GF13556.D	1.	L0202412-02 - CF	7,1 SOIL	19 Mar 2002 20:01
32	32	4GF13557.D	1.	L0202412-03 - CF	7,1 SOIL	19 Mar 2002 20:19
33	33	4GF13558.D	1.	✓ WG114783-09 1660 CCV 0.25 PPM - A		
					1,1 SOS57-19	19 Mar 2002 20:38
34	34	4GF13559.D	1.	✓ INSTRUMENT BLANK	SOS56-27	19 Mar 2002 20:56
35	35	4GF13560.D	1.	RR WG114616-01 BLANK V181 P197	7,1 SOIL	19 Mar 2002 21:14
36	36	4GF13561.D	1.	WG114616-02 LCS V181 P197	7,1 SOIL	19 Mar 2002 21:33
37	37	4GF13562.D	1.	WG114616-03 LCS DUP V181 P197	7,1 SOIL	19 Mar 2002 21:51
38	38	4GF13563.D	1.	RR100 L0203267-01 - CF	7,1 SOIL	19 Mar 2002 22:09
39	39	4GF13564.D	1.	RR100 L0203267-02	7,1 SOIL	19 Mar 2002 22:28
40	40	4GF13565.D	1.	RR200 L0203267-03	7,1 SOIL	19 Mar 2002 22:46
41	41	4GF13566.D	1.	RR100 L0203267-04	7,1 SOIL	19 Mar 2002 23:05
42	42	4GF13567.D	1.	RR20 L0203267-05	7,1 SOIL	19 Mar 2002 23:23
43	43	4GF13568.D	1.	RR20 L0203267-06	7,1 SOIL	19 Mar 2002 23:41
44	44	4GF13569.D	1.	RR100 L0203267-07	7,1 SOIL	20 Mar 2002 00:00
45	45	4GF13570.D	1.	CC 1254 CCV 0.5 PPM	SOS58-23	20 Mar 2002 00:18
46	46	4GF13571.D	1.	CC 1660 CCV 0.5 PPM	SOS57-19	20 Mar 2002 00:36
47	47	4GF13572.D	1.	✓ INSTRUMENT BLANK	SOS56-27	20 Mar 2002 00:55
48	48	4GF13573.D	1.	RR WG114637-01 BLANK V182 P03	1,1 WATER	20 Mar 2002 01:13
49	49	4GF13574.D	1.	WG114637-02 LCS V182 P03	1,1 WATER	20 Mar 2002 01:31
50	50	4GF13575.D	1.	WG114637-03 LCS DUP V182 P03	1,1 WATER	20 Mar 2002 01:50
51	51	4GF13576.D	1.	RR L0203266-01 - CF	1,1 WATER	20 Mar 2002 02:08
52	52	4GF13577.D	20.	RR L0203240-18 20x - CF	7,20 SOIL	20 Mar 2002 02:26
53	53	4GF13578.D	10.	L0203242-07 10x	7,10 SOIL	20 Mar 2002 02:45
54	54	4GF13579.D	10.	L0203243-03 10x	7,10 SOIL	20 Mar 2002 03:03
55	55	4GF13580.D	20.	L0203243-07 20x	7,20 SOIL	20 Mar 2002 03:21
56	56	4GF13581.D	1.	✓ 1660 CCV 0.5 PPM	1,1 SOS57-19	20 Mar 2002 03:39
57	57	4GF13582.D	1.	✓ INSTRUMENT BLANK	SOS56-27	20 Mar 2002 03:58

EC2 3/20/02
 note 3/20/02

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	4GF13830.D	1.	✓ WG115506-01 1660 CCV 0.5 PPM	1,1 SOS57-19	2 Apr 2002 11:32
2	2	4GF13831.D	1.	WG115461-01 BLANK V182 P163	1,1 WATER	2 Apr 2002 12:23
3	3	4GF13832.D	1.	WG115461-02 LCS V182 P163	1,1 WATER	2 Apr 2002 12:40
4	4	4GF13833.D	1.	WG115461-03 LCS DUP V182 P163	1,1 WATER	2 Apr 2002 12:58
5	5	4GF13834.D	1.	L0203540-01	1,1 WATER	2 Apr 2002 13:16
6	6	4GF13835.D	1.	WG115411-01 BLANK V182 P155	7,1 SOIL	2 Apr 2002 13:33
7	7	4GF13836.D	1.	WG115411-02 LCS V182 P155	7,1 SOIL	2 Apr 2002 13:51
8	8	4GF13837.D	1.	WG115411-03 LCS DUP V182 P155	7,1 SOIL	2 Apr 2002 14:09
9	9	4GF13838.D	1.	↙ L0204001-01	7,1 SOIL	2 Apr 2002 14:26
10	10	4GF13839.D	1.	✓ WG115506-02 1660 CCV 0.25 PPM -A	1,1 SOS57-19	2 Apr 2002 14:44

EC2 4/3/02
 → 4/3/02

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Extraction Analyst(s): CAF TV/KD Analyst(s): CAF DP
 Date/Time Extracted: 04-01-02 @ 12:01 Date TV/KD: 04-01-02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-49 Earliest Hold Date: 4/12/02
 Spike #: A = ESS0039-46 Spike #: B =

Extraction Work Group WG 115489
 Analytical Work Group WG 115489
 Extract Relinquished By: DP
 Extract Received By & Date: EC 4/1/02

Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
		<2	N	>12						A	BN	N	
1	Blank				30.00 g	200 uL		10 mL	T				WG 115411-01
2	LCS				.07g	I	100 uL	I	I				WG -02
3	LCS DUP				.08g	I	I	I	I				WG -03
4	04-001-01	8081			.05g	I		I	I				
5													
6													
7													
8													
9													
10													
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22													
23													
24													

DP
04/01/02

Methylene Chloride Lot #:
 Hexane Lot #: 41304
 Ether Lot #:
 Methanol Lot #:
 Solvent: Lot #:
 Reagent: 94:6 Lot #: ER 2124
 Reagent: Lot #:
 Reagent: Lot #:
 Acid: C₂H₂SO₄ Lot #: V34030
 Florisil Lot #: V28572
 Silica Gel Lot #:
 IR Analyst / Date / Time:
 Dried Na₂SO₄ Lot #: ER 2085

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	<input checked="" type="checkbox"/>			
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B	<input checked="" type="checkbox"/>	GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A	<input checked="" type="checkbox"/>	N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

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General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

Supervisor Review: _____ Date: _____ **636**

Example 8082 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = A_s / C_s$$

Where:

A_s = Area of the compound being measured in the standard
 C_s = Concentration of the compound being measured (ng/ml).

Example:

	10000
	100
RF	100

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(V_i)]$$

Example:

Where:

A_x = Area of the compound being measured
 V_f = Final volume of sample extract (mL). (prep log)
 D = Dilution factor for sample as a multiplier (10X = 10).
 RF = Response factor from ICAL calculated above.
 V_i = Initial volume of sample (mL). (prep log)

10000
1
1
100
1000

C (ug/L) = 0.1

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(W_i)]$$

Example:

Where: A_x = Area of the compound being measured
 V_f = Final volume of sample extract (mL).
 D = Dilution factor for sample as a multiplier (10X = 10).
 RF = Response factor from ICAL calculated above.
 W_i = Initial weight of sample (g).

10000
1
1
100
30

C (ug/kg) 3.333333

2.2.4 Herbicide GC Data (8151)

REPORT NARRATIVE
GC HERBICIDES

KEMRON Report No.:L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8151

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: There were no MS/MSD results associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

REVIEWED: _____

DATE: 4/9/02

Rev. 7/14/00

Herbicides – GC DATA (8151)

Login Number 04-001

A. QC Summary

- Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Holding Time Summary
- Surrogate Recovery Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Instrument Run Log
- Extraction Bench Sheet

B. Sample Data

- Target compound and surrogate results summary (See Summary Report)
- Chromatograms and quantitation report

C. Standards Data

- Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- Retention Time Window Summary

D. Raw QC Data

- Method blank chromatogram and quantitation report
- LCS chromatogram and quantitation report
- MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: EC2 Date: 4/5/02

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2.2.4.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0204001 _____
Blank File ID: 1G4751.R _____
Date Analyzed: 04/03/02 _____
Time Analyzed: 11:57 _____
Analyst: ECL _____

Work Group: WG115556 _____
Blank Sample ID: WG115458-01 _____
Instrument ID: HP1 _____
Method: 8151A _____

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115458-02	1G4752.R	04/03/02 12:32	01
LCS2	WG115458-03	1G4753.R	04/03/02 13:07	01
027-EQBFS-01	L0204001-01	1G4755.R	04/03/02 14:18	01

044

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115458-01
 Instrument ID: HP1 Run Time: 11:57 Method: 8151A
 File ID: 1G4751.R Analyst: ECL Matrix: Solid
 Workgroup (AAB#): WG115556 Units: ug/kg
 Contract #: Cal ID: HP1-26-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
2,4,5-T	2.00	4.00	2.00	1.00	ND
Silvex	1.50	3.00	1.50	1.00	ND
2,4-D	20.0	40.0	20.0	1.00	ND
2,4-DB	20.0	40.0	20.0	1.00	ND
Dinoseb	9.99	20.0	9.99	1.00	ND
Dalapon	50.0	99.9	50.0	1.00	ND
Dicamba	2.00	4.00	2.00	1.00	ND
Dichloroprop	20.0	40.0	20.0	1.00	ND
MCPA	2000	4000	2000	1.00	ND
MCPP	2000	4000	2000	1.00	ND
Pentachlorophenol	2.00	4.00	2.00	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4-Dichlorophenylacetic acid	71.5	51 - 146	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115458-02
 Instrument ID: HP1 Run Time: 12:32 Method: 8151A
 File ID: 1G4752.R Analyst: ECL Matrix: Solid
 Workgroup (AAB#): WG115556 Units: ug/kg
 Contract #: _____ Cal ID: HP1-26-MAR-2002

Analytes	Expected	Found	% Rec	LCS Limits		Q
2,4,5-T	9.99	10.9	109	20	- 144	
Silvex	9.99	9.34	93.4	31	- 132	
2,4-D	99.9	93.8	93.8	32	- 132	
2,4-DB	99.9	117	117	29	- 134	
Dinoseb	50	46.9	93.8	15	- 100	
Dalapon	250	75.5	30.2	10	- 99	
Dicamba	9.99	11.8	118	33	- 146	
Dichloroprop	99.9	115	115	35	- 139	
MCEPA	9990	12600	126	19	- 147	
MCPP	9990	11400	114	10	- 219	
Pentachlorophenol	9.99	8.95	89.5	31	- 132	

Surrogates	% Recovery	Surrogate Limits		Qualifier
2,4-Dichlorophenylacetic acid	87.3	51	- 146	PASS

* Analyte outside control limits
 NS Analyte not spiked

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KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0204001 _____ Worknum: WG115556 _____ Method: 8151A _____
 Instrument ID: HP1 _____ Cal ID: _____ HP1 - 26-MAR-2002 _____ Matrix: Solid _____
 Analyst: ECL _____ Contract #: _____ Units: ug/kg _____
 Sample ID: WG115458-02 LCS File ID: 1G4752.R Run Date: 04/03/2002 12:32 _____
 Sample ID: WG115458-03 LCS2 File ID: 1G4753.R Run Date: 04/03/2002 13:07 _____

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
2,4,5-T	9.99	10.9	109	9.99	9.69	97.0	12	20 - 144	50	
Silvex	9.99	9.34	93.4	9.99	9.37	93.8	.385	31 - 132	50	
2,4-D	99.9	93.8	93.8	99.9	92.5	92.6	1.4	32 - 132	50	
2,4-DB	99.9	117	117	99.9	116	116	.294	29 - 134	50	
Dinoseb	50.0	46.9	93.8	49.9	44.2	88.5	5.85	15 - 100	50	
Dalapon	250	75.5	30.2	250	48.3	19.3	44.1	10 - 99	50	
Dicamba	9.99	11.8	118	9.99	11.5	115	3.01	33 - 146	50	
Dichloroprop	99.9	115	115	99.9	111	111	3.84	35 - 139	50	
MCPA	9990	12600	126	9990	12400	124	1.56	19 - 147	50	
MCPFP	9990	11400	114	9990	11300	113	1.13	10 - 219	50	
Pentachlorophenol	9.99	8.95	89.5	9.99	8.24	82.5	8.18	31 - 132	50	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4-Dichlorophenylacetic acid	87.3	85.6	51 - 146	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

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KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8151A

AAB#: WG115556

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	14	3.95	03-APR-02	40	1.21	
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	14	3.95	03-APR-02	40	1.23	

* EXT = MISSED EXTRACTION HOLD TIME
 *ANAL = MISSED ANALYTICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0204001 _____

Instrument Id: HP1 _____

Workgroup (AAB#): WG115556 _____

Method: 8151 _____

Matrix: SOLID _____

Sample Number	Dilution	Tag	1
L0204001-01	1.00	01	86.9
WG115458-01	1.00	01	71.5
WG115458-02	1.00	01	87.3
WG115458-03	1.00	01	85.6

Surrogates Surrogate Limits
1 - 2,4-Dichlorophenylaceti 51 - 146

Underline = Result out of surrogate limits

DL = surrogate diluted out

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002

Calibration Files

5 =1G4735.D 4 =1G4736.D 3 =1G4737.D
 2 =1G4738.D 1 =1G4739.D

Compound	5	4	3	2	1	Avg	%RSD
1) Dalapon	1.171	1.336	1.446	1.520	1.632	1.421#E3	12.42
2) S 2,4-Dichlorophenylace	6.302	7.374	8.236	8.720	9.671	8.061#E2	15.96
3) MCPA	2.166	2.561	2.856	3.068	3.534	2.837#E3	18.19
4) Dicamba	3.540	3.615	3.678	3.448	3.433	3.543#E3	2.98
5) MCPP	1.592	1.840	1.955	1.976	2.039	1.880#E3	9.39
6) Dichloroprop	0.744	0.865	0.935	0.996	1.113	0.930#E3	14.89
7) 2,4-D	0.899	1.050	1.126	1.221	1.386	1.136#E3	16.07
8) Pentachlorophenol	1.179	1.291	1.278	1.211	1.199	1.232#E4	4.04
9) Silvex	5.429	5.966	5.362	5.193	5.431	5.476#E3	5.30
10) 2,4,5-T	5.038	5.423	5.436	5.257	4.669	5.165#E3	6.20
11) Dinoseb	3.791	4.197	4.579	4.459	4.903	4.386#E3	9.53
12) 2,4-DB	4.708	5.213	5.484	4.933	4.623	4.992#E2	7.16

Signal #2 Calibration Files

5 =1G4735.D 4 =1G4736.D 3 =1G4737.D
 2 =1G4738.D 1 =1G4739.D

Compound	5	4	3	2	1	Avg	%RSD
1) Dalapon	1.317	1.458	1.571	1.683	1.885	1.583#E3	13.70
2) S 2,4-Dichlorophenylace	0.788	0.905	1.002	1.104	1.255	1.011#E3	17.80
3) MCPA	2.675	2.935	3.264	3.492	3.654	3.204#E3	12.50
4) Dicamba	4.570	5.117	5.255	5.442	5.644	5.205#E3	7.82
5) MCPP	1.996	2.237	2.356	2.456	2.443	2.298#E3	8.26
6) Dichloroprop	0.922	1.058	1.204	1.328	1.519	1.206#E3	19.22
7) 2,4-D	1.024	1.167	1.326	1.445	1.667	1.326#E3	18.73
8) Pentachlorophenol	1.831	2.022	2.178	2.080	2.322	2.087#E4	8.75
9) Silvex	8.228	8.909	9.328	9.069	8.605	8.828#E3	4.82
10) 2,4,5-T	6.717	7.501	7.922	7.982	7.822	7.589#E3	6.87
11) Dinoseb	4.739	5.381	6.039	6.535	7.205	5.980#E3	16.11
12) 2,4-DB	5.593	6.194	6.601	6.869	7.346	6.521#E2	10.22

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Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD1A.CH Vial: 7
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-07 HERB ALT ICV Inst : HP1
 Misc : 1,1 SOS58-09 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD2B.CH Vial: 7
 Acq On : 26 Mar 2002 18:09 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1169.153	6.5	92	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	483.236	3.4	95	-0.01
3	MCPA	50.000	49.057	1.9	97	0.00
4	Dicamba	50.000	51.573	-3.1	99	0.00
5	MCPP	50.000	48.106	3.8	93	0.00
6	Dichloroprop	500.000	523.238	-4.6	104	0.00
7	2,4-D	500.000	449.529	10.1	91	0.02
8	Pentachlorophenol	50.000	45.271	9.5	87	0.01
9	Silvex	50.000	50.689	-1.4	104	0.02
10	2,4,5-T	50.000	53.977	-8.0	103	0.02
11	Dinoseb	250.000	251.817	-0.7	96	0.01
12	2,4-DB	500.000	453.033	9.4	82	0.03

Signal #2

1	Dalapon	1250.000	1142.542	8.6	92	0.00
2 S	2,4-Dichlorophenylacetic	500.000	462.928	7.4	93	-0.01
3	MCPA	50.000	42.356	15.3#	83	0.00
4	Dicamba	50.000	48.749	2.5	97	0.00
5	MCPP	50.000	47.172	5.7	92	0.00
6	Dichloroprop	500.000	489.117	2.2	98	-0.01
7	2,4-D	500.000	594.874	-19.0#	119	-0.02
8	Pentachlorophenol	50.000	40.073	19.9#	77	0.00
9	Silvex	50.000	49.352	1.3	93	-0.01
10	2,4,5-T	50.000	51.053	-2.1	98	-0.02
11	Dinoseb	250.000	234.572	6.2	93	-0.01
12	2,4-DB	500.000	332.770	33.4#	66	-0.02

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(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD1A.CH Vial: 1
 Acq On : 3 Apr 2002 9:25 Operator: ECL
 Sample : WG115555-01 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD2B.CH Vial: 1
 Acq On : 3 Apr 2002 10:00 Operator: ECL
 Sample : WG115 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1272.240	-1.8	100	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	512.515	-2.5	100	0.00
3	MCPA	50.000	49.166	1.7	98	0.00
4	Dicamba	50.000	52.297	-4.6	101	0.00
5	MCPA	50.000	49.351	1.3	95	0.00
6	Dichloroprop	500.000	507.002	-1.4	101	0.00
7	2,4-D	500.000	492.960	1.4	100	0.00
8	Pentachlorophenol	50.000	53.113	-6.2	102	0.00
9	Silvex	50.000	48.278	3.4	99	0.00
10	2,4,5-T	50.000	53.158	-6.3	101	0.00
11	Dinoseb	250.000	262.019	-4.8	100	0.00
12	2,4-DB	500.000	539.300	-7.9	98	0.00

	Signal #2	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1212.338	3.0	98	0.02
2 S	2,4-Dichlorophenylacetic	500.000	480.691	3.9	97	0.00
3	MCPA	50.000	49.603	0.8	97	0.01
4	Dicamba	50.000	49.155	1.7	97	0.01
5	MCPA	50.000	51.616	-3.2	101	0.01
6	Dichloroprop	500.000	479.156	4.2	96	0.01
7	2,4-D	500.000	470.777	5.8	94	0.00
8	Pentachlorophenol	50.000	50.566	-1.1	97	0.01
9	Silvex	50.000	49.831	0.3	94	0.00
10	2,4,5-T	50.000	49.428	1.1	95	0.00
11	Dinoseb	250.000	239.915	4.0	95	0.01
12	2,4-DB	500.000	461.238	7.8	91	0.00

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(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Page 1

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD1A.CH Vial: 11
 Acq On : 3 Apr 2002 16:04 Operator: ECL
 Sample : WG115555-02 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD2B.CH Vial: 11
 Acq On : 3 Apr 2002 16:39 Operator: ECL
 Sample : WG115542-03 LCS DUP V182 P171 Inst : HP1
 Misc : 17,1 WATER Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1280.516	-2.4	101	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	499.712	0.1	98	0.00
3	MCPA	50.000	49.435	1.1	98	0.00
4	Dicamba	50.000	49.667	0.7	96	0.00
5	MCPA	50.000	51.144	-2.3	98	0.00
6	Dichloroprop	500.000	494.999	1.0	99	0.00
7	2,4-D	500.000	500.676	-0.1	101	0.00
8	Pentachlorophenol	50.000	52.373	-4.7	101	0.00
9	Silvex	50.000	50.378	-0.8	103	0.00
10	2,4,5-T	50.000	52.643	-5.3	100	0.00
11	Dinoseb	250.000	255.735	-2.3	98	0.00
12	2,4-DB	500.000	539.334	-7.9	98	0.00

Signal #2

1	Dalapon	1250.000	1236.719	1.1	100	-0.02
2 S	2,4-Dichlorophenylacetic	500.000	498.665	0.3	101	0.00
3	MCPA	50.000	52.183	-4.4	102	0.01
4	Dicamba	50.000	50.378	-0.8	100	0.01
5	MCPA	50.000	52.840	-5.7	103	0.01
6	Dichloroprop	500.000	495.827	0.8	99	0.01
7	2,4-D	500.000	506.662	-1.3	101	0.00
8	Pentachlorophenol	50.000	52.045	-4.1	100	0.02
9	Silvex	50.000	52.657	-5.3	100	0.01
10	2,4,5-T	50.000	52.806	-5.6	101	0.00
11	Dinoseb	250.000	247.648	0.9	98	0.02
12	2,4-DB	500.000	511.553	-2.3	101	0.00

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Injection Log

Directory: c:\hpcchem\1\data\032602

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1g4734.d	1.	CC ✓ WG115123-01 HERBICIDE CCV	1,1 SOS56-44	26 Mar 102 13::2
2	2	1g4735.d	1.	✓ WG115123-02 HERB ICAL #5	1,1 SOS56-44	26 Mar 102 12::3
3	3	1g4736.d	1.	WG115123-03 HERB ICAL #4	1,1 SOS56-44	26 Mar 102 12::1
4	4	1g4737.d	1.	WG115123-04 HERB ICAL #3	1,1 SOS56-44	26 Mar 102 12::4
5	5	1g4738.d	1.	WG115123-05 HERB ICAL #2	1,1 SOS56-44	26 Mar 102 12::2
6	6	1g4739.d	1.	WG115123-06 HERB ICAL #1	1,1 SOS56-44	26 Mar 102 12::5
7	7	1g4740.d	1.	✓ WG115123-07 HERB ALT ICV	1,1 SOS58-09	26 Mar 102 12::3
8	8	1g4741.d	1.	WG115018-01 BLANK V182 P83	17,1 WATER	26 Mar 102 12::0
9	9	1g4742.d	1.	WG115018-02 LCS V182 P83	17,1 WATER	26 Mar 102 12::4
10	10	1g4743.d	1.	WG115018-03 LCS DUP V182 P83	17,1 WATER	26 Mar 102 12::1
11	11	1g4744.d	1.	WG114917-01 FILTCLP BLANK 3/21	17,1 WATER	26 Mar 102 12::5
12	12	1g4745.d	1.	L0203292-01	17,1 WATER	26 Mar 102 12::2
13	13	1g4746.d	1.	WG114928-01 TCLP BLANK 3/21	17,1 WATER	26 Mar 102 12::0
14	14	1g4747.d	1.	L0203388-01	17,1 WATER	26 Mar 102 12::4
15	15	1g4748.d	1.	✓ WG115123-08 HERB CCV	1,1 SOS56-44	26 Mar 102 13::1

ECZ 3/27/02
 rde 3/27/02

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1g4749.d	1.	✓ WG115555-01 HERB CCV	1,1 SOS56-44	3 Apr 102 12::2
2	2	1g4750.d	1.	✓ ELAB HERB SURROGATE	ESS41-03	3 Apr 102 13::4
3	3	1g4751.d	1.	WG115458-01 BLANK V182 P165	7,1 SOIL	3 Apr 102 13::2
4	4	1g4752.d	1.	WG115458-02 LCS V182 P165	7,1 SOIL	3 Apr 102 13::5
5	5	1g4753.d	1.	WG115458-03 LCS DUP V182 P165	7,1 SOIL	3 Apr 102 13::3
6	6	1g4754.d	1.	L0203450-01	7,1 SOIL	3 Apr 102 12::0
7	7	1g4755.d	1.	L0204001-01	7,1 SOIL	3 Apr 102 12::4
8	8	1g4756.d	1.	WG115542-01 BLANK V182 P171	17,1 WATER	3 Apr 102 12::1
9	9	1g4757.d	1.	WG115542-02 LCS V182 P171	17,1 WATER	3 Apr 102 12::5
10	10	1g4758.d	1.	↘ WG115542-03 LCS DUP V182 P171	17,1 WATER	3 Apr 102 12::2
11	11	1g4759.d	1.	✓ WG115555-02 HERB CCV	1,1 SOS56-44	3 Apr 102 12::0
12	12	1g4760.d	1.	RR WG115474-01 TCLP BLANK 4/2	17,1 WATER	3 Apr 102 12::3
13	13	1g4761.d	1.	RR L0203560-03	17,1 WATER	3 Apr 102 12::1

Instrument stopped

ECZ 4/4/02
 PNEC 4/4/02

Parameter: Herb 5 SOP #: EXH02 Revision #: 10
 Extraction Analyst(s): DP TV/KD Analyst(s): DP
 Date/Time Extracted: 04/02/02 0840 Date TV/KD: 04/02/02
 Spike/Surrogate Analyst: DP Witness: QSH
 Surrogate #: ES500-10-16 Earliest Hold Date: 01/03/02
 Spike #: A = ES500-10-15 Spike #: B = _____

Extraction Work Group WG 115458
 Analytical Work Group WG 115556

Extract Relinquished By: DP
 Extract Received By & Date: 4/3/02

Sample ID	Test Code	pH			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
		<2	N	>12						A	BN	N	
1	Blank	✓			50.03g	1ml	10ml	T				WG 115458-01	
2	LCS	✓			.07g	1ml		T				WG 115458-02	
3	LCS Dup	✓			.06g			T				WG 115458-03	
4	03-450-01	8151	✓		.07g			C					
5	04-001-01		✓		.08g			T					
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

DP
04/02/02

Methylene Chloride Lot #: _____
 Hexane Lot #: _____
 Ether Lot #: 41141
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: Iso octane Lot #: V04616
 Reagent: D.420 methanol Lot #: EX 2118
 Reagent: Silicic Acid Lot #: 2847 N24H04
 Acid: HCL Lot #: V44033
 Florisil Lot #: _____
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: Acidified ER 2121

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B				
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	✓
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: DP

Date: 4/3/02

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Extraction Notes For Volume # 182 Page # 165

General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

Supervisor Review: _____ Date: 659

2.2.4.2 Sample Data

Data File : C:\HPCHEM\1\DATA\040302\1G4755.D\ECD1A.CH Vial: 7
 Acq On : 3 Apr 2002 13:42 Operator: ECL
 Sample : L0204001-01 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4755.D\ECD2B.CH Vial: 7
 Acq On : 3 Apr 2002 14:18 Operator: ECL
 Sample : L0203450-01 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events2.e

Quant Time: Apr 4 9:13 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:11:37 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

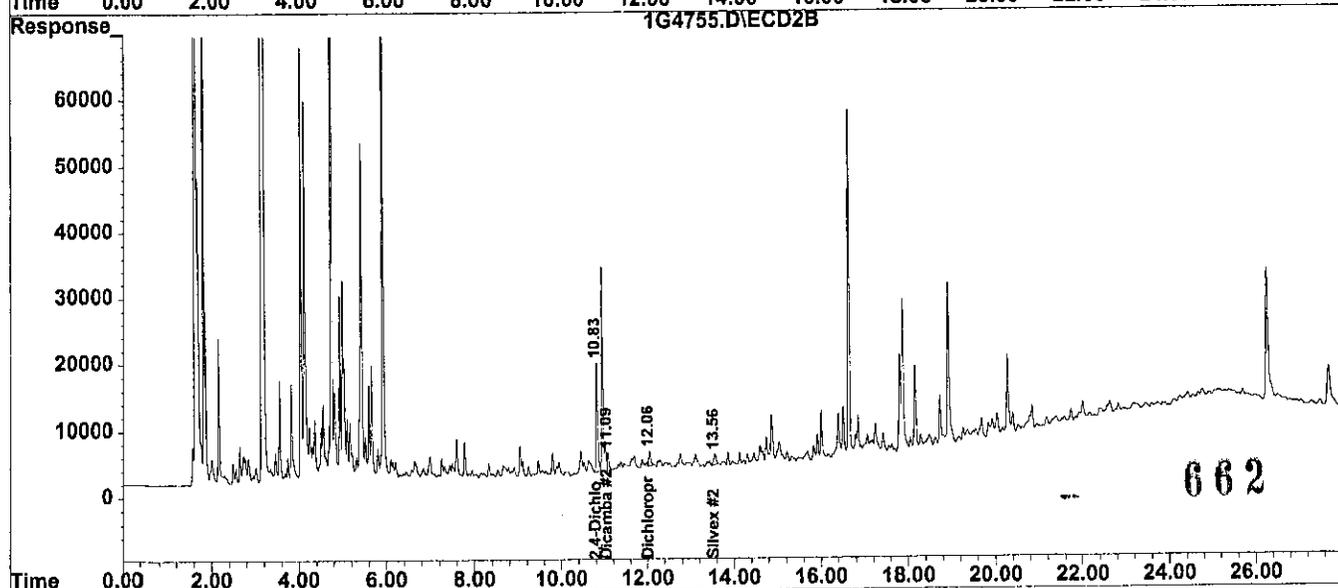
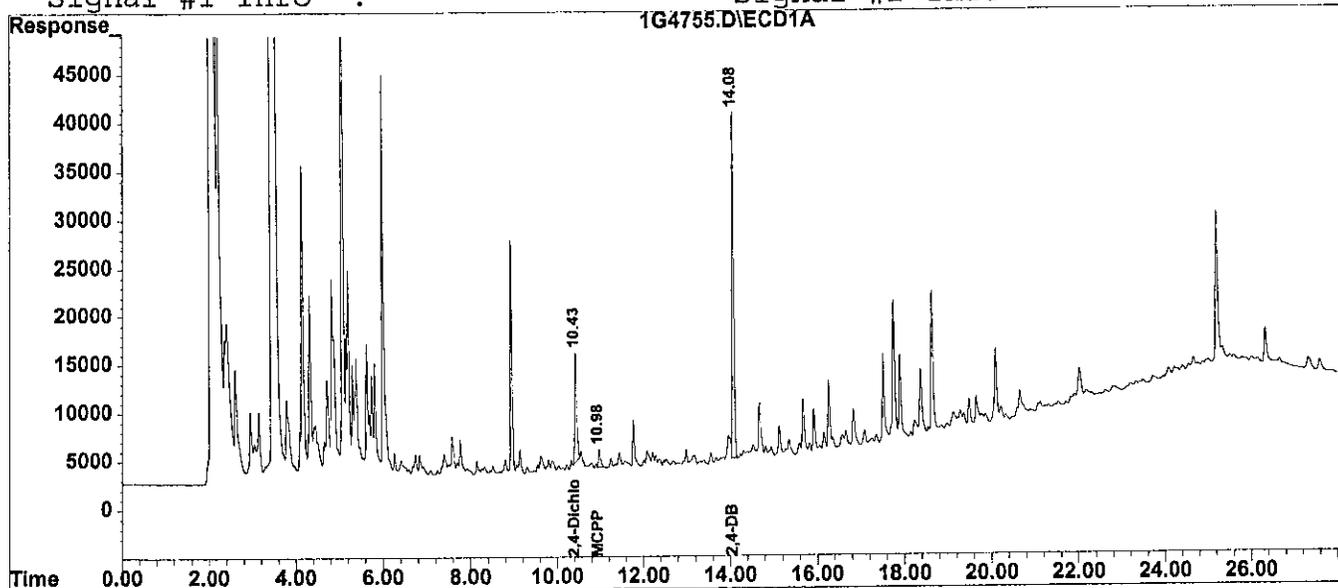
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.43	10.83	368153	439039	456.732	434.395
Spiked Amount	500.000	Range	51 - 146	Recovery	= 91.35%	86.88%
Target Compounds						
1) Dalapon	0.00	0.00	0	0	N.D.	N.D.
3) MCPA	0.00	0.00	0	0	N.D.	N.D.
4) Dicamba	0.00	11.09	0	77153	N.D.	14.822 #
5) MCPP	10.98	0.00	64379	0	34.237	N.D. #
6) Dichloroprop	0.00	12.06	0	72197	N.D.	59.858 #
7) 2,4-D	0.00	0.00	0	0	N.D.	N.D.
8) Pentachloropheno	0.00	0.00	0	0	N.D.	N.D.
9) Silvex	0.00	13.56f	0	64104	N.D.	7.261 #
10) 2,4,5-T	0.00	0.00	0	0	N.D.	N.D.
11) Dinoseb	0.00	0.00	0	0	N.D.	N.D.
12) 2,4-DB	14.08f	0.00	1015582	0	2034.385	N.D. #

Data File : C:\HPCHEM\1\DATA\040302\1G4755.D\ECD1A.CH Vial: 7
Acq On : 3 Apr 2002 13:42 Operator: ECL
Sample : L0204001-01 Inst : HP1
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4755.D\ECD2B.CH Vial: 7
Acq On : 3 Apr 2002 14:18 Operator: ECL
Sample : L0203450-01 Inst : HP1
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : events2.e
Quant Time: Apr 4 9:13 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
Title : CALIBRATION March 26, 2002
Last Update : Thu Apr 04 09:11:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8151.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



2.2.4.3 Standards Data

Response Factor Report HP1

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002

Calibration Files

5 =1G4735.D 4 =1G4736.D 3 =1G4737.D
 2 =1G4738.D 1 =1G4739.D

Compound	5	4	3	2	1	Avg	%RSD
1) Dalapon	1.171	1.336	1.446	1.520	1.632	1.421#E3	12.42
2) S 2,4-Dichlorophenylace	6.302	7.374	8.236	8.720	9.671	8.061#E2	15.96
3) MCPA	2.166	2.561	2.856	3.068	3.534	2.837#E3	18.19
4) Dicamba	3.540	3.615	3.678	3.448	3.433	3.543#E3	2.98
5) MCPP	1.592	1.840	1.955	1.976	2.039	1.880#E3	9.39
6) Dichloroprop	0.744	0.865	0.935	0.996	1.113	0.930#E3	14.89
7) 2,4-D	0.899	1.050	1.126	1.221	1.386	1.136#E3	16.07
8) Pentachlorophenol	1.179	1.291	1.278	1.211	1.199	1.232#E4	4.04
9) Silvex	5.429	5.966	5.362	5.193	5.431	5.476#E3	5.30
10) 2,4,5-T	5.038	5.423	5.436	5.257	4.669	5.165#E3	6.20
11) Dinoseb	3.791	4.197	4.579	4.459	4.903	4.386#E3	9.53
12) 2,4-DB	4.708	5.213	5.484	4.933	4.623	4.992#E2	7.16

Signal #2 Calibration Files

5 =1G4735.D 4 =1G4736.D 3 =1G4737.D
 2 =1G4738.D 1 =1G4739.D

Compound	5	4	3	2	1	Avg	%RSD
1) Dalapon	1.317	1.458	1.571	1.683	1.885	1.583#E3	13.70
2) S 2,4-Dichlorophenylace	0.788	0.905	1.002	1.104	1.255	1.011#E3	17.80
3) MCPA	2.675	2.935	3.264	3.492	3.654	3.204#E3	12.50
4) Dicamba	4.570	5.117	5.255	5.442	5.644	5.205#E3	7.82
5) MCPP	1.996	2.237	2.356	2.456	2.443	2.298#E3	8.26
6) Dichloroprop	0.922	1.058	1.204	1.328	1.519	1.206#E3	19.22
7) 2,4-D	1.024	1.167	1.326	1.445	1.667	1.326#E3	18.73
8) Pentachlorophenol	1.831	2.022	2.178	2.080	2.322	2.087#E4	8.75
9) Silvex	8.228	8.909	9.328	9.069	8.605	8.828#E3	4.82
10) 2,4,5-T	6.717	7.501	7.922	7.982	7.822	7.589#E3	6.87
11) Dinoseb	4.739	5.381	6.039	6.535	7.205	5.980#E3	16.11
12) 2,4-DB	5.593	6.194	6.601	6.869	7.346	6.521#E2	10.22

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Data File : C:\HPCHEM\1\DATA\032602\1G4735.D\ECD1A.CH Vial: 2
 Acq On : 26 Mar 2002 14:37 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4735.D\ECD2B.CH Vial: 2
 Acq On : 26 Mar 2002 15:12 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 8:49 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Tue Mar 26 13:49:20 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

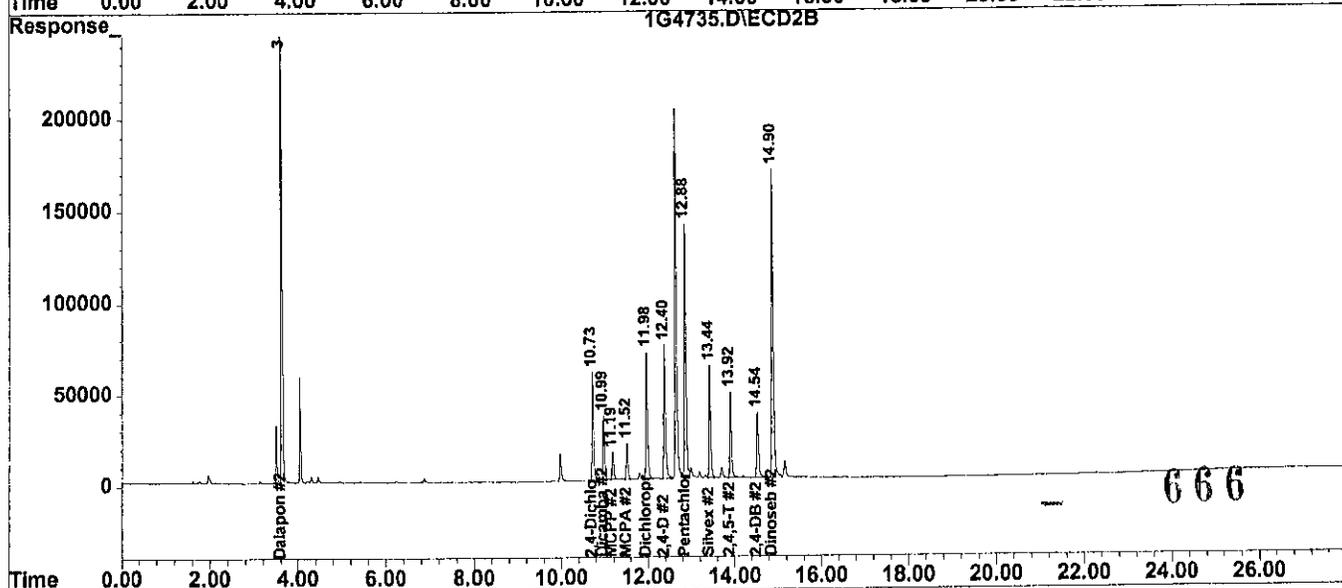
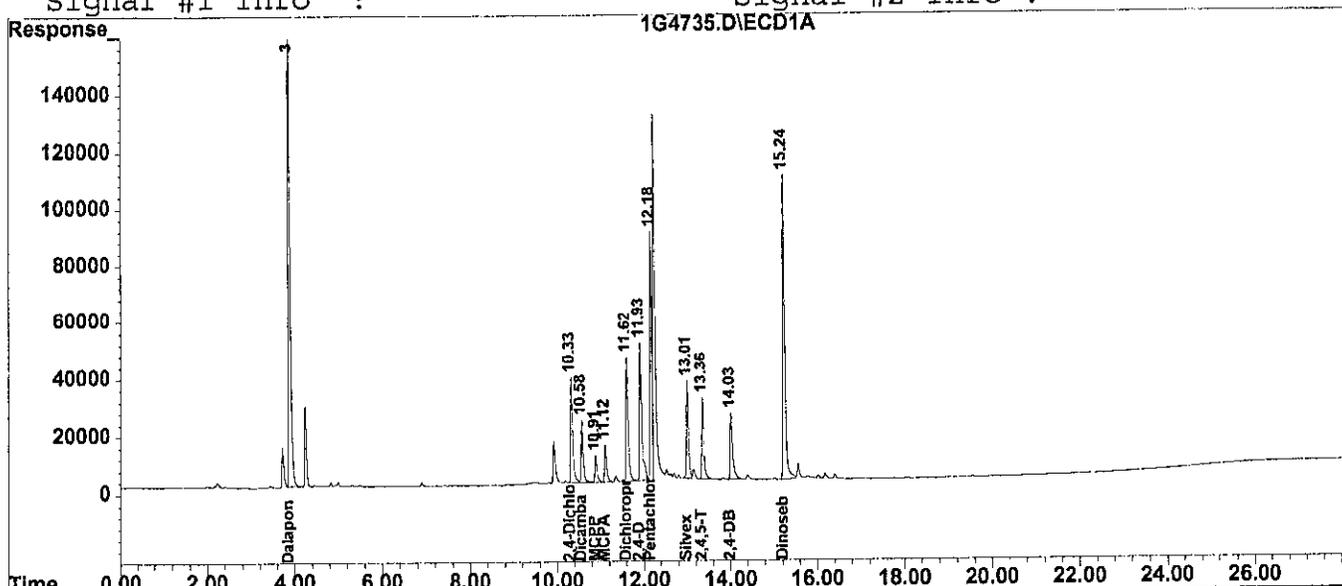
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.33	10.74	1260380	1575300	1479.950	1631.852
Spiked Amount	500.000	Range 20 - 144	Recovery	=	295.99%#	326.37%#
Target Compounds						
1) Dalapon	3.89	3.63	5855669	6583495	3871.678	4288.705
3) MCPA	11.12	11.53	433217	534941	144.470	177.937
4) Dicamba	10.58	10.99	707959	913914	186.251	181.967
5) MCPP	10.91	11.19	318324	399276	154.025	187.807
6) Dichloroprop	11.62	11.98	1487710	1844381	1487.144	1590.935
7) 2,4-D	11.93	12.40	1798408	2047939	1518.797	1640.284
8) Pentachloropheno	12.18	12.88	2357423	3662763	176.947	181.570
9) Silvex	13.01	13.44	1085760	1645652	181.951	191.855
10) 2,4,5-T	13.36	13.92	1007685	1343438	175.546	183.586
11) Dinoseb	15.24	14.90	3791020	4738859	804.991	822.474
12) 2,4-DB	14.03	14.54	941554	1118533	1677.062	1849.536

Data File : C:\HPCHEM\1\DATA\032602\1G4735.D\ECD1A.CH Vial: 2
 Acq On : 26 Mar 2002 14:37 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4735.D\ECD2B.CH Vial: 2
 Acq On : 26 Mar 2002 15:12 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 8:49 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Tue Mar 26 13:49:20 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032602\1G4736.D\ECD1A.CH Vial: 3
 Acq On : 26 Mar 2002 15:12 Operator: ECL
 Sample : WG115123-03 HERB ICAL #4 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4736.D\ECD2B.CH Vial: 3
 Acq On : 26 Mar 2002 15:47 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 10:51 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:50:26 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
----------	------	------	--------	--------	------	------

System Monitoring Compounds

2) S	2,4-Dichlorophen	10.31	10.80	737420	905112	887.703	934.906
	Spiked Amount	500.000	Range	20 - 144	Recovery	= 177.54%#	186.98%#

Target Compounds

1)	Dalapon	3.87	3.67	3340022	3644362	2272.311	2376.135
3)	MCPA	11.10	11.58	256130	293453	87.342	97.566
4)	Dicamba	10.56	11.05	361506	511695	97.938	101.458
5)	MCPD	10.88	11.25	184045	223705	90.713	105.062
6)	Dichloroprop	11.60	12.05	864604	1058240	883.976	913.588
7)	2,4-D	11.91	12.47	1049639	1167415	889.151	933.664
8)	Pentachloropheno	12.16	12.95	1290692	2021722	99.645	100.606
9)	Silvex	13.00	13.51	596621	890942	102.669	104.284
10)	2,4,5-T	13.35	13.99	542307	750065	97.893	102.547
11)	Dinoseb	15.23	14.97	2098382	2690527	456.964	467.994
12)	2,4-DB	14.02	14.61	521340	619380	959.139	1020.372

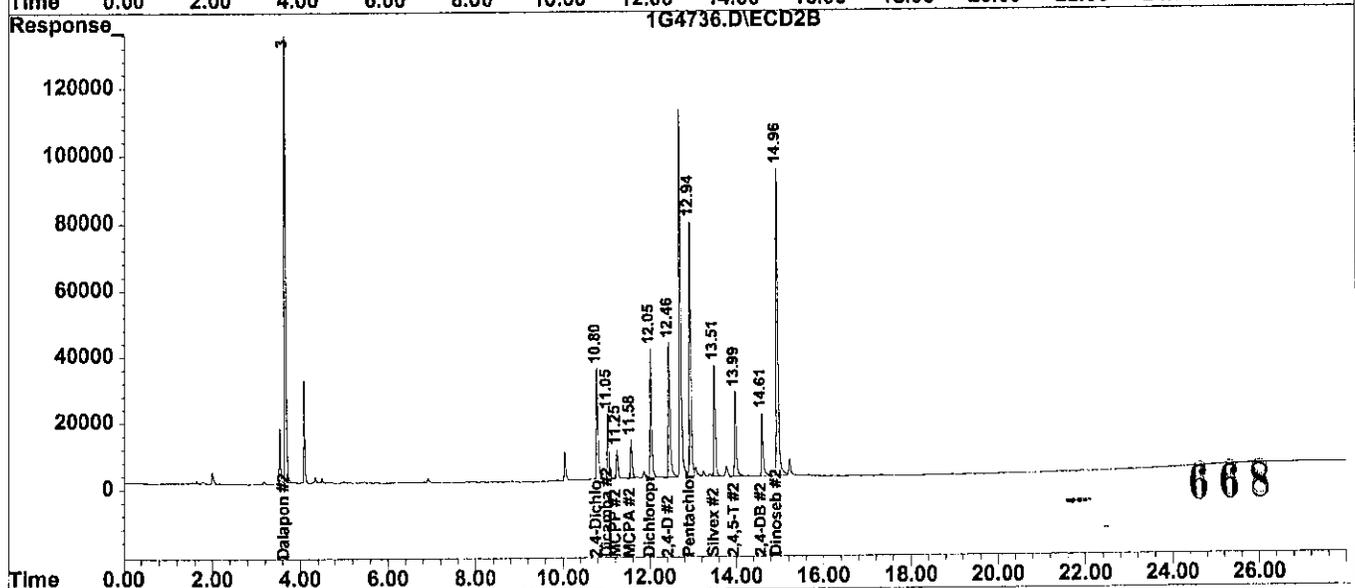
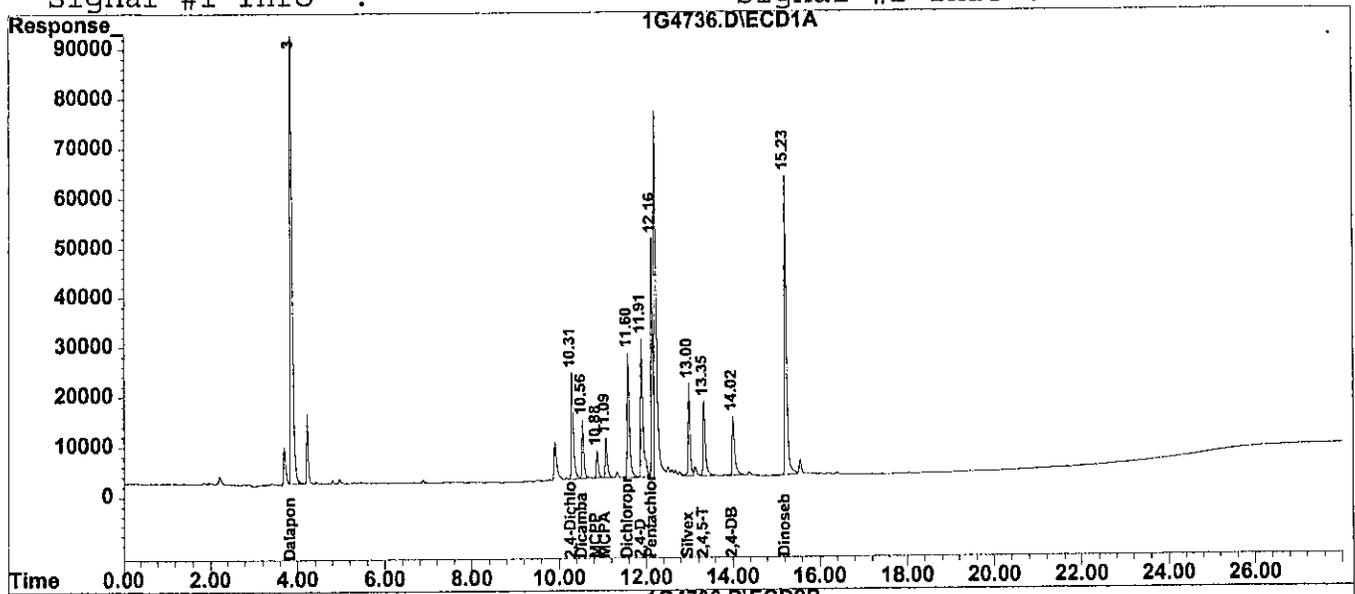
667

Data File : C:\HPCHEM\1\DATA\032602\1G4736.D\ECD1A.CH Vial: 3
 Acq On : 26 Mar 2002 15:12 Operator: ECL
 Sample : WG115123-03 HERB ICAL #4 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4736.D\ECD2B.CH Vial: 3
 Acq On : 26 Mar 2002 15:47 Operator: ECL
 Sample : WG115123-02 HERB ICAL #5 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 10:51 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:50:26 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032602\1G4737.D\ECD1A.CH Vial: 4
 Acq On : 26 Mar 2002 15:47 Operator: ECL
 Sample : WG115123-04 HERB ICAL #3 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4737.D\ECD2B.CH Vial: 4
 Acq On : 26 Mar 2002 16:23 Operator: ECL
 Sample : WG115123-03 HERB ICAL #4 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 10:55 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:53:51 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

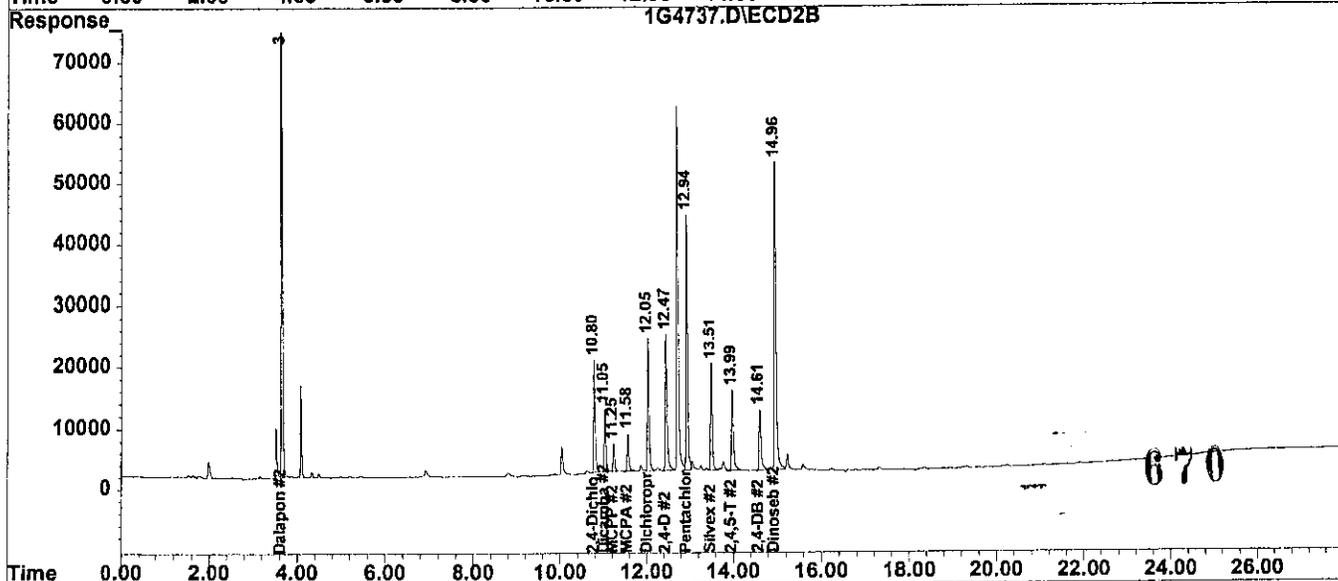
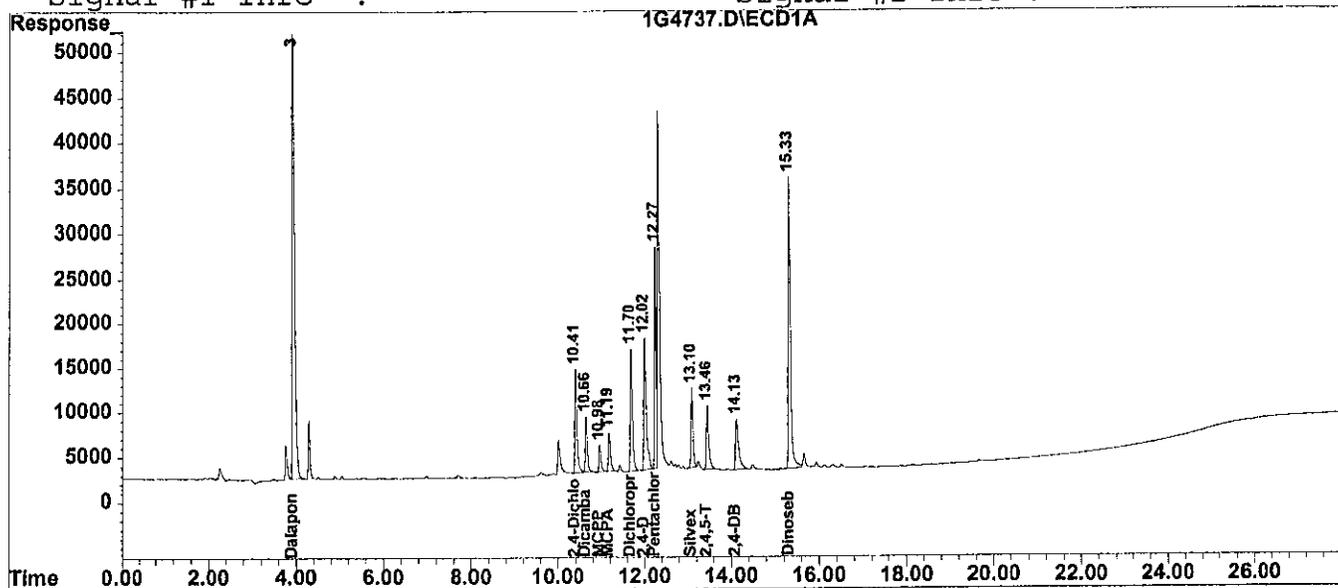
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.41	10.80	411805	500905	498.690	510.394
Spiked Amount	500.000	Range	20 - 144	Recovery	= 99.74%	102.08%
Target Compounds						
1) Dalapon	3.94	3.66	1807340	1963911	1244.649	1266.737
3) MCPA	11.19	11.58	142785	163222	48.910	53.404
4) Dicamba	10.66	11.05	183901	262729	50.096	51.528
5) MCPP	10.98	11.25	97755	117789	48.364	54.453
6) Dichloroprop	11.70	12.05	467381	602059	483.756	513.309
7) 2,4-D	12.02	12.47	562897	662858	483.520	521.059
8) Pentachloropheno	12.27	12.94	638942	1089148	50.150	53.530
9) Silvex	13.10	13.51	268088	466422	47.458	53.827
10) 2,4,5-T	13.46	13.99	271821	396082	50.057	53.410
11) Dinoseb	15.33	14.97	1144701	1509753	251.648	259.231
12) 2,4-DB	14.13	14.61	274192	330065	512.128	532.361

Data File : C:\HPCHEM\1\DATA\032602\1G4737.D\ECD1A.CH Vial: 4
 Acq On : 26 Mar 2002 15:47 Operator: ECL
 Sample : WG115123-04 HERB ICAL #3 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4737.D\ECD2B.CH Vial: 4
 Acq On : 26 Mar 2002 16:23 Operator: ECL
 Sample : WG115123-03 HERB ICAL #4 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 10:55 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:53:51 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032602\1G4738.D\ECD1A.CH Vial: 5
 Acq On : 26 Mar 2002 16:23 Operator: ECL
 Sample : WG115123-05 HERB ICAL #2 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4738.D\ECD2B.CH Vial: 5
 Acq On : 26 Mar 2002 16:58 Operator: ECL
 Sample : WG115123-04 HERB ICAL #3 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 12:37 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:56:49 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.42	10.71	218000	275907	267.057	277.620
Spiked Amount	500.000	Range	20 - 144	Recovery	= 53.41%	55.52%
Target Compounds						
1) Dalapon	3.94	3.60	950002	1051713	661.721	672.151
3) MCPA	11.20	11.49	76706	87289	26.268	28.030
4) Dicamba	10.67	10.96	86204	136043	23.892	26.424
5) MCPP	10.98	11.16	49392	61402	24.303	27.854
6) Dichloroprop	11.71	11.96	248997	331883	262.629	279.795
7) 2,4-D	12.03	12.38	305256	361272	266.363	279.296
8) Pentachloropheno	12.27	12.85	302831	519902	24.262	25.286
9) Silvex	13.11	13.42	129833	226735	23.431	25.945
10) 2,4,5-T	13.48	13.90	131422	199548	24.716	26.621
11) Dinoseb	15.34	14.87	557425	816916	125.310	138.812
12) 2,4-DB	14.15	14.52	123317	171729	238.595	272.525

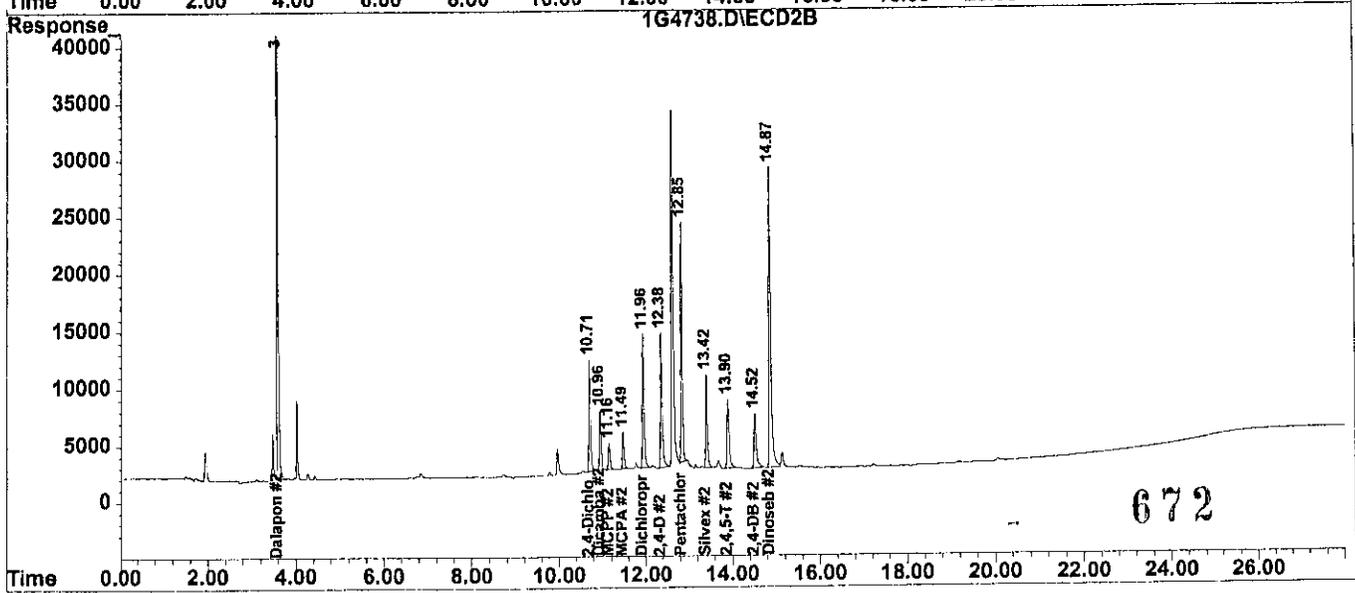
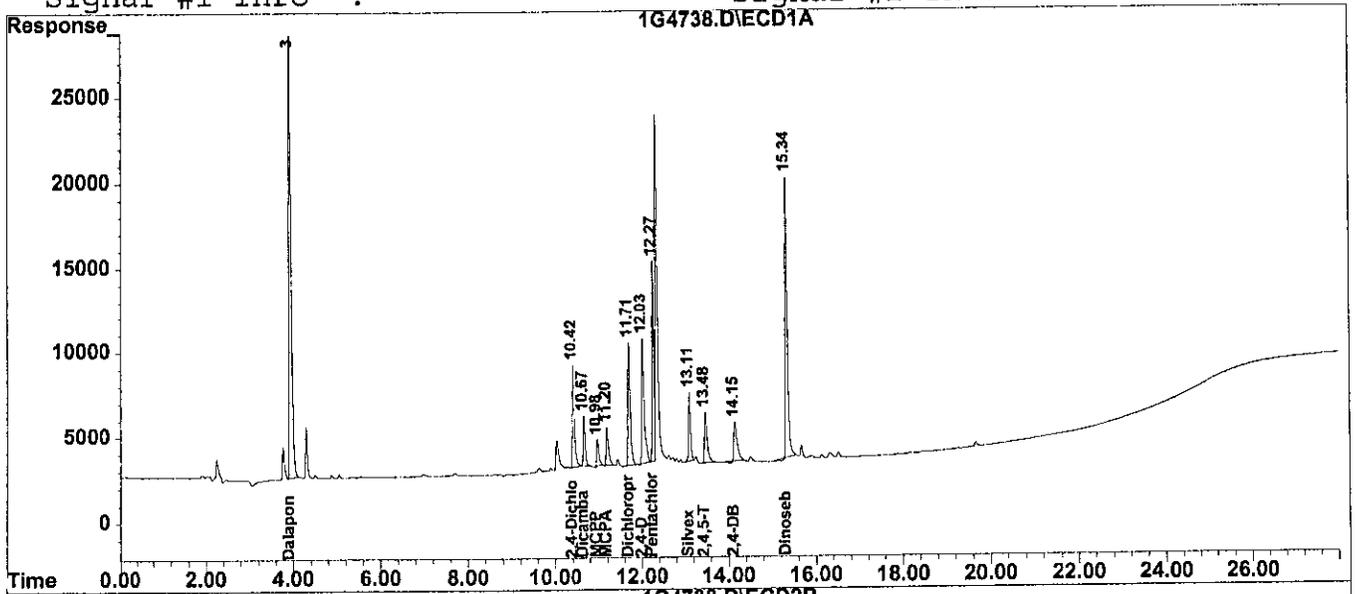
671

Data File : C:\HPCHEM\1\DATA\032602\1G4738.D\ECD1A.CH Vial: 5
 Acq On : 26 Mar 2002 16:23 Operator: ECL
 Sample : WG115123-05 HERB ICAL #2 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4738.D\ECD2B.CH Vial: 5
 Acq On : 26 Mar 2002 16:58 Operator: ECL
 Sample : WG115123-04 HERB ICAL #3 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 12:37 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 10:56:49 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032602\1G4739.D\ECD1A.CH Vial: 6
 Acq On : 26 Mar 2002 16:58 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4739.D\ECD2B.CH Vial: 6
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-05 HERB ICAL #2 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 12:41 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

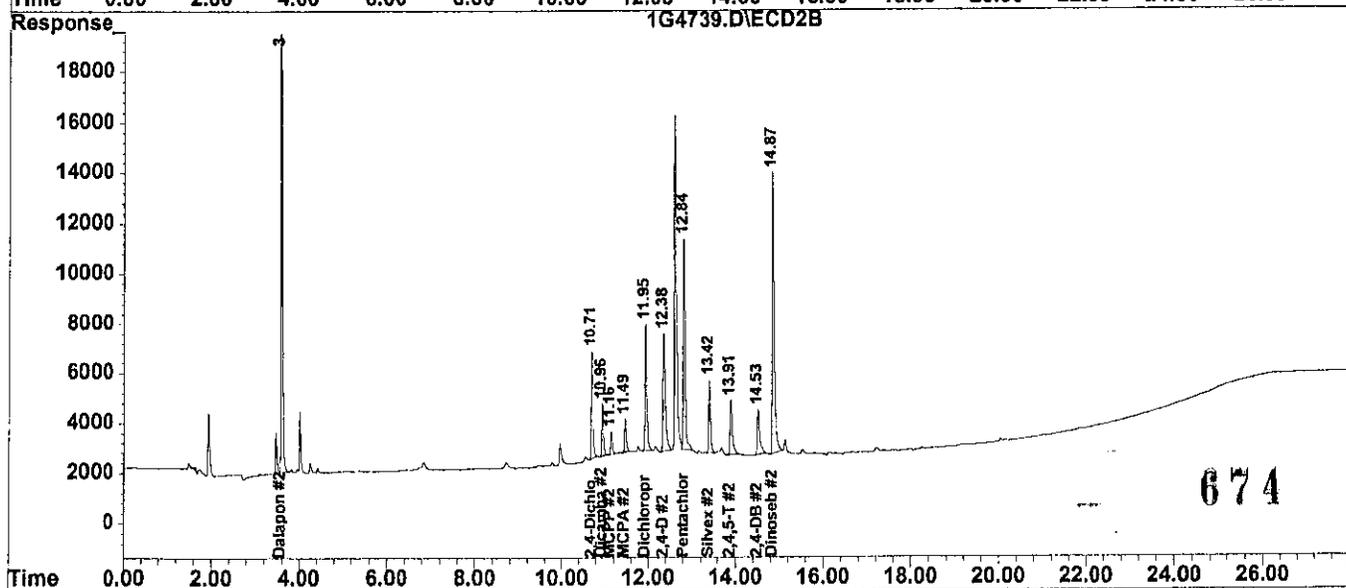
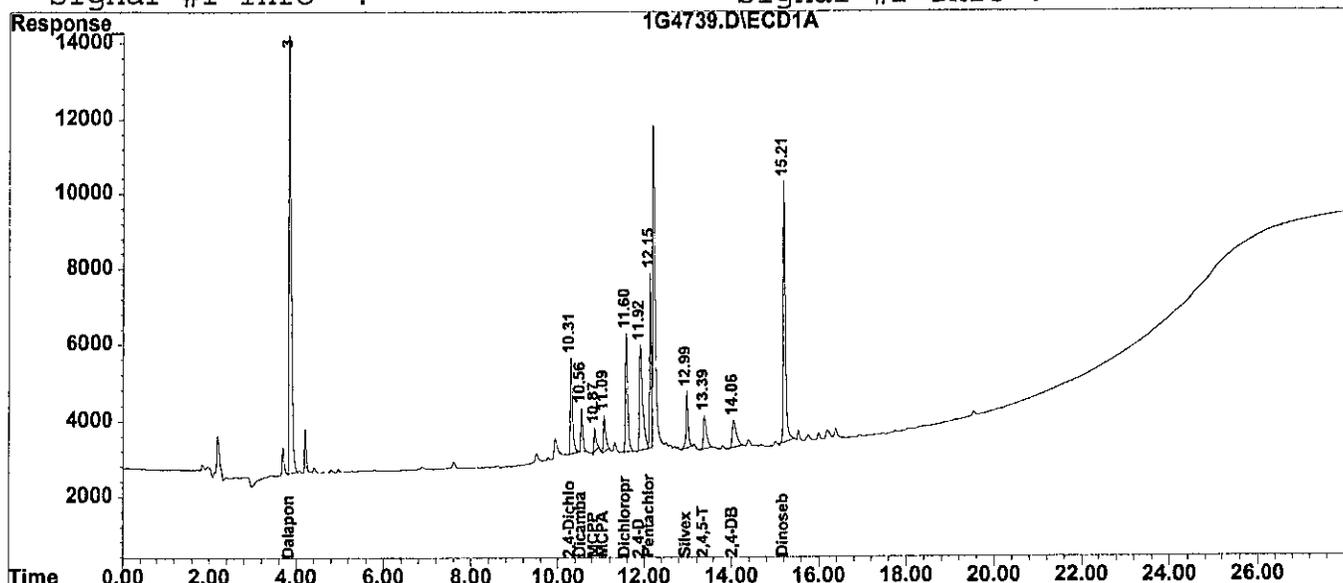
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.31	10.71	96708	125525	119.976	124.198
Spiked Amount	500.000	Range	20 - 144	Recovery	=	24.00% 24.84%
Target Compounds						
1) Dalapon	3.86	3.60	408044	471347	287.145	297.804
3) MCPA	11.09	11.49	35339	36537	12.456	11.404
4) Dicamba	10.56	10.96	34329	56436	9.690	10.842
5) MCPP	10.87	11.16	20391	24425	10.105	10.631
6) Dichloroprop	11.60	11.96	111304	151857	119.624	125.904
7) 2,4-D	11.92	12.38	138588	166666	121.963	125.713
8) Pentachloropheno	12.15	12.85	119891	232225	9.735	11.129
9) Silvex	13.00	13.42	54311	86050	9.918	9.747
10) 2,4,5-T	13.39	13.91	46691	78223	9.040	10.308
11) Dinoseb	15.21	14.87	245139	360235	55.894	60.242
12) 2,4-DB	14.06	14.53	46227	73462	92.601	112.662

Data File : C:\HPCHEM\1\DATA\032602\1G4739.D\ECD1A.CH Vial: 6
 Acq On : 26 Mar 2002 16:58 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4739.D\ECD2B.CH Vial: 6
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-05 HERB ICAL #2 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 12:41 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD1A.CH Vial: 7
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-07 HERB ALT ICV Inst : HP1
 Misc : 1,1 SOS58-09 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD2B.CH Vial: 7
 Acq On : 26 Mar 2002 18:09 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1169.153	6.5	92	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	483.236	3.4	95	-0.01
3	MCPA	50.000	49.057	1.9	97	0.00
4	Dicamba	50.000	51.573	-3.1	99	0.00
5	MCPA	50.000	48.106	3.8	93	0.00
6	Dichloroprop	500.000	523.238	-4.6	104	0.00
7	2,4-D	500.000	449.529	10.1	91	0.02
8	Pentachlorophenol	50.000	45.271	9.5	87	0.01
9	Silvex	50.000	50.689	-1.4	104	0.02
10	2,4,5-T	50.000	53.977	-8.0	103	0.02
11	Dinoseb	250.000	251.817	-0.7	96	0.01
12	2,4-DB	500.000	453.033	9.4	82	0.03

Signal #2

1	Dalapon	1250.000	1142.542	8.6	92	0.00
2 S	2,4-Dichlorophenylacetic	500.000	462.928	7.4	93	-0.01
3	MCPA	50.000	42.356	15.3#	83	0.00
4	Dicamba	50.000	48.749	2.5	97	0.00
5	MCPA	50.000	47.172	5.7	92	0.00
6	Dichloroprop	500.000	489.117	2.2	98	-0.01
7	2,4-D	500.000	594.874	-19.0#	119	-0.02
8	Pentachlorophenol	50.000	40.073	19.9#	77	0.00
9	Silvex	50.000	49.352	1.3	93	-0.01
10	2,4,5-T	50.000	51.053	-2.1	98	-0.02
11	Dinoseb	250.000	234.572	6.2	93	-0.01
12	2,4-DB	500.000	332.770	33.4#	66	-0.02

675

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD1A.CH Vial: 7
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-07 HERB ALT ICV Inst : HP1
 Misc : 1,1 SOS58-09 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD2B.CH Vial: 7
 Acq On : 26 Mar 2002 18:09 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Quant Time: Mar 27 12:55 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:52:23 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

2) S	2,4-Dichlorophen	10.30	10.70	389517	467876	483.236	462.928
	Spiked Amount	500.000	Range	20 - 144	Recovery	=	96.65% 92.59%

Target Compounds

1)	Dalapon	3.85	3.60	1661412	1808348	1169.153	1142.542
3)	MCPA	11.08	11.48	139176	135699	49.057	42.356
4)	Dicamba	10.55	10.95	182710	253750	51.573	48.749
5)	MCPA	10.86	11.15	90458	108381	48.106	47.172
6)	Dichloroprop	11.59	11.94	486847	589939	523.238	489.117
7)	2,4-D	11.90	12.36	510803	788666	449.529	594.874 #
8)	Pentachloropheno	12.14	12.83	557513	836193	45.271	40.073
9)	Silvex	12.98	13.40	277586	435685	50.689	49.352
10)	2,4,5-T	13.34	13.89	278779	387431	53.977	51.053
11)	Dinoseb	15.20	14.86	1104405	1402691	251.817	234.572
12)	2,4-DB	14.01f	14.50	226158	216987	453.033	332.770 #

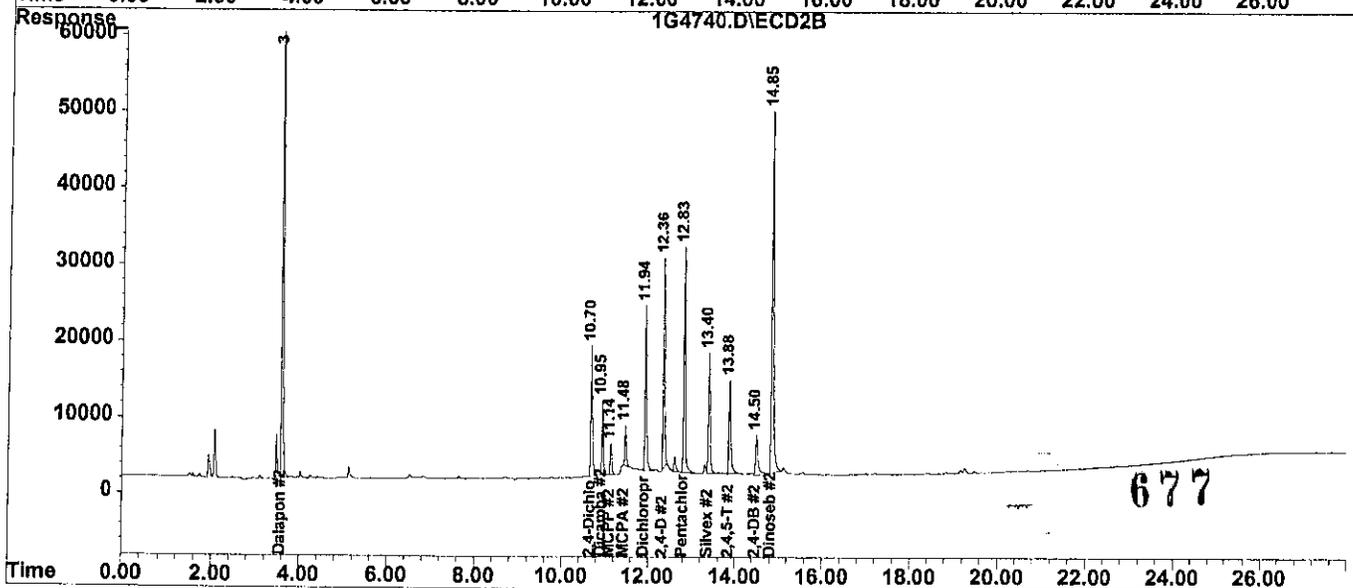
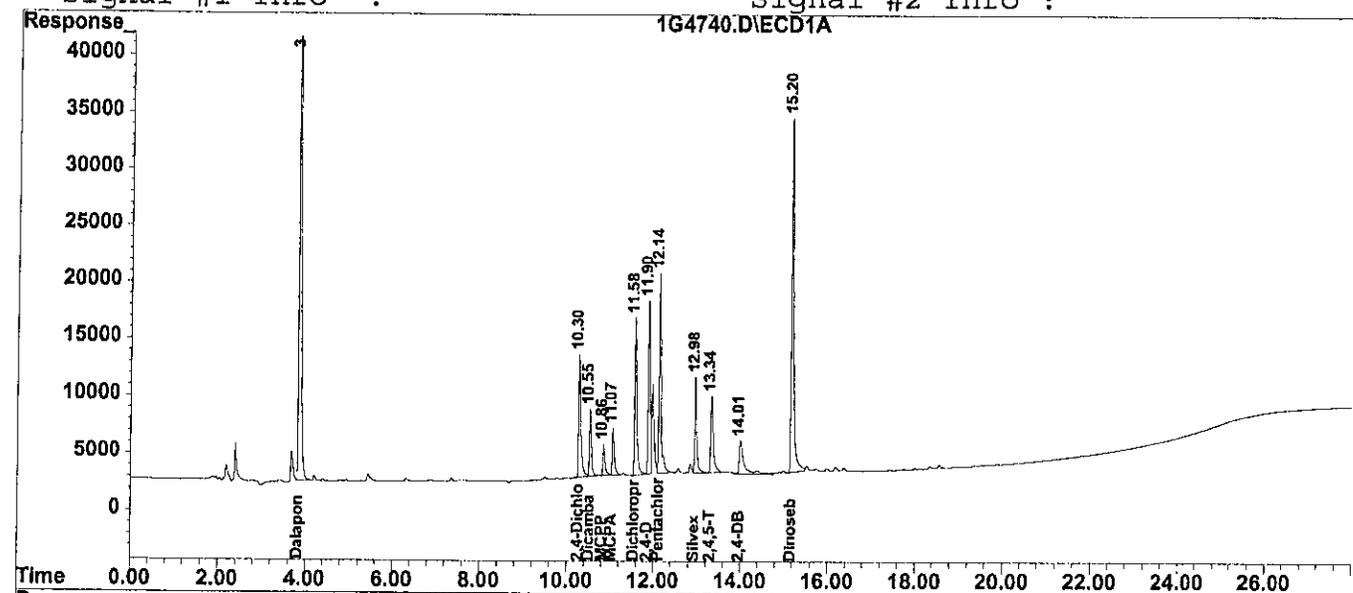
676

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD1A.CH Vial: 7
 Acq On : 26 Mar 2002 17:34 Operator: ECL
 Sample : WG115123-07 HERB ALT ICV Inst : HP1
 Misc : 1,1 SOS58-09 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\032602\1G4740.D\ECD2B.CH Vial: 7
 Acq On : 26 Mar 2002 18:09 Operator: ECL
 Sample : WG115123-06 HERB ICAL #1 Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Mar 27 12:55 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:52:23 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



----- Calibration Report -----

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD1A.CH Vial: 1
 Acq On : 3 Apr 2002 9:25 Operator: ECL
 Sample : WG115555-01 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD2B.CH Vial: 1
 Acq On : 3 Apr 2002 10:00 Operator: ECL
 Sample : WG115 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1272.240	-1.8	100	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	512.515	-2.5	100	0.00
3	MCPA	50.000	49.166	1.7	98	0.00
4	Dicamba	50.000	52.297	-4.6	101	0.00
5	MCPA	50.000	49.351	1.3	95	0.00
6	Dichloroprop	500.000	507.002	-1.4	101	0.00
7	2,4-D	500.000	492.960	1.4	100	0.00
8	Pentachlorophenol	50.000	53.113	-6.2	102	0.00
9	Silvex	50.000	48.278	3.4	99	0.00
10	2,4,5-T	50.000	53.158	-6.3	101	0.00
11	Dinoseb	250.000	262.019	-4.8	100	0.00
12	2,4-DB	500.000	539.300	-7.9	98	0.00

Signal #2

1	Dalapon	1250.000	1212.338	3.0	98	0.02
2 S	2,4-Dichlorophenylacetic	500.000	480.691	3.9	97	0.00
3	MCPA	50.000	49.603	0.8	97	0.01
4	Dicamba	50.000	49.155	1.7	97	0.01
5	MCPA	50.000	51.616	-3.2	101	0.01
6	Dichloroprop	500.000	479.156	4.2	96	0.01
7	2,4-D	500.000	470.777	5.8	94	0.00
8	Pentachlorophenol	50.000	50.566	-1.1	97	0.01
9	Silvex	50.000	49.831	0.3	94	0.00
10	2,4,5-T	50.000	49.428	1.1	95	0.00
11	Dinoseb	250.000	239.915	4.0	95	0.01
12	2,4-DB	500.000	461.238	7.8	91	0.00

678

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD1A.CH Vial: 1
 Acq On : 3 Apr 2002 9:25 Operator: ECL
 Sample : WG115555-01 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD2B.CH Vial: 1
 Acq On : 3 Apr 2002 10:00 Operator: ECL
 Sample : WG115 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e

Quant Time: Apr 3 10:42 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Apr 03 10:41:59 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

2) S	2,4-Dichlorophen	10.25	10.69	413118	485830	512.515	480.691
	Spiked Amount	500.000	Range	20 - 144	Recovery	= 102.50%	96.14%

Target Compounds

1)	Dalapon	3.82	3.59	1807903	1918816	1272.240	1212.338
3)	MCPA	11.02	11.47	139487	158918	49.166	49.603
4)	Dicamba	10.50	10.94	185276	255866	52.297	49.155
5)	MCPP	10.81	11.14	92799	118592	49.351	51.616
6)	Dichloroprop	11.54	11.93	471741	577925	507.002	479.156
7)	2,4-D	11.85	12.35	560154	624143	492.960	470.777
8)	Pentachloropheno	12.09	12.82	654092	1055143	53.113	50.566
9)	Silvex	12.93	13.39	264382	439910	48.278	49.831
10)	2,4,5-T	13.30	13.88	274550	375097	53.158	49.428
11)	Dinoseb	15.16	14.85	1149149	1434643	262.019	239.915
12)	2,4-DB	13.96	14.50	269223	300757	539.300	461.238

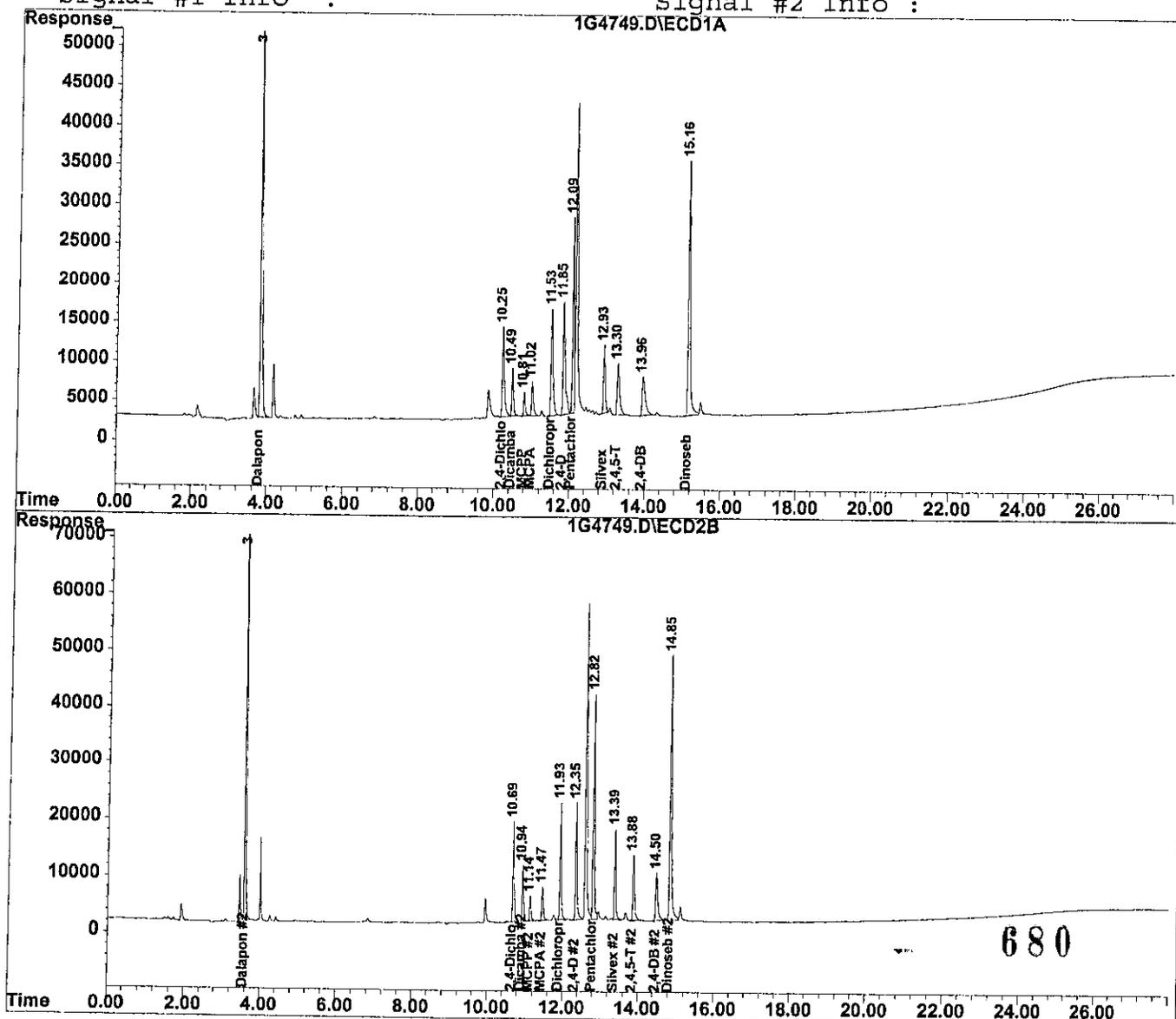
679

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD1A.CH Vial: 1
 Acq On : 3 Apr 2002 9:25 Operator: ECL
 Sample : WG11555-01 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4749.D\ECD2B.CH Vial: 1
 Acq On : 3 Apr 2002 10:00 Operator: ECL
 Sample : WG115 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Apr 3 10:42 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Apr 03 10:41:59 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Report containing calibration report

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD1A.CH Vial: 11
 Acq On : 3 Apr 2002 16:04 Operator: ECL
 Sample : WG115555-02 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD2B.CH Vial: 11
 Acq On : 3 Apr 2002 16:39 Operator: ECL
 Sample : WG115542-03 LCS DUP V182 P171 Inst : HP1
 Misc : 17,1 WATER Multiplr: 1.00
 IntFile : events2.e

Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Wed Mar 27 12:38:51 2002
 Response via : Multiple Level Calibration

Min. RRF : 15.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1280.516	-2.4	101	0.00
2 S	2,4-Dichlorophenylacetic ac	500.000	499.712	0.1	98	0.00
3	MCPA	50.000	49.435	1.1	98	0.00
4	Dicamba	50.000	49.667	0.7	96	0.00
5	MCPA	50.000	51.144	-2.3	98	0.00
6	Dichloroprop	500.000	494.999	1.0	99	0.00
7	2,4-D	500.000	500.676	-0.1	101	0.00
8	Pentachlorophenol	50.000	52.373	-4.7	101	0.00
9	Silvex	50.000	50.378	-0.8	103	0.00
10	2,4,5-T	50.000	52.643	-5.3	100	0.00
11	Dinoseb	250.000	255.735	-2.3	98	0.00
12	2,4-DB	500.000	539.334	-7.9	98	0.00

	Signal #2	Amount	Calc.	%Dev	Area%	Dev(min)
1	Dalapon	1250.000	1236.719	1.1	100	-0.02
2 S	2,4-Dichlorophenylacetic	500.000	498.665	0.3	101	0.00
3	MCPA	50.000	52.183	-4.4	102	0.01
4	Dicamba	50.000	50.378	-0.8	100	0.01
5	MCPA	50.000	52.840	-5.7	103	0.01
6	Dichloroprop	500.000	495.827	0.8	99	0.01
7	2,4-D	500.000	506.662	-1.3	101	0.00
8	Pentachlorophenol	50.000	52.045	-4.1	100	0.02
9	Silvex	50.000	52.657	-5.3	100	0.01
10	2,4,5-T	50.000	52.806	-5.6	101	0.00
11	Dinoseb	250.000	247.648	0.9	98	0.02
12	2,4-DB	500.000	511.553	-2.3	101	0.00

681

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD1A.CH Vial: 11
 Acq On : 3 Apr 2002 16:04 Operator: ECL
 Sample : WG115555-02 HERB CCV Inst : HP1
 Misc : 1,1 SOS56-44 Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD2B.CH Vial: 11
 Acq On : 3 Apr 2002 16:39 Operator: ECL
 Sample : WG115542-03 LCS DUP V182 P171 Inst : HP1
 Misc : 17,1 WATER Multiplr: 1.00
 IntFile : events2.e

Quant Time: Apr 4 9:03 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:02:43 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

2) S	2,4-Dichlorophen	10.42	10.81	402797	503996	499.712	498.665
	Spiked Amount	500.000	Range	20 - 144	Recovery	= 99.94%	99.73%

Target Compounds

1)	Dalapon	3.95	3.67	1819663	1957405	1280.516	1236.719
3)	MCPA	11.21	11.59	140249	167183	49.435	52.183
4)	Dicamba	10.68	11.06	175958	262232	49.667	50.378
5)	MCPA	10.99	11.26	96171	121403	51.144	52.840
6)	Dichloroprop	11.71	12.05	460573	598032	494.999	495.827
7)	2,4-D	12.02	12.47	568922	671717	500.676	506.662
8)	Pentachloropheno	12.28	12.95	644971	1086006	52.373	52.045
9)	Silvex	13.11	13.52	275884	464860	50.378	52.657
10)	2,4,5-T	13.46	14.00	271887	400732	52.643	52.806
11)	Dinoseb	15.34	14.97	1121590	1480884	255.735	247.648
12)	2,4-DB	14.13	14.62	269240	333565	539.334	511.553

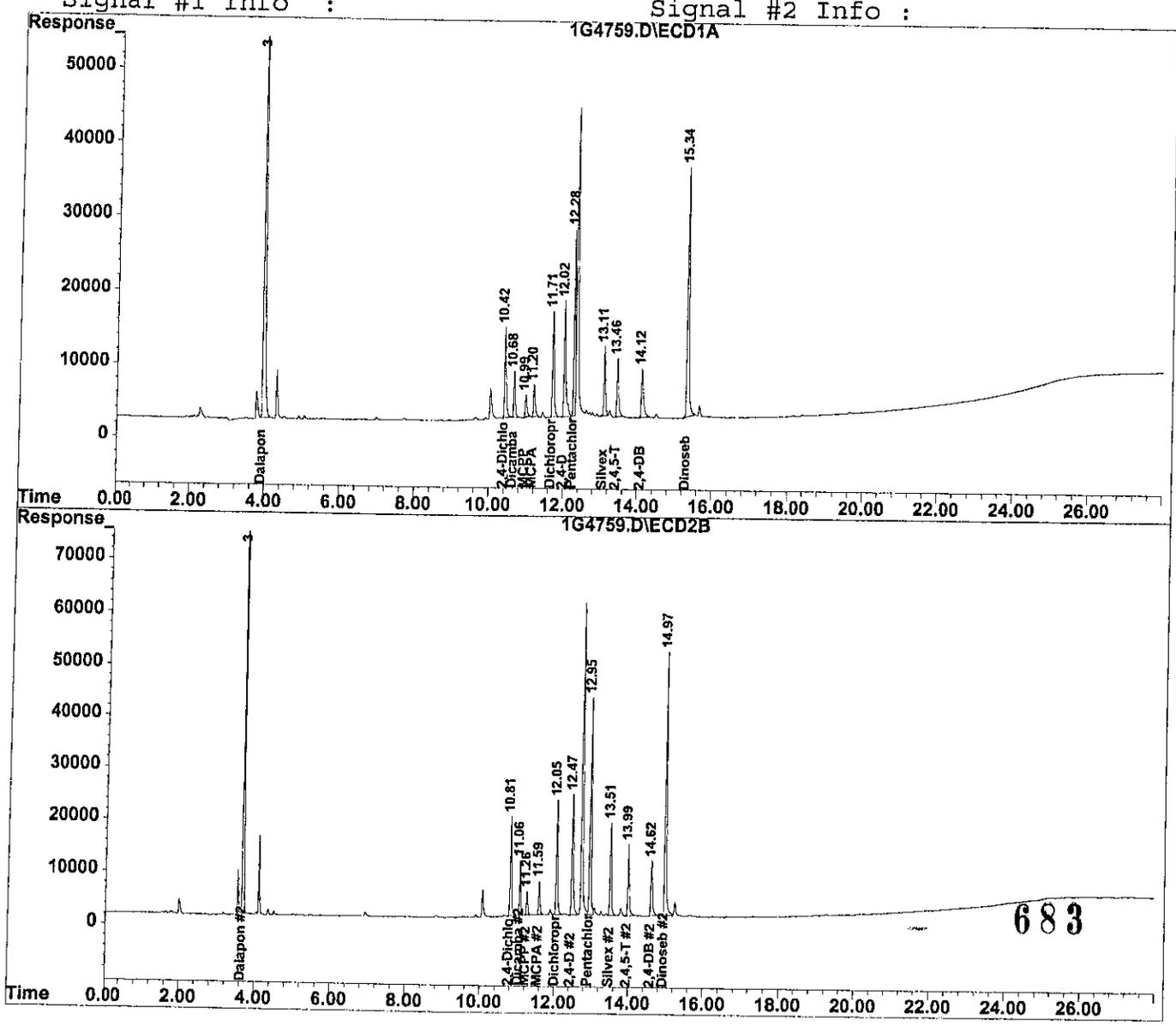
Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD1A.CH Vial: 11
Acq On : 3 Apr 2002 16:04 Operator: ECL
Sample : WG115555-02 HERB CCV Inst : HP1
Misc : 1,1 SOS56-44 Multiplr: 1.00
IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4759.D\ECD2B.CH Vial: 11
Acq On : 3 Apr 2002 16:39 Operator: ECL
Sample : WG115542-03 LCS DUP V182 P171 Inst : HP1
Misc : 17,1 WATER Multiplr: 1.00
IntFile : events2.e

Quant Time: Apr 4 9:03 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
Title : CALIBRATION March 26, 2002
Last Update : Thu Apr 04 09:02:43 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8151.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP1

GC Column: RTx-CLP II

Date Run	STANDARD #1	STANDARD #2	STANDARD #3
	07/23/01	07/26/01	07/31/01
File #	1G4094	1G4105	1G4112

COMPOUND	STD #1	STD #2	STD #3	RT WIN
	RT	RT	RT	
DALAPON	3.51	3.46	3.48	0.075
MCPA	11.36	11.29	11.34	0.108
DICAMBA	10.83	10.77	10.81	0.092
MCPP	11.03	10.96	11.01	0.108
DICHLOROPROP	11.82	11.76	11.80	0.092
2,4-D	12.24	12.19	12.22	0.075
PENTACHLOROPHENOL	12.71	12.64	12.69	0.108
SILVEX	13.28	13.22	13.26	0.092
2,4,5-T	13.77	13.71	13.74	0.090
DINOSEB	14.74	14.68	14.72	0.092
2,4-DB	14.40	14.33	14.36	0.105

RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP1

GC Column: RTx-CLP

Date Run	STANDARD #1	STANDARD #2	STANDARD #3
	07/23/01	07/26/01	07/31/01
File #	1G4094	1G4105	1G4112

COMPOUND	STD #1	STD #2	STD #3	RT WIN
	RT	RT	RT	
DALAPON	3.63	3.62	3.69	0.114
MCPA	10.84	10.81	10.90	0.137
DICAMBA	10.31	10.29	10.37	0.125
MCPP	10.62	10.60	10.68	0.125
DICHLOROPROP	11.35	11.34	11.41	0.114
2,4-D	11.66	11.65	11.73	0.131
PENTACHLOROPHENOL	11.89	11.86	11.95	0.137
SILVEX	12.74	12.72	12.80	0.125
2,4,5-T	13.10	13.08	13.15	0.108
DINOSEB	14.98	14.95	15.01	0.090
2,4-DB	13.78	13.77	13.83	0.096

2.2.4.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\040302\1G4751.D\ECD1A.CH Vial: 3
 Acq On : 3 Apr 2002 11:22 Operator: ECL
 Sample : WG115458-01 BLANK V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4751.D\ECD2B.CH Vial: 3
 Acq On : 3 Apr 2002 11:57 Operator: ECL
 Sample : ELAB HERB SURROGATE Inst : HP1
 Misc : ESS41-03 Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Apr 4 9:15 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:15:47 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
----------	------	------	--------	--------	------	------

System Monitoring Compounds

2) S	2,4-Dichlorophen	10.26	10.69	309353	361087	383.785	357.268
	Spiked Amount	500.000	Range	51 - 146	Recovery	= 76.76%	71.45%

Target Compounds

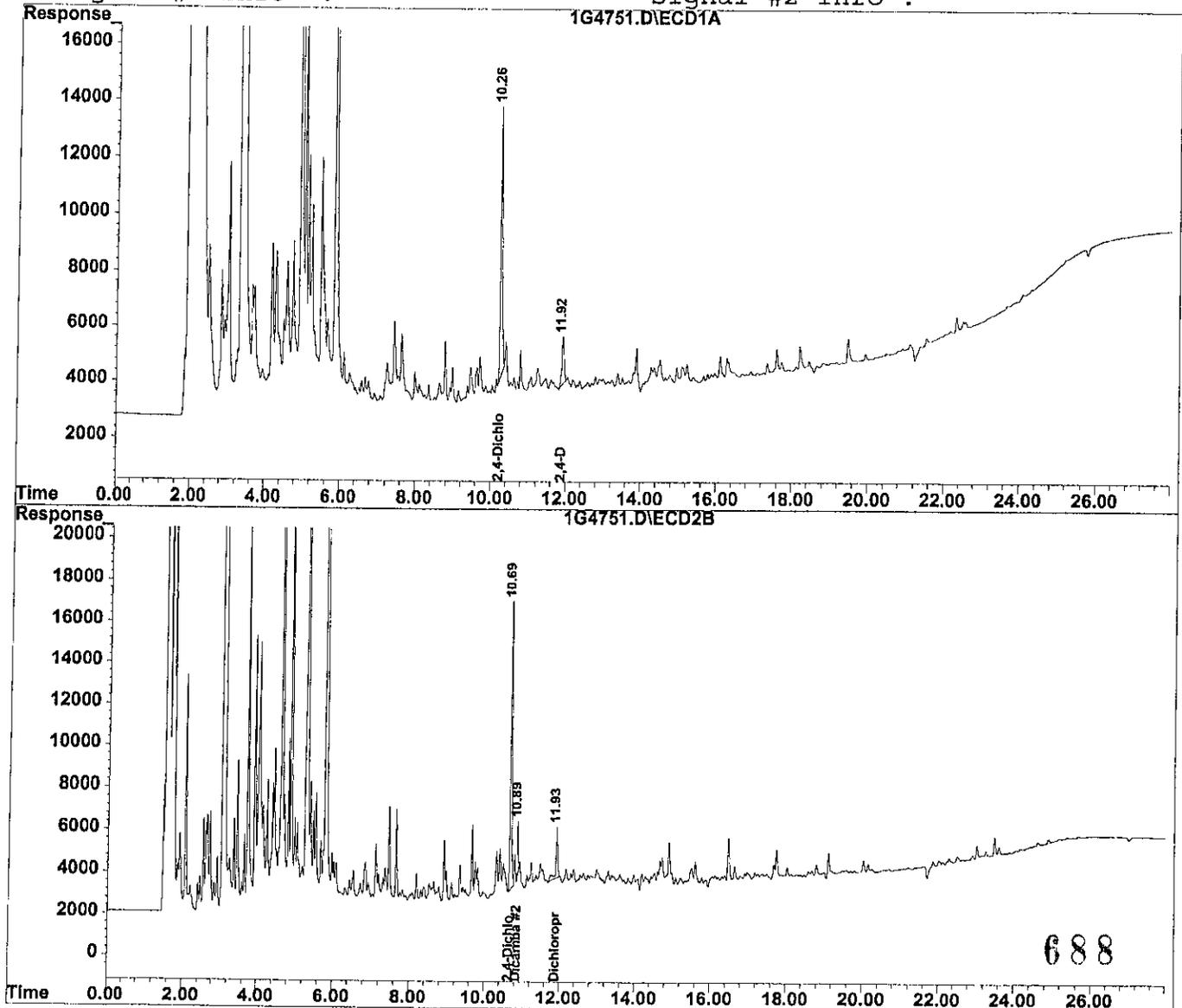
1)	Dalapon	0.00	0.00	0	0	N.D.	N.D.
3)	MCPA	0.00	0.00	0	0	N.D.	N.D.
4)	Dicamba	0.00	10.90f	0	48613	N.D.	9.339 #
5)	MCPA	0.00	0.00	0	0	N.D.	N.D.
6)	Dichloroprop	0.00	11.93	0	89341	N.D.	74.072 #
7)	2,4-D	11.92f	0.00	70080	0	61.673	N.D. #
8)	Pentachloropheno	0.00	0.00	0	0	N.D.	N.D.
9)	Silvex	0.00	0.00	0	0	N.D.	N.D.
10)	2,4,5-T	0.00	0.00	0	0	N.D.	N.D.
11)	Dinoseb	0.00	0.00	0	0	N.D.	N.D.
12)	2,4-DB	0.00	0.00	0	0	N.D.	N.D.

Data File : C:\HPCHEM\1\DATA\040302\1G4751.D\ECD1A.CH Vial: 3
Acq On : 3 Apr 2002 11:22 Operator: ECL
Sample : WG115458-01 BLANK V182 P165 Inst : HP1
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4751.D\ECD2B.CH Vial: 3
Acq On : 3 Apr 2002 11:57 Operator: ECL
Sample : ELAB HERB SURROGATE Inst : HP1
Misc : ESS41-03 Multiplr: 1.00
IntFile : events2.e
Quant Time: Apr 4 9:15 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
Title : CALIBRATION March 26, 2002
Last Update : Thu Apr 04 09:15:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8151.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data File : C:\HPCHEM\1\DATA\040302\1G4752.D\ECD1A.CH Vial: 4
 Acq On : 3 Apr 2002 11:57 Operator: ECL
 Sample : WG115458-02 LCS V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4752.D\ECD2B.CH Vial: 4
 Acq On : 3 Apr 2002 12:32 Operator: ECL
 Sample : WG115458-01 BLANK V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events2.e

Quant Time: Apr 4 9:08 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:08:31 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
2) S 2,4-Dichlorophen	10.27	10.82	393492	441320	488.168	436.652
Spiked Amount	500.000	Range	51 - 146	Recovery	= 97.63%	87.33%
Target Compounds						
1) Dalapon	3.84	3.64	446950	598172	314.523	377.934
3) MCPA	11.05	11.60	151395	201707	53.364	62.959
4) Dicamba	10.52	11.07	152145	307978	42.945	59.167 #
5) MCPP	10.84	11.26	139354	131211	74.109	57.109
6) Dichloroprop	11.56	12.06	534393	695484	574.338	576.624
7) 2,4-D	11.87	12.48	564656	622070	496.922	469.214
8) Pentachloropheno	12.12	12.96	654980	934245	53.185	44.772
9) Silvex	12.95	13.52	270614	412429	49.416	46.718
10) 2,4,5-T	13.30	14.00	291089	414790	56.360	54.659
11) Dinoseb	15.18	14.98	956204	1402237	218.025	234.496
12) 2,4-DB	13.97	14.62	262148	380502	525.127	583.536

Data File : C:\HPCHEM\1\DATA\040302\1G4753.D\ECD1A.CH Vial: 5
 Acq On : 3 Apr 2002 12:32 Operator: ECL
 Sample : WG115458-03 LCS DUP V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4753.D\ECD2B.CH Vial: 5
 Acq On : 3 Apr 2002 13:07 Operator: ECL
 Sample : WG115458-02 LCS V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Apr 4 9:11 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:11:37 2002
 Response via : Initial Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
----------	------	------	--------	--------	------	------

System Monitoring Compounds

2) S	2,4-Dichlorophen	10.43	10.82	396260	432335	491.602	427.762
	Spiked Amount	500.000	Range	51 - 146	Recovery	=	98.32% 85.55%

Target Compounds

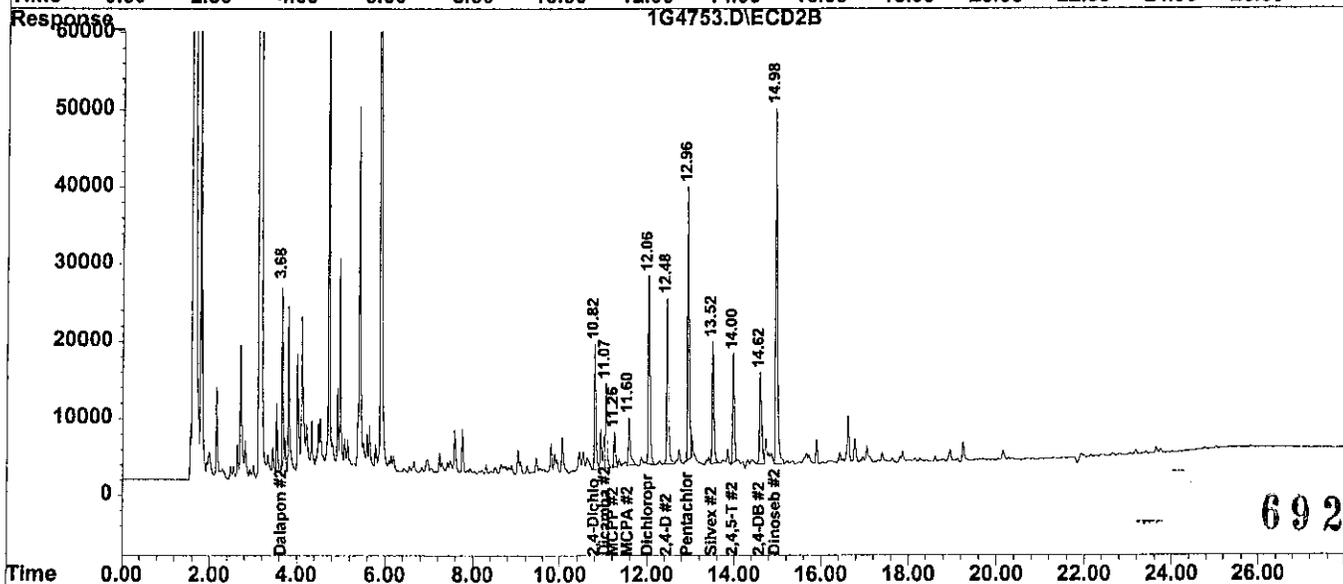
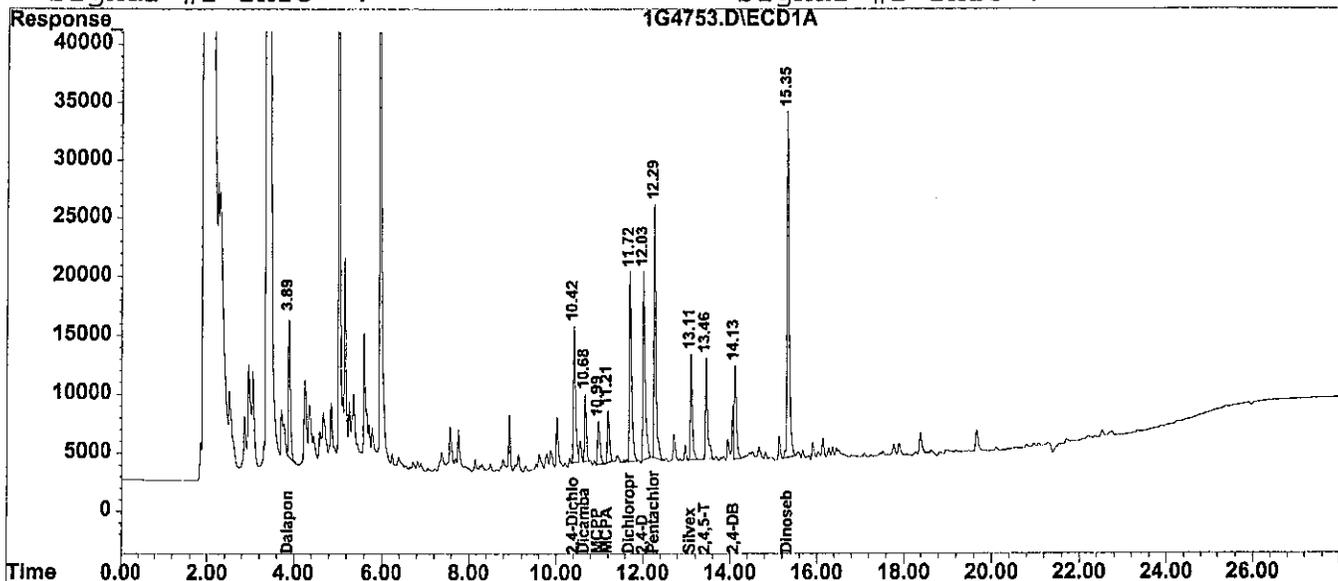
1)	Dalapon	3.90	3.68f	353403	382321	248.693	241.557
3)	MCPA	11.21	11.60	147576	198662	52.018	62.008
4)	Dicamba	10.68	11.07	155798	298997	43.976	57.441 #
5)	MCPP	10.99	11.27	140662	129795	74.805	56.493
6)	Dichloroprop	11.72	12.06	544392	669592	585.084	555.157
7)	2,4-D	12.03	12.48	561435	613660	494.087	462.871
8)	Pentachloropheno	12.29	12.96	639445	861131	51.924	41.269
9)	Silvex	13.11	13.52	273707	414186	49.981	46.917
10)	2,4,5-T	13.47	14.00	299967	367995	58.079	48.492
11)	Dinoseb	15.35	14.98	979913	1323177	223.431	221.275
12)	2,4-DB	14.13	14.62	283931	379542	568.763	582.062

Data File : C:\HPCHEM\1\DATA\040302\1G4753.D\ECD1A.CH Vial: 5
 Acq On : 3 Apr 2002 12:32 Operator: ECL
 Sample : WG115458-03 LCS DUP V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events.e

Data File : C:\HPCHEM\1\DATA\040302\1G4753.D\ECD2B.CH Vial: 5
 Acq On : 3 Apr 2002 13:07 Operator: ECL
 Sample : WG115458-02 LCS V182 P165 Inst : HP1
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : events2.e
 Quant Time: Apr 4 9:11 2002 Quant Results File: 8151.RES

Quant Method : C:\HPCHEM\1\METHODS\8151.M (Chemstation Integrator)
 Title : CALIBRATION March 26, 2002
 Last Update : Thu Apr 04 09:11:37 2002
 Response via : Multiple Level Calibration
 DataAcq Meth : 8151.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :



Injection Log

Directory: c:\hpchem\1\data\032602

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1g4734.d	1.	CC ✓ WG115123-01 HERBICIDE CCV	1,1 SOS56-44	26 Mar 102 13::2
2	2	1g4735.d	1.	✓ WG115123-02 HERB ICAL #5	1,1 SOS56-44	26 Mar 102 12::3
3	3	1g4736.d	1.	✓ WG115123-03 HERB ICAL #4	1,1 SOS56-44	26 Mar 102 12::1
4	4	1g4737.d	1.	✓ WG115123-04 HERB ICAL #3	1,1 SOS56-44	26 Mar 102 12::4
5	5	1g4738.d	1.	✓ WG115123-05 HERB ICAL #2	1,1 SOS56-44	26 Mar 102 12::2
6	6	1g4739.d	1.	✓ WG115123-06 HERB ICAL #1	1,1 SOS56-44	26 Mar 102 12::5
7	7	1g4740.d	1.	✓ WG115123-07 HERB ALT ICV	1,1 SOS58-09	26 Mar 102 12::3
8	8	1g4741.d	1.	WG115018-01 BLANK V182 P83	17,1 WATER	26 Mar 102 12::0
9	9	1g4742.d	1.	WG115018-02 LCS V182 P83	17,1 WATER	26 Mar 102 12::4
10	10	1g4743.d	1.	WG115018-03 LCS DUP V182 P83	17,1 WATER	26 Mar 102 12::1
11	11	1g4744.d	1.	WG114917-01 FILTCLP BLANK 3/21	17,1 WATER	26 Mar 102 12::5
12	12	1g4745.d	1.	L0203292-01	17,1 WATER	26 Mar 102 12::2
13	13	1g4746.d	1.	WG114928-01 TCLP BLANK 3/21	17,1 WATER	26 Mar 102 12::0
14	14	1g4747.d	1.	L0203388-01	17,1 WATER	26 Mar 102 12::4
15	15	1g4748.d	1.	✓ WG115123-08 HERB CCV	1,1 SOS56-44	26 Mar 102 13::1

EC2 3/27/02
note 3/2/02

Injection Log

Directory: c:\hpchem\1\data\040302

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1g4749.d	1.	✓ WG115555-01 HERB CCV	1,1 SOS56-44	3 Apr 102 12::2
2	2	1g4750.d	1.	✓ ELAB HERB SURROGATE	ESS41-03	3 Apr 102 13::4
3	3	1g4751.d	1.	WG115458-01 BLANK V182 P165	7,1 SOIL	3 Apr 102 13::2
4	4	1g4752.d	1.	WG115458-02 LCS V182 P165	7,1 SOIL	3 Apr 102 13::5
5	5	1g4753.d	1.	WG115458-03 LCS DUP V182 P165	7,1 SOIL	3 Apr 102 13::3
6	6	1g4754.d	1.	L0203450-01	7,1 SOIL	3 Apr 102 12::0
7	7	1g4755.d	1.	L0204001-01	7,1 SOIL	3 Apr 102 12::4
8	8	1g4756.d	1.	WG115542-01 BLANK V182 P171	17,1 WATER	3 Apr 102 12::1
9	9	1g4757.d	1.	WG115542-02 LCS V182 P171	17,1 WATER	3 Apr 102 12::5
10	10	1g4758.d	1.	→ WG115542-03 LCS DUP V182 P171	17,1 WATER	3 Apr 102 12::2
11	11	1g4759.d	1.	✓ WG115555-02 HERB CCV	1,1 SOS56-44	3 Apr 102 12::0
12	12	1g4760.d	1.	RR WG115474-01 TCLP BLANK 4/2	17,1 WATER	3 Apr 102 12::3
13	13	1g4761.d	1.	RR L0203560-03	17,1 WATER	3 Apr 102 12::1

Instrument stopped

ECZ 4/4/02
RNC 4/4/02

Parameter: Herb 5 SOP #: EXH02 Revision #: 10
 Extraction Analyst(s): DP TV/KD Analyst(s): DP
 Date/Time Extracted: 04/02/02 @ 0840 Date TV/KD: 04/02/02
 Spike/Surrogate Analyst: DP Witness: QSH
 Surrogate #: ESS0040-16 Earliest Hold Date: 01/03/02
 Spike #: A = ESS0040-15 Spike #: B = _____

Extraction Work Group WG 115458
 Analytical Work Group WG 115556

Extract Relinquished By: [Signature]
 Extract Received By & Date: [Signature] 4/13/02

	Sample ID	Test Code	pH ✓			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions ✓			Comments
			<2	N	>12						A	BN	N	
1	Blank		✓			50.03g	1mL	10mL	T				WG 115458-01	
2	LCS		✓			.04g	1mL		T				WG 115458-02	
3	LCS Dup		✓			.06g	1mL		T				WG 115458-03	
4	03-450-01	8151	✓			.09g			C					
5	04-001-01		✓			.08g			T					
6														
7														
8														
9														
10														
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16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
04/02/02

Methylene Chloride Lot #: _____
 Hexane Lot #: _____
 Ether Lot #: 41141
 Methanol Lot #: _____
 Solvent: _____ Lot #: _____
 Reagent: Isooctane Lot #: V04616
 Reagent: Dichloromethane Lot #: EK 2118
 Reagent: Silicic Acid Lot #: 2847 N24H04
 Acid: HCL Lot #: V44033
 Florisil Lot #: _____
 Silica Gel Lot #: _____
 IR Analyst / Date / Time: _____
 Dried Na₂SO₄ Lot #: Analyzed ER 2121

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B				
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	✓
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: [Signature]

Date: 4/3/02

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Extraction Notes For Volume # 182 Page # 165

General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

Supervisor Review: _____ Date: 698

Analyst: ECL
 Method: 8151
 Instrument: HP I
 Work Group: _____

WG 115556
 115583

	Analyst
System Performance Check	✓
Endrin & DDT Breakdown	NA
Initial Calibration	↓
Average RF	↓
Linear Reg or Higher Order Curve	↓
Second Source Standard % Difference	↓
Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Surrogates	✓
Calculations & Correct Factors	✓
Dilutions Run	NA
Reruns	↓
Check Sample Histories	↓
Ending Check Standards	✓
Excel Spreadsheets	✓
Case Narrative	✓
Corrective Action	✓
Results Reporting / Data Qualifiers	✓
WorkGroups Traceability	✓
Client Data Package Assembly	✓
Check for Completeness	✓

Primary Reviewer Initials & Date Checked ECL 4/4/02

Secondary Reviewer Initials & Date Checked JR 4/4/02

- ✓ Check for compliance with Method and project-specific requirements
- ✓ Check the completeness of the reported information
- ✓ Check the information for the report narrative
- ✓ Check the reasonableness of results

Supervisory Review Initials & Date Checked JR 4/4/02

Comments: _____

✓ - Checked & OK
 NA - Not Applicable
 DL - Diluted Out

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Example 8151 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = A_s / C_s$$

Where:

A_s = Area of the compound being measured in the standard
 C_s = Concentration of the compound being measured (ng/ml).

Example:

	10000
	100
RF	100

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(V_i)]$$

Example:

Where: A_x = Area of the compound being measured 10000
 V_f = Final volume of sample extract (mL). (prep log) 1
 D = Dilution factor for sample as a multiplier (10X = 10). 1
 RF = Response factor from ICAL calculated above. 100
 V_i = Initial volume of sample (mL). (prep log) 1000

$$C \text{ (ug/L)} = 0.1$$

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(W_i)]$$

Example:

Where: A_x = Area of the compound being measured 10000
 V_f = Final volume of sample extract (mL). 1
 D = Dilution factor for sample as a multiplier (10X = 10). 1
 RF = Response factor from ICAL calculated above. 100
 W_i = Initial weight of sample (g). 30

$$C \text{ (ug/kg)} = 3.333333$$

2.2.6 PRO QC Data (8015)

REPORT NARRATIVE
GC PETROLEUM RANGE ORGANICS

KEMRON Report No.: L0204001

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

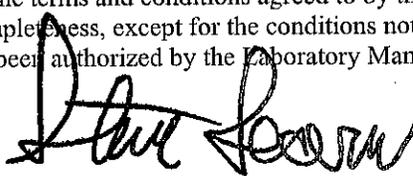
Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: An MS/MSD was not associated with this sample delivery group.
SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK

REVIEWED:



DATE:

4/4/02

Rev. 7/14/00

703

TRPH - GC DATA (FLA-PRO)

Login Number L0204001

A. QC Summary

- Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Holding Time Summary
- Surrogate Recovery Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Instrument Run Log
- Extraction Bench Sheet

B. Sample Data

- Target compound and surrogate results summary (See Summary Report)
- Chromatograms (RIC) and quantitation report

C. Standards Data

- Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- Retention Time Window Summary

D. Raw QC Data

- Method blank chromatogram and quantitation report
- LCS chromatogram and quantitation report
- MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: CLK Date: 4/4/02

METHOD BLANK SUMMARY

Login Number:L0204001
Blank File ID:2G19687
Date Analyzed:04/02/02
Time Analyzed:10:20
Analyst:CLK

Work Group:WG115499
Blank Sample ID:WG115412-01
Instrument ID:HP2
Method:8015 MOD

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG115412-02	2G19688	04/02/02 10:35	01
LCS2	WG115412-03	2G19689	04/02/02 10:50	01
027-EQBFS-01	L0204001-01	2G19690	04/02/02 11:06	01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115412-01
 Instrument ID: HP2 Run Time: 10:20 Method: 8015 MOD
 File ID: 2G19687 Analyst: CLK Matrix: Solid
 Workgroup (AAB#): WG115499 Units: ug/kg
 Contract #: _____ Cal ID: HP2-26-MAR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	4980	9960	4980	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	70.9	43 - 136	PASS

* Analyte detected above RDL
 ND Not detected at or above the reporting limit

706

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115412-02
 Instrument ID: HP2 Run Time: 10:35 Method: 8015 MOD
 File ID: 2G19688 Analyst: CLK Matrix: Solid
 Workgroup (AAB#): WG115499 Units: ug/kg
 Contract #: Cal ID: HP2 - 26-MAR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
TRPH-Florida PRO	136000	130000	95.7	63 - 153	

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	114	43 - 136	PASS

* Analyte outside control limits
 NS Analyte not spiked

707

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0204001 _____ Worknum: WG115499 _____ Method: 8015 MOD _____
 Instrument ID: HP2 _____ Cal ID: HP2-26-MAR-2002 _____ Matrix: Solid _____
 Analyst: CLK _____ Contract #: _____ Units: ug/kg _____
 Sample ID: WG115412-02 LCS File ID: 2G19688 Run Date: 04/02/2002 10:35 _____
 Sample ID: WG115412-03 LCS2 File ID: 2G19689 Run Date: 04/02/2002 10:50 _____

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
TRPH-Florida PRO	136000	130000	95.7	136000	121000	89.4	6.98	63 - 153	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
o-Terphenyl	114	108	43 - 136	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

708

KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8015 MOD

AAB#: WG115499

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	01-APR-02	14	3.10	02-APR-02	40	0.952	

* EXT = MISSED EXTRACTION HOLD TIME
 *ANAL = MISSED ANALYTICAL HOLD TIME

709

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0204001 _____
Instrument Id: HP2 _____
Workgroup (AAB#): WG115499 _____

Method: FLA-PRO _____
Matrix: SOLID _____

Sample Number	Dilution	Tag	1
L0204001-01	1.00	01	90.5
WG115412-01	1.00	01	70.9
WG115412-02	1.00	01	114
WG115412-03	1.00	01	108

Surrogates Surrogate Limits
1 - o-Terphenyl 43 - 136

Underline = Result out of surrogate limits

DL = surrogate diluted out

Method : C:\MSDCHEM\1
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 12:40:07 2002

Calibration Files
 5 =2G19585.D 50 =2G19584.D 100 =2G19583.D
 200 =2G19582.D 400 =2G19581.D 600 =2G19580.D

Compound	5	50	100	200	400	600	Avg	%RSD
1) H Petroleum Range	2.599	3.431	3.377	3.285	2.758	3.420	3.145 E4	11.72
2) s O-Terphenyl	2.787	2.811	2.957	2.676	1.993	2.979	2.700 E4	13.50
3) s n-Nonatriacontane							0.000 0	-1.00

(#) = Out of Range
 FLASHPRO.M

Wed Mar 27 16:53:01 2002

HP2

711 Page 1

Login Number: L0204001
File ID: 2G19586
ALT ID: WG115180-07
Units: mg/L

Instrument ID: HP2
Run Date: 03/26/2002
Run Time: 20:43
Analyst: CLK
Cal ID: HP2 - 26-MAR-02

Analyte	Expected	Found	RF	%D	Q
n-Nonatriacontane	200		0		
Petroleum Range	3400	2770	25600	18.5	

712

Login Number: L0204001
File ID: 2G19686
CCV ID: WG115514-01
Units: mg/L

Instrument ID: HP2
Run Date: 04/02/2002
Run Time: 10:04
Analyst: CLK
Cal ID: HP2 - 26-MAR-02

Analyte	Expected	Found	RF	%D	Q
n-Nonatriacontane	200		0		
Petroleum Range	3400	3070	28400	9.7	

* Exceeds %D Limit

713

Login Number: L0204001
File ID: 2G19692
CCV ID: WG115514-02
Units: mg/L

Instrument ID: HP2
Run Date: 04/02/2002
Run Time: 11:36
Analyst: CLK
Cal ID: HP2 - 26-MAR-02

Analyte	Expected	Found	RF	%D	Q
n-Nonatriacontane	200		0		
Petroleum Range	3400	3080	28500	9.4	

* Exceeds %D Limit

714

1	1	2g19548.d	1.	NA CH2CL2	1,1	26 Mar 102 13::2
2	1	2g19549.d	1.	↓ CH2CL2	1,1	26 Mar 102 13::4
3	2	2g19550.d	1.	✓ win def std	1,1 NS 14-41	26 Mar 102 13::5
4	3	2g19551.d	1.	✓ JP-4 2000ppm Qualitative STD	1,1 SOS 59-03	26 Mar 102 12::0
5	4	2g19552.d	1.	WG115131-03 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::1
6	5	2g19553.d	1.	WG115131-06 10000ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::2
7	6	2g19554.d	1.	WG115131-05 5000ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::3
8	7	2g19555.d	1.	WG115131-04 2500ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::4
9	8	2g19556.d	1.	WG115131-02 500ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::0
10	9	2g19557.d	1.	WG115131-01 100ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::1
11	10	2g19558.d	1.	WG115131-07 1000ppm DRO Alt Source STD	1,1 SOS 58-20	26 Mar 102 12::2
12	11	2g19559.d	1.	RR DRO SPK @ 1000ppm ESS0041-02	1,1	26 Mar 102 12::3
13	12	2g19560.d	1.	✓ L0203345-01 WATER DRO	1,1	26 Mar 102 12::5
14	13	2g19561.d	1.	↓ L0203345-03 WATER DRO	1,1	26 Mar 102 12::0
15	14	2g19562.d	1.	↓ L0203345-04 WATER DRO	1,1	26 Mar 102 12::1
16	15	2g19563.d	1.	↓ L0203345-02 WATER DRO	1,1	26 Mar 102 12::2
17	1	2g19564.d	1.	NA CH2CL2	1,1	26 Mar 102 12::3
18	1	2g19565.d	1.	NA CH2CL2	1,1	26 Mar 102 12::4
19	4	2g19566.d	1.	✓ WG115131-08 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::5
20	16	2g19567.d	1.	RR L0203407-02 WATER DRO	1,1	26 Mar 102 12::2
21	17	2g19568.d	20.	✓ L0203407-02 WATER DRO 20X	1,20	26 Mar 102 12::3
22	1	2g19569.d	1.	NA CH2CL2	1,1	26 Mar 102 12::4
23	1	2g19570.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
24	4	2g19571.d	1.	✓ WG115131-09 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::0
25	18	2g19572.d	1.	↓ L0203340-01 SOIL DRO	7,1 SOIL	26 Mar 102 12::2
26	19	2g19573.d	1.	↓ L0203340-02 SOIL DRO	7,1 SOIL	26 Mar 102 12::3
27	20	2g19574.d	1.	↓ L0203340-03 SOIL DRO	7,1 SOIL	26 Mar 102 12::4
28	1	2g19575.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
29	1	2g19576.d	1.	NA CH2CL2	1,1	26 Mar 102 12::0
30	4	2g19577.d	1.	✓ WG115131-10 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::1
31	21	2g19578.d	1.	RR DRO SPK @ 1000 ESS0041-02	1,1	26 Mar 102 12::3
32	1	2g19579.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
33	2	2g19580.d	1.	✓ WG115180-06 600ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::1
34	3	2g19581.d	1.	WG115180-05 400ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::2
35	4	2g19582.d	1.	WG115180-04 200ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::4
36	5	2g19583.d	1.	WG115180-03 100ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::5
37	6	2g19584.d	1.	WG115180-02 50ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::1
38	7	2g19585.d	1.	WG115180-01 5ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::2
39	8	2g19586.d	1.	WG115180-07 200ppm PRO Alt Source STD	1,1 SOS 59-1	26 Mar 102 12::4
40	9	2g19587.d	1.	WG114738-02 BLK 3/19 V182P27	1,1	26 Mar 102 12::5
41	10	2g19588.d	1.	WG114738-03 LCS 3/19 V182P27	1,1	26 Mar 102 12::1
42	11	2g19589.d	1.	L0203326-01 PRO WATER	1,1	26 Mar 102 12::2
43	12	2g19590.d	1.	L0203326-02 PRO WATER	1,1	26 Mar 102 12::4
44	13	2g19591.d	1.	L0203327-01 PRO WATER	1,1	26 Mar 102 12::5
45	14	2g19592.d	1.	↓ L0203327-02 PRO WATER	1,1	26 Mar 102 13::1
46	1	2g19593.d	1.	NA CH2CL2	1,1	26 Mar 102 13::3
47	1	2g19594.d	1.	NA CH2CL2	1,1	26 Mar 102 13::4
48	4	2g19595.d	1.	✓ WG115180-08 200ppm PRO CCV	1,1 SOS 59-6	26 Mar 102 13::0
49	15	2g19596.d	1.	↓ L0203327-03 PRO WATER	1,1	26 Mar 102 13::1
50	16	2g19597.d	1.	WG114738-01 L0203327-04 PRO WATER REF	1,1	26 Mar 102 13::3
51	17	2g19598.d	1.	↓ WG114738-04 L0203327-05 PRO WATER MS	1,1	26 Mar 102 13::4

5	18	2g19599.d	1.	✓	WG114738-05 L0203327-06 PRO WATER MSD	1,1	27 Mar 102 13::0
53	19	2g19600.d	1.	↓	L0203327-07 PRO WATER	1,1	27 Mar 102 13::1
54	20	2g19601.d	1.	↓	L0203327-08 PRO WATER	1,1	27 Mar 102 13::3
55	21	2g19602.d	1.	↓	L0203327-09 PRO WATER	1,1	27 Mar 102 13::4
56	1	2g19603.d	1.	NA	CH2CL2	1,1	27 Mar 102 12::0
57	4	2g19604.d	1.	✓	WG115180-09 200ppm CCV	1,1 SOS 59-6	27 Mar 102 12::1
58	22	2g19605.d	1.	NA	500ppm PRO ALT Check 1	1,1 SOS 59-1	27 Mar 102 12::5
59	23	2g19606.d	1.		600ppm PRO STD Check	1,1 SOS 59-6	27 Mar 102 13::2
60	24	2g19607.d	1.	↓	500ppm PRO ALT CHECK II	1,1 STOCK (New Vial)	27 Mar 102 13::3
61	25	2g19608.d	1.	↓	200ppm PRO STD CHK	1,1 SOS 59-6 Remix	27 Mar 102 13::5

CHK
3/27/02
REC 3/27/02

Analysis Date/Time 3/26/02 Instrument ID HP7 Column ID RTX-5 Data Subdirectory 032602

Analyst Initials _____
SOP # GCS09 Rev. # 8081A _____ SOP # GCS10 Rev. # 8082 _____
SOP # GCS04 Rev. # 8151A _____ SOP # GCS05 Rev. # TNRCC 1005 _____
SOP # GCS03 Rev. # 2 PRO _____ SOP # GCS02 Rev. # 3 8015B Mod (DRO) _____
SOP # GCS02 Rev. # 8015B Mod (Alcohol) _____ SOP # GCS07 Rev. # 8011 _____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check	Additional Maintenance
<input checked="" type="checkbox"/> Gases >500 psi	Problem: <u>Injection Port Pressure low</u>
Preventative Maintenance	
<input type="checkbox"/> Change o-ring	
<input checked="" type="checkbox"/> Change liner	
<input checked="" type="checkbox"/> Change septum	
<input type="checkbox"/> Clip column (____ cm)	
<input checked="" type="checkbox"/> Injection port seal (goldseal)	Action Taken: <u>Replaced instrument weld, Replaced</u>
<input type="checkbox"/> Change gases _____	<u>pre-column, changed Gold Seal</u>
Returned To Control?	
Yes <input checked="" type="checkbox"/> No _____	

Comments

DRO SPK @ 1000 ppm ESS0041-02, low (2g19559)

LO203467-02 WATER DRG, Needs 20x
↓ -02 ↓ ↓ 20x, Dilution based, Reported, SS DL

DRO SPK @ 1000 ESS0041-02, high (2g19578)

F.I.s (2g19665 - 2g19668), (Check study)

Reviewed By: 717
7248 C 3/27/02

1	1	2g19684.d	1.	NA MECL2	1,1	2 Apr 102 12::3
2	2	2g19685.d	1.	✓ win def std	1,1 NS 14-41	2 Apr 102 12::4
3	3	2g19686.d	1.	WG115514-01 200ppm PRO CCV	1,1 SOS 59-6	2 Apr 102 13::0
4	4	2g19687.d	1.	WG115412-01 BLK 4/1 V182P157	7,1 SOIL	2 Apr 102 13::2
5	5	2g19688.d	1.	WG115412-02 LCS 4/1 V182P157	7,1 SOIL	2 Apr 102 13::3
6	6	2g19689.d	1.	WG115412-03 LCS DUP 4/1 V182P157	7,1 SOIL	2 Apr 102 13::5
7	7	2g19690.d	1.	L0204001-01 PRO SOIL	7,1 SOIL	2 Apr 102 13::0
8	1	2g19691.d	1.	NA MECL2	1,1	2 Apr 102 13::2
9	3	2g19692.d	1.	✓ WG115514-02 200ppm PRO CCV	1,1 SOS 59-6	2 Apr 102 13::3

CLX
4/2/02
REC 4/2/02

Parameter: TKU-S SOP #: E1800 Revision #: 1
 Extraction Analyst(s): CAF TV/KD Analyst(s): CAF, DP
 Date/Time Extracted: 4-01-02 @ 12:15 Date TV/KD: 04/02/02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-18 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-19 Spike #: B = ---

Extraction Work Group WG 115712
 Analytical Work Group WG 115499

Extract Relinquished By: DP
 Extract Received By & Date: EC 4/1/02

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	Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					25.09g	1mL		1mL	T				WG 15412-01
2	LCS					1.00g	I	1mL	I	T				WG -02
3	LCS DUP					1.03g	I	I	I	T				Wt -03
4	04-001-01	FLA-PRO				1.07g	I		I	C				
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
 04/01/02

Methylene Chloride Lot #: 42015
 Hexane Lot #: ---
 Ether Lot #: ---
 Methanol Lot #: ---
 Solvent: --- Lot #: ---
 Reagent: --- Lot #: ---
 Reagent: --- Lot #: ---
 Reagent: --- Lot #: ---
 Acid: --- Lot #: ---
 Florisil Lot #: ---
 Silica Gel Lot #: ---
 IR Analyst / Date / Time: ---
 Dried Na₂SO₄ Lot #: CA2685

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	✓			
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02 720

2.2.6.1 QC Summary

2.2.6.2 Sample Data

Acq On : 2 Apr 2002 11:06
 Sample : L0204001-01 PRO SOIL
 Misc : 7,1 SOIL
 IntFile : PETRO.E
 Quant Time: Apr 2 13:08 2002

Operator: CLK
 Inst : HP2
 Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Tue Apr 02 13:07:40 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.76	488731	18.098 ppb
Spiked Amount 20.000	Range 43 - 136	Recovery =	90.49%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	6334195	201,407 ppb

724

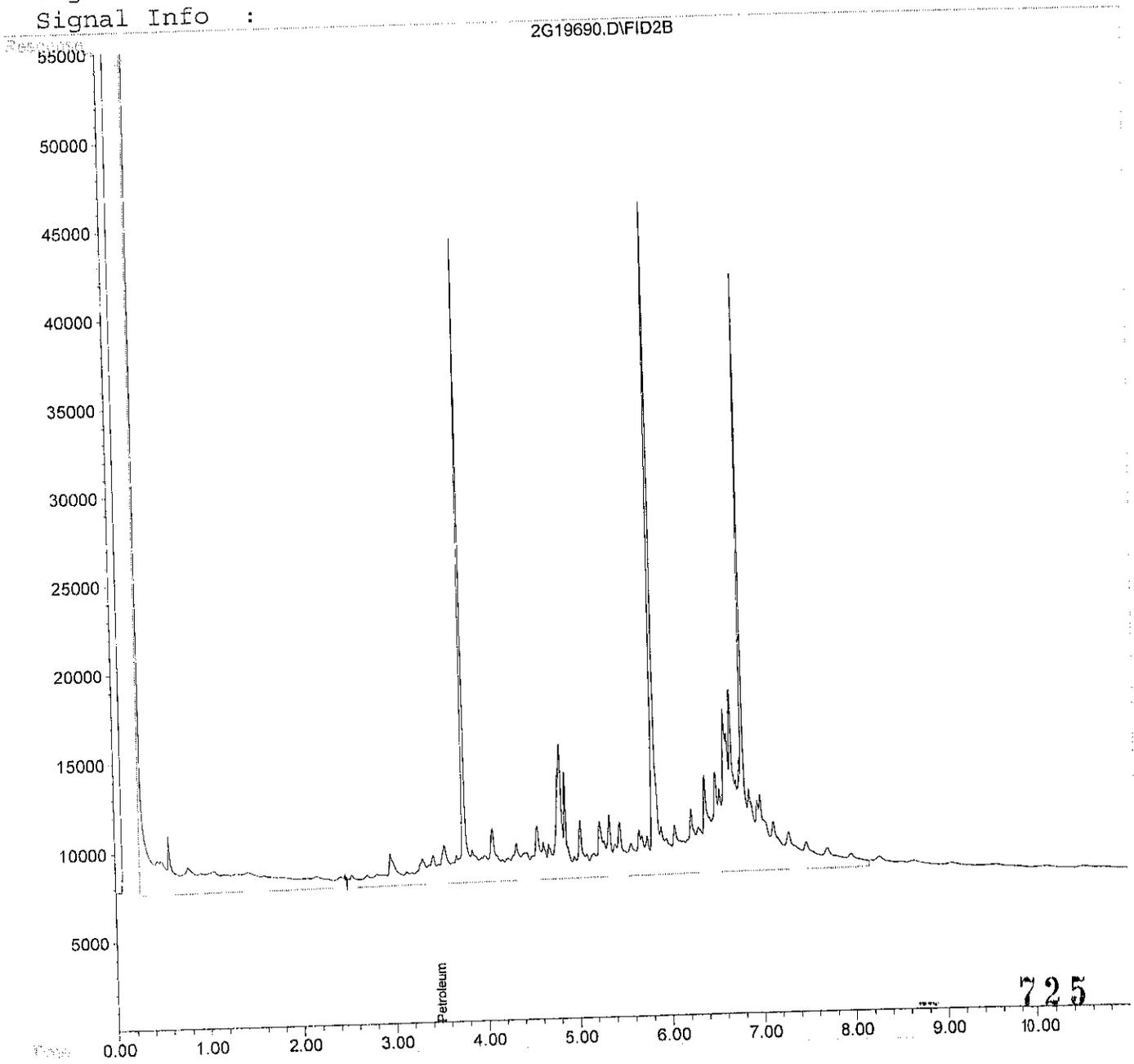
Data File :
Acq On : 2 Apr 2002 11:06
Sample : L0204001-01 PRO SOIL
Misc : 7,1 SOIL
IntFile : PETRO.E
Quant Time: Apr 2 13:08 2002

Operator: CLR
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:07:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



2.2.6.3 Standards Data

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 12:40:07 2002

Calibration Files
 5 =2G19585.D 50 =2G19584.D 100 =2G19583.D
 200 =2G19582.D 400 =2G19581.D 600 =2G19580.D

Compound		5	50	100	200	400	600	Avg		%RSD
1) H	Petroleum Range	2.599	3.431	3.377	3.285	2.758	3.420	3.145	E4	11.72
2) s	O-Terphenyl	2.787	2.811	2.957	2.676	1.993	2.979	2.700	E4	13.50
3) s	n-Nonatriacontane							0.000	0	-1.00

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(#) = Out of Range
 FLASHPRO.M

Wed Mar 27 16:53:01 2002

HP2

Page 1

Data File : C:\HPCHEM\1\METHODS\FLASHPRO.M
 Acq On : 26 Mar 2002 19:10 Operator: CLK
 Sample : WG115180-06 600ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:23:38 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.71	17874205	661.898 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery	= 3309.49%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.48	348822762	11091.432 ppb

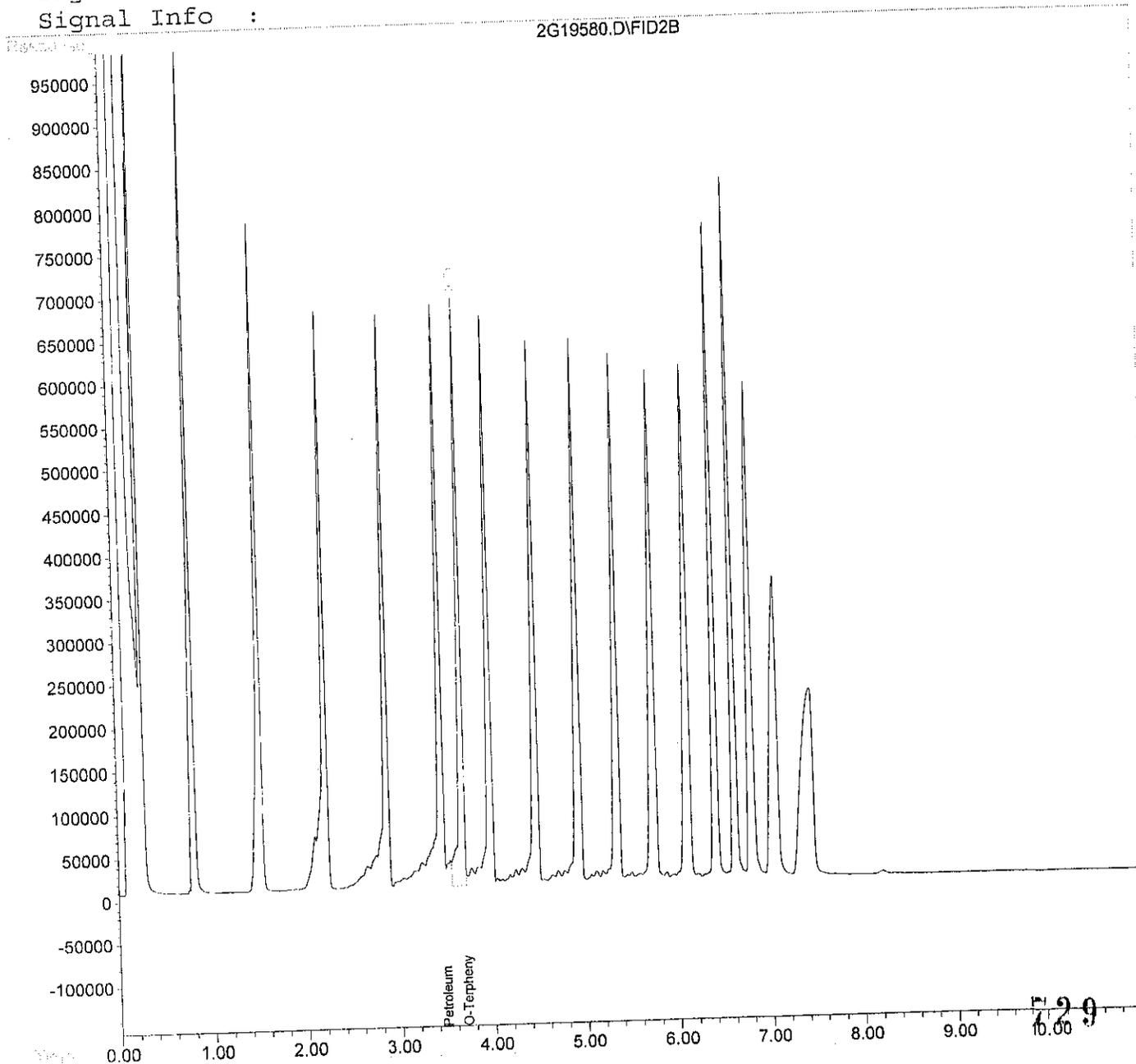
728

Data File : C:\MSDCHEM\...
Acq On : 26 Mar 2002 19:10
Sample : WG115180-06 600ppm PRO STD
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:23:38 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\METHODS\FLASHPRO.M
 Acq On : 26 Mar 2002 19:26 Operator: CLK
 Sample : WG115180-05 400ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:05:41 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

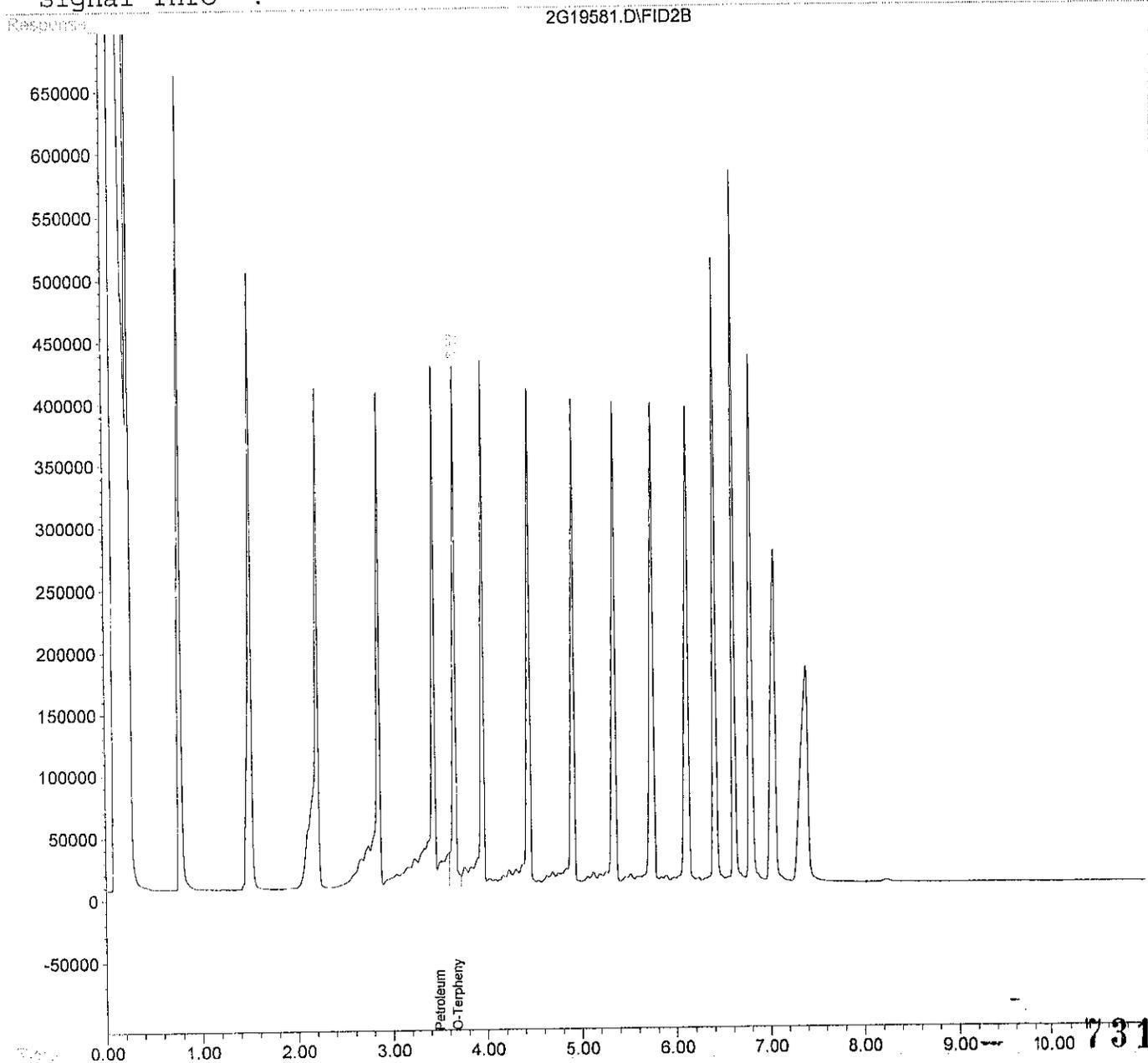
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.67	7972510	295.229 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery	= 1476.15%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000	Recovery	=	0.00%
Target Compounds			
1) H Petroleum Range	3.48	187550130	5963.485 ppb

730

Data File : C:\MSDCHEM\1\DATA\260302\260302.D
Acq On : 26 Mar 2002 19:26 Operator: CLK
Sample : WG115180-05 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:05:41 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 26 Mar 2002 19:41 Operator: CLK
 Sample : WG115180-04 200ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:05:41 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.65	5351263	198.162 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	990.81%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	111694516	3551.523 ppb

732

(f)=RT Delta > 1/2 Window

2G19582.D FLASHPRO.M

Wed Mar 27 11:33:23 2002

(m)=manual int.

HP2

Page 1

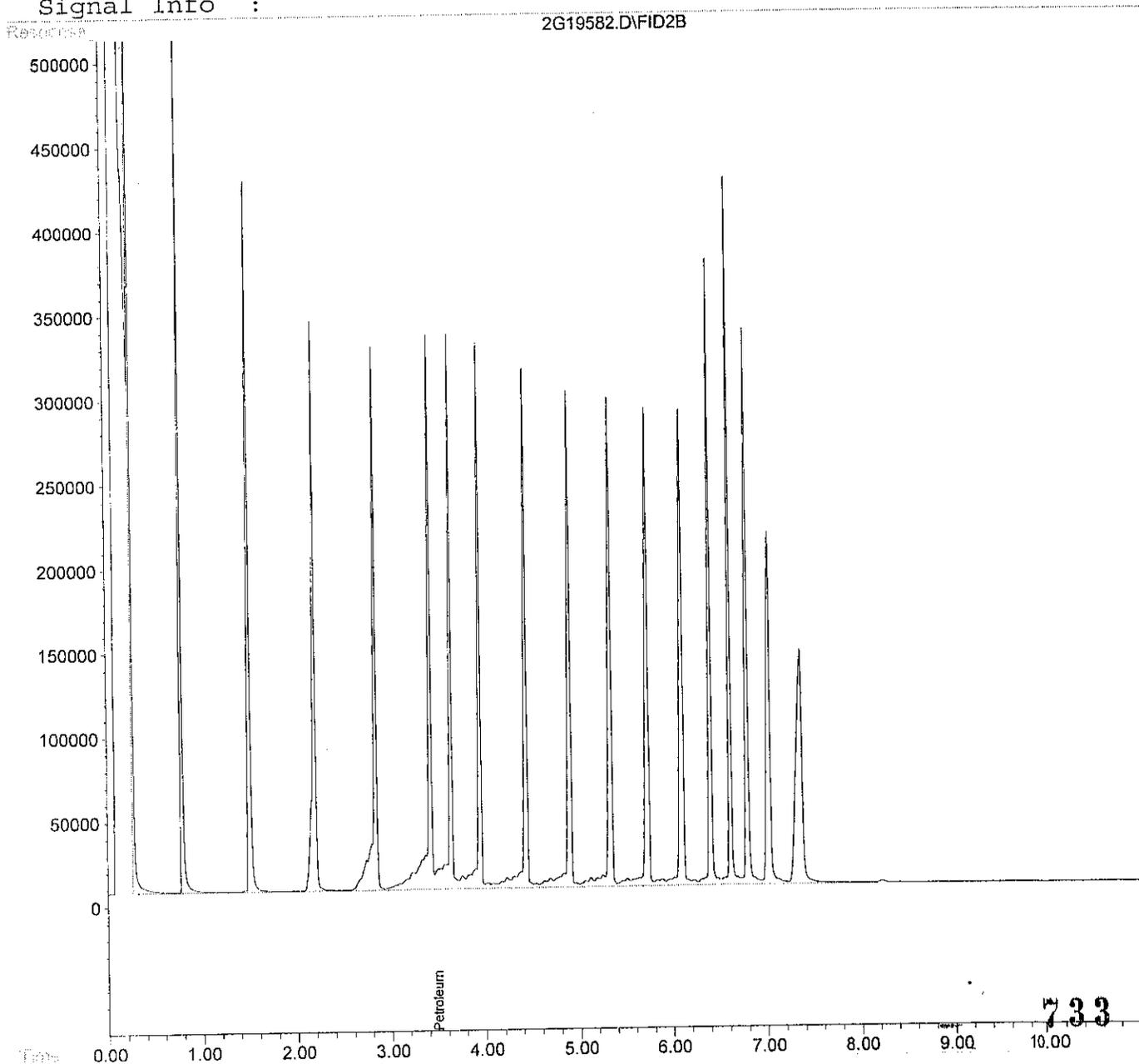
Data File : C:\HPCHEM\1\DATA\2002\03\26\260202.D
Acq On : 26 Mar 2002 19:41
Sample : WG115180-04 200ppm PRO STD
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:05:41 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 26 Mar 2002 19:56 Operator: CLK
 Sample : WG115180-03 100ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:05:41 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.66	2957241	109.509 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	547.55%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000	Recovery =		0.00%
Target Compounds			
1) H Petroleum Range	3.48	57410555	1825.469 ppb

734

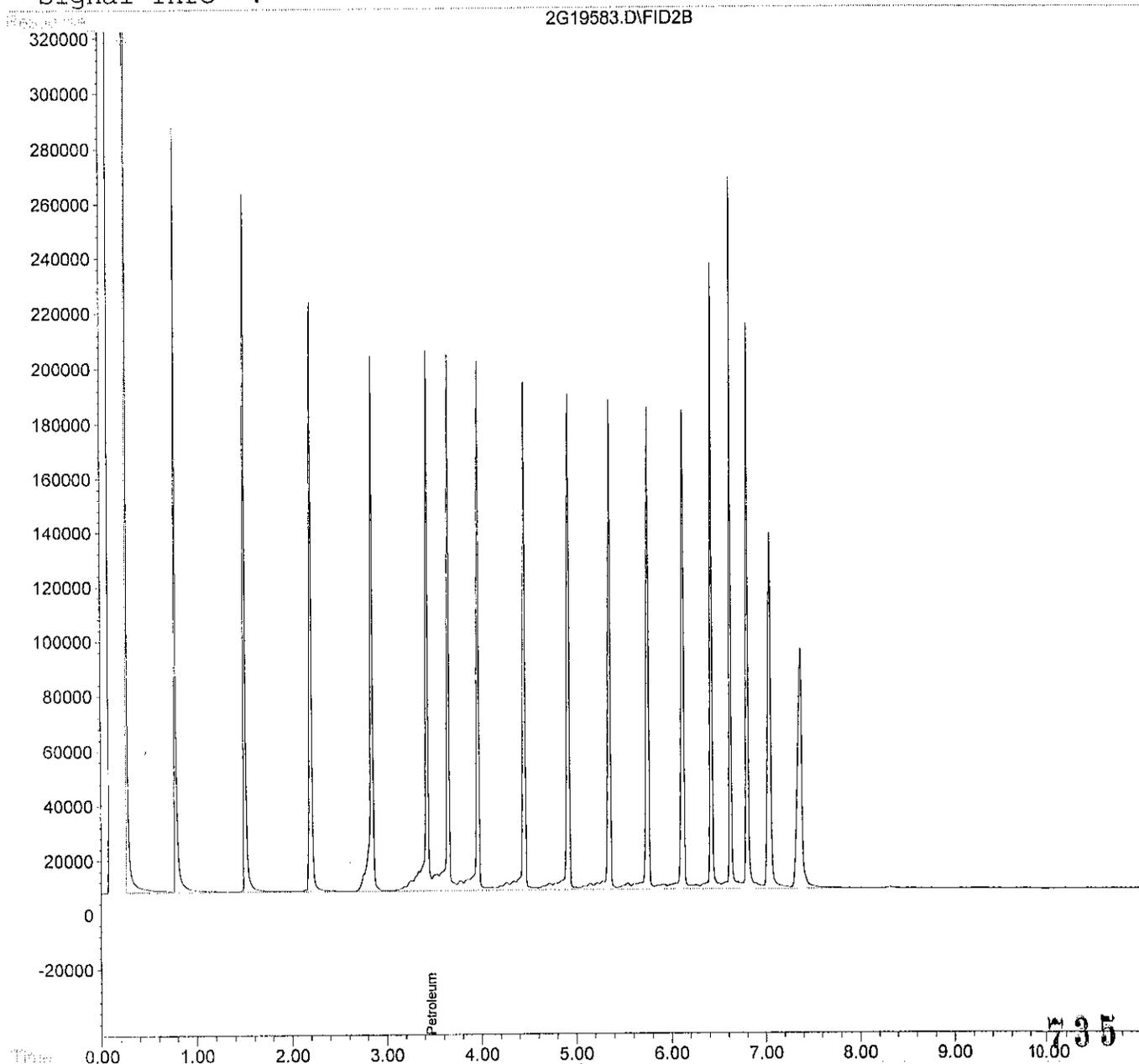
Acq On : 26 Mar 2002 19:56
Sample : WG115180-03 100ppm PRO STD
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:05:41 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 26 Mar 2002 20:12 Operator: CLK
 Sample : WG115180-02 50ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:05:41 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.66	1405349	52.041 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	260.21%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	29163598	927.308 ppb

736

(f)=RT Delta > 1/2 Window

2G19584.D FLASHPRO.M

Wed Mar 27 11:33:32 2002

(m)=manual int.

HP2

Page 1

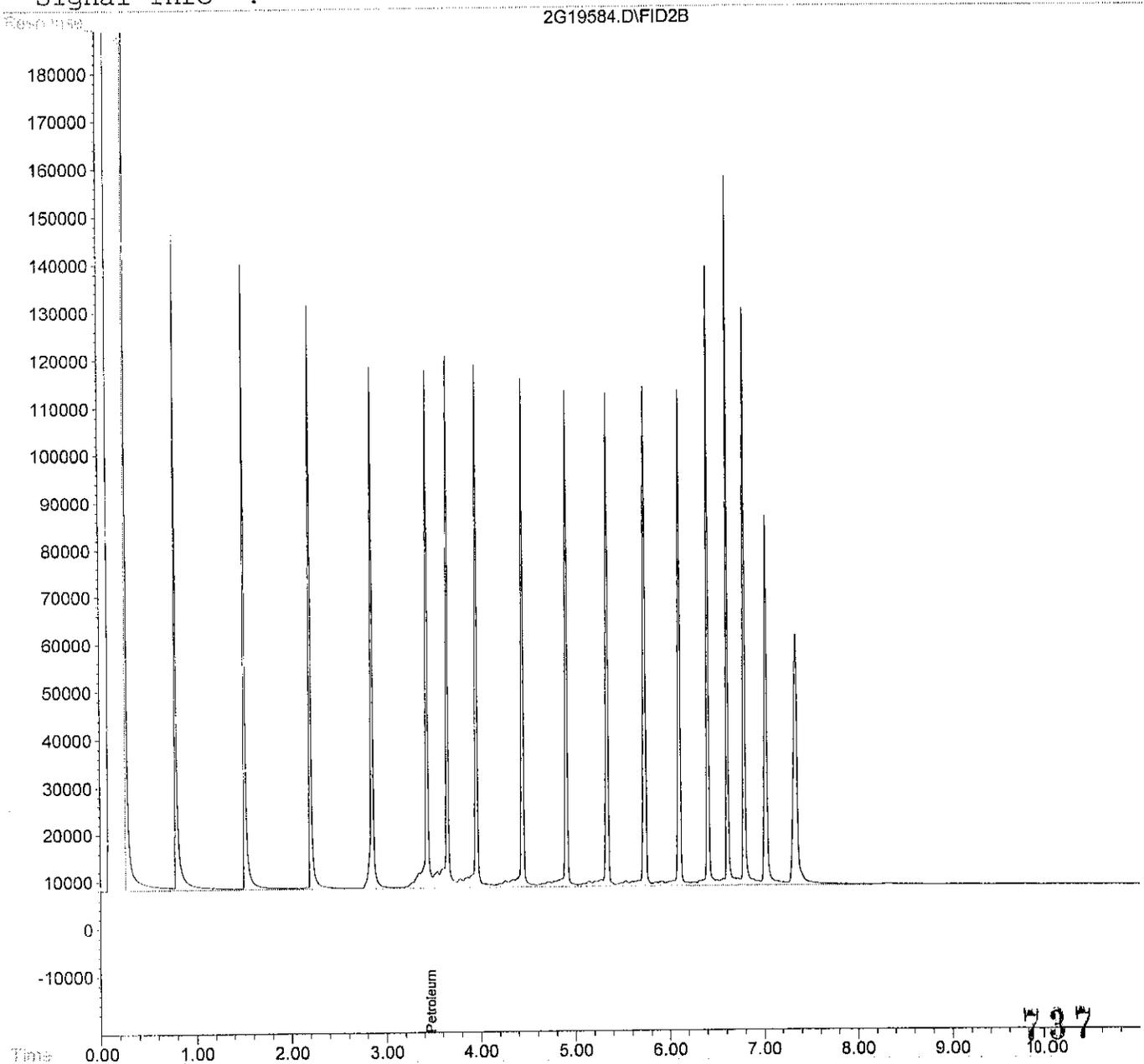
Data File : C:\MSDCHEM\1\...
Acq On : 26 Mar 2002 20:12
Sample : WG115180-02 50ppm PRO STD
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:05:41 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File :
 Acq On : 26 Mar 2002 20:27 Operator: CLK
 Sample : WG115180-01 5ppm PRO STD Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 09:05:41 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.66	139347	5.160 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	25.80%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	2208890	<MDL ppb

738

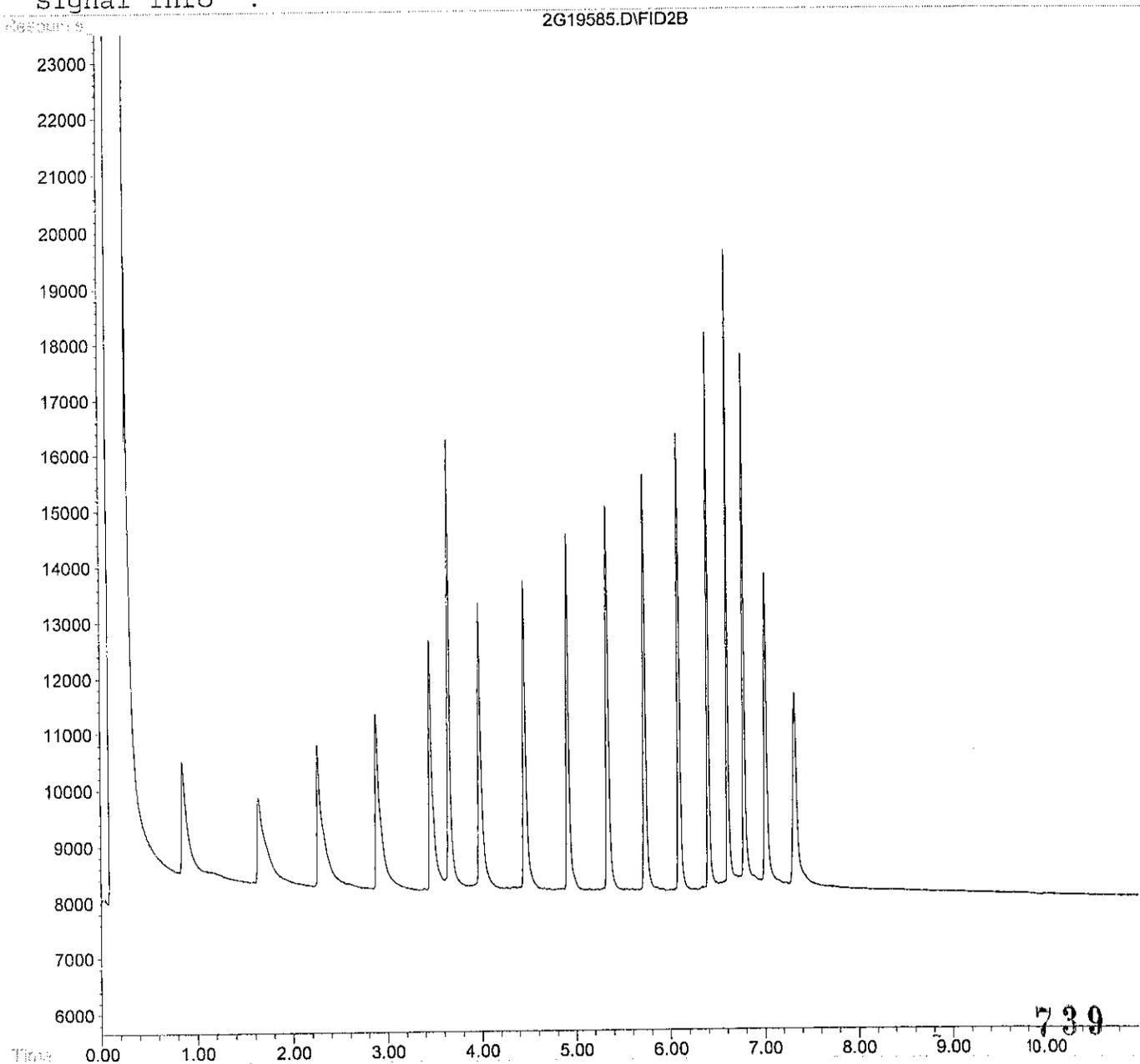
Acq On : 26 Mar 2002 20:27
Sample : WG115180-01 5ppm PRO STD
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Mar 27 11:33 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 09:05:41 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\20020327\20020327.D
Acq On : 26 Mar 2002 20:43
Sample : WG115180-07 200ppm PRO Alt Source STD
Misc : 1,1 SOS 59-1
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 11:36:35 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 H Petroleum Range	3400.000	2770.051	18.5#	78	0.00
2 s O-Terphenyl	200.000	2.666	98.7#	1	-0.03

CLK
3/28/02
Limit 20%

740

Data File : C:\MSDCHEM\1\...
Acq On : 26 Mar 2002 20:43
Sample : WG115180-07 200ppm PRO Alt Source STD
Misc : 1,1 SOS 59-1
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 11:36:35 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

741

Data File : C:\MSDCHEM\...
 Acq On : 26 Mar 2002 20:43 Operator: CLK
 Sample : WG115180-07 200ppm PRO Alt Source STD Inst : HP2
 Misc : 1,1 SOS 59-1 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Mar 27 11:40 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Wed Mar 27 11:36:35 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

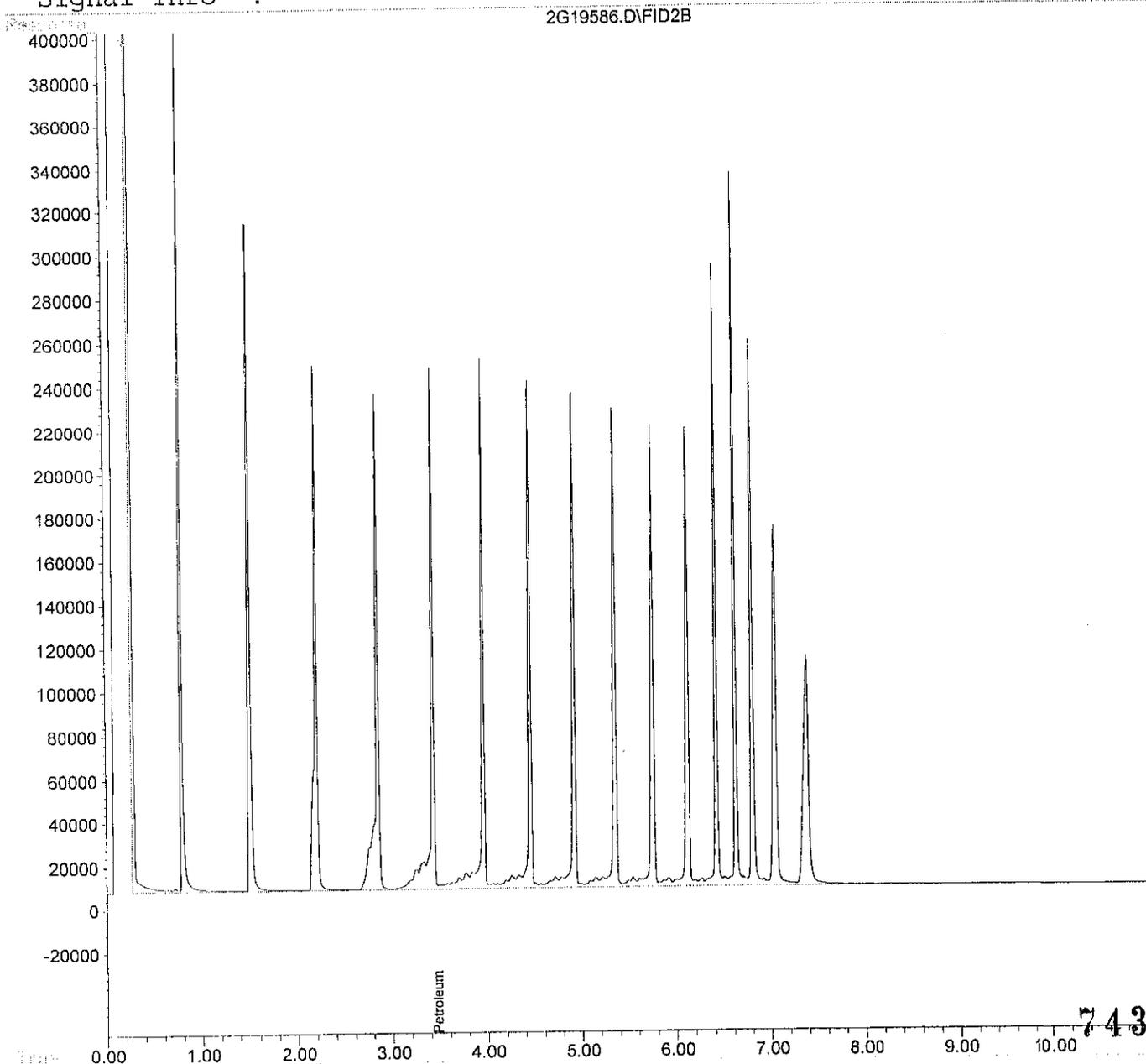
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.63	71990	2.666 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	13.33%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	87117421	2770.051 ppb

742

Acq On : 26 Mar 2002 20:43 Operator: CLK
Sample : WG115180-07 200ppm PRO Alt Source STD Inst : HP2
Misc : 1,1 SOS 59-1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Mar 27 11:40 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Wed Mar 27 11:36:35 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 10:04
Sample : WG115514-01 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Mon Apr 01 17:44:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 H	Petroleum Range	3400.000	3066.778	9.8	86	0.00
2 s	O-Terphenyl	200.000	182.199	8.9	92	0.00

744

(#) = Out of Range
2G19686.D FLASHPRO.M

SPCC's out = 0 CCC's out = 0
Tue Apr 02 13:06:04 2002 HP2

Page 1

Acq On : 2 Apr 2002 10:04
Sample : WG115514-01 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Mon Apr 01 17:44:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

745

(#) = Out of Range
2G19686.D FLASHPRO.M SPCC's out = 0 CCC's out = 0
Tue Apr 02 13:06:04 2002 HP2 Page 2

Acq On : 2 Apr 2002 10:04 Operator: CLK
 Sample : WG115514-01 200ppm PRO CCV Inst : HP2
 Misc : 1,1 SOS 59-6 Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Apr 2 13:05 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Mon Apr 01 17:44:27 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.79	4920183	182.199 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery	= 911.00%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.48	96449418	3066.778 ppb

746

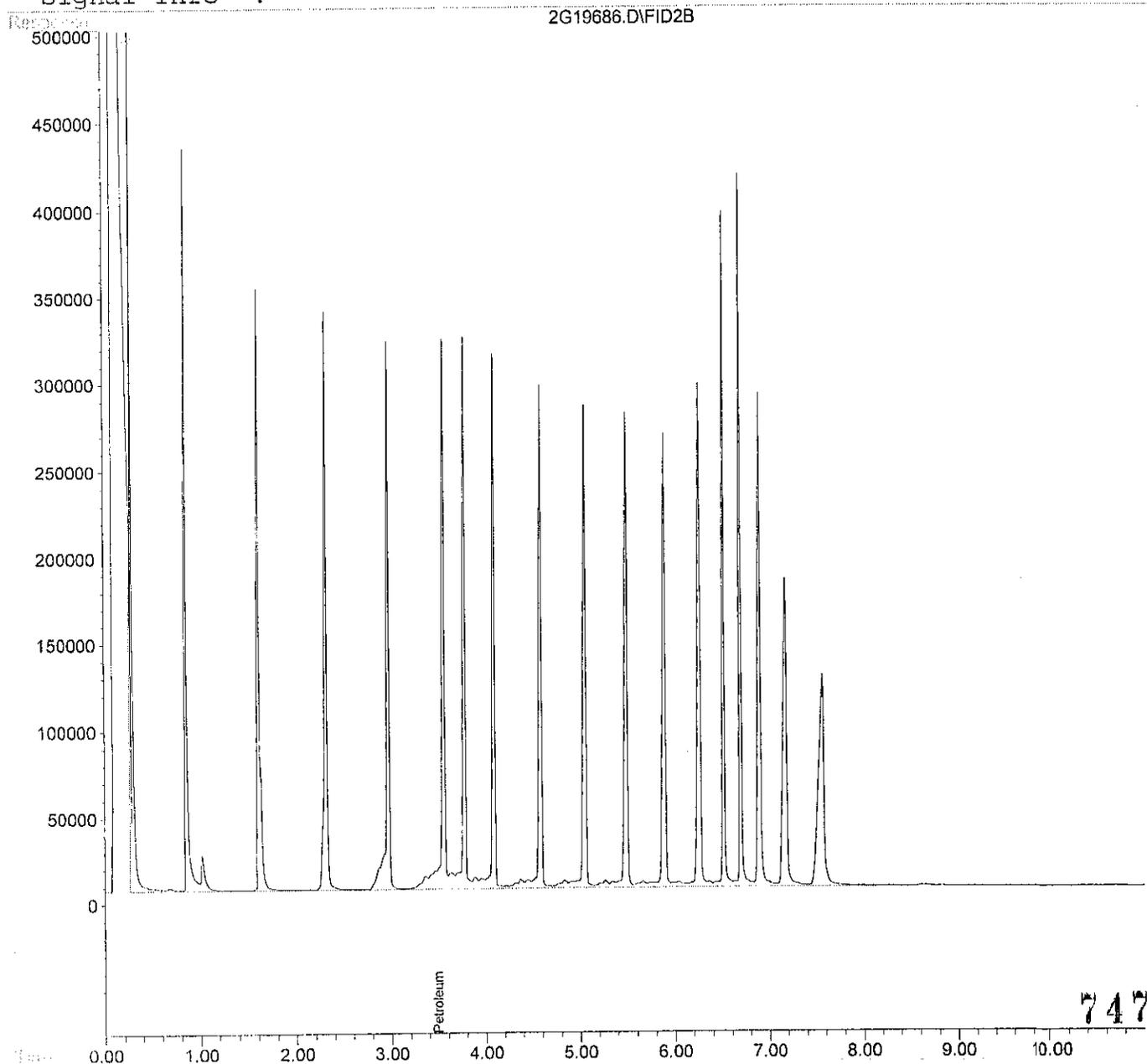
Acq On : 2 Apr 2002 10:04
Sample : WG115514-01 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Apr 2 13:05 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Mon Apr 01 17:44:27 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 11:36
Sample : WG115514-02 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:09:10 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 H	Petroleum Range	3400.000	3083.842	9.3	87	0.00
2 s	O-Terphenyl	200.000	186.658	6.7	94	0.00

748

(#) = Out of Range
2G19692.D FLASHPRO.M

SPCC's out = 0 CCC's out = 0
Tue Apr 02 13:09:30 2002 HP2

Page 1

Acq On : 2 Apr 2002 11:36
Sample : WG115514-02 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:09:10 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

749

(#) = Out of Range
2G19692.D FLASHPRO.M

SPCC's out = 0 CCC's out = 0
Tue Apr 02 13:09:30 2002 HP2

Page 2

Acq On : 2 Apr 2002 11:36
Sample : WG115514-02 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Apr 2 13:09 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:09:10 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
2) s O-Terphenyl	3.79	5040608	186.658 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery =	933.29%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	96986073	3083.842 ppb

750

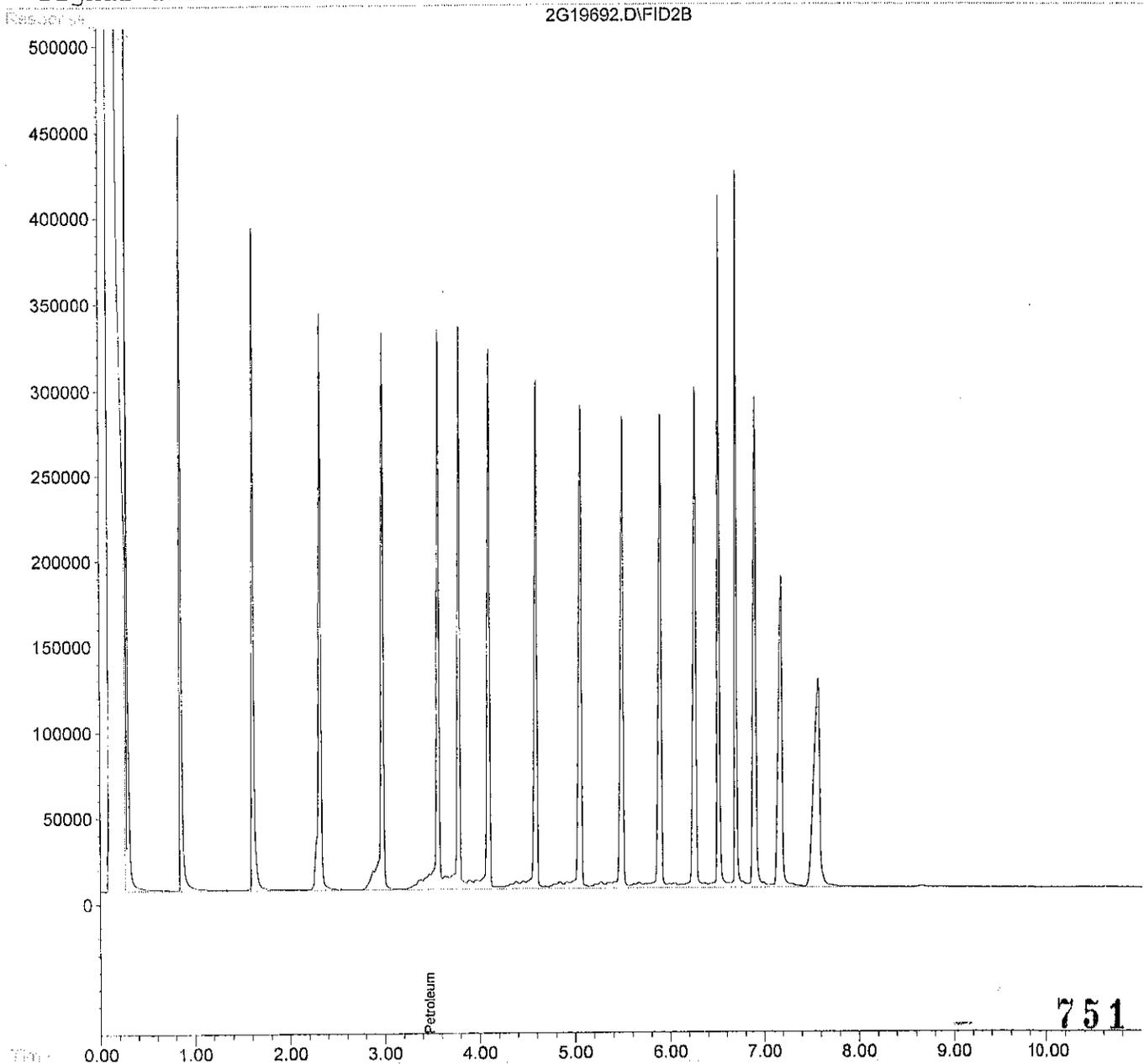
Acq On : 2 Apr 2002 11:36
Sample : WG115514-02 200ppm PRO CCV
Misc : 1,1 SOS 59-6
IntFile : PETRO.E
Quant Time: Apr 2 13:09 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:09:10 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP-2

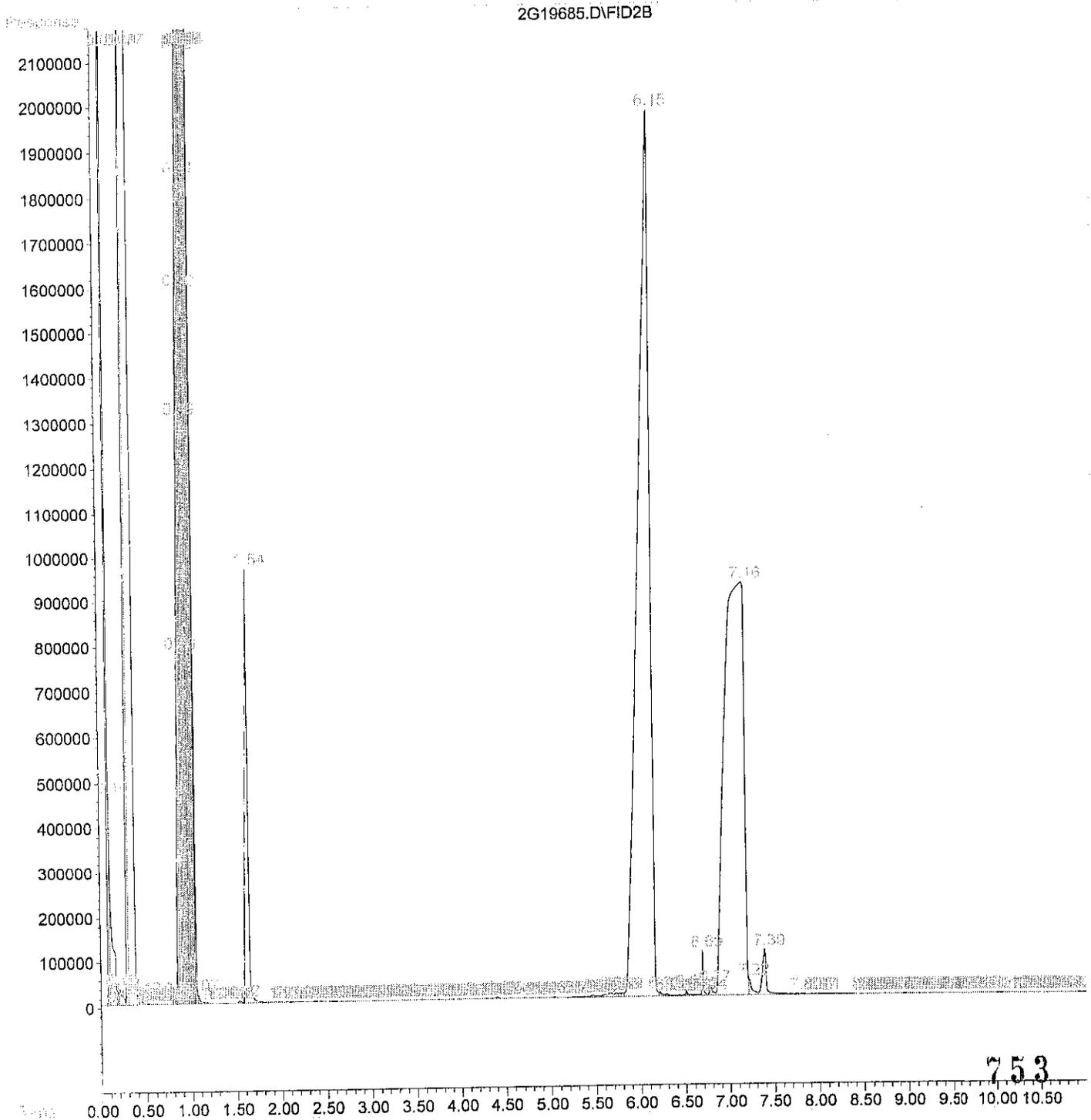
GC Column: RTX-5

	WIN.STD #1	WIN.STD #2	WIN.STD #3
Date Run	01-23-02	01-24-02	01-25-02
File #	2g18031	2g18074	2g18121

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
Petroleum Range				
PRO - C8 #1	0.28	0.26	0.26	0.035
PRO - C40 #2	7.97	7.75	7.88	0.332
Surrogates				
O-Terphenyl (C28)	3.81	3.72	3.75	0.137

752

File : C:\HPCHEM\1\DATA\040202\2G19685.D
Operator : CLK
Acquired : 2 Apr 2002 9:48 using AcqMethod FLASHPRO.M
Instrument : HP2
Sample Name: win def std
Misc Info : 1,1 NS 14-41
Vial Number: 2



753

2.2.6.4 Raw QC Data

Acq On : 2 Apr 2002 10:20 Operator: CLK
 Sample : WG115412-01 BLK 4/1 V182P157 Inst : HP2
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Apr 2 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Mon Apr 01 17:44:27 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

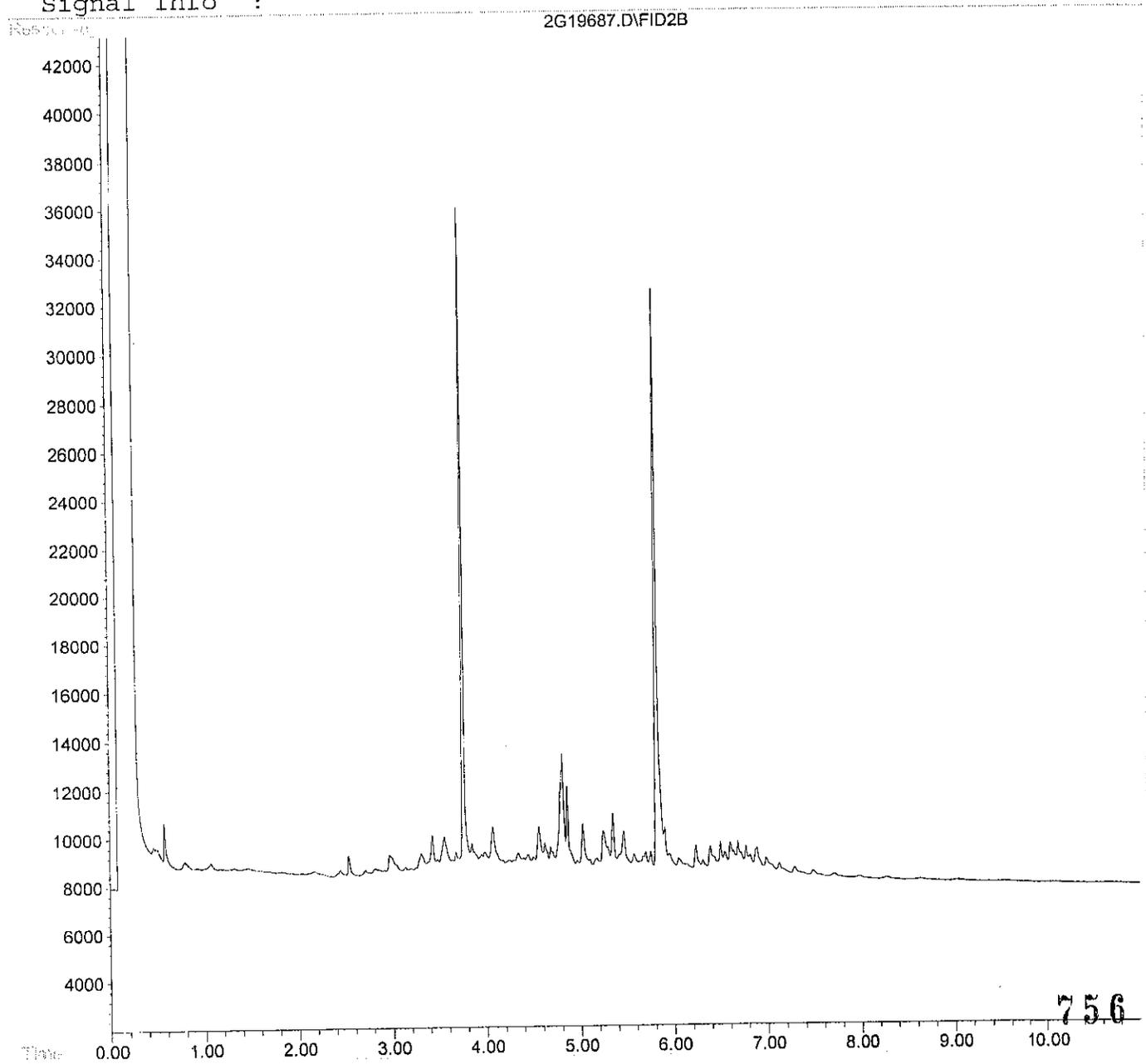
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.76	382924	14.180 ppb
Spiked Amount 20.000	Range 43 - 136	Recovery =	70.90%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	2954757	<MDL ppb

755

Data File : C:\HPCHEM\1\METHODS\FLASHPRO.M
Acq On : 2 Apr 2002 10:20 Operator: CLK
Sample : WG115412-01 BLK 4/1 V182P157 Inst : HP2
Misc : 7,1 SOIL Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Apr 2 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Mon Apr 01 17:44:27 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 10:35 Operator: CLK
 Sample : WG115412-02 LCS 4/1 V182P157 Inst : HP2
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Apr 2 13:07 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Tue Apr 02 13:07:40 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.76	617856	22.880 ppb
Spiked Amount 20.000	Range 43 - 136	Recovery =	114.40%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	102373777	3255.154 ppb

757

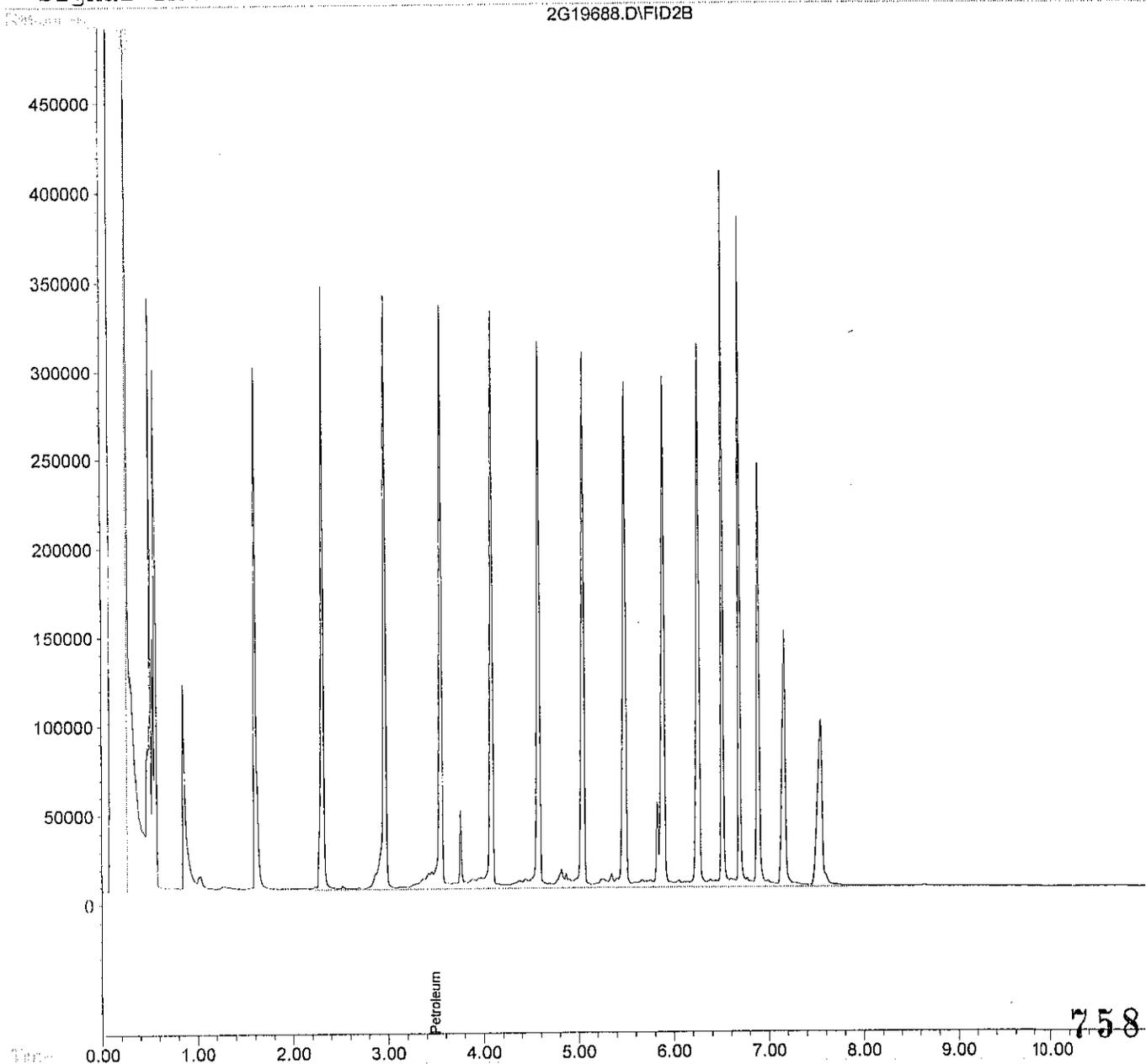
Acq On : 2 Apr 2002 10:35
Sample : WG115412-02 LCS 4/1 V182P157
Misc : 7,1 SOIL
IntFile : PETRO.E
Quant Time: Apr 2 13:07 2002

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:07:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 2 Apr 2002 10:50 Operator: CLK
 Sample : WG115412-03 LCS DUP 4/1 V182P157 Inst : HP2
 Misc : 7,1 SOIL Multiplr: 1.00
 IntFile : PETRO.E
 Quant Time: Apr 2 13:08 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
 Title : PETROLEUM RANGE ORGANICS 03/26/02
 Last Update : Tue Apr 02 13:07:40 2002
 Response via : Initial Calibration
 DataAcq Meth : FLASHPRO.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	580608	21.500 ppb
Spiked Amount 20.000	Range 43 - 136	Recovery =	107.50%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	95572776	3038.904 ppb

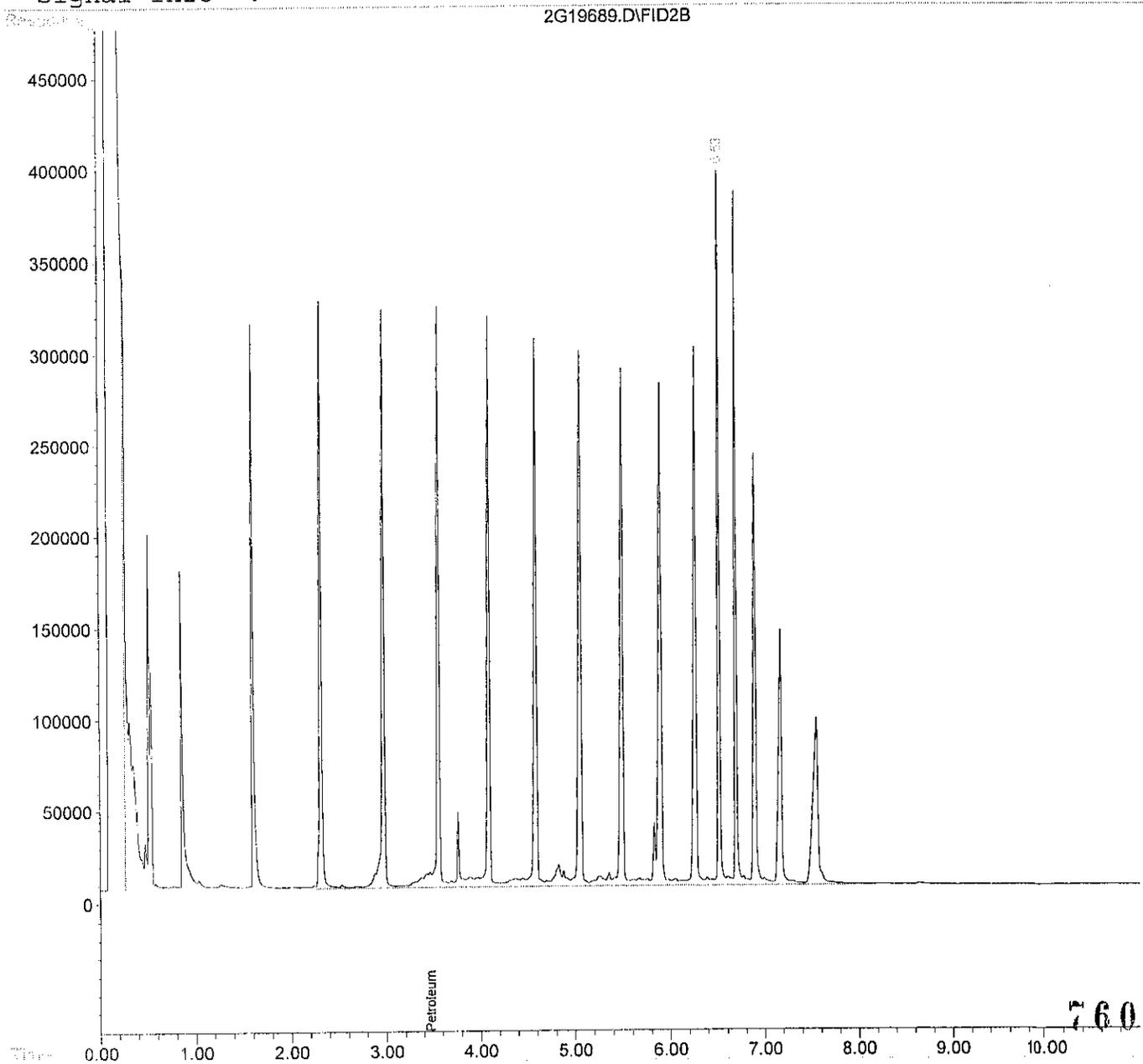
759

Acq On : 2 Apr 2002 10:50
Sample : WG115412-03 LCS DUP 4/1 V182P157
Misc : 7,1 SOIL
IntFile : PETRO.E
Quant Time: Apr 2 13:08 2002 Quant Results File: FLASHPRO.RES

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 03/26/02
Last Update : Tue Apr 02 13:07:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



1	1	2g19548.d	1.	NA CH2CL2	1,1	26 Mar 102 13::2
2	1	2g19549.d	1.	↓ CH2CL2	1,1	26 Mar 102 13::4
3	2	2g19550.d	1.	✓ win def std	1,1 NS 14-41	26 Mar 102 13::5
4	3	2g19551.d	1.	✓ JP-4 2000ppm Qualitative STD	1,1 SOS 59-03	26 Mar 102 12::0
5	4	2g19552.d	1.	↓ WG115131-03 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::1
6	5	2g19553.d	1.	↓ WG115131-06 1000ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::2
7	6	2g19554.d	1.	↓ WG115131-05 5000ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::3
8	7	2g19555.d	1.	↓ WG115131-04 2500ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::4
9	8	2g19556.d	1.	↓ WG115131-02 500ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::0
10	9	2g19557.d	1.	↓ WG115131-01 100ppm DRO STD	1,1 NS 14-29	26 Mar 102 12::1
11	10	2g19558.d	1.	↓ WG115131-07 1000ppm DRO Alt Source STD	1,1 SOS 58-20	26 Mar 102 12::2
12	11	2g19559.d	1.	RR DRO SPK @ 1000ppm ESS0041-02	1,1	26 Mar 102 12::3
13	12	2g19560.d	1.	✓ L0203345-01 WATER DRO	1,1	26 Mar 102 12::5
14	13	2g19561.d	1.	↓ L0203345-03 WATER DRO	1,1	26 Mar 102 12::0
15	14	2g19562.d	1.	↓ L0203345-04 WATER DRO	1,1	26 Mar 102 12::1
16	15	2g19563.d	1.	↓ L0203345-02 WATER DRO	1,1	26 Mar 102 12::2
17	1	2g19564.d	1.	NA CH2CL2	1,1	26 Mar 102 12::3
18	1	2g19565.d	1.	NA CH2CL2	1,1	26 Mar 102 12::4
19	4	2g19566.d	1.	✓ WG115131-08 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::5
20	16	2g19567.d	1.	RR L0203407-02 WATER DRO	1,1	26 Mar 102 12::2
21	17	2g19568.d	20.	✓ L0203407-02 WATER DRO 20X	1,20	26 Mar 102 12::3
22	1	2g19569.d	1.	NA CH2CL2	1,1	26 Mar 102 12::4
23	1	2g19570.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
24	4	2g19571.d	1.	✓ WG115131-09 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::0
25	18	2g19572.d	1.	↓ L0203340-01 SOIL DRO	7,1 SOIL	26 Mar 102 12::2
26	19	2g19573.d	1.	↓ L0203340-02 SOIL DRO	7,1 SOIL	26 Mar 102 12::3
27	20	2g19574.d	1.	↓ L0203340-03 SOIL DRO	7,1 SOIL	26 Mar 102 12::4
28	1	2g19575.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
29	1	2g19576.d	1.	NA CH2CL2	1,1	26 Mar 102 12::0
30	4	2g19577.d	1.	✓ WG115131-10 1000ppm DRO CCV	1,1 NS 14-29	26 Mar 102 12::1
31	21	2g19578.d	1.	RR DRO SPK @ 1000 ESS0041-02	1,1	26 Mar 102 12::3
32	1	2g19579.d	1.	NA CH2CL2	1,1	26 Mar 102 12::5
33	2	2g19580.d	1.	✓ WG115180-06 600ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::1
34	3	2g19581.d	1.	↓ WG115180-05 400ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::2
35	4	2g19582.d	1.	↓ WG115180-04 200ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::4
36	5	2g19583.d	1.	↓ WG115180-03 100ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::5
37	6	2g19584.d	1.	↓ WG115180-02 50ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::1
38	7	2g19585.d	1.	↓ WG115180-01 5ppm PRO STD	1,1 SOS 59-6	26 Mar 102 12::2
39	8	2g19586.d	1.	↓ WG115180-07 200ppm PRO Alt Source STD	1,1 SOS 59-1	26 Mar 102 12::4
40	9	2g19587.d	1.	↓ WG114738-02 BLK 3/19 V182P27	1,1	26 Mar 102 12::5
41	10	2g19588.d	1.	↓ WG114738-03 LCS 3/19 V182P27	1,1	26 Mar 102 12::1
42	11	2g19589.d	1.	↓ L0203326-01 PRO WATER	1,1	26 Mar 102 12::2
43	12	2g19590.d	1.	↓ L0203326-02 PRO WATER	1,1	26 Mar 102 12::4
44	13	2g19591.d	1.	↓ L0203327-01 PRO WATER	1,1	26 Mar 102 12::5
45	14	2g19592.d	1.	↓ L0203327-02 PRO WATER	1,1	26 Mar 102 13::1
46	1	2g19593.d	1.	NA CH2CL2	1,1	26 Mar 102 13::3
47	1	2g19594.d	1.	NA CH2CL2	1,1	26 Mar 102 13::4
48	4	2g19595.d	1.	✓ WG115180-08 200ppm PRO CCV	1,1 SOS 59-6	26 Mar 102 13::0
49	15	2g19596.d	1.	↓ L0203327-03 PRO WATER	1,1	26 Mar 102 13::1
50	16	2g19597.d	1.	↓ WG114738-01 L0203327-04 PRO WATER REF	1,1	26 Mar 102 13::3
51	17	2g19598.d	1.	↓ WG114738-04 L0203327-05 PRO WATER MS	1,1	26 Mar 102 13::4

5	18	2g19599.d	1.	✓	WG114738-05 L0203327-06 PRO WATER MSD		
				↓		1,1	27 Mar 102 13::0
33	19	2g19600.d	1.		L0203327-07 PRO WATER	1,1	27 Mar 102 13::1
34	20	2g19601.d	1.		L0203327-08 PRO WATER	1,1	27 Mar 102 13::3
35	21	2g19602.d	1.	↓	L0203327-09 PRO WATER	1,1	27 Mar 102 13::4
36	1	2g19603.d	1.	NA	CH2CL2	1,1	27 Mar 102 12::0
37	4	2g19604.d	1.	✓	WG115180-09 200ppm CCV	1,1 SOS 59-6	27 Mar 102 12::1
38	22	2g19605.d	1.	NA	500ppm PRO ALT Check 1	1,1 SOS 59-1	27 Mar 102 12::5
39	23	2g19606.d	1.		600ppm PRO STD Check	1,1 SOS 59-6	27 Mar 102 13::2
30	24	2g19607.d	1.	↓	500ppm PRO ALT CHECK II	1,1 STOCK (New Vial)	27 Mar 102 13::3
31	25	2g19608.d	1.	↓	200ppm PRO STD CHK	1,1 SOS 59-6 Remix	27 Mar 102 13::5

CHK
3/27/02
REC 3/27/02

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Analysis Date/Time 3/26/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 032602

Analyst Initials _____
SOP # GCS09 Rev. # 8081A _____
SOP # GCS04 Rev. # 8151A _____
SOP # GCS03 Rev. # 2 PRO
SOP # GCS02 Rev. # 8015B Mod (Alcohol) _____

SOP # GCS10 Rev. # 8082 _____
SOP # GCS05 Rev. # TNRCC 1005 _____
SOP # GCS02 Rev. # 2 8015B Mod (DRO)
SOP # GCS07 Rev. # 8011 _____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check <input checked="" type="checkbox"/> Gases >500 psi	Additional Maintenance Problem: <u>Injection Port Pressure low</u>
Preventative Maintenance <input type="checkbox"/> Change o-ring <input checked="" type="checkbox"/> Change liner <input checked="" type="checkbox"/> Change septum <input type="checkbox"/> Clip column (____ cm) <input checked="" type="checkbox"/> Injection port seal (goldseal) <input type="checkbox"/> Change gases _____	Action Taken: <u>Replaced instrument weld, Replaced pre-column, changed Gold Seal</u>
Returned To Control? Yes <input checked="" type="checkbox"/> No _____	

Comments

DRO SPK @ 1000 ppm ESS0041-02, low (2g19559)
LO#03467-02 WATER DRG, Needs 20X
↓ -02 ↓ ↓ 20X, Dilution based, Reported, SS DL
DRO SPK @ 1000 ESS0041-02, high (2g19578)
Fiks (2g19605 - 2g19608), (check study)

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Reviewed By: RJC 3/27/02

line	vial	filename	multiplier	sample name	misc info	injected
1	1	2g19684.d	1.	NA MECL2	1,1	2 Apr 102 12:3
2	2	2g19685.d	1.	✓ win def std	1,1 NS 14-41	2 Apr 102 12:4
3	3	2g19686.d	1.	WG115514-01 200ppm PRO CCV	1,1 SOS 59-6	2 Apr 102 13:0
4	4	2g19687.d	1.	WG115412-01 BLK 4/1 V182P157	7,1 SOIL	2 Apr 102 13:2
5	5	2g19688.d	1.	WG115412-02 LCS 4/1 V182P157	7,1 SOIL	2 Apr 102 13:3
6	6	2g19689.d	1.	WG115412-03 LCS DUP 4/1 V182P157	7,1 SOIL	2 Apr 102 13:5
7	7	2g19690.d	1.	L0204001-01 PRO SOIL	7,1 SOIL	2 Apr 102 13:0
8	1	2g19691.d	1.	NA MECL2	1,1	2 Apr 102 13:2
9	3	2g19692.d	1.	✓ WG115514-02 200ppm PRO CCV	1,1 SOS 59-6	2 Apr 102 13:3

CLX
4/2/02
REC 4/2/02

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Parameter: PRO-S SOP #: EXPRD Revision #: 3
 Extraction Analyst(s): CAF TV/KD Analyst(s): CAF, DP
 Date/Time Extracted: 4-01-02 @ 12:15 Date TV/KD: 04/02/02
 Spike/Surrogate Analyst: CAF Witness: DP
 Surrogate #: ESS0040-18 Earliest Hold Date: 4-12-02
 Spike #: A = ESS0040-19 Spike #: B = ---

Extraction Work Group WG 115412
 Analytical Work Group WG 115499

Extract Relinquished By: DP
 Extract Received By & Date: EC 4/1/02

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	Sample ID	Test Code	pH /			Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions /			Comments
			<2	N	>12						A	BN	N	
1	Blank					25.09g	1ml	1ml	T				WG 115412-01	
2	LCS					1.00g	1ml	1ml	T				WG 115412-02	
3	LCS DUP					1.03g	1ml	1ml	T				WG 115412-03	
4	04-001-01	FLA-PRO				1.07g	1ml	1ml	C					
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP
 04/01/02

Methylene Chloride Lot #: 42015

Hexane Lot #: ---

Ether Lot #: ---

Methanol Lot #: ---

Solvent: --- Lot #: ---

Reagent: --- Lot #: ---

Reagent: --- Lot #: ---

Reagent: --- Lot #: ---

Acid: --- Lot #: ---

Florisil Lot #: ---

Silica Gel Lot #: ---

IR Analyst / Date / Time: ---

Dried Na₂SO₄ Lot #: CK2085

Color Code
 T = Transparent
 C = Colored
 O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C				
Sonication	3550B	✓			
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 4-01-02

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Extraction Notes For Volume # 182 Page # 157

General Comments: <i>None</i>

Extraction Anomalies: <i>None</i>

Concentration Anomalies: <i>None</i>

Clean-Up Anomalies: <i>None</i>

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Supervisor Review: _____ Date: _____

Example FLA-PRO Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = A_s / C_s$$

Where:

A_s = Area of the compound being measured in the standard
 C_s = Concentration of the compound being measured (ng/ml).

Example:

	10000
	100
RF	100

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(V_i)]$$

Example:

Where:	A_x = Area of the compound being measured	10000
	V_f = Final volume of sample extract (mL). (prep log)	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	100
	V_i = Initial volume of sample (mL). (prep log)	1000
	C (ug/L) =	0.1

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report:

$$C = [(A_x)(V_f)(D)] / [(RF)(W_i)]$$

Example:

Where:	A_x = Area of the compound being measured	10000
	V_f = Final volume of sample extract (mL).	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	100
	W_i = Initial weight of sample (g).	30
	C (ug/kg)	3.333333

2.3 Metals

2.3.1 Metals I C P Data

**REPORT NARRATIVE
METALS**

KEMRON Login No: L0204001

METHOD

Analysis: SW-846 6010/6020/7000

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met

MS/MSD: WG115563 - A post digestion spike was performed for antimony with 103 % recovery.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

REVIEWED:

Maren Beery DATE: 04/05/02

Rev. 6/00

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METALS - ICP DATA

Login Number: 60204001

A. QC Summary

 Batch QC Summary Form

B. Raw Data

 Analyst checksheet

 Analysis runlog

 Instrument data: (actual order may vary)

- Initial and continuing calibration standards
- Initial and continuing calibration blanks
- Preparation blank
- Laboratory control sample
- Sample data
- Matrix spike
- Matrix spike duplicate
- Duplicate
- ICP Interference check sample
- ICP Serial dilutions (as needed)
- Post digestion spike sample (if applicable)
- Standard addition results (as needed)

C. Preparation log(s)

D. Sample Calculations

Checked By: DAJ MMB Date: 04/05/02

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2.3.1.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115494-03
 Instrument ID: IRIS-ICP Run Time: 08:28 Method: 6010B
 File ID: IR.040302.082800 Analvst: JYH Matrix: Solid
 Workgroup (AAB#): WG115553 Units: mg/kg
 Contract #: Cal ID: IRIS-I-03-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	10.0	20.0	10.0	1.00	ND
Barium	0.100	0.500	0.100	1.00	ND
Beryllium	0.0120	0.500	0.0120	1.00	ND
Cadmium	0.0500	0.500	0.0500	1.00	ND
Calcium	5.00	10.0	5.00	1.00	ND
Chromium	0.120	1.00	0.120	1.00	ND
Cobalt	0.120	1.00	0.120	1.00	ND
Copper	0.500	1.00	0.500	1.00	ND
Iron	1.00	2.00	1.00	1.00	ND
Magnesium	12.0	25.0	12.0	1.00	ND
Manganese	0.100	0.500	0.100	1.00	ND
Nickel	0.500	2.00	0.500	1.00	ND
Potassium	25.0	50.0	25.0	1.00	ND
Silver	0.250	2.00	0.250	1.00	ND
Sodium	5.00	25.0	5.00	1.00	ND
Vanadium	0.250	0.500	0.250	1.00	ND
Zinc	0.500	1.00	0.500	1.00	ND

* Analyte detected above RDL

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KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115494-04
 Instrument ID: IRIS-ICP Run Time: 08:33 Method: 6010B
 File ID: IR.040302.083300 Analyst: JYH Matrix: Solid
 Workgroup (AAB#): WG115553 Units: mg/kg
 Contract #: _____ Cal ID: IRIS-I-03-APR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum	500	487	97.4	80 - 120	
Barium	500	482	96.5	80 - 120	
Beryllium	50	52.4	105	80 - 120	
Cadmium	50	42.9	85.8	80 - 120	
Calcium	500	506	101	80 - 120	
Chromium	50	51.0	102	80 - 120	
Cobalt	50	48.9	97.8	80 - 120	
Copper	50	49.3	98.6	80 - 120	
Iron	50	43.1	86.3	80 - 120	
Magnesium	500	491	98.3	80 - 120	
Manganese	50	50.6	101	80 - 120	
Nickel	50	50.3	101	80 - 120	
Potassium	2500	2260	90.6	80 - 120	
Silver	10	9.50	95.0	80 - 120	
Sodium	2500	2320	92.6	80 - 120	
Vanadium	50	50.1	100	80 - 120	
Zinc	50	49.3	98.5	80 - 120	

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KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115507-02
Instrument ID: ELAN-ICP Run Time: 08:53 Method: 6020A
File ID: Analyst: JYH Matrix: Solid
Workgroup (AAB#): WG115563 Units: mg/kg
Contract #: Cal ID: ELAN-I -

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Arsenic, Total	0.250	0.500	0.250	10.0	ND
Lead, Total	0.250	0.500	0.250	10.0	ND
Antimony, Total	0.100	0.200	0.100	10.0	ND
Selenium, Total	0.100	0.200	0.100	10.0	ND
Thallium, Total	0.0500	0.100	0.0500	10.0	ND

* Analyte detected above RDL
ND Not detected at or above the reporting limit

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KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 Run Date: 04/03/2002 Sample ID: WG115507-03
 Instrument ID: ELAN-ICP Run Time: 08:58 Method: 6020A
 File ID: Analyst: JYH Matrix: Solid
 Workgroup (AAB#): WG115563 Units: mg/kg
 Contract #: Cal ID: ELAN-I-

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Total	10	10.2	102	80 - 120	
Lead, Total	10	10.7	107	80 - 120	
Antimony, Total	10	10.8	108	80 - 120	
Selenium, Total	10	9.43	94.3	80 - 120	
Thallium, Total	10	10.7	107	80 - 120	

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KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 8

AAB#:WG115553_____

Analytical Method:6010B_____

Contract #:Steve Grant_____

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	180	3.91	03-APR-02	180	4.95	

* EXT = MISSED EXTRACTION HOLD TIME
 *ANAL = MISSED ANALYTICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
 HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 8

AAB#: WG115563 _____

Analytical Method: 6020A _____

Contract #: Steve Grant _____

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	180	3.97	03-APR-02	180	4.97	

* EXT = MISSED EXTRACTION HOLD TIME

*ANAL = MISSED ANALYTICAL HOLD TIME

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2.3.1.2 Raw Data

Metals

Date: 4/3/02
 Analyst: JYH
 Method: 6010 B
 Instrument: IRIS-ICP
 Work Group: 115553, 115554, 115572

	Analyst
Calibration/Linearity	✓
ICV/CCV	✓
ICB/CCB	✓
icsa/icsab/cr	✓
Blank/LCS	✓
MS/MSD	✓
Postspike/Serial Dilution	✓
Duplicate	✓
Record Results	✓
Excel Spreadsheets	✓
Results Reporting / Data Qualifiers	
Calculations & Correct Factors	
Reanalysis Assign	
Instrument Failure/Reassign	
Case Narrative	
QA Approval - Seedpak 3	
Check for Completeness	
Level IV Data	✓

Primary Reviewer Initials & Date Checked JYH 4/3/02

Secondary Reviewer Initials & Date Checked DA 4/3/02 - DA 4/04/02 - 03575

- Check for compliance with Method and project-specific requirements
- Check the completeness of the reported information
- NA • Check the information for the report narrative
- Check the reasonableness of results

Supervisory Review Initials & Date Checked MB 4/4

Comments: _____

✓ - Checked & OK
 NA - Not Applicable
 DL - Diluted Out

ICP (ICP/MS) RUN LOGBOOK

ANALYST JYH DATE 4/3/02 TIME 7:33
 METHOD # 6010B SOP # ME600 Rev # 1 WORK GROUP # 115553, 115554, 115572
 CAL STD SOURCE M2-1248A ICV/CCV SOURCE M2-13-0A
 ICS AB SOURCE M2-13-71A ICS A SOURCE M2-12-44B POST SPK SOURCE D55-42-02
 Instrument ID: TJA IRIS: Data File: 20020403.1 Perkin Elmer Optima: Perkin Elmer ELAN:

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
	50				27.	L020357526	1.10	50	
	1 1/200				28.	27	1.08		
	2 1/100				29.	28	1.06		UV/LUB
	3 1/4				30.	29	1.10		
	4 1/2				31.	30	1.00		
	5			1.00/1.00	32.	31	1.09		
	ICSA				33.	32	1.02		
	IC SAB			UV/LUB	34.	33	1.07		
1.	PBS R3			Wt 115494-03	35.	34	1.06		
2.	LCSS R3		1.00	50	36.	PBS U3			Wt 115449-03
3.	L020400101		1.00		37.	LCSS U3	1.00	50	04
4.	015		1.02		38.	L020357501	1.04		02
5.	015D		1.04		39.	01DP	1.10		UV/LUB 0.7
6.	L020400301		1.04		40.	02	1.04		
7.	01DP		1.05		41.	03	1.10		
8.	01PS		1.04		42.	04	1.10		
9.	015D	5	1.04	UV/LUB	43.	05	1.05		01
10.	01	25	1.04		44.	06S	1.00		05
11.	02		1.10		45.	07SD	1.00		06
12.	03		1.10		46.	05S	1.05		
13.	04		1.04		47.	08	1.00		
14.	05		1.00		48.	09	1.04		
15.	PBS U3			Wt 115450-03	49.	10	1.10		UV/LUB
16.	LCSS O3		1.00	50	50.	11	1.10		
17.	L020357518		1.10		51.	12	1.00		
18.	18DP		1.06		52.	13	1.00		
19.	19		1.04	UV/LUB	53.	14	1.08		
20.	20		1.10		54.	15	1.04		
21.	21		1.05		55.	16	1.10		
22.	22		1.01	01	56.	17	1.06		UV/LUB
23.	23S		1.06	05	57.				
24.	24SD		1.05	06	58.				
25.	22PS		1.01		59.				
26.	25		1.04		60.				

Reviewed by: _____

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key:

CCV - Continuing Calibration Verification
 CCB = Continuing Calibration Blank

FRS = Full Recalibration Sequence
 R = Analyst Rerun

KEMRON ENVIRONMENTAL SERVICES
FORM 2A - INITIAL AND CONTINUING CALIBRATION VERIFICATION

INSTRUMENT: IRIS - Jarrell Ash
 METHOD: 6010B
 ANALYST: Jyh
 DATE: 4/3/02
 UNITS: ug/L

ICV Time: 8:01 AM
 CCV1 Time: 8:19 AM
 CCV2 Time: 9:09 AM

Analyte	Initial Calibration Verification			Continuing Calibration Verification					Q
	True	Found	%R(1)	CCV1		CCV2			
				True	Found	%R(1)	Found	%R(1)	
Aluminum	10000	10300	103.0	10000	10500	105.0	10500	105.0	
Antimony	1200	1220	101.7	1200	1220	101.7	1240	103.3	
Arsenic	400	416	104.0	400	411	102.8	426	106.5	
Barium	1000	1000	100.0	1000	1010	101.0	1020	102.0	
Beryllium	50	50.9	101.8	50	50.7	101.4	52.1	104.2	
Cadmium	50	49.9	99.8	50	49.9	99.8	51.7	103.4	
Calcium	10000	10100	101.0	10000	10200	102.0	10500	105.0	
Chromium	500	505	101.0	500	506	101.2	523	104.6	
Cobalt	200	201	100.5	200	201	100.5	209	104.5	
Copper	500	506	101.2	500	508	101.6	512	102.4	
Iron	4000	3930	98.3	4000	3950	98.8	4090	102.3	
Lead	500	510	102.0	500	511	102.2	530	106.0	
Magnesium	10000	10100	101.0	10000	10200	102.0	10500	105.0	
Manganese	500	504	100.8	500	508	101.6	520	104.0	
Nickel	500	501	100.2	500	502	100.4	520	104.0	
Potassium	50000	51000	102.0	50000	53000	106.0	52900	105.8	
Selenium	400	402	100.5	400	398	99.5	409	102.3	
Silver	400	394	98.5	400	408	102.0	399	99.8	
Sodium	50000	50800	101.6	50000	51900	103.8	52300	104.6	
Thallium	500	500	100.0	500	497	99.4	519	103.8	
Vanadium	1000	986	98.6	1000	994	99.4	1010	101.0	
Zinc	1000	1000	100.0	1000	1000	100.0	1020	102.0	

(1) Control Limits: 90-110%

KEMRON ENVIRONMENTAL SERVICES
FORM 2A - INITIAL AND CONTINUING CALIBRATION VERIFICATION

INSTRUMENT: IRIS - Jarrell Ash
 METHOD: 6010B
 ANALYST: Jyh
 DATE: 4/3/02

UNITS: ug/L

ICV Time: 8:01 AM
 CCV1 Time: 10:13 AM
 CCV2 Time: _____

Analyte	Initial Calibration Verification			Continuing Calibration Verification					Q
	True	Found	%R(1)	CCV1			CCV2		
				True	Found	%R(1)	Found	%R(1)	
Aluminum	10000	10300	103.0	10000	10400	104.0			
Antimony	1200	1220	101.7	1200	1190	99.2			
Arsenic	400	416	104.0	400	413	103.3			
Barium	1000	1000	100.0	1000	985	98.5			
Beryllium	50	50.9	101.8	50	50.2	100.4			
Cadmium	50	49.9	99.8	50	49.5	99.0			
Calcium	10000	10100	101.0	10000	10100	101.0			
Chromium	500	505	101.0	500	499	99.8			
Cobalt	200	201	100.5	200	199	99.5			
Copper	500	506	101.2	500	503	100.6			
Iron	4000	3930	98.3	4000	3900	97.5			
Lead	500	510	102.0	500	510	102.0			
Magnesium	10000	10100	101.0	10000	10000	100.0			
Manganese	500	504	100.8	500	495	99.0			
Nickel	500	501	100.2	500	499	99.8			
Potassium	50000	51000	102.0	50000	55700	111.4			*
Selenium	400	402	100.5	400	395	98.8			
Silver	400	394	98.5	400	380	95.0			
Sodium	50000	50800	101.6	50000	56500	113.0			*
Thallium	500	500	100.0	500	503	100.6			
Vanadium	1000	986	98.6	1000	967	96.7			
Zinc	1000	1000	100.0	1000	993	99.3			

(1) Control Limits: 90-110%

780

KEMRON ENVIRONMENTAL SERVICES
FORM 3 - BLANKS

INSTRUMENT: IRIS - Jarrell Ash
 METHOD: 6010B
 ANALYST: Jyh
 DATE: 4/3/02

UNITS: ug/L

ICB Time: 8:06 AM
 CCB1 Time: 8:24 AM
 CCB2 Time: 9:13 AM
 CCB3 Time: 10:17 AM

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)		
		CCB1	CCB2	CCB3
		1	2	3
Aluminum	-8.12	8.99	5.57	3.49
Antimony	1.57	0.58	3.01	4.28
Arsenic	1.93	0.15	-1.71	-0.25
Barium	0.10	0.12	0.07	0
Beryllium	0.03	0.04	-0.01	0.06
Cadmium	-0.03	-0.02	0.02	0.04
Calcium	-11.2	-6.30	1.22	-1.91
Chromium	-0.28	-0.19	-0.64	-0.4
Cobalt	0.21	-0.32	0.21	0.17
Copper	0.26	-0.31	1.47	1.24
Iron	6.27	2.18	-0.55	5.81
Lead	-2.02	-1.34	-0.15	-3.34
Magnesium	186	159	248	133
Manganese	0.01	0.03	0.04	0.01
Nickel	-0.28	0.06	-0.34	-0.15
Potassium	-2.00	-9.04	-3.88	8.61
Selenium	3.10	4.25	3.99	0.14
Silver	-2.34	-0.92	-2.82	0.08
Sodium	1.31	0.61	-1.80	-1.47
Thallium	1.61	1.81	0.91	0.11
Vanadium	-0.67	-1.08	-0.79	3.08
Zinc	0.04	-0.02	-0.17	0.04

KEMRON ENVIRONMENTAL SERVICES
FORM 4A - INTERFERENCE CHECK SAMPLE

INSTRUMENT ID: IRIS - Jarrell Ash
 METHOD: 6010B
 ANALYST: Jyh
 DATE: 4/3/02
 UNITS: ug/L

Initial ICSA Time: 8:10 AM
 Initial ICSAB Time: 8:15 AM
 Final ICSA Time: _____
 Final ICSAB Time: _____

Analyte	True		Initial Found			Final Found			Q
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R	
Aluminum	250000	250000	242000	247000	98.8				
Antimony	0	500	1.87	499	99.8				
Arsenic	0	250	1.20	248	99.2				
Barium	0	250	0.19	239	95.6				
Beryllium	0	250	-0.10	236	94.4				
Cadmium	0	500	1.42	421	84.2				
Calcium	250000	250000	234000	237000	94.8				
Chromium	0	250	-0.12	235	94.0				
Cobalt	0	250	-6.87	224	89.6				
Copper	0	250	1.31	241	96.4				
Iron	100000	100000	94900	101000	101.0				
Lead	0	500	-18.0	454	90.8				
Magnesium	250000	250000	240000	243000	97.2				
Manganese	0	250	2.62	228	91.2				
Nickel	0	500	0.88	469	93.8				
Potassium	0	5000	-27.8	4600	92.0				
Selenium	0	250	-4.77	243	97.2				
Silver	0	500	0.33	501	100.2				
Sodium	0	5000	9.27	4780	95.6				
Thallium	0	500	-7.35	449	89.8				
Vanadium	0	250	-6.65	216	86.4				
Zinc	0	500	-6.84	495	99				

(1) Control Limits: 80-120%

788

Instrument ID: IRIS-Jarrell Ash

Date: January 11, 2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:					
		Al	Ca	Fe	Mg	As	Ba
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.80	0.0000000	0.0000000	0.0000550	0.0000000	-0.0000500	0.0000000
Arsenic	189.00	0.0000000	0.0000000	-0.0000160	0.0000000	0.0000000	0.0000000
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.70	0.0000000	0.0000000	-0.0000340	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	-0.0000090	0.0000000	0.0060000	-0.0028000
Calcium	373.70	0.0000000	0.0000000	0.0080000	0.0000000	0.0000000	0.0000000
Chromium	267.70	0.0000000	0.0000000	0.0000380	0.0000000	0.0000000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000100	0.0000000	0.0000000	0.0000000
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000400	-0.0004000	0.0000000
Lead	220.30	-0.0002800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lithium	670.80	0.0000000	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	277.90	0.0000000	0.0000000	0.0000000	0.0000000	-0.1400000	0.0000000
Manganese	257.60	0.0000000	0.0000000	0.0000000	0.0000190	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.00	-0.0000100	0.0000000	-0.0001400	0.0000000	0.0000000	0.0000000
Silicon	251.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.00	0.0000000	0.0000000	-0.0000100	0.0000000	0.0000000	0.0000000
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	215.20	0.0000000	0.0000290	-0.0005000	0.0000000	0.0002150	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.20	-0.0000330	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.80	0.0000000	0.0000000	0.0000760	0.0000400	0.0000000	0.0000000

Comments:

789

Instrument ID: IRIS-Jarrell Ash

Date: Jan. 11, 2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:					
		Be	Co	Cr	Cu	Mn	Mo
Aluminum	308.20	0.0000000	-0.0052900	0.0000000	0.0000000	0.0018000	0.0330000
Antimony	206.80	0.0000000	0.0000000	0.0190000	0.0000000	0.0000000	-0.0042000
Arsenic	189.00	0.0000000	0.0000000	-0.0021000	0.0000000	0.0000000	0.0001400
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.70	0.0000000	0.0013800	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0025000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0016000	0.0000000
Chromium	267.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0013000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000450	0.0000000	0.0000000	-0.0009000
Copper	324.70	0.0000000	0.0000000	-0.0000890	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.1280000	0.0000000	0.0000000	0.0000800	-0.0150000
Lead	220.30	0.0000000	0.0000000	-0.0012000	0.0000000	0.0000000	-0.0012000
Lithium	670.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	277.90	0.0000000	0.0000000	-0.0520000	0.0000000	0.0013200	-0.0054000
Manganese	257.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0083000	0.0001100	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0004300	0.0004600
Silicon	251.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0080000
Silver	328.00	0.0000000	0.0000000	0.0000540	0.0000000	0.0000900	0.0000600
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	215.20	0.0000000	0.0004200	0.0000000	0.0000000	0.0000000	-0.0003000
Thallium	190.80	0.0000000	0.0030000	0.0004000	0.0000000	0.0014000	-0.0026000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0005000	0.0000000	0.0000000	0.0000000
Vanadium	310.20	0.0050000	0.0000000	-0.0004700	0.0000000	0.0000000	0.0000000
Zinc	213.80	0.0000000	-0.0002800	0.0000000	0.0009000	0.0002790	0.0000000

Comments:

790

Instrument ID: IRIS-Jarrell Ash

Date: Jan. 11, 2002

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Ni	Sb	V	Ti	Zn
Aluminum	308.20	0.0000000	0.0000000	-0.1190000	-0.0096000	0.0000000
Antimony	206.80	-0.0016000	0.0000000	-0.0010740	0.0000000	-0.0004000
Arsenic	189.00	0.0000000	-0.0006000	0.0000000	0.0000000	0.0000000
Barium	455.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	-0.0008500	0.0000000	0.0000000
Boron	249.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000720	0.0000000	0.0000000
Calcium	373.70	0.0006500	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.70	0.0000000	0.0000000	-0.0003500	0.0000000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000000	0.0020000	0.0003000
Copper	324.70	0.0000000	0.0000000	-0.0110000	-0.0007090	0.0000000
Iron	271.40	0.0000000	0.0000000	-0.0680000	0.0000000	0.0000000
Lead	220.30	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lithium	670.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	277.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.60	0.0000000	0.0000000	-0.0000750	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	-0.0002470	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0100000
Silicon	251.60	0.0000000	0.0000000	0.0000000	0.0066470	0.0000000
Silver	328.00	0.0000000	0.0000000	-0.0165000	0.0012000	0.0000000
Sodium	589.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	215.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0007000
Thallium	190.80	0.0000000	-0.0008400	-0.0249000	-0.0011000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.80	0.0076000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

791

Instrument ID: IRIS-Jarrel Ash

Date: Jan. 11, 2002

Analyte	Integ. Time (Sec.)	Concentration (ug/L)
Aluminum	15.00	1000000.0
Antimony	55.00	50000.0
Arsenic	55.00	100000.0
Barium	15.00	20000.0
Beryllium	15.00	5000.0
Boron	15.00	100000.0
Cadmium	55.00	30000.0
Calcium	15.00	1000000.0
Chromium	55.00	100000.0
Cobalt	55.00	100000.0
Copper	15.00	50000.0
Iron	55.00	1000000.0
Lead	55.00	200000.0
Lithium	15.00	15000.0
Magnesium	55.00	1000000.0
Manganese	55.00	40000.0
Molybdenum	55.00	30000.0
Nickel	55.00	100000.0
Potassium	15.00	400000.0
Selenium	55.00	20000.0
Silicon	55.00	50000.0
Silver	15.00	10000.0
Sodium	15.00	300000.0
Strontium	55.00	30000.0
Thallium	55.00	20000.0
Tin	55.00	30000.0
Titanium	15.00	30000.0
Vanadium	15.00	100000.0
Zinc	55.00	40000.0

Comments:

792

Method: CLP5

Sample Name: SU

Operator:

Comment:

Run Time: 04/03/02 07:33 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00116	.04850	-.02165	.17794	-.01732
Stddev	.00817	.02941	.01335	.01688	.05062
%RSD	706.57	60.627	61.645	9.4858	292.33

#1	.00693	.06930	-.03109	.18987	.01848
#2	-.00462	.02771	-.01221	.16600	-.05311

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.16166	.12010	.21194	-.03997	-.48301
Stddev	.00650	.03269	.00530	.01178	.02983
%RSD	4.0182	27.219	2.4995	29.463	6.1757

#1	.15707	.14321	.21569	-.03165	-.50410
#2	.16626	.09698	.20819	-.04830	-.46192

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00231	.38420	.17955	1.4645	-.02309
Stddev	.00327	.00314	.19428	.0918	.00001
%RSD	141.42	.81634	108.20	6.2683	.02245

#1	-.00462	.38642	.04218	1.5294	-.02310
#2	.00000	.38198	.31693	1.3996	-.02309

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.05246	-.01388	.68661	.17266	.04747
Stddev	.00432	.00236	.30742	.02591	.02473
%RSD	8.2288	16.973	44.773	15.005	52.104

#1	-.05552	-.01221	.90399	.19098	.02998
#2	-.04941	-.01555	.46924	.15434	.06498

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.05996	-.01499	.11992	.00111	.00638
Stddev	.00471	.01256	.00550	.01099	.01295
%RSD	7.8578	83.804	4.5839	989.98	202.91

#1	.05663	-.02387	.11603	.00888	.01554
#2	.06329	-.00611	.12381	-.00666	-.00278

Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.24249	-.04580	.68361	.10909	
Stddev	.02281	.01217	.01322	.00118	
%RSD	9.4057	26.571	1.9336	1.0783	

#1	.22636	-.03720	.69295	.10993	
#2	.25862	-.05441	.67426	.10826	

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Method: CLP5

Sample name: S1

Operator:

Comment:

Run Time: 04/03/02 07:37 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Al3082	B_2496	Ba4554	Be3130	Ca3736
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.05546	4.7146	5.4449	.51295	.53721
Stddev	.06535	.0018	.0867	.01960	.01145
%RSD	117.85	.03907	1.5922	3.8204	2.1306
#1	.10167	4.7132	5.5062	.49910	.54531
#2	.00924	4.7159	5.3836	.52681	.52912
Elem	Cr2677	Fe2714	K_7664	Li6707	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00333	.62598	14.340	22.024	4.0614
Stddev	.03141	.02156	.207	.392	.0116
%RSD	943.05	3.4435	1.4443	1.7802	.28612
#1	.02554	.64123	14.486	21.747	4.0532
#2	-.01888	.61074	14.193	22.301	4.0696
Elem	Mo2020	Na5895	Sb2068	Si2516	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.19764	82.861	.14213	1.1609	.08272
Stddev	.00470	.369	.00156	.0282	.01178
%RSD	2.3778	.44528	1.0992	2.4291	14.243
#1	.20097	83.121	.14323	1.1808	.07439
#2	.19432	82.600	.14102	1.1409	.09105
Elem	Sr2152	Ti3349	V_3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	.14268	.91731	.83644	1.5895	
Stddev	.00627	.00979	.02616	.0156	
%RSD	4.3965	1.0669	3.1271	.98218	
#1	.14712	.91039	.85493	1.6005	
#2	.13824	.92423	.81794	1.5784	

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Method: CLPS Sample Name: 52 Operator:
 Comment:
 Run Time: 04/03/02 07:42 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B 2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.11904	.10401	.04331	9.2979	10.717
Stddev	.00493	.04901	.00157	.0024	.045
%RSD	4.1392	47.123	3.6345	.02547	.42213

#1	.12253	.06936	.04219	9.2962	10.685
#2	.11556	.13867	.04442	9.2996	10.749

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.82059	1.0725	.30231	.22624	.50745
Stddev	.02305	.0423	.01769	.01529	.01261
%RSD	2.8088	3.9421	5.8523	6.7588	2.4842

#1	.83689	1.0426	.28980	.23706	.49854
#2	.80429	1.1024	.31482	.21543	.51636

Elem	Cu3247	Fe2714	K 7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.28200	.88752	27.784	41.324	.04161
Stddev	.00006	.00503	.514	.139	.00655
%RSD	.02015	.56659	1.8510	.33590	15.733

#1	.28204	.89108	28.147	41.422	.04624
#2	.28196	.88396	27.420	41.226	.03698

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2207
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.1997	.43527	162.44	.71565	.09883
Stddev	.0478	.01410	2.88	.01655	.00315
%RSD	.58312	3.2383	1.7737	2.3124	3.1870

#1	8.1659	.44524	164.47	.70395	.09660
#2	8.2335	.42531	160.40	.72735	.10105

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2150
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.22375	.01693	2.2311	.19821	.28896
Stddev	.01965	.01295	.0151	.01019	.00042
%RSD	8.7816	76.500	.67767	5.1412	.14445

#1	.20985	.02609	2.2418	.20541	.28869
#2	.23764	.00777	2.2204	.19100	.28920

Elem	Ti3349	V 3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	
Avg	1.6712	1.0309	3.0333	
Stddev	.0618	.0329	.0072	
%RSD	3.6963	3.1911	.23731	

#1	1.6275	1.0542	3.0384	
#2	1.7149	1.0077	3.0282	

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Comment: Run Time: 04/03/02 07:47 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.2788	2.7589	1.3159	234.80	272.06
Stddev	.0156	.0006	.0173	.72	.28
%RSD	.47615	.02216	1.3134	.30671	.10456

#1	3.2678	2.7594	1.3282	234.29	271.86
#2	3.2899	2.7585	1.3037	235.31	272.26

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.488	25.353	2.6073	6.5642	25.314
Stddev	.014	.305	.0218	.0149	.110
%RSD	.07518	1.2023	.83517	.22670	.43370

#1	18.498	25.137	2.5919	6.5536	25.236
#2	18.478	25.568	2.6227	6.5747	25.391

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.9431	12.706	729.09	1089.1	1.2223
Stddev	.0078	.039	5.42	3.3	.0035
%RSD	.13212	.30843	.74296	.30047	.28949

#1	5.9486	12.678	725.26	1086.8	1.2248
#2	5.9375	12.733	732.92	1091.4	1.2198

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	218.39	11.768	4185.8	15.034	2.1283
Stddev	.76	.052	63.3	.054	.0056
%RSD	.34764	.44316	1.5119	.35980	.25890

#1	217.86	11.731	4141.0	14.996	2.1322
#2	218.93	11.805	4230.5	15.073	2.1244

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.9139	.85619	54.761	4.9550	8.8276
Stddev	.0165	.01335	.120	.0330	.0545
%RSD	.42190	1.5597	.21881	.66499	.61763

#1	3.9256	.86564	54.677	4.9317	8.7890
#2	3.9023	.84675	54.846	4.9783	8.8662

Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	36.573	.89839	8.9978	77.544	
Stddev	.149	.00315	.1091	.106	
%RSD	.40672	.35020	1.2126	.13612	

#1	36.468	.90062	8.9206	77.470	
#2	36.679	.89617	9.0749	77.619	

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METHOD: CLEO

SAMPLE NAME: 07

OPERATOR:

Comment:

Run Time: 04/03/02 07:51 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.7331	5.5495	2.6235	460.79	549.79
Stddev	.0997	.0490	.0024	1.72	.56
%RSD	1.4800	.88329	.09103	.37394	.10265

#1	6.6627	5.5149	2.6252	459.57	550.19
#2	6.8036	5.5842	2.6219	462.00	549.39

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	36.801	51.303	4.8973	12.995	50.756
Stddev	.003	.335	.0058	.027	.222
%RSD	.00939	.65305	.11901	.20723	.43659

#1	36.798	51.066	4.8932	12.976	50.599
#2	36.803	51.540	4.9014	13.014	50.912

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.870	25.144	1379.5	2167.5	2.5080
Stddev	.046	.092	45.8	31.1	.0653
%RSD	.38467	.36726	3.3173	1.4363	2.6050

#1	11.903	25.079	1347.1	2145.5	2.4619
#2	11.838	25.209	1411.8	2189.5	2.5542

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	436.06	23.363	7698.6	29.595	4.2396
Stddev	1.74	.121	223.9	.047	.0052
%RSD	.39961	.51804	2.9078	.15796	.12163

#1	434.82	23.278	7540.3	29.562	4.2432
#2	437.29	23.449	7856.9	29.628	4.2360

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.7668	1.6899	108.08	9.8190	17.580
Stddev	.0109	.0019	.27	.0001	.038
%RSD	.14031	.11493	.24580	.00124	.21563

#1	7.7591	1.6885	107.89	9.8191	17.607
#2	7.7745	1.6913	108.27	9.8189	17.553

Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	72.611	1.7851	17.572	152.62	
Stddev	.291	.0008	.095	.22	
%RSD	.40084	.04275	.53951	.14154	

#1	72.405	1.7846	17.505	152.47	
#2	72.816	1.7857	17.639	152.78	

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Method: CLPS

Sample Name: 50

Operator:

Comment:

Run Time: 04/03/02

07:55 Type: Std

Mode: IR

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	13.953	11.889	5.5202	947.99	1121.4
Stddev	.021	.196	.0095	1.30	1.4
%RSD	.15202	1.6484	.17130	.13707	.12498

#1	13.938	12.028	5.5136	947.07	1120.4
#2	13.968	11.751	5.5269	948.91	1122.4

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75.662	108.00	10.137	27.221	108.40
Stddev	.056	.28	.022	.090	.27
%RSD	.07353	.25869	.22139	.33234	.24835

#1	75.701	108.20	10.121	27.157	108.21
#2	75.622	107.81	10.153	27.285	108.59

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	24.222	52.686	2526.9	4060.6	5.1895
Stddev	.196	.091	49.1	97.1	.0163
%RSD	.80891	.17275	1.9422	2.3915	.31481

#1	24.084	52.621	2492.2	3991.9	5.2010
#2	24.361	52.750	2561.6	4129.2	5.1779

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	917.65	49.331	14005.	61.380	8.8001
Stddev	3.70	.102	434.	.029	.0519
%RSD	.40305	.20594	3.0963	.04667	.58954

#1	915.03	49.259	14312.	61.360	8.7634
#2	920.26	49.403	13699.	61.400	8.8368

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	16.110	3.5433	223.90	20.732	37.271
Stddev	.028	.0169	.18	.003	.111
%RSD	.17609	.47585	.08076	.01455	.29856

#1	16.090	3.5552	224.03	20.734	37.350
#2	16.130	3.5314	223.77	20.730	37.193

Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	151.36	3.7637	36.072	318.30	
Stddev	.09	.0012	.016	.40	
%RSD	.06029	.03191	.04541	.12459	

#1	151.30	3.7629	36.084	318.02	
#2	151.42	3.7646	36.061	318.58	

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El Name	Slope	Y-int	Correlation	Date Stdized
AL3082	0.6760	0.0009	0.9996176	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	0.000378580	0	0	0.0011556
S1	0.1	0.080699	-0.0193	-19.3	0.055455
S2	0.2	0.17476	-0.0252	-12.6	0.11904
S3	5	4.8488	-0.151	-3.02	3.2788
S4	10	9.9584	-0.0416	-0.416	6.7331
S5	20	20.638	0.638	3.19	13.953

El Name	Slope	Y-int	Correlation	Date Stdized
Ag3280	14.5742	0.0479	0.9985044	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	4.3921e-050	0	0	0.048503
S2	0.008	0.0038527	-0.00415	-51.8	0.10401
S3	0.2	0.18602	-0.014	-6.99	2.7589
S4	0.4	0.3775	-0.0225	-5.63	5.5495
S5	0.8	0.81249	0.0125	1.56	11.889

El Name	Slope	Y-int	Correlation	Date Stdized
As1890	6.8579	-0.0216	0.9996696	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	-1.2762e-050	0	0	-0.021652
S2	0.008	0.0094591	0.00146	18.2	0.043306
S3	0.2	0.19503	-0.00497	-2.48	1.3159
S4	0.4	0.3857	-0.0143	-3.57	2.6235
S5	0.8	0.80809	0.00809	1.01	5.5202

El Name	Slope	Y-int	Correlation	Date Stdized
B_2496	46.9538	0.1747	0.9999203	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	6.9621e-050	0	0	0.17794
S1	0.1	0.096688	-0.00331	-3.31	4.7146
S2	0.2	0.1943	-0.0057	-2.85	9.2979
S3	5	4.997	-0.00302	-0.0603	234.8
S4	10	9.8099	-0.19	-1.9	460.79
S5	20	20.186	0.186	0.931	947.99

El Name	Slope	Y-int	Correlation	Date Stdized
Ea4554	555.0962	-0.0210	0.9999274	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	6.7181e-060	0	0	-0.017317
S1	0.01	0.0098469	-0.000153	-1.53	5.4449
S2	0.02	0.019345	-0.000655	-3.27	10.717
S3	0.5	0.49016	-0.00984	-1.97	272.06
S4	1	0.99048	-0.00952	-0.952	549.79
S5	2	2.0202	0.0202	1.01	1121.4

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El Name	Slope	Y-int	Correlation	Date Stdized
Be3130	717.9970	0.1610	0.9998506	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	9.7584e-070	0	0	0.16166
S1	0.0005	0.00049024	-9.76e-06	-1.95	0.51295
S2	0.001	0.0009187	-8.13e-05	-8.13	0.82059
S3	0.025	0.025525	0.000525	2.1	18.488
S4	0.05	0.05103	0.00103	2.06	36.801
S5	0.1	0.10515	0.00515	5.15	75.662

El Name	Slope	Y-int	Correlation	Date Stdized
Ca3736	5.2427	0.1183	0.9995116	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	0.000339550	0	0	0.1201
S1	0.1	0.079902	-0.0201	-20.1	0.53721
S2	0.2	0.18201	-0.018	-8.99	1.0725
S3	5	4.8133	-0.187	-3.73	25.353
S4	10	9.7631	-0.237	-2.37	51.303
S5	20	20.579	0.579	2.89	108

El Name	Slope	Y-int	Correlation	Date Stdized
Cd2288	98.5016	0.2118	0.9996617	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	9.4594e-070	0	0	0.21194
S2	0.001	0.00091835	-8.16e-05	-8.16	0.30231
S3	0.025	0.024319	-0.000681	-2.72	2.6073
S4	0.05	0.047567	-0.00243	-4.87	4.8973
S5	0.1	0.10076	0.00076	0.76	10.137

El Name	Slope	Y-int	Correlation	Date Stdized
Co2286	68.7303	-0.0401	0.9997958	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	1.1927e-060	0	0	-0.039973
S2	0.004	0.0038745	-0.000125	-3.14	0.22624
S3	0.1	0.096089	-0.00391	-3.91	6.5642
S4	0.2	0.18966	-0.0103	-5.17	12.995
S5	0.4	0.39664	-0.00336	-0.839	27.221

El Name	Slope	Y-int	Correlation	Date Stdized
Cr2677	106.0790	-0.4840	0.9995658	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	9.2911e-060	0	0	-0.48301
S1	0.005	0.004594	-0.000406	-8.12	0.0033302
S2	0.01	0.0093463	-0.000654	-6.54	0.50745
S3	0.25	0.24319	-0.00681	-2.72	25.314
S4	0.5	0.48303	-0.017	-3.39	50.756
S5	1	1.0264	0.0264	2.64	108.4

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El Name	Slope	Y-int	Correlation	Date Stdized
Cu3247	24.6779	-0.0019	0.9998598	04/03/02 07:59:28

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	-1.5993e-050	0	0	-0.0023097
S2	0.01	0.011505	0.00151	15.1	0.282
S3	0.25	0.2409	-0.0091	-3.64	5.9431
S4	0.5	0.48109	-0.0189	-3.78	11.87
S5	1	0.98161	-0.0184	-1.84	24.222

El Name	Slope	Y-int	Correlation	Date Stdized
Fe2714	6.4891	0.3839	0.9996142	04/03/02 07:59:28

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	4.0346e-050	0	0	0.3842
S1	0.04	0.0373	-0.0027	-6.75	0.62598
S2	0.08	0.077604	-0.0024	-3	0.88752
S3	2	1.8988	-0.101	-5.06	12.706
S4	4	3.8156	-0.184	-4.61	25.144
S5	8	8.0599	0.0599	0.749	52.686

El Name	Slope	Y-int	Correlation	Date Stdized
K_7664	26.4960	0.2064	0.9984282	04/03/02 07:59:28

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	-0.00101360	0	0	0.17955
S1	0.5	0.5334	0.0334	6.68	14.34
S2	1	1.0408	0.0408	4.08	27.784
S3	25	27.509	2.51	10	729.09
S4	50	52.056	2.06	4.11	1379.5
S5	100	95.36	-4.64	-4.64	2526.9

El Name	Slope	Y-int	Correlation	Date Stdized
Li6707	2089.7725	1.4621	0.9994509	04/03/02 07:59:28

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	1.1227e-060	0	0	1.4645
S1	0.01	0.0098394	-0.000161	-1.61	22.024
S2	0.02	0.019075	-0.000925	-4.63	41.324
S3	0.5	0.52047	0.0205	4.09	1089.1
S4	1	1.0365	0.0365	3.65	2167.5
S5	2	1.9424	-0.0576	-2.88	4060.6

El Name	Slope	Y-int	Correlation	Date Stdized
Mg2779	0.2600	-0.0230	0.9996555	04/03/02 07:59:28

Standard Name	Concentration Stated	Concentration Found	Difference Conc	Difference %	Signal (S) IR
S0	0	-0.000437990	0	0	-0.023095
S2	0.2	0.24841	0.0484	24.2	0.041608
S3	5	4.7895	-0.21	-4.21	1.2223
S4	10	9.7343	-0.266	-2.66	2.508
S5	20	20.047	0.0471	0.235	5.1895

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Element	Slope	Y-int	Correlation	Date Stdized
Mn2576	898.0319	-0.0612	0.9996673	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	9.7093e-060		0	-0.052464
S1	0.005	0.0045907	-0.000409	-8.19	4.0614
S2	0.01	0.0091989	-0.000801	-8.01	8.1997
S3	0.25	0.24326	-0.00674	-2.7	218.39
S4	0.5	0.48564	-0.0144	-2.87	436.06
S5	1	1.0219	0.0219	2.19	917.65

El Name	Slope	Y-int	Correlation	Date Stdized
Mo2020	24.1327	-0.0144	0.9996452	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	2.2082e-050		0	-0.01388
S1	0.01	0.008787	-0.00121	-12.1	0.19764
S2	0.02	0.018634	-0.00137	-6.83	0.43527
S3	0.5	0.48822	-0.0118	-2.36	11.768
S4	1	0.96872	-0.0313	-3.13	23.363
S5	2	2.0448	0.0448	2.24	49.331

El Name	Slope	Y-int	Correlation	Date Stdized
Na5895	148.0472	0.9194	0.9977026	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	-0.00157230		0	0.68661
S1	0.5	0.55348	0.0535	10.7	82.861
S2	1	1.091	0.091	9.1	162.44
S3	25	28.267	3.27	13.1	4185.8
S4	50	51.995	1.99	3.99	7698.6
S5	100	94.594	-5.41	-5.41	14005

El Name	Slope	Y-int	Correlation	Date Stdized
Ni2316	60.2054	0.1719	0.9998109	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	1.1826e-050		0	0.17266
S2	0.01	0.0090308	-0.000969	-9.69	0.71565
S3	0.25	0.24686	-0.00314	-1.25	15.034
S4	0.5	0.48871	-0.0113	-2.26	29.595
S5	1	1.0167	0.0167	1.67	61.38

El Name	Slope	Y-int	Correlation	Date Stdized
Pb2203	8.6242	0.0471	0.9992940	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	4.2142e-050		0	0.047468
S2	0.01	0.0059971	-0.004	-40	0.098825
S3	0.25	0.24132	-0.00868	-3.47	2.1283
S4	0.5	0.48613	-0.0139	-2.77	4.2396
S5	1	1.0149	0.0149	1.49	8.8001

El Name	Slope	Y-int	Correlation	Date Stdized
Sb2068	6.6327	0.0600	0.9997967	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	-5.7452e-060	0	0	0.05996
S1	0.012	0.012382	0.000382	3.18	0.14213
S2	0.024	0.024688	0.000688	2.87	0.22375
S3	0.6	0.58105	-0.0189	-3.16	3.9139
S4	1.2	1.1619	-0.0381	-3.17	7.7668
S5	2.4	2.4198	0.0198	0.825	16.11

El Name	Slope	Y-int	Correlation	Date Stdized
Se1960	4.1185	-0.0150	0.9998046	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S2	0.008	0.00776	-0.00024	-3	0.016933
S3	0.2	0.21154	0.0115	5.77	0.85619
S4	0.4	0.41397	0.014	3.49	1.6899
S0	0	8.8772e-060	0	0	-0.01499
S5	0.8	0.86398	0.064	8	3.5433

El Name	Slope	Y-int	Correlation	Date Stdized
Si2516	22.0056	0.1186	0.9998619	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	5.8047e-050	0	0	0.11992
S1	0.05	0.047362	-0.00264	-5.28	1.1609
S2	0.1	0.095994	-0.00401	-4.01	2.2311
S3	2.5	2.4831	-0.0169	-0.675	54.761
S4	5	4.906	-0.094	-1.88	108.08
S5	10	10.169	0.169	1.69	223.9

El Name	Slope	Y-int	Correlation	Date Stdized
Sn1899	10.1367	0.0009	0.9996246	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	2.5032e-050	0	0	0.0011103
S1	0.01	0.0080761	-0.00192	-19.2	0.082722
S2	0.02	0.019469	-0.000531	-2.66	0.19821
S3	0.5	0.48874	-0.0113	-2.25	4.955
S4	1	0.96858	-0.0314	-3.14	9.819
S5	2	2.0451	0.0451	2.26	20.732

El Name	Slope	Y-int	Correlation	Date Stdized
Sr2152	18.1905	0.0055	0.9993786	04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal
	Stated	Found	Conc	%	(S) IR
S0	0	4.9591e-050	0	0	0.0063845
S1	0.01	0.0075422	-0.00246	-24.6	0.14268
S2	0.02	0.015585	-0.00442	-22.1	0.28898
S3	0.5	0.48498	-0.015	-3	8.8276
S4	1	0.96612	-0.0339	-3.39	17.58
S5	2	2.0486	0.0486	2.43	37.271

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Ti3349 74.1955 0.2414 0.9997730 04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.5257e-050	0	0	0.24249
S1	0.01	0.0091104	-0.00089	-8.9	0.91731
S2	0.02	0.019271	-0.000729	-3.64	1.6712
S3	0.5	0.48968	-0.0103	-2.06	36.573
S4	1	0.97539	-0.0246	-2.46	72.611
S5	2	2.0368	0.0368	1.84	151.36

El Name Slope Y-int Correlation Date Stdized
 TL1908 3.9898 -0.0459 0.9998503 04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	2.4832e-050	0	0	-0.045802
S3	0.25	0.23668	-0.0133	-5.33	0.89839
S4	0.5	0.45892	-0.0411	-8.22	1.7851
S5	1	0.95483	-0.0452	-4.52	3.7637

El Name Slope Y-int Correlation Date Stdized
 V_3102 17.3062 0.6833 0.9996474 04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.5213e-050	0	0	0.68361
S1	0.01	0.0088462	-0.00115	-11.5	0.83644
S2	0.02	0.020085	8.49e-05	0.424	1.0309
S3	0.5	0.48043	-0.0196	-3.91	8.9978
S4	1	0.9759	-0.0241	-2.41	17.572
S5	2	2.0449	0.0449	2.24	36.072

El Name Slope Y-int Correlation Date Stdized
 Zn2138 155.9266 0.1070 0.9998070 04/03/02 07:59:28

Standard Name	Concentration		Difference		Signal (S) IR
	Stated	Found	Conc	%	
S0	0	1.3486e-050	0	0	0.10909
S1	0.01	0.0095075	-0.000492	-4.92	1.5895
S2	0.02	0.018767	-0.00123	-6.16	3.0333
S3	0.5	0.49663	-0.00337	-0.675	77.544
S4	1	0.97814	-0.0219	-2.19	152.62
S5	2	2.0406	0.0406	2.03	318.3

Comment:	Sample Name:	Operator:			
Run Time: 04/03/02 08:01	Type: QC	Mode: CONC	Corr.Fact: 1.000000		
Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.326	.39447	.41610	9.9251	1.0024
Stddev	.071	.00546	.00091	.0305	.0030
%RSD	.68869	1.3853	.21784	.30719	.29559
#1	10.276	.39061	.41674	9.9035	1.0003
#2	10.377	.39834	.41546	9.9466	1.0045
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	10.000	.40000	.40000	10.000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05091	10.125	.04989	.20078	.50483
Stddev	.00002	.035	.00024	.00027	.00048
%RSD	.03205	.35023	.48207	.13690	.09441
#1	.05090	10.099	.04972	.20059	.50449
#2	.05092	10.150	.05006	.20098	.50517
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.05000	10.000	.05000	.20000	.50000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50650	3.9344	51.004	1.0368	10.094
Stddev	.00129	.0026	.710	.0057	.000
%RSD	.25431	.06598	1.3920	.54992	.00383
#1	.50559	3.9362	51.506	1.0328	10.094
#2	.50741	3.9325	50.502	1.0409	10.094
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50363	1.0013	50.830	.50140	.51019
Stddev	.00030	.0033	.688	.00060	.00329
%RSD	.05939	.32841	1.3541	.11974	.64541
#1	.50342	.99898	51.317	.50183	.50786
#2	.50384	1.0036	50.343	.50098	.51252
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2168	.40164	4.8654	1.0177	.99626
Stddev	.0092	.00158	.0057	.0009	.00190
%RSD	.76060	.39256	.11772	.09138	.19096
#1	1.2102	.40052	4.8614	1.0183	.99761
#2	1.2233	.40275	4.8695	1.0170	.99492
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	5.0000%	5.0000%	5.0000%	5.0000%	5.0000%
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.97638	.50022	.98615	1.0019	
Stddev	.00384	.00053	.00940	.0014	
%RSD	.39301	.10525	.95319	.14339	
#1	.97366	.50059	.97950	1.0009	
#2	.97909	.49984	.99279	1.0029	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	5.0000%	5.0000%	5.0000%	5.0000%	

Method: 0110

Sample Name: 000

Operator:

Comment:

Run Time: 04/03/02 08:06 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00812	-.00234	.00193	.00972	.00010
Stddev	.02407	.00000	.00080	.00345	.00029
%RSD	296.44	.19666	41.378	35.490	278.68

#1	.00890	-.00234	.00137	.01216	.00030
#2	-.02514	-.00234	.00250	.00728	-.00010

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00500	.01000	.05000	.00250
Low Limit	-.20000	-.00500	-.01000	-.05000	-.00250

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00003	-.01117	-.00003	.00021	-.00028
Stddev	.00001	.00065	.00024	.00006	.00021
%RSD	29.557	5.8621	888.35	27.408	73.005

#1	.00003	-.01163	.00014	.00017	-.00043
#2	.00004	-.01071	-.00020	.00025	-.00014

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00025	.05000	.00100	.00250	.00250
Low Limit	-.00025	-.05000	-.00100	-.00250	-.00250

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00026	.00627	-.00200	.00004	H .18632
Stddev	.00079	.00374	.00082	.00011	.01267
%RSD	307.07	59.742	40.917	308.27	6.8023

#1	-.00030	.00891	-.00142	-.00004	.17736
#2	.00081	.00362	-.00258	.00011	.19529

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.01000	.02000	.25000	.05000	.10000
Low Limit	-.01000	-.02000	-.25000	-.05000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00120	.00131	-.00028	-.00202
Stddev	.00002	.00091	.00008	.00061	.00023
%RSD	275.13	76.227	6.4070	216.00	11.495

#1	.00002	.00184	.00125	-.00072	-.00185
#2	-.00001	.00055	.00137	.00015	-.00215

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00250	.05000	.10000	.01000	.01000
Low Limit	-.00250	-.05000	-.10000	-.01000	-.01000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00157	.00310	-.00043	-.00096	-.00124
Stddev	.00274	.00076	.00038	.00155	.00048
%RSD	174.41	24.420	89.368	161.23	39.411
#1	.00351	.00364	-.00016	.00013	-.00087
#2	-.00037	.00257	-.00070	-.00206	-.00159
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.01000	.25000	.20000	.00500
Low Limit	-.02000	-.01000	-.25000	-.20000	-.00500
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	-.00064	.00161	-.00067	.00004	
Stddev	.00053	.00002	.00056	.00007	
%RSD	82.423	1.2406	82.748	170.02	
#1	-.00027	.00163	-.00028	.00009	
#2	-.00101	.00160	-.00107	-.00001	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	.01500	.02000	.00728	.01000	
Low Limit	-.01500	-.02000	-.00728	-.01000	

Method: CHS

Sample Name: 100A

Operator:

Comment:

Run Time: 04/03/02 08:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	242.13	.00033	.00120	.10527	.00019
Stddev	.03	.00132	.00137	.00079	.00001
%RSD	.01227	400.93	114.27	.75031	4.5567

#1	242.11	.00126	.00217	.10583	.00020
#2	242.15	-.00061	.00023	.10471	.00019

Check ?	QC Pass				
Value	250.00	.00000	.00000	.00000	.00000
Range	±50.000	±.01600	±.04000	±.20000	±.02000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	233.89	.00142	-.00687	-.00012
Stddev	.00013	.13	.00023	.00015	.00048
%RSD	127.98	.05626	16.470	2.2172	419.50

#1	-.00001	233.98	.00158	-.00697	.00023
#2	-.00019	233.80	.00125	-.00676	-.00046

Check ?	QC Pass				
Value	.00000	250.00	.00000	.00000	.00000
Range	±.00100	±50.000	±.00400	±.01000	±.01000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00131	94.852	-.02781	.01493	239.65
Stddev	.00267	.297	.00569	.00006	.11
%RSD	203.63	.31312	20.446	.37069	.04574

#1	-.00058	94.642	-.02379	.01497	239.57
#2	.00320	95.062	-.03183	.01489	239.72

Check ?	QC Pass				
Value	.00000	100.00	.00000	.00000	250.00
Range	±.01000	±20.000	±1.0000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00262	-.00184	.00927	.00088	-.01796
Stddev	.00003	.00075	.00098	.00010	.00465
%RSD	1.1171	40.610	10.534	11.209	25.878

#1	.00260	-.00237	.00996	.00081	-.02124
#2	.00264	-.00131	.00858	.00095	-.01467

Check ?	QC Pass				
Value	.00000	.00000	.00000	.00000	.00000
Range	±.01000	±.20000	±1.0000	±.04000	±.04000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00187	-.00477	.11884	-.00244	.00507
Stddev	.00567	.00016	.00009	.00023	.00068
%RSD	302.86	3.2762	.07449	9.5203	13.502
#1	-.00214	-.00466	.11878	-.00260	.00458
#2	.00588	-.00488	.11890	-.00228	.00555
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.00000	.00000	.00000	.00000
Range	±.04000	±.04000	±1.0000	±1.0000	±.02000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.00132	-.00735	-.00665	-.00684	
Stddev	.00026	.00034	.00151	.00014	
%RSD	19.925	4.6173	22.741	2.0015	
#1	.00113	-.00759	-.00772	-.00694	
#2	.00150	-.00711	-.00558	-.00675	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	.00000	.00000	.00000	.00000	
Range	±.06000	±.08000	±.02000	±.02000	

Comment:

Run Time: 04/03/02 08:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	246.63	.50067	.24815	.09991	.23871
Stddev	.66	.00409	.00161	.00050	.00023
%RSD	.26687	.81689	.64707	.50215	.09532

#1	247.10	.50357	.24701	.10026	.23855
#2	246.17	.49778	.24928	.09955	.23887

Check ?	QC Pass				
Value	250.00	.50000	.25000	.00000	.25000
Range	±50.000	±.10000	±.05000	±.20000	±.05000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.23600	236.66	.42122	.22436	.23528
Stddev	.00090	1.16	.00083	.00077	.00021
%RSD	.38031	.48811	.19615	.34278	.08825

#1	.23537	235.85	.42064	.22381	.23514
#2	.23664	237.48	.42181	.22490	.23543

Check ?	QC Pass				
Value	.25000	250.00	.50000	.25000	.25000
Range	±.05000	±50.000	±.10000	±.05000	±.05000

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.24132	101.41	4.5992	.01523	243.41
Stddev	.00202	.17	.0910	.00014	.60
%RSD	.83689	.16585	1.9778	.90086	.24483

#1	.24275	101.29	4.6635	.01513	242.99
#2	.23989	101.53	4.5349	.01532	243.83

Check ?	QC Pass				
Value	.25000	100.00	5.0000	.00000	250.00
Range	±.05000	±20.000	±1.0000	±.20000	±50.000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.22823	-.00095	4.7839	.46942	.45407
Stddev	.00060	.00099	.0945	.00008	.00614
%RSD	.26149	104.58	1.9747	.01731	1.3524

#1	.22781	-.00165	4.8507	.46947	.44973
#2	.22865	-.00025	4.7171	.46936	.45841

Check ?	QC Pass				
Value	.25000	.00000	5.0000	.50000	.50000
Range	±.05000	±.20000	±1.0000	±.10000	±.10000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49854	.24309	.00807	-.00271	.01957
Stddev	.00108	.00896	.00038	.00031	.00231
%RSD	.21647	3.6848	4.7329	11.419	11.818

#1	.49778	.23676	.00780	-.00249	.02120
#2	.49930	.24943	.00834	-.00293	.01793

Check ?	QC Pass				
Value	.50000	.25000	.00000	.00000	.00000
Range	±.10000	±.05000	±1.0000	±1.0000	±.02000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	.00243	.44941	.21557	.49535
Stddev	.00037	.00017	.00119	.00078
%RSD	15.369	.03688	.55004	.15700

#1	.00217	.44929	.21641	.49480
#2	.00270	.44953	.21473	.49590

Check ?	QC Pass	QC Pass	QC Pass	QC Pass
Value	.00000	.50000	.25000	.50000
Range	±.06000	±.10000	±.05000	±.10000

Method: 0110 Sample Name: 007 Operator:
 Comment:
 Run Time: 04/03/02 08:19 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.500	.40836	.41132	9.9413	1.0106
Stddev	.033	.00474	.00149	.0189	.0068
%RSD	.31447	1.1597	.36181	.19028	.67058

#1	10.476	.40501	.41027	9.9279	1.0058
#2	10.523	.41171	.41238	9.9547	1.0154

Check ?	QC Pass				
Value	10.000	.40000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05070	10.192	.04986	.20142	.50634
Stddev	.00001	.015	.00012	.00104	.00145
%RSD	.01234	.15136	.24454	.51413	.28704

#1	.05070	10.203	.04977	.20215	.50737
#2	.05071	10.181	.04995	.20068	.50531

Check ?	QC Pass				
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50827	3.9456	52.972	1.0586	10.209
Stddev	.00363	.0124	1.486	.0278	.038
%RSD	.71419	.31458	2.8046	2.6269	.36807

#1	.50570	3.9544	51.922	1.0389	10.182
#2	.51083	3.9368	54.023	1.0783	10.235

Check ?	QC Pass				
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50777	1.0012	51.897	.50169	.51115
Stddev	.00099	.0006	1.541	.00119	.00487
%RSD	.19576	.05562	2.9687	.23638	.95200

#1	.50848	1.0008	50.807	.50253	.51459
#2	.50707	1.0016	52.986	.50085	.50771

Check ?	QC Pass				
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2180	.39796	4.8327	1.0163	.98441
Stddev	.0023	.00133	.0111	.0013	.00482
%RSD	.18662	.33484	.22897	.12936	.48953
#1	1.2164	.39890	4.8249	1.0172	.98782
#2	1.2196	.39701	4.8405	1.0154	.98101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.97403	.49658	.99401	1.0008	
Stddev	.00583	.00124	.00545	.0002	
%RSD	.59853	.25008	.54794	.01916	
#1	.96991	.49570	.99016	1.0009	
#2	.97815	.49746	.99786	1.0006	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	10.000%	10.000%	10.000%	10.000%	

Comment: Run Time: 04/03/02 08:24 Type: Blank Mode: CONC Operator: Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00899	-.00092	.00015	.00565	.00012
Stddev	.02877	.00064	.00217	.00284	.00001
%RSD	320.03	70.023	1450.0	50.216	12.359
#1	.02934	-.00138	-.00139	.00765	.00011
#2	-.01135	-.00047	.00169	.00364	.00013
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00500	.01000	.05000	.00250
Low Limit	-.20000	-.00500	-.01000	-.05000	-.00250
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00004	-.00630	-.00002	-.00032	-.00019
Stddev	.00008	.00568	.00014	.00004	.00033
%RSD	183.67	90.223	820.79	12.874	179.42
#1	-.00001	-.01031	-.00011	-.00030	-.00042
#2	.00010	-.00228	.00008	-.00035	.00005
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00025	.05000	.00100	.00250	.00250
Low Limit	-.00025	-.05000	-.00100	-.00250	-.00250
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	.00218	-.00904	.00010	H .15943
Stddev	.00077	.00950	.00177	.00010	.04990
%RSD	249.22	435.69	19.609	101.67	31.299
#1	-.00085	.00890	-.00779	.00017	.19472
#2	.00024	-.00454	-.01030	.00003	.12415
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.01000	.02000	.25000	.05000	.10000
Low Limit	-.01000	-.02000	-.25000	-.05000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00003	.00103	.00061	.00006	-.00134
Stddev	.00007	.00068	.00213	.00023	.00082
%RSD	257.88	66.118	347.31	404.45	60.869
#1	.00007	.00152	.00212	-.00011	-.00192
#2	-.00002	.00055	-.00089	.00022	-.00076
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00250	.05000	.10000	.01000	.01000
Low Limit	-.00250	-.05000	-.10000	-.01000	-.01000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00058	.00425	-.00088	.00024	-.00018
Stddev	.00203	.00086	.00096	.00077	.00008
%RSD	349.89	20.226	108.95	317.32	44.501
#1	.00202	.00364	-.00020	.00079	-.00023
#2	-.00086	.00486	-.00156	-.00030	-.00012
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.01000	.25000	.20000	.00500
Low Limit	-.02000	-.01000	-.25000	-.20000	-.00500
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	-.00017	.00181	-.00108	-.00002	
Stddev	.00057	.00054	.00188	.00004	
%RSD	329.89	30.082	174.76	189.98	
#1	-.00058	.00220	.00025	.00001	
#2	.00023	.00143	-.00241	-.00005	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	.01500	.02000	.00728	.01000	
Low Limit	-.01500	-.02000	-.00728	-.01000	

Comment: WG115494-03
 Run Time: 04/03/02 08:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00129	-.00282	-.00163	.00250	.00021
Stddev	.00017	.00070	.00011	.00076	.00003
%RSD	13.283	24.775	7.0222	30.554	12.823
#1	-.00142	-.00232	-.00171	.00304	.00019
#2	-.00117	-.00331	-.00155	.00196	.00023
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00800	.02000	.10000	.01000
Low Limit	-.20000	-.00800	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.00647	.00009	.00025	.00007
Stddev	.00007	.00622	.00026	.00024	.00019
%RSD	227.80	96.160	292.63	98.009	268.77
#1	.00002	.01087	-.00009	.00008	-.00006
#2	-.00008	.00207	.00027	.00042	.00021
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00050	.20000	.00200	.00500	.00500
Low Limit	-.00050	-.20000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00073	.00230	-.00382	-.00004	H .13255
Stddev	.00117	.00051	.00057	.00011	.11297
%RSD	160.89	22.088	14.900	252.70	85.228
#1	-.00010	.00266	-.00341	-.00012	.21244
#2	.00156	.00194	-.00422	.00003	.05267
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.00500	.02000	.50000	.10000	.10000
Low Limit	-.00500	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.00019	.00592	-.00022	.00207
Stddev	.00000	.00031	.00155	.00003	.00294
%RSD	3.0324	159.07	26.193	11.870	140.68
#1	.00008	.00041	.00482	-.00020	.00004
#2	.00008	-.00002	.00701	-.00024	.00413
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.01000	.10000	.50000	.02000	.02000
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00207	.00196	.01384	-.00145	-.00201
Stddev	.00133	.00391	.00166	.00147	.00052
%RSD	64.144	199.68	12.025	101.23	25.780
#1	.00301	.00472	.01502	-.00041	-.00238
#2	.00113	-.00081	.01267	-.00249	-.00164
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.02000	1.0000	.50000	.01000
Low Limit	-.02000	-.02000	-1.0000	-.50000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.00029	-.00089	-.00041	.00032	
Stddev	.00079	.00339	.00170	.00003	
%RSD	269.73	381.21	416.86	10.624	
#1	-.00027	.00151	.00079	.00035	
#2	.00085	-.00329	-.00161	.00030	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	.03000	.04000	.01000	.02000	
Low Limit	-.03000	-.04000	-.01000	-.02000	

Comment: WG115494-04

Operator: JYH

Run Time: 04/03/02 08:33 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	9.7427	.18993	.97656	.99865	9.6495
Stddev	.0521	.00397	.01385	.01508	.0369
%RSD	.53435	2.0892	1.4186	1.5096	.38222
#1	9.7795	.19274	.96676	.98799	9.6234
#2	9.7059	.18713	.98635	1.0093	9.6756
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	12.000	.24000	1.2000	1.2000	12.000
Low Limit	8.0000	.16000	.80000	.80000	8.0000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0478	10.123	.85778	.97780	1.0195
Stddev	.0094	.229	.02023	.03286	.0328
%RSD	.89892	2.2655	2.3581	3.3605	3.2215
#1	1.0411	9.9610	.84347	.95457	.99627
#2	1.0545	10.285	.87208	1.0010	1.0427
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1.2000	12.000	1.2000	1.2000	1.2000
Low Limit	.80000	8.0000	.80000	.80000	.80000
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.98585	.86266	45.279	9.0522	9.8256
Stddev	.00147	.02429	.619	.4402	.0548
%RSD	.14908	2.8155	1.3665	4.8626	.55753
#1	.98689	.84549	44.842	9.3634	9.7869
#2	.98481	.87983	45.717	8.7409	9.8644
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1.2000	1.2000	60.000	12.000	12.000
Low Limit	.80000	.80000	40.000	8.0000	8.0000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0127	.99759	46.302	1.0052	.97879
Stddev	.0312	.03352	.438	.0329	.03631
%RSD	3.0812	3.3597	.94682	3.2693	3.7096
#1	.99060	.97389	45.992	.98199	.95311
#2	1.0347	1.0213	46.612	1.0285	1.0045
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1.2000	1.2000	60.000	1.2000	1.2000
Low Limit	.80000	.80000	40.000	.80000	.80000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.98051	.98931	8.9391	L .00194	.97370
Stddev	.01771	.01537	.1671	.00023	.04565
%RSD	1.8065	1.5537	1.8691	11.965	4.6885
#1	.96799	.97844	8.8210	.00178	.94142
#2	.99304	1.0002	9.0573	.00211	1.0060
Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	1.2000	1.2000	12.000	1.2000	1.2000
Low Limit	.80000	.80000	8.0000	.80000	.80000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	1.0142	.97515	1.0015	.98519	
Stddev	.0103	.04063	.0088	.01866	
%RSD	1.0192	4.1670	.87607	1.8943	
#1	1.0068	.94642	.99534	.97199	
#2	1.0215	1.0039	1.0078	.99838	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	1.2000	1.2000	1.2000	1.2000	
Low Limit	.80000	.80000	.80000	.80000	

Comment: WG115494-01

Operator: JYH

Run Time: 04/03/02 08:37 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	227.94	-.00804	.02612	.11849	.16207
Stddev	.59	.00069	.00172	.00145	.00115
%RSD	.25963	8.5500	6.5955	1.2272	.71117
#1	227.52	-.00852	.02490	.11746	.16125
#2	228.35	-.00755	.02734	.11952	.16288
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00089	1.8645	.00209	.00320	.17176
Stddev	.00011	.0365	.00009	.00023	.00234
%RSD	12.714	1.9550	4.1624	7.1994	1.3635
#1	.00097	1.8387	.00215	.00303	.17010
#2	.00081	1.8903	.00202	.00336	.17341
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.06698	108.51	2.0265	.05915	2.7133
Stddev	.00021	1.42	.0023	.00044	.0265
%RSD	.31454	1.3096	.11317	.74657	.97666
#1	.06713	107.50	2.0249	.05883	2.6945
#2	.06683	109.51	2.0281	.05946	2.7320
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.68303	.00836	.16536	.04338	.04968
Stddev	.00741	.00054	.00022	.00077	.00564
%RSD	1.0845	6.4203	.13376	1.7807	11.363
#1	.67779	.00873	.16520	.04283	.04568
#2	.68827	.00798	.16551	.04393	.05367
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00332	.00268	10.520	.00600	.04823
Stddev	.00135	.00105	.069	.00039	.00278
%RSD	40.530	39.101	.65297	6.4593	5.7732
#1	.00237	.00343	10.472	.00572	.04626
#2	.00428	.00194	10.569	.00627	.05020
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	1.8890	-.01091	.24985	.09082	
Stddev	.0074	.00094	.00202	.00064	
%RSD	.39128	8.5831	.80871	.70451	
#1	1.8838	-.01025	.24843	.09037	
#2	1.8943	-.01157	.25128	.09128	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment: WG115494-05

Run Time: 04/03/02 08:42 Type: Unk

Mode: CONC

Operator: JIH

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	321.49	.17177	.95086	1.0532	9.5991
Stddev	.74	.00271	.01165	.0092	.0236
%RSD	.23005	1.5774	1.2252	.87849	.24615
#1	320.97	.17369	.94262	1.0466	9.5824
#2	322.01	.16986	.95909	1.0597	9.6158
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0416	11.460	.86023	.96436	1.2075
Stddev	.0080	.092	.01127	.01944	.0246
%RSD	.76508	.79925	1.3103	2.0156	2.0390
#1	1.0360	11.395	.85226	.95062	1.1901
#2	1.0473	11.524	.86820	.97811	1.2249
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0697	107.96	46.987	8.6679	14.066
Stddev	.0019	2.16	.271	.2565	.141
%RSD	.17979	1.9987	.57621	2.9588	1.0031
#1	1.0710	106.44	47.179	8.4865	13.966
#2	1.0683	109.49	46.796	8.8492	14.165
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.7005	.94380	43.747	1.0699	1.0166
Stddev	.0312	.01903	.013	.0201	.0152
%RSD	1.8345	2.0162	.03042	1.8783	1.4947
#1	1.6785	.93034	43.757	1.0557	1.0059
#2	1.7226	.95726	43.738	1.0841	1.0274
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.86624	.97948	17.977	.00857	1.0026
Stddev	.00829	.01423	.170	.00031	.0296
%RSD	.95728	1.4531	.94347	3.6165	2.9557

#1	.86038	.96941	17.857	.00835	.98161
#2	.87211	.98954	18.097	.00879	1.0235

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	4.0024	.50646	1.2694	1.1083
Stddev	.0274	.00648	.0063	.0136
%RSD	.68487	1.2802	.49733	1.2271

#1	3.9830	.50187	1.2649	1.0987
#2	4.0218	.51104	1.2738	1.1180

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	30.000	20.000	100.00	40.000
Low Limit	-.01000	-.04000	-.01000	-.01000

Comment: WG115494-06

Run Time: 04/03/02 08:46 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	354.30	.17271	.94805	1.0500	9.4957
Stddev	.24	.00069	.00973	.0073	.0135
%RSD	.06739	.40198	1.0267	.69815	.14168

#1	354.47	.17221	.94116	1.0448	9.5052
#2	354.13	.17320	.95493	1.0552	9.4862

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0353	11.541	.85829	.96400	1.2471
Stddev	.0065	.058	.00861	.01285	.0185
%RSD	.62350	.50633	1.0034	1.3334	1.4857

#1	1.0308	11.500	.85220	.95491	1.2340
#2	1.0399	11.583	.86438	.97309	1.2602

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0565	125.13	45.372	8.3642	13.961
Stddev	.0059	1.81	.813	.1158	.011
%RSD	.56119	1.4504	1.7928	1.3845	.07737

#1	1.0523	123.85	44.797	8.4461	13.969
#2	1.0607	126.41	45.947	8.2823	13.954

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.5980	.94532	42.073	1.0795	1.0124
Stddev	.0195	.01325	1.034	.0152	.0204
%RSD	1.2199	1.4018	2.4580	1.4045	2.0135

#1	1.5842	.93595	41.342	1.0688	.99797
#2	1.6118	.95469	42.804	1.0902	1.0268

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

825

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.84437	.96913	17.828	.01027	1.0126
Stddev	.00908	.00755	.112	.00101	.0199
%RSD	1.0759	.77893	.62705	9.8013	1.9652

#1	.83795	.96379	17.749	.00956	.99848
#2	.85080	.97447	17.907	.01098	1.0266

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	4.0695	.45213	1.3052	1.1053
Stddev	.0076	.01121	.0029	.0096
%RSD	.18795	2.4791	.21992	.86731

#1	4.0641	.44420	1.3032	1.0985
#2	4.0749	.46005	1.3073	1.1121

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	30.000	20.000	100.00	40.000
Low Limit	-.01000	-.04000	-.01000	-.01000

Comment: WG115494-02

Run Time: 04/03/02 08:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	266.01	L -.01416	.06401	.43623	1.5039
Stddev	1.45	.00008	.00125	.00563	.0103
%RSD	.54459	.57110	1.9502	1.2913	.68610

#1	267.03	-.01422	.06489	.43225	1.5112
#2	264.98	-.01410	.06313	.44022	1.4966

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01398	70.816	.01144	.10571	.39243
Stddev	.00001	.165	.00003	.00196	.00481
%RSD	.04953	.23237	.23254	1.8557	1.2264

#1	.01397	70.699	.01142	.10432	.38903
#2	.01398	70.932	.01145	.10710	.39584

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.31024	232.89	26.159	.43153	57.983
Stddev	.00265	3.04	.473	.00954	.265
%RSD	.85261	1.3040	1.8088	2.2098	.45731

#1	.31211	230.74	26.493	.43827	58.171
#2	.30837	235.03	25.824	.42478	57.796

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.6605	.00605	4.6544	.32647	.13168
Stddev	.0157	.00109	.0529	.00377	.00176
%RSD	.94362	18.006	1.1366	1.1540	1.3364

#1	1.6494	.00682	4.6918	.32381	.13293
#2	1.6716	.00528	4.6170	.32914	.13044

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00644	.02152	10.650	.01010	.46507
Stddev	.00176	.00289	.045	.00062	.01118
%RSD	27.308	13.414	.42133	6.1330	2.4048

#1	.00520	.02357	10.618	.01054	.45716
#2	.00769	.01948	10.682	.00967	.47298

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	3.3045	-.01920	.70847	.95606
Stddev	.0028	.00454	.00088	.00679
%RSD	.08360	23.669	.12423	.71045

#1	3.3065	-.01599	.70785	.95126
#2	3.3026	-.02241	.70909	.96087

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	30.000	20.000	100.00	40.000
Low Limit	-.01000	-.04000	-.01000	-.01000

Comment: WG115494-07

Run Time: 04/03/02 08:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	237.41	L -.01070	.05285	.36966	1.4197
Stddev	.49	.00128	.00115	.00422	.0023
%RSD	.20516	11.952	2.1832	1.1414	.16109
#1	237.06	-.00979	.05203	.36668	1.4181
#2	237.75	-.01160	.05366	.37265	1.4213
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01239	65.319	.00991	.09735	.36221
Stddev	.00009	.236	.00018	.00134	.00430
%RSD	.75218	.36174	1.8331	1.3773	1.1869
#1	.01232	65.486	.00978	.09640	.35917
#2	.01245	65.152	.01004	.09830	.36525
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.28281	215.52	21.864	.39854	53.754
Stddev	.00353	2.83	.279	.00024	.061
%RSD	1.2487	1.3120	1.2775	.05967	.11326
#1	.28031	213.52	21.667	.39871	53.797
#2	.28530	217.52	22.062	.39837	53.711
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.5554	.00259	4.6423	.29596	.15221
Stddev	.0175	.00013	.0839	.00356	.00327
%RSD	1.1265	4.9769	1.8072	1.2044	2.1452
#1	1.5430	.00268	4.5830	.29343	.14990
#2	1.5678	.00249	4.7016	.29848	.15451
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00061	-.00175	7.4866	.00956	.41607
Stddev	.00114	.00052	.0355	.00077	.00865
%RSD	186.27	29.747	.47416	8.1063	2.0791
#1	.00141	-.00212	7.4615	.00901	.40995
#2	-.00019	-.00138	7.5117	.01010	.42219
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	2.6472	-.02182	.59772	.90656	
Stddev	.0126	.00200	.00607	.00721	
%RSD	.47495	9.1886	1.0163	.79537	
#1	2.6383	-.02324	.59343	.90147	
#2	2.6561	-.02040	.60202	.91166	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	253.27	.16440	1.0195	1.2612	10.345
Stddev	.43	.00131	.0168	.0144	.085
%RSD	.16965	.79805	1.6427	1.1383	.82480
#1	252.97	.16532	1.0076	1.2511	10.285
#2	253.57	.16347	1.0313	1.2714	10.406
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0154	74.648	.84318	1.0020	1.3036
Stddev	.0159	.687	.01234	.0242	.0271
%RSD	1.5696	.92084	1.4638	2.4112	2.0815
#1	1.0041	74.162	.83445	.98495	1.2844
#2	1.0267	75.134	.85191	1.0191	1.3228
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2400	209.96	62.836	8.6333	63.003
Stddev	.0056	3.53	3.042	.3722	.592
%RSD	.45031	1.6806	4.8412	4.3110	.93970
#1	1.2361	207.46	60.685	8.3701	62.585
#2	1.2440	212.45	64.987	8.8965	63.422
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	2.3713	.93804	45.309	1.2689	1.0356
Stddev	.0378	.02223	2.658	.0266	.0259
%RSD	1.5947	2.3698	5.8660	2.0972	2.4967
#1	2.3445	.92233	43.429	1.2501	1.0173
#2	2.3980	.95376	47.188	1.2877	1.0539
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.95110	.96873	18.540	.00846	1.3210
Stddev	.01420	.01225	.165	.00294	.0408
%RSD	1.4927	1.2647	.89157	34.798	3.0879
#1	.94106	.96007	18.423	.00638	1.2922
#2	.96114	.97740	18.656	.01054	1.3499
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	3.9877	.89349	1.5831	1.7905	
Stddev	.0431	.02917	.0147	.0226	
%RSD	1.0805	3.2648	.92706	1.2617	
#1	3.9572	.87286	1.5727	1.7746	
#2	4.0181	.91412	1.5935	1.8065	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Method: CH10

Sample Name: B0207000013DD

Operator: JIN

Comment:

Run Time: 04/03/02 09:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	56.478	-.00626	.01507	.09473	.30555
Stddev	.010	.00204	.00172	.00132	.00037
%RSD	.01852	32.616	11.389	1.3902	.11982

#1	56.485	-.00770	.01386	.09566	.30581
#2	56.470	-.00482	.01629	.09380	.30529

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00274	14.033	.00244	.02342	.08290
Stddev	.00001	.132	.00026	.00020	.00025
%RSD	.38037	.94191	10.721	.87541	.30150

#1	.00273	13.939	.00225	.02356	.08307
#2	.00275	14.126	.00262	.02327	.08272

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.06099	49.507	6.4792	.10083	11.463
Stddev	.00056	.178	.2378	.00161	.161
%RSD	.92121	.35893	3.6704	1.5972	1.4077

#1	.06059	49.633	6.6473	.10196	11.577
#2	.06138	49.382	6.3110	.09969	11.349

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.36773	.00150	1.1407	.07050	.02581
Stddev	.00165	.00023	.0441	.00004	.00141
%RSD	.44782	15.104	3.8625	.04983	5.4603

#1	.36890	.00167	1.1718	.07047	.02481
#2	.36657	.00134	1.1095	.07052	.02680

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

833

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00712	-.00259	2.3270	.00030	.10599
Stddev	.00008	.00097	.0086	.00101	.00116
%RSD	1.1347	37.500	.37140	336.90	1.0990
#1	.00718	-.00190	2.3331	-.00041	.10682
#2	.00707	-.00327	2.3209	.00101	.10517
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.64499	-.00444	.13573	.20004	
Stddev	.00055	.00045	.00192	.00028	
%RSD	.08593	10.030	1.4115	.14050	
#1	.64538	-.00476	.13437	.20024	
#2	.64459	-.00413	.13708	.19984	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.504	.39898	.42597	10.043	1.0195
Stddev	.005	.00203	.00126	.016	.0018
%RSD	.04643	.50799	.29603	.15651	.17226

#1	10.508	.39755	.42687	10.032	1.0182
#2	10.501	.40042	.42508	10.054	1.0207

Check ?	QC Pass				
Value	10.000	.40000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05209	10.522	.05174	.20899	.52301
Stddev	.00016	.049	.00001	.00009	.00087
%RSD	.30458	.46971	.02289	.04333	.16674

#1	.05198	10.557	.05175	.20905	.52363
#2	.05221	10.487	.05173	.20892	.52239

Check ?	QC Pass				
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.51168	4.0852	52.865	1.0481	10.452
Stddev	.00013	.0169	1.417	.0090	.025
%RSD	.02599	.41422	2.6795	.86048	.24286

#1	.51178	4.0972	51.864	1.0417	10.470
#2	.51159	4.0733	53.867	1.0545	10.434

Check ?	QC Pass				
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.52040	1.0347	52.271	.51954	.53011
Stddev	.00024	.0004	1.669	.00151	.00000
%RSD	.04633	.03450	3.1935	.29144	.00034

#1	.52057	1.0350	51.091	.52061	.53011
#2	.52023	1.0345	53.451	.51847	.53010

Check ?	QC Pass				
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

835

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2397	.40934	4.9518	1.0597	1.0431
Stddev	.0008	.00171	.0021	.0050	.0041
%RSD	.06357	.41786	.04217	.47509	.39198
#1	1.2391	.41055	4.9503	1.0632	1.0459
#2	1.2402	.40814	4.9533	1.0561	1.0402
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.99657	.51874	1.0119	1.0232	
Stddev	.00181	.00019	.0002	.0003	
%RSD	.18145	.03714	.01811	.02694	
#1	.99785	.51888	1.0118	1.0234	
#2	.99529	.51860	1.0120	1.0230	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	10.000%	10.000%	10.000%	10.000%	

Comment:

Run Time: 04/03/02 09:13 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00557	-.00282	-.00171	.00571	.00007
Stddev	.02883	.00338	.00023	.00229	.00002
%RSD	517.61	120.21	13.383	40.090	33.071

#1	.02596	-.00042	-.00187	.00733	.00009
#2	-.01482	-.00521	-.00155	.00409	.00005

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00500	.01000	.05000	.00250
Low Limit	-.20000	-.00500	-.01000	-.05000	-.00250

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00001	.00122	.00002	.00021	-.00064
Stddev	.00008	.00248	.00019	.00007	.00021
%RSD	818.26	203.07	793.26	31.938	32.410

#1	-.00007	-.00053	.00016	.00016	-.00049
#2	.00005	.00297	-.00011	.00026	-.00079

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00025	.05000	.00100	.00250	.00250
Low Limit	-.00025	-.05000	-.00100	-.00250	-.00250

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00147	-.00055	-.00388	.00008	H .24799
Stddev	.00117	.00049	.00102	.00013	.05030
%RSD	79.703	89.383	26.351	159.04	20.283

#1	.00064	-.00089	-.00461	.00017	.28356
#2	.00230	-.00020	-.00316	-.00001	.21243

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.01000	.02000	.25000	.05000	.10000
Low Limit	-.01000	-.02000	-.25000	-.05000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.00068	-.00180	-.00034	-.00015
Stddev	.00000	.00008	.00138	.00064	.00040
%RSD	2.0407	12.061	77.029	189.04	269.46

#1	.00004	.00074	-.00278	.00011	-.00044
#2	.00004	.00062	-.00082	-.00079	.00014

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00250	.05000	.10000	.01000	.01000
Low Limit	-.00250	-.05000	-.10000	-.01000	-.01000

837

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00301	.00399	.00137	-.00041	-.00090
Stddev	.00046	.00543	.00003	.00077	.00006
%RSD	15.347	136.30	2.2359	187.50	7.1998
#1	.00268	.00783	.00135	.00013	-.00085
#2	.00333	.00014	.00139	-.00096	-.00094
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.01000	.25000	.20000	.00500
Low Limit	-.02000	-.01000	-.25000	-.20000	-.00500
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	-.00045	.00091	-.00079	-.00017	
Stddev	.00079	.00240	.00153	.00004	
%RSD	174.97	263.20	193.27	22.198	
#1	-.00101	.00261	.00029	-.00019	
#2	.00011	-.00079	-.00188	-.00014	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	.01500	.02000	.00728	.01000	
Low Limit	-.01500	-.02000	-.00728	-.01000	

Comment:

Run Time: 04/03/02 09:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	11.250	-.00100	.00342	.01911	.06137
Stddev	.359	.00198	.00057	.00130	.00187
%RSD	3.1870	197.64	16.789	6.7852	3.0488

#1	11.503	.00040	.00383	.02002	.06270
#2	10.996	-.00240	.00302	.01819	.06005

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00053	2.8159	.00047	.00464	.01537
Stddev	.00005	.0913	.00010	.00007	.00033
%RSD	10.054	3.2420	20.468	1.4346	2.1334

#1	.00057	2.8804	.00040	.00460	.01560
#2	.00049	2.7513	.00054	.00469	.01514

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01298	9.5386	1.3526	.01929	2.3475
Stddev	.00250	.2581	.0166	.00033	.0245
%RSD	19.280	2.7059	1.2251	1.7038	1.0419

#1	.01475	9.7211	1.3643	.01952	2.3302
#2	.01121	9.3561	1.3409	.01906	2.3648

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.07244	-.00011	.23049	.01332	.00249
Stddev	.00173	.00026	.00286	.00076	.00395
%RSD	2.3831	239.79	1.2425	5.7143	158.80

#1	.07366	-.00029	.23252	.01386	-.00031
#2	.07122	.00008	.22847	.01278	.00528

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00050	-.00051	.45934	-.00080	.01927
Stddev	.00243	.00170	.01337	.00023	.00052
%RSD	486.50	333.57	2.9108	29.177	2.7116
#1	.00222	-.00171	.46880	-.00063	.01964
#2	-.00122	.00069	.44989	-.00096	.01890
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.12938	-.00018	.02967	.03892	
Stddev	.00479	.00014	.00167	.00102	
%RSD	3.7059	77.281	5.6303	2.6326	
#1	.13277	-.00027	.02849	.03965	
#2	.12599	-.00008	.03085	.03820	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	326.65	L -.01451	.03628	.45781	1.9147
Stddev	.97	.00400	.00505	.00589	.0147
%RSD	.29747	27.548	13.932	1.2873	.76911

#1	325.96	-.01168	.03271	.45364	1.9043
#2	327.33	-.01733	.03986	.46197	1.9252

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01563	59.952	.00947	.13950	.48718
Stddev	.00022	.886	.00021	.00212	.00811
%RSD	1.3766	1.4783	2.2676	1.5191	1.6656

#1	.01548	59.326	.00963	.13801	.48145
#2	.01578	60.579	.00932	.14100	.49292

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.30471	276.99	35.794	.54164	77.306
Stddev	.00139	4.77	.439	.01304	1.057
%RSD	.45712	1.7238	1.2268	2.4080	1.3672

#1	.30373	273.61	36.104	.55086	76.559
#2	.30570	280.36	35.483	.53242	78.054

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	2.0040	.00173	4.3434	.44250	.18277
Stddev	.0310	.00089	.0689	.00803	.00466
%RSD	1.5487	51.649	1.5869	1.8156	2.5500

#1	1.9820	.00236	4.3921	.43682	.17948
#2	2.0259	.00110	4.2947	.44818	.18607

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

841

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00285	.01729	8.7492	.00967	.42958
Stddev	.00048	.00235	.0598	.00325	.00693
%RSD	16.724	13.591	.68380	33.662	1.6139
#1	.00319	.01563	8.7069	.01197	.42468
#2	.00251	.01895	8.7915	.00737	.43448
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	3.4006	-.02155	.80620	1.0186	
Stddev	.0332	.00210	.00983	.0102	
%RSD	.97759	9.7401	1.2195	1.0018	
#1	3.3771	-.02303	.79925	1.0114	
#2	3.4242	-.02006	.81316	1.0258	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	290.77	L -.01557	.04185	.45338	1.5806
Stddev	7.91	.00196	.00002	.00698	.0400
%RSD	2.7214	12.610	.05547	1.5388	2.5313

#1	285.17	-.01696	.04184	.44845	1.5523
#2	296.36	-.01418	.04187	.45832	1.6089

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01359	66.894	.01056	.14016	.44497
Stddev	.00031	.767	.00019	.00323	.00941
%RSD	2.2918	1.1460	1.7977	2.3064	2.1142

#1	.01337	66.352	.01069	.13788	.43831
#2	.01381	67.436	.01042	.14245	.45162

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.28189	275.61	26.001	.45583	72.158
Stddev	.00670	6.01	.151	.01713	1.548
%RSD	2.3754	2.1790	.58096	3.7574	2.1448

#1	.27715	271.37	25.894	.44372	71.064
#2	.28662	279.86	26.107	.46794	73.252

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.8828	.00111	3.5819	.42683	.15718
Stddev	.0375	.00093	.0075	.00806	.00461
%RSD	1.9928	84.310	.20946	1.8888	2.9356

#1	1.8563	.00045	3.5766	.42113	.15392
#2	1.9093	.00177	3.5872	.43253	.16045

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

843

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.01634	9.9685	.00912	.48584
Stddev	.00249	.00014	.1111	.00031	.00931
%RSD	38379.	.86336	1.1147	3.3978	1.9164
#1	-.00176	.01624	9.8899	.00934	.47926
#2	.00177	.01644	10.047	.00890	.49243
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	3.8973	-.01853	.80606	.95664	
Stddev	.0900	.00215	.02256	.01284	
%RSD	2.3097	11.578	2.7983	1.3422	
#1	3.8336	-.01701	.79011	.94757	
#2	3.9609	-.02004	.82201	.96572	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	306.17	L -.02420	.04895	.44706	1.6719
Stddev	1.15	.00207	.00105	.00600	.0126
%RSD	.37679	8.5432	2.1444	1.3426	.75602

#1	305.35	-.02274	.04821	.44282	1.6630
#2	306.98	-.02566	.04969	.45131	1.6809

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01449	71.795	.01133	.12854	.46593
Stddev	.00013	.351	.00009	.00199	.00918
%RSD	.86880	.48896	.82611	1.5508	1.9713

#1	.01440	71.546	.01126	.12713	.45944
#2	.01458	72.043	.01140	.12995	.47243

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.30403	269.09	27.270	.46676	70.876
Stddev	.00215	4.52	.399	.00366	.629
%RSD	.70708	1.6781	1.4629	.78376	.88747

#1	.30251	265.90	27.552	.46417	70.431
#2	.30555	272.29	26.988	.46934	71.321

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	2.0606	.00293	3.3587	.38820	.19358
Stddev	.0312	.00000	.0350	.00746	.00268
%RSD	1.5125	.00769	1.0412	1.9219	1.3859

#1	2.0386	.00293	3.3834	.38292	.19548
#2	2.0827	.00293	3.3340	.39348	.19168

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

845

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00572	.01407	12.690	.01010	.44906
Stddev	.00213	.00355	.074	.00077	.01037
%RSD	37.262	25.246	.58516	7.6663	2.3102
#1	.00723	.01658	12.638	.01065	.44173
#2	.00422	.01156	12.743	.00956	.45640
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	5.1185	-.01973	.76818	1.1503	
Stddev	.0286	.00334	.00080	.0124	
%RSD	.55952	16.910	.10407	1.0787	
#1	5.0983	-.02209	.76762	1.1416	
#2	5.1388	-.01737	.76875	1.1591	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 09:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	265.91	L -.01484	.04626	.39157	1.4829
Stddev	2.75	.00392	.00024	.00609	.0172
%RSD	1.0346	26.438	.52127	1.5550	1.1622

#1	263.96	-.01761	.04609	.38727	1.4708
#2	267.85	-.01206	.04643	.39588	1.4951

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01239	75.878	.01215	.09480	.38334
Stddev	.00029	1.703	.00029	.00126	.00559
%RSD	2.3016	2.2449	2.3669	1.3328	1.4589

#1	.01219	74.673	.01195	.09390	.37939
#2	.01259	77.082	.01235	.09569	.38730

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.30422	221.52	27.455	.34156	58.947
Stddev	.00512	3.88	.718	.00456	1.180
%RSD	1.6832	1.7496	2.6155	1.3359	2.0021

#1	.30060	218.78	27.963	.34479	58.113
#2	.30784	224.26	26.948	.33834	59.782

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.6518	.00143	3.3902	.31047	.16626
Stddev	.0222	.00035	.0743	.00505	.00302
%RSD	1.3472	24.785	2.1920	1.6259	1.8138

#1	1.6360	.00168	3.4427	.30690	.16413
#2	1.6675	.00118	3.3376	.31403	.16839

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

847

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00560	.01970	11.585	.00895	.39241
Stddev	.00056	.00052	.081	.00271	.00818
%RSD	9.9189	2.6377	.70049	30.281	2.0856
#1	.00599	.01933	11.528	.01087	.38663
#2	.00521	.02007	11.642	.00704	.39820
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	3.2520	-.02732	.57663	1.0379	
Stddev	.0736	.00116	.01461	.0106	
%RSD	2.2637	4.2425	2.5341	1.0200	
#1	3.2000	-.02650	.56630	1.0304	
#2	3.3041	-.02814	.58696	1.0454	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment: WG115450-03

Run Time: 04/03/02 09:42 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.02929	-.00438	-.00220	.00488	.00047
Stddev	.02177	.00269	.00114	.00021	.00021
%RSD	74.315	61.357	52.117	4.2491	45.473
#1	-.01390	-.00248	-.00301	.00474	.00032
#2	-.04469	-.00628	-.00139	.00503	.00062
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00800	.02000	.10000	.01000
Low Limit	-.20000	-.00800	-.02000	-.10000	-.01000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	.08969	.00035	-.00010	.00010
Stddev	.00006	.00238	.00000	.00003	.00009
%RSD	95.559	2.6500	.12712	29.519	90.727
#1	-.00002	.09137	.00035	-.00012	.00004
#2	-.00011	.08801	.00035	-.00008	.00016
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00050	.20000	.00200	.00500	.00500
Low Limit	-.00050	-.20000	-.00200	-.00500	-.00500
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00022	.00742	.05808	-.00004	H .16800
Stddev	.00225	.00756	.01071	.00008	.03788
%RSD	1012.9	101.83	18.436	181.66	22.543
#1	.00181	.01277	.05051	.00001	.14125
#2	-.00137	.00208	.06565	-.00010	.19482
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.00500	.02000	.50000	.10000	.10000
Low Limit	-.00500	-.02000	-.50000	-.10000	-.10000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00053	.00051	.11887	.00017	-.00020
Stddev	.00000	.00008	.00260	.00005	.00150
%RSD	.26989	15.816	2.1859	30.740	683.35
#1	.00053	.00057	.11703	.00021	-.00120
#2	.00053	.00046	.12071	.00013	.00084
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.01000	.10000	.50000	.02000	.02000
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

849

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00155	.00681	.21210	.00046	-.00024
Stddev	.00081	.00209	.01407	.00139	.00176
%RSD	52.358	30.780	6.6360	301.02	736.15
#1	.00213	.00532	.22205	-.00052	-.00149
#2	.00098	.00829	.20214	.00145	.00101
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.02000	1.0000	.50000	.01000
Low Limit	-.02000	-.02000	-1.0000	-.50000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.00008	-.00013	L -.01133	.00347	
Stddev	.00005	.00186	.00020	.00004	
%RSD	57.831	1486.0	1.7864	1.2631	
#1	.00005	.00119	-.01147	.00344	
#2	.00011	-.00144	-.01119	.00350	
Check ?	LC Pass	LC Pass	LC Fail	LC Pass	
High Limit	.03000	.04000	.01000	.02000	
Low Limit	-.03000	-.04000	-.01000	-.02000	

Comment: WG115450-04

Run Time: 04/03/02 09:46 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	8.7594	.17384	.97660	H 1.2404	9.0419
Stddev	.0982	.00064	.00900	.0049	.0720
%RSD	1.1216	.36595	.92193	.39247	.79677
#1	8.8288	.17339	.97023	1.2369	9.0928
#2	8.6899	.17429	.98297	1.2438	8.9909
Check ?	LC Pass	LC Pass	LC Pass	LC Fail	LC Pass
High Limit	12.000	.24000	1.2000	1.2000	12.000
Low Limit	8.0000	.16000	.80000	.80000	8.0000
Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0629	10.996	.84478	1.0511	1.1001
Stddev	.0004	.076	.00967	.0187	.0176
%RSD	.03924	.69284	1.1448	1.7751	1.5969
#1	1.0632	10.942	.83794	1.0379	1.0877
#2	1.0626	11.050	.85162	1.0643	1.1125
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1.2000	12.000	1.2000	1.2000	1.2000
Low Limit	.80000	8.0000	.80000	.80000	.80000
Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.85869	.94457	L 29.000	L 5.6300	9.8787
Stddev	.00936	.02371	.413	.1509	.0615
%RSD	1.0896	2.5098	1.4226	2.6801	.62214
#1	.86531	.92781	29.292	5.7367	9.8353
#2	.85207	.96134	28.708	5.5233	9.9222
Check ?	LC Pass	LC Pass	LC Fail	LC Fail	LC Pass
High Limit	1.2000	1.2000	60.000	12.000	12.000
Low Limit	.80000	.80000	40.000	8.0000	8.0000
Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.0722	1.0646	L 30.604	1.0815	1.0577
Stddev	.0165	.0176	.276	.0194	.0315
%RSD	1.5352	1.6578	.90187	1.7983	2.9822
#1	1.0606	1.0521	30.799	1.0678	1.0354
#2	1.0838	1.0771	30.408	1.0953	1.0800
Check ?	LC Pass	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	1.2000	1.2000	60.000	1.2000	1.2000
Low Limit	.80000	.80000	40.000	.80000	.80000

851

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.93526	.98120	H 12.875	L .00375	1.1293
Stddev	.00850	.00766	.163	.00093	.0303
%RSD	.90838	.78054	1.2630	24.792	2.6856

#1	.92925	.97579	12.760	.00309	1.1079
#2	.94127	.98662	12.990	.00441	1.1508

Check ?	LC Pass	LC Pass	LC Fail	LC Fail	LC Pass
High Limit	1.2000	1.2000	12.000	1.2000	1.2000
Low Limit	.80000	.80000	8.0000	.80000	.80000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	.93893	1.0308	1.0105	.97317
Stddev	.00586	.0203	.0001	.00884
%RSD	.62422	1.9689	.01319	.90865

#1	.94307	1.0164	1.0104	.96691
#2	.93478	1.0451	1.0106	.97942

Check ?	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	1.2000	1.2000	1.2000	1.2000
Low Limit	.80000	.80000	.80000	.80000

Comment: WG115450-02

Run Time: 04/03/02 09:51 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	425.68	L -.02125	.15156	.87296	1.2969
Stddev	2.83	.00044	.00534	.01164	.0130
%RSD	.66489	2.0828	3.5255	1.3330	1.0042

#1	427.68	-.02094	.15533	.86473	1.3061
#2	423.68	-.02157	.14778	.88119	1.2877

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01173	25.238	.01159	.12140	.65844
Stddev	.00002	.063	.00019	.00104	.00585
%RSD	.16895	.24771	1.6811	.86010	.88909

#1	.01175	25.283	.01172	.12066	.65430
#2	.01172	25.194	.01145	.12214	.66258

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.29616	800.10	17.297	.18548	20.818
Stddev	.00265	8.70	.742	.00698	.130
%RSD	.89361	1.0873	4.2905	3.7636	.62322

#1	.29803	793.94	17.822	.19042	20.910
#2	.29428	806.25	16.772	.18055	20.726

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.4332	.01033	.88125	.24474	.22188
Stddev	.0109	.00082	.04646	.00312	.00503
%RSD	.75811	7.9026	5.2717	1.2751	2.2662

#1	1.4255	.00975	.91410	.24254	.21832
#2	1.4408	.01091	.84840	.24695	.22543

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

853

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	L -.02537	.01566	8.7968	.01624	.32881
Stddev	.00262	.00148	.0349	.00202	.00633
%RSD	10.309	9.4507	.39671	12.419	1.9263

#1	-.02722	.01461	8.7721	.01481	.32433
#2	-.02352	.01671	8.8215	.01767	.33329

Check ?	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	3.8577	L -.04810	.82844	.60289
Stddev	.0013	.00229	.00429	.00312
%RSD	.03400	4.7512	.51729	.51711

#1	3.8587	-.04649	.82541	.60069
#2	3.8568	-.04972	.83147	.60510

Check ?	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	30.000	20.000	100.00	40.000
Low Limit	-.01000	-.04000	-.01000	-.01000

Comment: WG115450-07

Run Time: 04/03/02 09:55 Type: Unk

Mode: CONC

Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	444.50	L -.01601	.12677	.68992	1.3647
Stddev	.43	.00258	.00058	.00730	.0029
%RSD	.09734	16.120	.45968	1.0574	.21149

#1	444.20	-.01418	.12636	.68476	1.3627
#2	444.81	-.01783	.12718	.69508	1.3668

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01092	24.531	.01045	.12575	.51148
Stddev	.00000	.080	.00002	.00098	.00471
%RSD	.00687	.32776	.19518	.77638	.92112

#1	.01092	24.474	.01044	.12506	.50815
#2	.01092	24.588	.01047	.12644	.51481

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.29425	618.92	18.464	.19625	22.514
Stddev	.00006	5.70	.094	.00207	.225
%RSD	.02135	.92050	.50876	1.0533	.99977

#1	.29430	614.89	18.398	.19771	22.355
#2	.29421	622.95	18.530	.19479	22.674

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.2558	.00753	.85338	.25541	.15722
Stddev	.0090	.00102	.00405	.00315	.00348
%RSD	.71637	13.599	.47501	1.2344	2.2158

#1	1.2494	.00825	.85051	.25318	.15476
#2	1.2621	.00680	.85624	.25764	.15968

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

855

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.01058	.01261	4.7124	.01306	.28147
Stddev	.00151	.00558	.0050	.00046	.00454
%RSD	14.313	44.232	.10700	3.5583	1.6142
#1	-.01165	.01656	4.7088	.01339	.27826
#2	-.00951	.00867	4.7160	.01273	.28469
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	3.2545	-.03527	.71179	.56970	
Stddev	.0157	.00270	.00620	.00406	
%RSD	.48112	7.6501	.87128	.71312	
#1	3.2434	-.03336	.70740	.56683	
#2	3.2656	-.03717	.71617	.57257	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	30.000	20.000	100.00	40.000	
Low Limit	-.01000	-.04000	-.01000	-.01000	

Comment:

Run Time: 04/03/02 10:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	281.53	L -.01342	.09341	.60426	.97399
Stddev	.03	.00533	.00139	.00887	.00111
%RSD	.01240	39.761	1.4879	1.4685	.11435

#1	281.51	-.00964	.09243	.59799	.97320
#2	281.56	-.01719	.09439	.61054	.97478

Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass
High Limit	1000.0	10.000	100.00	100.00	20.000
Low Limit	-.10000	-.01000	-.02000	-.10000	-.01000

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00754	54.841	.00917	.02411	.47520
Stddev	.00008	.093	.00004	.00084	.00616
%RSD	1.0161	.16875	.41760	3.4840	1.2961

#1	.00748	54.775	.00914	.02352	.47084
#2	.00759	54.906	.00920	.02471	.47955

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	5.0000	1000.0	30.000	100.00	100.00
Low Limit	-.00050	-.10000	-.00200	-.00500	-.00500

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.19982	571.17	6.5357	.13004	22.153
Stddev	.00085	7.60	.1176	.00037	.176
%RSD	.42545	1.3302	1.7997	.28530	.79629

#1	.19922	565.80	6.6189	.13030	22.028
#2	.20042	576.55	6.4525	.12978	22.277

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	1000.0	400.00	15.000	1000.0
Low Limit	-.02000	-.02000	-.50000	-.10000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.7921	.00908	.31376	.08870	.20523
Stddev	.0210	.00036	.00308	.00213	.00097
%RSD	1.1697	3.9219	.98029	2.4055	.47225

#1	1.7772	.00883	.31593	.08719	.20454
#2	1.8069	.00934	.31158	.09021	.20591

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	40.000	30.000	300.00	100.00	200.00
Low Limit	-.01000	-.10000	-.50000	-.02000	-.02000

857

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	L -.02093	-.00878	11.546	.01454	.22204
Stddev	.00307	.00384	.051	.00085	.00296
%RSD	14.647	43.728	.44473	5.8605	1.3333

#1	-.02309	-.01150	11.510	.01394	.21994
#2	-.01876	-.00607	11.582	.01514	.22413

Check ?	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	50.000	20.000	50.000	30.000	30.000
Low Limit	-.02000	-.02000	-1.0000	-.10000	-.01000

Elem	Ti3349	Tl1908	V_3102	Zn2138
Units	ppm	ppm	ppm	ppm
Avg	2.4192	L -.05134	.73715	.40603
Stddev	.0028	.00512	.00660	.00328
%RSD	.11657	9.9742	.89548	.80679

#1	2.4172	-.04772	.74182	.40371
#2	2.4212	-.05496	.73248	.40834

Check ?	LC Pass	LC Fail	LC Pass	LC Pass
High Limit	30.000	20.000	100.00	40.000
Low Limit	-.01000	-.04000	-.01000	-.01000

Comment:

Run Time: 04/03/02 10:13 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	10.449	.37972	.41314	9.6986	.98476
Stddev	.013	.00226	.00023	.0103	.01332
%RSD	.12477	.59498	.05477	.10676	1.3527

#1	10.440	.38132	.41330	9.7060	.99417
#2	10.459	.37812	.41298	9.6913	.97534

Check ?	QC Pass				
Value	10.000	.40000	.40000	10.000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.05019	10.101	.04946	.19923	.49929
Stddev	.00007	.031	.00023	.00059	.00053
%RSD	.13492	.30246	.46077	.29770	.10664

#1	.05024	10.123	.04962	.19965	.49966
#2	.05014	10.079	.04930	.19881	.49891

Check ?	QC Pass				
Value	.05000	10.000	.05000	.20000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.50330	3.9022	Q 55.719	Q 1.1220	9.9995
Stddev	.00789	.0012	.165	.0228	.0065
%RSD	1.5667	.03092	.29616	2.0286	.06525

#1	.50888	3.9031	55.602	1.1381	9.9949
#2	.49772	3.9013	55.835	1.1059	10.004

Check ?	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass
Value	.50000	4.0000	50.000	1.0000	10.000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.49487	.98753	Q 56.498	.49926	.51012
Stddev	.00072	.00197	.125	.00007	.00309
%RSD	.14577	.19938	.22102	.01328	.60605

#1	.49538	.98614	56.410	.49921	.51231
#2	.49436	.98893	56.586	.49931	.50794

Check ?	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	.50000	1.0000	50.000	.50000	.50000
Range	10.000%	10.000%	10.000%	10.000%	10.000%

Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.1928	.39529	4.8485	1.0157	1.0090
Stddev	.0026	.00222	.0078	.0012	.0040
%RSD	.21881	.56117	.16086	.12215	.39389
#1	1.1909	.39372	4.8430	1.0148	1.0062
#2	1.1946	.39685	4.8540	1.0166	1.0118
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.2000	.40000	5.0000	1.0000	1.0000
Range	10.000%	10.000%	10.000%	10.000%	10.000%
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	.96374	.50288	.96726	.99276	
Stddev	.00465	.00407	.00270	.00147	
%RSD	.48224	.80950	.27872	.14837	
#1	.96702	.50001	.96916	.99381	
#2	.96045	.50576	.96535	.99172	
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	
Value	1.0000	.50000	1.0000	1.0000	
Range	10.000%	10.000%	10.000%	10.000%	

Comment:

Run Time: 04/03/02 10:17 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al3082	Ag3280	As1890	B_2496	Ba4554
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00349	.00008	-.00025	.00543	.00000
Stddev	.02687	.00064	.00298	.00194	.0003
%RSD	768.88	758.14	1172.8	35.684	8285.6

#1	.02249	.00053	.00185	.00680	.00021
#2	-.01551	-.00037	-.00236	.00406	-.00022

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.20000	.00500	.01000	.05000	.00250
Low Limit	-.20000	-.00500	-.01000	-.05000	-.00250

Elem	Be3130	Ca3736	Cd2288	Co2286	Cr2677
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00006	-.00191	.00004	.00017	-.00040
Stddev	.00006	.00184	.00003	.00017	.00040
%RSD	110.32	96.331	95.915	98.849	100.51

#1	.00001	-.00322	.00001	.00005	-.00068
#2	.00010	-.00061	.00006	.00029	-.00012

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00025	.05000	.00100	.00250	.00250
Low Limit	-.00025	-.05000	-.00100	-.00250	-.00250

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2779
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00124	.00581	.00861	.00022	H .13274
Stddev	.00242	.00215	.00748	.00008	.03726
%RSD	195.71	36.987	86.822	33.926	28.069

#1	-.00047	.00429	.01390	.00028	.10639
#2	.00295	.00732	.00332	.00017	.15909

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Fail
High Limit	.01000	.02000	.25000	.05000	.10000
Low Limit	-.01000	-.02000	-.25000	-.05000	-.10000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00045	-.00147	-.00015	-.00334
Stddev	.00002	.00024	.00091	.00004	.00019
%RSD	269.94	54.244	62.181	25.188	5.5655

#1	-.00001	.00062	-.00212	-.00018	-.00321
#2	.00003	.00028	-.00082	-.00013	-.00347

Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.00250	.05000	.10000	.01000	.01000
Low Limit	-.00250	-.05000	-.10000	-.01000	-.01000

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Elem	Sb2068	Se1960	Si2516	Sn1899	Sr2152
Units	ppm	ppm	ppm	ppm	ppm
Avg	.00428	.00014	.00147	.00046	-.00085
Stddev	.00084	.00191	.00078	.00015	.00087
%RSD	19.685	1343.3	53.274	33.456	102.22
#1	.00369	.00149	.00092	.00035	-.00146
#2	.00488	-.00121	.00202	.00057	-.00023
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.02000	.01000	.25000	.20000	.00500
Low Limit	-.02000	-.01000	-.25000	-.20000	-.00500
Elem	Ti3349	Tl1908	V_3102	Zn2138	
Units	ppm	ppm	ppm	ppm	
Avg	-.00023	.00011	.00308	.00004	
Stddev	.00075	.00218	.00319	.00003	
%RSD	319.11	2028.4	103.56	90.396	
#1	-.00076	.00165	.00082	.00006	
#2	.00029	-.00144	.00533	.00001	
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	
High Limit	.01500	.02000	.00728	.01000	
Low Limit	-.01500	-.02000	-.00728	-.01000	

Date: _____
 Analyst: JYH
 Method: 6020 A
 Instrument: Elan
 Work Group: 115563, 115525, 115565

	Analyst
Calibration/Linearity	
ICV/CCV	
ICB/CCB	
icsa/icsab/cr	
Blank/LCS	
MS/MSD	
Postspike/Serial Dilution	
Duplicate	
Record Results	
Excel Spreadsheets	
Results Reporting / Data Qualifiers	
Calculations & Correct Factors	
Reanalysis Assign	
Instrument Failure/Reassign	
Case Narrative	
QA Approval - Seedpak 3	
Check for Completeness	
Level IV Data	

Primary Reviewer Initials & Date Checked JYH 4/3/02

Secondary Reviewer Initials & Date Checked MMB 4/3/02

- Check for compliance with Method and project-specific requirements
- Check the completeness of the reported information
- Check the information for the report narrative
- Check the reasonableness of results

Supervisory Review Initials & Date Checked MB 4/3

Comments: _____

✓ - Checked & OK
 NA - Not Applicable
 DL - Diluted Out

ANALYST JTH DATE 4/03/02 TIME 8:09
 METHOD# 6020A SOP# ME700 Rev# 1 WORK GROUP# 115525, 115563, 115565
 CAL STD SOURCE M17-13-8B ICV/CCV SOURCE M17-12-47B
 ICS AB SOURCE M17-13-5B ICS A SOURCE M17-13-6A POST SPK SOURCE M15-1-10-2
 Instrument ID: TJA IRIS: Data File: 040302 Perkin Elmer Optima: Perkin Elmer ELAN:

Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
	50				27.	0401417	10	0.47	50
	1 1/10				28.	18		0.49	
	2 1/5				29.	19		0.48	
	3				30.	20		0.52	
	1LV				31.	21		0.48	
	1LB				32.	22		0.47	
	1LSA				33.	23		0.47	
	1L41B3			LV/L41B3	34.	24		0.49	LV/L41B3
	PBS P3			WG115507-02	35.	25		0.50	
	LCSS P3	10	0.50	50	36.	26		0.54	
	0400101		0.55		37.	27		0.51	LV/L41B3
	01DP		0.50		38.	PBW R4		40/50	WG115273-03
	01S		0.50		39.	LCSS R4	4		04
	01SP		0.49		40.	0350101	2		02
	01PS		0.55		41.	01DP			07
	01SDL	50	0.55		42.	02			01
	0401403	10	0.51		43.	02S			05
0.	07		0.55	LV/L41B3	44.	02SD			06
1.	08		0.52		45.	01PS			
2.	09		0.54		46.	01SDL	10		LV/L41B3
3.	10		0.47		47.				
4.	11		0.49	LV/L41B3	48.				
5.	PBS P4			WG115560-03	49.				
5.	LCSS P4	10	0.50	50	04	50.			
7.	0401412		0.53		02	51.			
3.	12DP		0.50		07	52.			
7.	13		0.57		01	53.			
1.	13S		0.55		05	54.			
1.	13SD		0.48		06	55.			
2.	14		0.52			56.			
3.	14PS		0.52			57.			
1.	14SDL	50	0.52	LV/L41B3		58.			
1.	15	10	0.47			59.			
1.	16	1	0.45			60.			

Reviewed by: _____

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key: CCV - Continuing Calibration Verification FRS = Full Resolution Sequence
 CCB = Continuing Calibration Blank R = Analyst Run

KEMRON ENVIRONMENTAL SERVICES
FORM 2A - INITIAL AND CONTINUING CALIBRATION VERIFICATION

INSTRUMENT: PE - ICP/MS
 METHOD: 6020A
 ANALYST: Jyh
 DATE: Wednesday, April 03, 2002
 UNITS: ug/L
 ICV Time: 8:23 AM
 CCV1 Time: 8:43 AM
 CCV2 Time: 9:40 AM

Analyte	Initial Calibration Verification			Continuing Calibration Verification					Q
	True	Found	%R(1)	CCV1		CCV2			
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	50	49.1	98.2	50	57.0	114.0	58.6	117.2	*
Antimony	50	49.7	99.4	50	50.4	100.8	50.3	100.6	
Arsenic	50	49.8	99.6	50	50.3	100.6	50.9	101.8	
Barium	50	51.2	102.4	50	46.6	93.2	48.1	96.2	
Beryllium	50	36.1	72.2	50	56.4	112.8	45.1	90.2	*
Cadmium	50	49.4	98.8	50	49.7	99.4	49.4	98.8	
Calcium	5000	5790	115.8	5000	6250	125.0	5230	104.6	*
Chromium	50	49.3	98.6	50	45.9	91.8	57.0	114.0	*
Cobalt	50	48.9	97.8	50	48.7	97.4	46.3	92.6	
Copper	50	50.4	100.8	50	56.7	113.4	47.9	95.8	*
Iron	5000	5260	105.2	5000	5580	111.6	5740	114.8	*
Lead	50	50.3	100.6	50	50.3	100.6	50.1	100.2	
Magnesium	5000	4800	96.0	5000	5090	101.8	5150	103.0	
Manganese	50	47.6	95.2	50	48.6	97.2	48.3	96.6	
Nickel	50	49.1	98.2	50	50.8	101.6	50.5	101.0	
Potassium	5000	4600	92.0	5000	4900	98.0	4920	98.4	
Selenium	50	50.9	101.8	50	49.5	99.0	49.9	99.8	
Silver	50	50.5	101.0	50	51.3	102.6	49.2	98.4	
Sodium	5000	4470	89.4	5000	4910	98.2	5300	106.0	*
Thallium	50	50.7	101.4	50	50.5	101.0	49.6	99.2	
Vanadium	50	50.9	101.8	50	49.5	99.0	51.3	102.6	
Zinc	50	48.2	96.4	50	50.5	101.0	45.5	91.0	

(1) Control Limits: 90-110%

KEMRON ENVIRONMENTAL SERVICES
FORM 3 - BLANKS

INSTRUMENT: PE - ICP/MS
 METHOD: 6020A
 ANALYST: Jyh
 DATE: Wednesday, April 03, 2002

UNITS: ug/L

ICB Time: 8:28 AM
 CCB1 Time: 8:48 AM
 CCB2 Time: 9:45 AM
 CCB3 Time: _____

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)		
		CCB1	CCB2	CCB3
		1	2	3
Aluminum	-0.0028	0.017	-0.312	
Antimony	0.0704	0.0593	0.0603	
Arsenic	-0.0254	-0.0172	-0.0313	
Barium	0	0	0	
Beryllium	0	0	0	
Cadmium	-0.0002	-0.0016	-0.0006	
Calcium	0	0	0	
Chromium	-0.008	1.42	-0.462	
Cobalt	-0.044	-0.044	-0.044	
Copper	0	0	0	
Iron	-2.90	21.0	10.6	
Lead	0.0005	0.0001	0.0023	
Magnesium	0	0	0.20	
Manganese	-0.0007	-0.0378	0.001	
Nickel	0	0	0	
Potassium	-14.1	6.80	-10.1	
Selenium	0.0459	0.0186	-0.0648	
Silver	0.0043	0.0001	-0.0045	
Sodium	1.00	1.70	1.20	
Thallium	0.0027	0.0025	0.0004	
Vanadium	-0.551	-0.0684	-0.415	
Zinc	-0.288	0.004	-0.288	

INSTRUMENT ID: PE - ICP/MS
 METHOD: 6020A
 ANALYST: Jyh
 DATE: Wednesday, April 03, 2002

UNITS: ug/L

ICSA Time: 8:33:15
 ICSAB Time: 8:38:22

Analyte	True		Found			Q
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	
Aluminum	10000	10000	7620	7550.0	75.5	*
Antimony	0	0	0	0.1		
Arsenic	0	10	0	9.5	94.9	
Barium	0	0	0	0.0		
Beryllium	0	0	0	0.0		
Cadmium	0	10	0	9.6	96.1	
Calcium	30000	30000	27900	28800.0	96.0	
Chromium	0	20	1	17.5	87.5	
Cobalt	0	20	0	19.1	95.5	
Copper	0	20	0	20.1	100.5	
Iron	25000	25000	17000	17300.0	69.2	*
Lead	0	0	0	10.1		
Magnesium	10000	10000	8760	8690.0	86.9	
Manganese	0	20	0	19.3	96.5	
Nickel	0	20	0	19.0	95.0	
Potassium	10000	10000	8550	8210.0	82.1	
Selenium	0	10	0	9.5	95.1	
Silver	0	5	0	4.4	88.4	
Sodium	25000	25000	21500	20700.0	82.8	
Thallium	0	0	0	0.0		
Vanadium	0	20	0	18.9	94.5	
Zinc	0	10	2	10.6	106.0	

(1) Control Limits: 80-120%

KEMRON ENVIRONMENTAL SERVICES
 11-IN
 ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Instrument ID: PE - ICP/MS

Date: 8/17/2000

Analyte	Integ. Time (Sec.)	Concentration (ug/L)
Antimony	40.00	100.0
Arsenic	40.00	100.0
Barium	10.00	100.0
Beryllium	10.00	100.0
Cadmium	40.00	100.0
Chromium	40.00	100.0
Cobalt	40.00	100.0
Copper	10.00	100.0
Lead	40.00	100.0
Manganese	40.00	100.0
Nickel	40.00	100.0
Selenium	40.00	100.0
Silver	10.00	100.0
Thallium	40.00	100.0
Vanadium	40.00	100.0
Zinc	40.00	100.0

Comments:

Measurement Tuning Report

File Name: 060501.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.028	586	2064	0.730	
Li	7.016	6.979	1546	2060	0.716	
Co	58.933	58.929	14267	1950	0.770	
In	114.904	114.928	27905	1939	0.762	
Tl	204.975	204.975	49690	2242	0.704	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	0.224
3.000	0.432
4.000	28.534
5.000	47.088
6.000	0.973
7.000	2.275 ✓
8.000	39.080
9.000	3.173
58.000	1.724
59.000	1.316 ✓
60.000	38.384
114.000	2.804
115.000	1.760 ✓
116.000	10.742
204.000	3.778
205.000	2.306 ✓
206.000	2.396

File Name: 060501.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.078	597	2064	0.741	
Li	7.016	7.079	1559	2060	0.723	
Co	58.933	58.929	14265	1950	0.770	
In	114.904	114.928	27910	1939	0.764	
Tl	204.975	204.975	49689	2242	0.711	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	0.356
3.000	1.091
4.000	25.493
5.000	27.436
6.000	2.314
7.000	1.372 ✓
8.000	47.892
9.000	1.227
58.000	1.445
59.000	0.686 ✓
60.000	24.191
114.000	2.035
115.000	1.874 ✓
116.000	10.974
204.000	4.079
205.000	0.757 ✓
206.000	1.032

File Name: 060501.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.026	598	2064	0.739	
Li	7.016	6.979	1550	2060	0.726	
Co	58.933	58.929	14263	1950	0.772	
In	114.904	114.929	27915	1939	0.764	
Tl	204.975	204.975	49689	2242	0.710	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	0.132
3.000	0.598
4.000	25.802
5.000	13.670
6.000	1.193
7.000	1.582 ✓
8.000	50.000
9.000	1.420
58.000	3.503
59.000	1.490 ✓
60.000	37.965
114.000	1.956
115.000	1.098 ✓
116.000	11.401
204.000	2.455
205.000	0.710 ✓
206.000	1.227

File Name: 060501.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
He	3.016	3.026	599	2064	0.743	
Li	7.016	7.029	1552	2060	0.735	
Co	58.933	58.878	14249	1950	0.770	
In	114.904	114.929	27920	1939	0.760	
Tl	204.975	204.975	49689	2242	0.710	

Relative Std. Dev.

Mass	Meas. Intens. RSD
2.000	0.319
3.000	0.714
4.000	9.952
5.000	40.761
6.000	2.053
7.000	1.092 ✓
8.000	31.877
9.000	3.185
58.000	2.267
59.000	1.508 ✓
60.000	15.249
114.000	2.362
115.000	1.582 ✓
116.000	18.484
204.000	3.688
205.000	0.776 ✓
206.000	1.674

Sample ID: Sample

Sample Date/Time: Wednesday, April 03, 2002 07:55:29

Sample Description:

Method File: C:\elandata\Method\Service\6020 methods\6020 daily.mth

Dataset File: c:\elandata\dataset\032202\Sample.250

Tuning File: C:\elandata\Tuning\060501.tun

Optimization File: c:\elandata\Optimize\6020.dac

Dual Detector Mode: Dual

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Mg	24.0	28019.1	28019.131	157.632	0.6
Rh	102.9	249387.6	249387.603	1609.866	0.6
Pb	208.0	151198.7	151198.740	1492.307	1.0
[> Ba	137.9	209864.6	209864.587	879.576	0.4
[Ba++	69.0	4490.2	0.021	0.000	0.6
[> Ce	139.9	253561.6	253561.619	1225.535	0.5
[CeO	155.9	3914.5	0.015	0.000	0.6
Bkgd	220.0	8.4	8.400	1.981	23.6

Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
7.00	Lens Voltage
1400.00	ICP RF Power
-1900.00	Analog Stage Voltage
1450.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-6.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	45	6.3	1973.1
Co	59	45	6.8	44984.7
Rh	103	45	7.3	112834.9
Pb	208	45	8.5	62526.5

Sample ID: Sample

Report Date/Time: Wednesday, April 03, 2002 07:57:35

Page 1

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Sample ID: Blank

Sample Date/Time: Wednesday, April 03, 2002 08:09:47

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 1

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	21683.211					ug/L
Be	9	0.000					ug/L
Al	27	666.690					ug/L
> Sc-1	45	185530.345					ug/L
V	51	3002.830					ug/L
Cr	52	5667.939					ug/L
Cr	53	333.345					ug/L
Mn	55	333.345					ug/L
Co	59	333.345					ug/L
Ni	60	0.000					ug/L
Cu	65	0.000					ug/L
Zn	66	333.345					ug/L
> Ge	72	637179.642					ug/L
As	75	207.597					ug/L
Se	77	41.333					ug/L
Se	82	98.103					ug/L
Y	89	495117.462					ug/L
Rh	103	0.000					ug/L
Ag	107	33.367					ug/L
Cd	114	25.074					ug/L
> In	115	611318.200					ug/L
Sb	123	16.358					ug/L
Ba	135	0.000					ug/L
Ce	140	0.000					ug/L
> Tb	159	464443.254					ug/L
Ho	165	0.000					ug/L
Tl	203	17.000					ug/L
Tl	205	20.002					ug/L
Pb	206	30.003					ug/L
Pb	207	26.669					ug/L
Pb	208	108.006					ug/L
> Bi	209	447308.043					ug/L
Na	23	2000.163					mg/L
Mg	24	0.000					mg/L
K	39	555639.240					mg/L
Ca	43	0.000					mg/L
Fe	54	15182.199					mg/L
Fe	57	5667.822					mg/L

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Cl	35	13006.549				mg/L
Kr	83	115.335				mg/L
U	238	0.000				mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209					
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45					
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: Blank

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Sample ID: Standard 1

Sample Date/Time: Wednesday, April 03, 2002 08:12:30

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 2

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	21349.516	-333.70				ug/L
Be	9	2666.970	0.01	10.0000	6.130	61.301	ug/L
Al	27	26024.056	0.12	10.0000	2.117	21.173	ug/L
Sc-1	45	209870.682	209870.68				ug/L
V	51	64462.546	0.09	10.0000	2.735	27.346	ug/L
Cr	52	54104.037	0.07	10.0000	1.836	18.364	ug/L
Cr	53	6335.119	0.01	10.0000	6.728	67.277	ug/L
Mn	55	80895.186	0.12	10.0000	0.269	2.692	ug/L
Co	59	74864.008	0.11	10.0000	1.123	11.228	ug/L
Ni	60	15675.503	0.02	10.0000	2.070	20.703	ug/L
Cu	65	17010.331	0.03	10.0000	1.759	17.586	ug/L
Zn	66	12338.714	0.02	10.0000	1.270	12.703	ug/L
Ge	72	649999.955	649999.96				ug/L
As	75	14202.902	0.02	10.0000	0.309	3.091	ug/L
Se	77	1046.705	0.00	10.0000	0.510	5.103	ug/L
Se	82	1425.943	0.00	10.0000	0.146	1.459	ug/L
Y	89	521712.087	26594.62				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	73495.219	0.12	10.0000	0.169	1.686	ug/L
Cd	114	42957.763	0.07	10.0000	0.275	2.748	ug/L
In	115	623799.717	623799.72				ug/L
Sb	123	45232.946	0.07	10.0000	0.300	3.005	ug/L
Ba	135	16008.988	0.04	10.0000	0.419	4.188	ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	434556.513	434556.51				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	54693.045	54676.04	10.0000	0.060	0.598	ug/L
Tl	205	134564.545	134544.54	10.0000	0.292	2.922	ug/L
Pb	206	47710.972	47680.97	10.0000	0.080	0.796	ug/L
Pb	207	41481.032	41454.36	10.0000	0.467	4.666	ug/L
Pb	208	188210.454	188102.45	10.0000	0.231	2.312	ug/L
Bi	209	470672.887	470672.89				ug/L
Na	23	2011306.982	9.58	1.0000	0.035	3.459	mg/L
Mg	24	1558884.977	7.44	1.0000	0.050	4.986	mg/L
K	39	4285891.166	17.49	1.0000	0.063	6.313	mg/L
Ca	43	12339.041	0.06	1.0000	0.397	39.653	mg/L
Fe	54	487027.141	2.25	1.0000	0.119	11.917	mg/L
Fe	57	190939.920	0.89	1.0000	0.168	16.810	mg/L

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Cl	35	12672.339	-334.21	-
Kr	83	120.002	4.67	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209					
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45					
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: Standard 1

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method 6020 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Wednesday, April 03, 2002 08:15:15

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 3

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	25689.963	4006.75				ug/L
Be	9	5000.898	0.02	19.7813	4.401	22.248	ug/L
Al	27	56111.313	0.27	20.3951	3.258	15.975	ug/L
> Sc-1	45	206144.063	206144.06				ug/L
V	51	128465.916	0.19	20.0635	1.304	6.501	ug/L
Cr	52	124215.190	0.18	20.7416	3.700	17.840	ug/L
Cr	53	15675.387	0.02	20.8998	3.274	15.665	ug/L
Mn	55	179460.612	0.27	20.3892	1.872	9.180	ug/L
Co	59	170680.563	0.26	20.4941	0.523	2.554	ug/L
Ni	60	31702.560	0.05	20.0230	3.642	18.187	ug/L
Cu	65	40390.546	0.06	20.6322	1.418	6.871	ug/L
Zn	66	27026.756	0.04	20.3947	5.615	27.533	ug/L
> Ge	72	653455.354	653455.35				ug/L
As	75	28845.319	0.04	20.0706	0.188	0.938	ug/L
Se	77	2087.486	0.00	20.0499	0.315	1.573	ug/L
Se	82	2771.635	0.00	20.0076	0.348	1.741	ug/L
Y	89	516560.859	21443.40				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	159480.449	0.26	20.3316	1.732	8.517	ug/L
Cd	114	87842.673	0.14	20.1001	0.405	2.016	ug/L
> In	115	622015.309	622015.31				ug/L
Sb	123	93308.286	0.15	20.1336	0.265	1.318	ug/L
Ba	135	32704.207	0.08	20.0913	1.426	7.100	ug/L
Ce	140	0.000	0.00				ug/L
> Tb	159	433865.314	433865.31				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	112408.334	112391.33	20.1088	0.217	1.080	ug/L
Tl	205	271723.613	271703.61	20.0386	0.216	1.078	ug/L
Pb	206	97014.781	96984.78	20.0672	0.518	2.580	ug/L
Pb	207	84289.831	84263.16	20.0645	0.622	3.102	ug/L
Pb	208	385040.783	384932.78	20.0911	0.431	2.145	ug/L
> Bi	209	465733.529	465733.53				ug/L
Na	23	4339413.232	21.04	2.0364	0.069	3.376	mg/L
Mg	24	2789686.229	13.55	1.9616	0.161	8.204	mg/L
K	39	8497222.738	38.30	2.0353	0.278	13.679	mg/L
Ca	43	20347.962	0.10	1.9174	0.275	14.364	mg/L
Fe	54	864203.599	4.12	1.9627	0.217	11.068	mg/L
Fe	57	382383.836	1.83	2.0112	0.075	3.736	mg/L

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Cl	35	18011.511	5004.96	mg/L
Kr	83	122.668	7.33	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209					
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45					
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: Standard 2

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Sample ID: Standard 3

Sample Date/Time: Wednesday, April 03, 2002 08:18:00
 Number of Replicates: 3
 Aliquot Volume (mL):
 Diluted To Volume (mL):
 Autosampler Position: 4
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description:
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	24688.363	3005.15				ug/L
Be	9	29697.721	0.16	101.0501	10.372	10.264	ug/L
Al	27	215628.221	1.14	99.2654	14.237	14.342	ug/L
Sc-1	45	190281.779	190281.78				ug/L
V	51	703181.843	1.05	100.4051	2.651	2.640	ug/L
Cr	52	594898.120	0.88	100.0345	11.912	11.908	ug/L
Cr	53	76204.980	0.11	100.0413	14.013	14.007	ug/L
Mn	55	928556.623	1.39	100.1460	14.128	14.107	ug/L
Co	59	793062.954	1.18	99.6496	16.068	16.125	ug/L
Ni	60	175745.720	0.26	100.3668	9.112	9.079	ug/L
Cu	65	179117.889	0.27	99.4296	4.768	4.796	ug/L
Zn	66	121181.288	0.18	99.4767	10.026	10.079	ug/L
Ge	72	669937.003	669937.00				ug/L
As	75	144715.483	0.22	99.9420	0.177	0.177	ug/L
Se	77	10229.661	0.02	99.8734	0.768	0.769	ug/L
Se	82	13910.907	0.02	100.0422	2.253	2.253	ug/L
Y	89	516170.795	21053.33				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	774892.186	1.21	99.8022	2.954	2.960	ug/L
Cd	114	446306.885	0.70	99.9659	1.512	1.513	ug/L
In	115	639812.670	639812.67				ug/L
Sb	123	474185.635	0.74	99.9749	1.078	1.079	ug/L
Ba	135	145741.429	0.32	99.1154	10.053	10.143	ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	461345.323	461345.32				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	558086.533	558069.53	99.9928	1.281	1.281	ug/L
Tl	205	1337763.818	1337743.82	99.9354	0.568	0.568	ug/L
Pb	206	487426.021	487396.02	100.0400	2.013	2.012	ug/L
Pb	207	417374.158	417347.49	99.9702	3.109	3.110	ug/L
Pb	208	1899019.827	1898911.82	99.9573	1.531	1.532	ug/L
Bi	209	481972.060	481972.06				ug/L
Na	23	22318385.653	117.84	10.0589	0.640	6.365	mg/L
Mg	24	13936109.210	74.25	10.0332	1.238	12.335	mg/L
K	39	39326329.502	205.94	10.0413	0.994	9.898	mg/L
Ca	43	83242.736	0.45	9.9248	1.674	16.868	mg/L
Fe	54	3180669.276	16.89	9.8861	1.634	16.525	mg/L
Fe	57	1691403.791	9.01	9.9966	2.070	20.704	mg/L

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Cl	35	14006.887	1000.34	mg/L
Kr	83	131.335	16.00	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45					
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72					
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115					
Sb	123					
Ba	135					
Ce	140					
Tb	159					
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209					
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45					
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: Standard 3

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Sample ID: QC Std 1

Sample Date/Time: Wednesday, April 03, 2002 08:23:05
 Number of Replicates: 3
 Aliquot Volume (mL):
 Diluted To Volume (mL):
 Autosampler Position: 5
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description:
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	19346.456	-2336.76				ug/L
Be	9	11671.651	0.06	36.1334	10.956	30.320	ug/L
Al	27	118828.029	0.56	49.0518	1.764	3.597	ug/L
> Sc-1	45	208851.798	208851.80				ug/L
V	51	357990.726	0.53	50.9498	2.551	5.008	ug/L
Cr	52	322606.506	0.47	53.8449	2.502	4.647	ug/L
Cr	53	37716.421	0.06	49.3119	1.721	3.490	ug/L
Mn	55	441421.676	0.66	47.6003	3.961	8.321	ug/L
Co	59	388890.893	0.58	48.8625	1.249	2.556	ug/L
Ni	60	85924.351	0.13	49.1268	1.647	3.352	ug/L
Cu	65	90622.960	0.14	50.4229	6.810	13.505	ug/L
Zn	66	58789.498	0.09	48.1962	8.311	17.244	ug/L
> Ge	72	668996.524	668996.52				ug/L
As	75	72153.695	0.11	49.8296	0.555	1.114	ug/L
Se	77	5140.925	0.01	50.0515	0.313	0.625	ug/L
Se	82	7123.591	0.01	50.9350	0.643	1.263	ug/L
Y	89	591360.869	96243.41				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	395740.630	0.61	50.4528	2.291	4.542	ug/L
Cd	114	222614.732	0.34	49.3709	0.465	0.942	ug/L
> In	115	646162.962	646162.96				ug/L
Sb	123	237885.553	0.37	49.6619	0.388	0.782	ug/L
Ba	135	66488.032	0.16	51.1669	4.784	9.350	ug/L
Ce	140	0.000	0.00				ug/L
> Tb	159	408463.305	408463.31				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	282830.844	282813.84	50.6735	1.403	2.768	ug/L
Tl	205	685722.007	685702.00	51.2250	0.914	1.785	ug/L
Pb	206	260268.931	260238.93	53.4151	0.759	1.422	ug/L
Pb	207	197607.020	197580.35	47.3278	0.457	0.967	ug/L
Pb	208	955852.519	955744.51	50.3097	0.701	1.393	ug/L
> Bi	209	469439.411	469439.41				ug/L
Na	23	10893965.532	52.35	4.4686	0.591	13.231	mg/L
Mg	24	7373446.288	35.53	4.8014	0.963	20.064	mg/L
K	39	20323917.018	94.29	4.5977	0.133	2.897	mg/L
Ca	43	54106.760	0.26	5.7922	1.537	26.543	mg/L
Fe	54	1678096.766	7.95	4.6559	0.327	7.028	mg/L
Fe	57	996625.527	4.74	5.2626	0.126	2.391	mg/L

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Cl	35	20014.080	7007.53	mg/L
Kr	83	122.335	7.00	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9	72.267				
Al	27	98.104				
Sc-1	45		112.570			
V	51	101.900				
Cr	52	107.690				
Cr	53	98.624				
Mn	55	95.201				
Co	59	97.725				
Ni	60	98.254				
Cu	65	100.846				
Zn	66	96.392				
Ge	72		104.993			
As	75	99.659				
Se	77	100.103				
Se	82	101.870				
Y	89					
Rh	103					
Ag	107	100.906				
Cd	114	98.742				
In	115		105.700			
Sb	123	99.324				
Ba	135	102.334				
Ce	140					
Tb	159		87.947			
Ho	165					
Tl	203	101.347				
Tl	205	102.450				
Pb	206	106.830				
Pb	207	94.656				
Pb	208	100.619				
Bi	209		104.948			
Na	23	89.372				
Mg	24	96.028				
K	39	91.953				
Ca	43	115.843				
Fe	54	93.117				
Fe	57	105.252				
Sc	45		112.570			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 1

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QC Std 1	Mg	24	ICV is out of limits (+/-10%)
QC Std 1	Ca	43	ICV is out of limits (+/-10%)

Sample ID: QC Std 2

Sample Date/Time: Wednesday, April 03, 2002 08:28:10

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 1

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	23018.904	1335.69				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	666.713	-0.00	-0.0028	0.536	19106.286	ug/L
Sc-1	45	201752.935	201752.94				ug/L
V	51	-652.946	-0.01	-0.5514	0.447	81.104	ug/L
Cr	52	7002.206	0.00	0.2232	0.814	364.847	ug/L
Cr	53	333.345	-0.00	-0.0080	0.786	9839.366	ug/L
Mn	55	333.345	-0.00	-0.0007	0.064	9839.366	ug/L
Co	59	0.000	-0.00	-0.0440	0.000	0.000	ug/L
Ni	60	0.000	0.00	0.0000	0.000		ug/L
Cu	65	0.000	0.00	0.0000	0.000		ug/L
Zn	66	0.000	-0.00	-0.2884	0.000	0.000	ug/L
Ge	72	646369.199	646369.20				ug/L
As	75	175.325	-0.00	-0.0254	0.015	59.280	ug/L
Se	77	60.667	0.00	0.1900	0.087	45.880	ug/L
Se	82	105.639	0.00	0.0459	0.037	80.495	ug/L
Y	89	515816.086	20698.62				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	66.734	0.00	0.0043	0.008	177.901	ug/L
Cd	114	24.888	-0.00	-0.0002	0.002	881.917	ug/L
In	115	628876.085	628876.09				ug/L
Sb	123	344.772	0.00	0.0704	0.010	14.211	ug/L
Ba	135	0.000	0.00	0.0000	0.000		ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	460329.864	460329.86				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	32.000	15.00	0.0027	0.001	35.277	ug/L
Tl	205	46.671	26.67	0.0020	0.001	43.301	ug/L
Pb	206	20.002	-10.00	-0.0021	0.000	0.000	ug/L
Pb	207	30.003	3.33	0.0008	0.004	519.615	ug/L
Pb	208	117.673	9.67	0.0005	0.001	114.438	ug/L
Bi	209	469289.281	469289.28				ug/L
Na	23	4334.139	0.01	0.0010	0.001	126.064	mg/L
Mg	24	0.000	0.00	0.0000	0.000		mg/L
K	39	543846.298	-0.29	-0.0141	0.012	85.711	mg/L
Ca	43	0.000	0.00	0.0000	0.000		mg/L
Fe	54	16812.547	0.00	0.0013	0.008	656.421	mg/L
Fe	57	5667.822	-0.00	-0.0029	0.004	150.166	mg/L

Sample ID: QC Std 2

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Cl	35	14674.815	1668.27		mg/L
Kr	83	116.002	0.67		mg/L
U	238	0.000	0.00		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc-1	45		108.744			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		101.442			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
> In	115		102.872			
Sb	123					
Ba	135					
Ce	140					
> Tb	159		99.114			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
> Bi	209		104.914			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
> Sc	45		108.744			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 2

Report Date/Time: Wednesday, April 03, 2002 08:28:55

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QC Std 2	Cr	52	ICB is out of limits (+/-3*IDL)
QC Std 2	Co	59	ICB is out of limits (+/-3*IDL)

Sample ID: QC Std 4

Sample Date/Time: Wednesday, April 03, 2002 08:33:15

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 6

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	21683.819		0.61					ug/L
Be	9	0.000		0.00		0.0000	0.000		ug/L
Al	27	16938765.327		87.68		7616.0555	1276.482	16.760	ug/L
> Sc-1	45	196702.412		196702.41					ug/L
V	51	3717.037		0.00		0.1205	0.693	575.470	ug/L
Cr	52	5335.107		-0.00		-0.0680	1.016	1493.201	ug/L
Cr	53	1333.403		0.00		1.3994	0.886	63.321	ug/L
Mn	55	1333.427		0.00		0.1095	0.128	116.528	ug/L
Co	59	1333.403		0.00		0.1334	0.084	63.321	ug/L
Ni	60	0.000		0.00		0.0000	0.000		ug/L
Cu	65	666.690		0.00		0.3791	0.328	86.627	ug/L
Zn	66	2333.532		0.00		1.7360	0.587	33.814	ug/L
> Ge	72	640140.611		640140.61					ug/L
As	75	180.449		-0.00		-0.0189	0.063	333.453	ug/L
Se	77	228.669		0.00		1.9275	0.285	14.789	ug/L
Se	82	103.161		0.00		0.0381	0.123	321.331	ug/L
Y	89	512018.166		16900.70					ug/L
Rh	103	0.000		0.00					ug/L
Ag	107	66.734		0.00		0.0044	0.008	176.136	ug/L
Cd	114	1303.681		0.00		0.2984	0.019	6.219	ug/L
> In	115	614466.392		614466.39					ug/L
Sb	123	701.747		0.00		0.1506	0.015	9.650	ug/L
Ba	135	0.000		0.00		0.0000	0.000		ug/L
Ce	140	0.000		0.00					ug/L
> Tb	159	433501.467		433501.47					ug/L
Ho	165	0.000		0.00					ug/L
Tl	203	113.002		96.00		0.0172	0.002	11.600	ug/L
Tl	205	206.689		186.69		0.0139	0.003	20.282	ug/L
Pb	206	750.095		720.09		0.1478	0.020	13.249	ug/L
Pb	207	630.077		603.41		0.1445	0.011	7.596	ug/L
Pb	208	2825.260		2717.25		0.1430	0.009	5.955	ug/L
> Bi	209	508316.529		508316.53					ug/L
Na	23	48408892.825		252.34		21.5406	4.910	22.795	mg/L
Mg	24	12403260.416		64.87		8.7650	2.225	25.384	mg/L
K	39	34719060.773		175.40		8.5523	0.838	9.798	mg/L
Ca	43	241360.095		1.25		27.8597	4.734	16.993	mg/L
Fe	54	7092580.227		37.05		21.6898	5.980	27.569	mg/L
Fe	57	2948586.807		15.33		17.0035	3.759	22.108	mg/L

Sample ID: QC Std 4

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Cl	35	2108681.280	2095674.73	mg/L
Kr	83	144.002	28.67	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27	76.161				
Sc-1	45		106.022			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.465			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		100.515			
Sb	123					
Ba	135					
Ce	140					
Tb	159		93.338			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		113.639			
Na	23	86.163				
Mg	24	87.650				
K	39	85.523				
Ca	43	92.866				
Fe	54	86.759				
Fe	57	68.014				
Sc	45		106.022			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 4
 Report Date/Time: Wednesday, April 03, 2002 08:34:02
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QC Std 4	Na	23	ICSA is out of limits (+/-20%)
QC Std 4	Mg	24	ICSA is out of limits (+/-20%)
QC Std 4	Fe	54	ICSA is out of limits (+/-20%)
QC Std 4	Fe	57	ICSA is out of limits (+/-20%)

Sample ID: QC Std 4
Report Date/Time: Wednesday, April 03, 2002 08:34:02
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method 6020 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Wednesday, April 03, 2002 08:38:22

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 7

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	30365.977	8682.77				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	16375883.257	86.87	7546.0199	1360.552	18.030	ug/L
> Sc-1	45	190603.644	190603.64				ug/L
V	51	126400.967	0.20	18.8852	1.626	8.611	ug/L
Cr	52	114457.839	0.17	19.7648	0.324	1.637	ug/L
Cr	53	12672.339	0.02	17.4900	2.975	17.008	ug/L
Mn	55	167645.456	0.27	19.3428	1.531	7.916	ug/L
Co	59	142712.321	0.23	19.1190	1.088	5.690	ug/L
Ni	60	31033.695	0.05	18.9811	1.253	6.601	ug/L
Cu	65	33707.726	0.05	20.1460	5.117	25.398	ug/L
Zn	66	12338.784	0.02	10.6478	2.584	24.269	ug/L
> Ge	72	626338.704	626338.70				ug/L
As	75	13021.645	0.02	9.4923	0.340	3.585	ug/L
Se	77	1147.379	0.00	11.6084	0.256	2.206	ug/L
Se	82	1322.990	0.00	9.5108	0.361	3.793	ug/L
Y	89	516159.320	21041.86				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	32402.758	0.05	4.4242	0.480	10.850	ug/L
Cd	114	40422.916	0.07	9.6129	0.322	3.347	ug/L
> In	115	602584.608	602584.61				ug/L
Sb	123	634.918	0.00	0.1386	0.005	3.619	ug/L
Ba	135	0.000	0.00	0.0000	0.000		ug/L
Ce	140	0.000	0.00				ug/L
> Tb	159	427010.401	427010.40				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	109.668	92.67	0.0166	0.001	4.866	ug/L
Tl	205	240.026	220.02	0.0164	0.002	12.026	ug/L
Pb	206	49403.597	49373.59	10.1341	0.313	3.090	ug/L
Pb	207	41086.459	41059.79	9.8353	0.245	2.494	ug/L
Pb	208	192190.635	192082.63	10.1111	0.277	2.736	ug/L
> Bi	209	501499.438	501499.44				ug/L
Na	23	46051316.875	242.79	20.7255	2.582	12.458	mg/L
Mg	24	12193787.510	64.30	8.6885	0.733	8.431	mg/L
K	39	32415426.409	168.30	8.2061	0.966	11.769	mg/L
Ca	43	243733.282	1.29	28.7642	4.092	14.226	mg/L
Fe	54	6700720.787	35.47	20.7635	3.877	18.673	mg/L
Fe	57	2948586.807	15.61	17.3105	2.991	17.277	mg/L

Sample ID: QC Std 5

Report Date/Time: Wednesday, April 03, 2002 08:39:10

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Cl	35	2083244.835	2070238.29	mg/L
Kr	83	118.002	2.67	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27	75.460				
Sc-1	45		102.734			
V	51	94.426				
Cr	52	98.824				
Cr	53	87.450				
Mn	55	96.714				
Co	59	95.595				
Ni	60	94.905				
Cu	65	100.730				
Zn	66	106.478				
Ge	72		98.299			
As	75	94.923				
Se	77	116.084				
Se	82	95.108				
Y	89					
Rh	103					
Ag	107	88.484				
Cd	114	96.129				
In	115		98.571			
Sb	123					
Ba	135					
Ce	140					
Tb	159		91.940			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		112.115			
Na	23	82.902				
Mg	24	86.885				
K	39	82.061				
Ca	43	95.881				
Fe	54	83.054				
Fe	57	69.242				
Sc	45		102.734			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 5
 Report Date/Time: Wednesday, April 03, 2002 08:39:10
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QC Std 5	Cu	65	ICSAB is out of limits {+/-20%}
QC Std 5	Zn	66	ICSAB is out of limits {+/-20%}
QC Std 5	Fe	57	ICSAB is out of limits {+/-20%}

Sample ID: QC Std 6

Sample Date/Time: Wednesday, April 03, 2002 08:43:29

Number of Replicates: 3

Aliquot Volume (mL):

Diluted To Volume (mL):

Autosampler Position: 5

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	32370.535	10687.32				ug/L
Be	9	16009.129	0.09	56.3824	7.911	14.031	ug/L
Al	27	118158.467	0.66	57.0261	14.865	26.067	ug/L
Sc-1	45	182840.600	182840.60				ug/L
V	51	329867.753	0.52	49.5329	10.258	20.710	ug/L
Cr	52	279790.604	0.43	49.1745	10.739	21.838	ug/L
Cr	53	33372.556	0.05	45.9438	4.596	10.003	ug/L
Mn	55	427349.773	0.67	48.5914	5.195	10.692	ug/L
Co	59	368035.580	0.58	48.7289	3.755	7.707	ug/L
Ni	60	84252.985	0.13	50.8060	9.367	18.437	ug/L
Cu	65	96659.621	0.15	56.6532	2.300	4.060	ug/L
Zn	66	58453.269	0.09	50.5109	4.756	9.415	ug/L
Ge	72	634547.773	634547.77				ug/L
As	75	69033.062	0.11	50.2555	0.622	1.237	ug/L
Se	77	4826.816	0.01	49.5383	1.379	2.783	ug/L
Se	82	6575.307	0.01	49.5461	0.627	1.265	ug/L
Y	89	515815.643	20698.18				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	380270.409	0.62	51.3285	0.313	0.611	ug/L
Cd	114	211888.985	0.35	49.7419	0.724	1.455	ug/L
In	115	610439.333	610439.33				ug/L
Sb	123	227981.554	0.37	50.3803	1.284	2.548	ug/L
Ba	135	62469.840	0.15	46.5537	3.853	8.275	ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	420435.084	420435.08				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	281762.754	281745.75	50.4821	0.389	0.771	ug/L
Tl	205	673780.567	673760.57	50.3329	0.622	1.235	ug/L
Pb	206	260614.552	260584.55	53.4860	2.365	4.422	ug/L
Pb	207	199838.661	199811.99	47.8624	1.402	2.929	ug/L
Pb	208	955956.891	955848.88	50.3152	1.090	2.167	ug/L
Bi	209	462262.075	462262.07				ug/L
Na	23	10429817.767	57.53	4.9106	0.535	10.899	mg/L
Mg	24	6821423.571	37.66	5.0888	0.611	12.003	mg/L
K	39	18807014.926	100.59	4.9048	0.465	9.474	mg/L
Ca	43	50756.706	0.28	6.2516	0.761	12.177	mg/L
Fe	54	1701307.583	9.23	5.4028	0.226	4.185	mg/L
Fe	57	918439.704	5.03	5.5847	0.748	13.402	mg/L

Sample ID: QC Std 6

Report Date/Time: Wednesday, April 03, 2002 08:44:16

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Cl	35	26357.821	13351.27		mg/L
Kr	83	119.002	3.67		mg/L
U	238	0.000	0.00		mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9	112.765				
Al	27	114.052				
Sc-1	45		98.550			
V	51	99.066				
Cr	52	98.349				
Cr	53	91.888				
Mn	55	97.183				
Co	59	97.458				
Ni	60	101.612				
Cu	65	113.306				
Zn	66	101.022				
Ge	72		99.587			
As	75	100.511				
Se	77	99.077				
Se	82	99.092				
Y	89					
Rh	103					
Ag	107	102.657				
Cd	114	99.484				
In	115		99.856			
Sb	123	100.761				
Ba	135	93.107				
Ce	140					
Tb	159		90.525			
Ho	165					
Tl	203	100.964				
Tl	205	100.666				
Pb	206	106.972				
Pb	207	95.725				
Pb	208	100.630				
Bi	209		103.343			
Na	23	98.213				
Mg	24	101.776				
K	39	98.095				
Ca	43	125.032				
Fe	54	108.055				
Fe	57	111.695				
Sc	45		98.550			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 6
 Report Date/Time: Wednesday, April 03, 2002 08:44:16
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QC Std 6	Al	27	CCV is out of limits (+/-10%)
QC Std 6	V	51	CCV is out of limits (+/-10%)
QC Std 6	Cr	52	CCV is out of limits (+/-10%)
QC Std 6	Cu	65	CCV is out of limits (+/-10%)
QC Std 6	Ca	43	CCV is out of limits (+/-10%)

Sample ID: QC Std 6
Report Date/Time: Wednesday, April 03, 2002 08:44:16
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Method 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, April 03, 2002 08:48:34
 Number of Replicates: 3
 Aliquot Volume (mL):
 Diluted To Volume (mL):
 Autosampler Position: 1
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description:
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	25690.220	4007.01				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	666.690	0.00	0.0170	0.288	1695.538	ug/L
Sc-1	45	178108.080	178108.08				ug/L
V	51	2487.181	-0.00	-0.0684	0.401	586.636	ug/L
Cr	52	6334.745	0.00	0.1445	0.110	76.253	ug/L
Cr	53	1333.427	0.00	1.4230	1.632	114.715	ug/L
Mn	55	0.000	-0.00	-0.0378	0.000	0.000	ug/L
Co	59	0.000	-0.00	-0.0440	0.000	0.000	ug/L
Ni	60	0.000	0.00	0.0000	0.000		ug/L
Cu	65	0.000	0.00	0.0000	0.000		ug/L
Zn	66	333.345	0.00	0.0040	0.506	12693.514	ug/L
Ge	72	623287.199	623287.20				ug/L
As	75	179.994	-0.00	-0.0172	0.014	83.758	ug/L
Se	77	62.667	0.00	0.2345	0.090	38.225	ug/L
Se	82	98.356	0.00	0.0186	0.020	107.999	ug/L
Y	89	474118.410	-20999.05				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	33.367	0.00	0.0001	0.008	11961.767	ug/L
Cd	114	17.892	-0.00	-0.0016	0.002	138.605	ug/L
In	115	601518.925	601518.92				ug/L
Sb	123	280.358	0.00	0.0593	0.007	12.406	ug/L
Ba	135	0.000	0.00	0.0000	0.000		ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	457548.954	457548.95				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	31.000	14.00	0.0025	0.001	37.115	ug/L
Tl	205	56.672	36.67	0.0027	0.001	31.492	ug/L
Pb	206	30.003	0.00	0.0000	0.005	283444880.011	ug/L
Pb	207	16.668	-10.00	-0.0024	0.001	57.735	ug/L
Pb	208	109.672	1.67	0.0001	0.002	2233.689	ug/L
Bi	209	447581.085	447581.09				ug/L
Na	23	5667.939	0.02	0.0017	0.001	58.086	mg/L
Mg	24	0.000	0.00	0.0000	0.000		mg/L
K	39	557355.787	0.14	0.0068	0.006	93.141	mg/L
Ca	43	0.000	0.00	0.0000	0.000		mg/L
Fe	54	17499.081	0.02	0.0094	0.009	99.422	mg/L
Fe	57	8669.398	0.02	0.0210	0.018	84.775	mg/L

Sample ID: QC Std 7

Report Date/Time: Wednesday, April 03, 2002 08:49:19

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Cl	35	19681.296	6674.75	mg/L
Kr	83	112.335	-3.00	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		95.999			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.820			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		98.397			
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.516			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		100.061			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		95.999			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 7
 Report Date/Time: Wednesday, April 03, 2002 08:49:19
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Sample ID: PBS P3 WG115507-02

Sample Date/Time: Wednesday, April 03, 2002 08:53:37

Number of Replicates: 3

Aliquot Volume (mL): 0.500

Diluted To Volume (mL): 500.000

Autosampler Position: 11

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	20681.845		-1001.37					ug/L
Be	9	0.000		0.00		0.0000	0.000		ug/L
Al	27	8669.444		0.04		3748.7150	1435.285	38.287	ug/L
> Sc-1	45	188235.999		188236.00					ug/L
V	51	3354.440		0.00		61.0424	110.814	181.536	ug/L
Cr	52	8669.584		0.00		560.3315	635.548	113.424	ug/L
Cr	53	333.345		0.00		9.4266	816.183	8658.325	ug/L
Mn	55	2000.233		0.00		193.0221	230.527	119.431	ug/L
Co	59	0.000		-0.00		-44.0100	0.000	0.000	ug/L
Ni	60	0.000		0.00		0.0000	0.000		ug/L
Cu	65	333.345		0.00		197.7942	342.590	173.205	ug/L
Zn	66	3000.478		0.00		2355.6705	2339.964	99.333	ug/L
> Ge	72	626883.221		626883.22					ug/L
As	75	150.116		-0.00		-40.0461	26.284	65.635	ug/L
Se	77	64.667		0.00		251.5714	45.539	18.102	ug/L
Se	82	91.798		-0.00		-36.6112	31.573	86.239	ug/L
Y	89	501326.107		6208.64					ug/L
Rh	103	0.000		0.00					ug/L
Ag	107	66.734		0.00		4.6474	7.921	170.433	ug/L
Cd	114	25.751		0.00		0.2196	1.675	762.778	ug/L
> In	115	604157.683		604157.68					ug/L
Sb	123	278.073		0.00		58.4476	5.985	10.240	ug/L
Ba	135	0.000		0.00		0.0000	0.000		ug/L
Ce	140	0.000		0.00					ug/L
> Tb	159	443496.897		443496.90					ug/L
Ho	165	0.000		0.00					ug/L
Tl	203	37.334		20.33		3.6433	0.919	25.237	ug/L
Tl	205	86.676		66.67		4.9808	1.141	22.913	ug/L
Pb	206	160.017		130.01		26.6859	5.431	20.352	ug/L
Pb	207	86.676		60.01		14.3737	4.987	34.695	ug/L
Pb	208	571.033		463.03		24.3734	1.740	7.137	ug/L
> Bi	209	488465.857		488465.86					ug/L
Na	23	20347.845		0.10		8.3508	1.036	12.401	mg/L
Mg	24	1666.772		0.01		1.2112	0.462	38.111	mg/L
K	39	1119268.009		2.98		145.3507	33.353	22.947	mg/L
Ca	43	666.690		0.00		81.0147	70.545	87.077	mg/L
Fe	54	57873.342		0.23		132.9650	18.799	14.138	mg/L
Fe	57	8002.264		0.01		13.4205	6.538	48.714	mg/L

Sample ID: PBS P3 WG115507-02

Report Date/Time: Wednesday, April 03, 2002 08:54:22

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Cl	35	33038.463	20031.91	mg/L
Kr	83	122.002	6.67	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		101.458			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.384			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		98.829			
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.490			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		109.201			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		101.458			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: PBS P3 WG115507-02
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As 75 Lower	As	75
Se 82 Lower	Se	82

Method 6020 - Summary Report

Sample ID: LCSS P3 WG115507-03

Sample Date/Time: Wednesday, April 03, 2002 08:58:17

Number of Replicates: 3

Aliquot Volume (mL): 0.500

Diluted To Volume (mL): 50.000

Autosampler Position: 12

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	26357.868		4674.66					ug/L
Be	9	3667.238		0.02		11406.6749	5891.998	51.654	ug/L
Al	27	36380.752		0.18		15204.6171	2965.017	19.501	ug/L
Sc-1	45	204119.865		204119.87					ug/L
V	51	81826.235		0.13		12193.8134	1644.550	13.487	ug/L
Cr	52	77547.200		0.12		13181.9242	2301.902	17.463	ug/L
Cr	53	7335.434		0.01		9927.3866	4222.227	42.531	ug/L
Mn	55	91297.147		0.15		10597.1758	2064.308	19.480	ug/L
Co	59	91630.762		0.15		12373.3918	1953.032	15.784	ug/L
Ni	60	18011.441		0.03		11084.3807	1159.319	10.459	ug/L
Cu	65	18012.189		0.03		10803.4259	3695.468	34.206	ug/L
Zn	66	13339.753		0.02		11532.3353	2447.696	21.225	ug/L
Ge	72	621081.194		621081.19					ug/L
As	75	13864.136		0.02		10192.2538	256.037	2.512	ug/L
Se	77	1034.704		0.00		10517.8957	262.819	2.499	ug/L
Se	82	1301.603		0.00		9427.3146	359.115	3.809	ug/L
Y	89	489242.998		-5874.46					ug/L
Rh	103	0.000		0.00					ug/L
Ag	107	77655.755		0.13		10643.7320	809.833	7.609	ug/L
Cd	114	43402.045		0.07		10352.8731	257.651	2.489	ug/L
In	115	600626.369		600626.37					ug/L
Sb	123	48061.145		0.08		10792.3323	105.398	0.977	ug/L
Ba	135	12672.339		0.03		8765.2022	611.277	6.974	ug/L
Ce	140	0.000		0.00					ug/L
Tb	159	451021.511		451021.51					ug/L
Ho	165	0.000		0.00					ug/L
Tl	203	59776.073		59759.07		10707.4022	113.576	1.061	ug/L
Tl	205	145953.109		145933.11		10901.8507	177.207	1.625	ug/L
Pb	206	51571.416		51541.41		10579.0857	173.855	1.643	ug/L
Pb	207	44129.153		44102.48		10564.1787	258.912	2.451	ug/L
Pb	208	203299.692		203191.69		10695.8614	39.466	0.369	ug/L
Bi	209	491536.142		491536.14					ug/L
Na	23	16343.011		0.07		5.9735	1.885	31.562	mg/L
Mg	24	1333.403		0.01		0.8725	0.327	37.473	mg/L
K	39	535244.016		-0.35		-17.0009	23.647	139.090	mg/L
Ca	43	0.000		0.00		0.0000	0.000		mg/L
Fe	54	29513.104		0.06		37.3115	12.512	33.534	mg/L
Fe	57	8669.304		0.01		13.4500	5.491	40.822	mg/L

Sample ID: LCSS P3 WG115507-03

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Cl	35	20348.313	7341.76	mg/L
Kr	83	121.668	6.33	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		110.020			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		97.473			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		98.251			
Sb	123					
Ba	135					
Ce	140					
Tb	159		97.110			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		109.888			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		110.020			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: LCSS P3 WG115507-03
 Report Date/Time: Wednesday, April 03, 2002 08:59:13
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Sample ID: LCSS P3 WG115507-03
Report Date/Time: Wednesday, April 03, 2002 08:59:13
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Method 6020 - Summary Report

Sample ID: 0400101 WG115507-01

Sample Date/Time: Wednesday, April 03, 2002 09:03:07

Number of Replicates: 3

Aliquot Volume (mL): 0.550

Diluted To Volume (mL): 50.000

Autosampler Position: 13

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	26691.680	5008.47				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	14164205.031	71.58	5652148.8099	258927.714	4.581	ug/L
Sc-1	45	198030.589	198030.59				ug/L
V	51	59536.393	0.09	7893.5699	1792.638	22.710	ug/L
Cr	52	36046.846	0.05	5018.4373	1221.361	24.337	ug/L
Cr	53	3000.338	0.00	3409.6592	1218.059	35.724	ug/L
Mn	55	208527.919	0.33	21857.6309	3198.082	14.631	ug/L
Co	59	1666.772	0.00	163.5082	70.697	43.238	ug/L
Ni	60	1333.450	0.00	730.8078	833.012	113.985	ug/L
Cu	65	2333.672	0.00	1265.1703	1356.597	107.226	ug/L
Zn	66	11337.885	0.02	8799.0834	1122.734	12.760	ug/L
Ge	72	626518.626	626518.63				ug/L
As	75	1623.234	0.00	954.7894	65.809	6.893	ug/L
Se	77	88.000	0.00	450.5198	182.945	40.608	ug/L
Se	82	97.212	0.00	5.5121	25.856	469.075	ug/L
Y	89	528989.145	33871.68				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	133.468	0.00	12.1036	6.665	55.063	ug/L
Cd	114	33.803	0.00	1.7813	0.441	24.772	ug/L
In	115	614319.920	614319.92				ug/L
Sb	123	110.972	0.00	18.8647	0.794	4.209	ug/L
Ba	135	6001.284	0.01	3855.6398	788.116	20.441	ug/L
Ce	140	216635.466	0.49				ug/L
Tb	159	445524.437	445524.44				ug/L
Ho	165	1000.058	1000.06				ug/L
Tl	203	170.336	153.34	24.9765	3.924	15.711	ug/L
Tl	205	343.372	323.37	21.9611	3.741	17.034	ug/L
Pb	206	14345.300	14315.30	2671.1575	32.156	1.204	ug/L
Pb	207	11922.836	11896.17	2590.5205	89.454	3.453	ug/L
Pb	208	56224.156	56116.15	2685.3755	53.933	2.008	ug/L
Bi	209	506004.840	506004.84				ug/L
Na	23	18678.972	0.08	6.4783	0.713	11.007	mg/L
Mg	24	47748.067	0.24	29.5644	4.846	16.392	mg/L
K	39	680616.365	0.44	19.4894	13.889	71.267	mg/L
Ca	43	666.690	0.00	69.0524	59.850	86.673	mg/L
Fe	54	1867612.649	9.34	4972.6370	159.449	3.207	mg/L
Fe	57	790662.603	3.96	3995.3317	174.328	4.363	mg/L

Sample ID: 0400101 WG115507-01

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Cl	35	20348.103	7341.55	mg/L
Kr	83	125.002	9.67	mg/L
U	238	3333.730	3333.73	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		106.738			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.327			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		100.491			
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.927			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		113.122			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		106.738			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0400101 WG115507-01
 Report Date/Time: Wednesday, April 03, 2002 09:04:03
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method 6020 - Summary Report

Sample ID: 0400101DP WG115507-06

Sample Date/Time: Wednesday, April 03, 2002 09:07:58

Number of Replicates: 3

Aliquot Volume (mL): 0.500

Diluted To Volume (mL): 50.000

Autosampler Position: 14

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	24688.784	3005.57				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	21720772.301	104.20	9051057.5450	401886.272	4.440	ug/L
> Sc-1	45	208858.090	208858.09				ug/L
V	51	85814.546	0.13	12358.0491	2944.334	23.825	ug/L
Cr	52	51429.021	0.07	8056.1513	1943.842	24.129	ug/L
Cr	53	3333.963	0.00	4118.7967	4408.293	107.029	ug/L
Mn	55	241706.167	0.37	27084.5399	2451.487	9.051	ug/L
Co	59	3000.338	0.00	347.4102	128.490	36.985	ug/L
Ni	60	1666.772	0.00	986.7906	331.059	33.549	ug/L
Cu	65	3333.823	0.01	1936.8276	1215.587	62.762	ug/L
Zn	66	3667.238	0.01	2837.6521	1726.138	60.830	ug/L
> Ge	72	643681.380	643681.38				ug/L
As	75	2169.279	0.00	1410.7642	19.514	1.383	ug/L
Se	77	78.000	0.00	372.5506	246.585	66.188	ug/L
Se	82	112.770	0.00	103.1545	88.612	85.903	ug/L
Y	89	516164.639	21047.18				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	266.936	0.00	31.4662	7.883	25.052	ug/L
Cd	114	33.516	0.00	1.9643	0.652	33.216	ug/L
> In	115	611944.769	611944.77				ug/L
Sb	123	71.251	0.00	12.0929	0.379	3.133	ug/L
Ba	135	5334.524	0.01	3695.2827	1890.464	51.159	ug/L
Ce	140	320909.983	0.72				ug/L
> Tb	159	442773.636	442773.64				ug/L
Ho	165	1000.058	1000.06				ug/L
Tl	203	208.670	191.67	34.3427	2.038	5.934	ug/L
Tl	205	496.725	476.72	35.6133	2.402	6.744	ug/L
Pb	206	15666.820	15636.82	3209.5207	59.889	1.866	ug/L
Pb	207	13103.984	13077.31	3132.5013	25.639	0.818	ug/L
Pb	208	61716.751	61608.74	3243.0392	32.427	1.000	ug/L
> Bi	209	508661.982	508661.98				ug/L
Na	23	21015.937	0.09	7.6176	1.206	15.825	mg/L
Mg	24	102702.715	0.49	66.5202	1.479	2.224	mg/L
K	39	759001.724	0.66	32.0754	16.152	50.358	mg/L
Ca	43	333.345	0.00	33.2241	57.546	173.205	mg/L
Fe	54	1666152.044	7.92	4636.5216	521.263	11.243	mg/L
Fe	57	963456.893	4.60	5103.4281	323.853	6.346	mg/L

Sample ID: 0400101DP WG115507-06

Report Date/Time: Wednesday, April 03, 2002 09:08:54

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Cl	35	14007.775	1001.23	mg/L
Kr	83	115.335	0.00	mg/L
U	238	4667.437	4667.44	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		112.574			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		101.020			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		100.102			
Sb	123					
Ba	135					
Ce	140					
Tb	159		95.334			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		113.716			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		112.574			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0400101DP WG115507-06

Report Date/Time: Wednesday, April 03, 2002 09:08:54

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Method 6020 - Summary Report

Sample ID: 0400101S WG115507-04

Sample Date/Time: Wednesday, April 03, 2002 09:12:50

Number of Replicates: 3

Aliquot Volume (mL): 0.500

Diluted To Volume (mL): 50.000

Autosampler Position: 15

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	25689.963	4006.75				ug/L
Be	9	2666.923	0.01	8266.7712	1723.872	20.853	ug/L
Al	27	20348435.925	98.51	8557169.9365	608479.593	7.111	ug/L
Sc-1	45	206821.045	206821.04				ug/L
V	51	161008.377	0.25	23678.4319	4971.173	20.995	ug/L
Cr	52	118153.883	0.18	19973.1164	682.832	3.419	ug/L
Cr	53	16343.455	0.02	22032.3916	7766.897	35.252	ug/L
Mn	55	379658.201	0.59	42792.0400	2493.946	5.828	ug/L
Co	59	86599.522	0.13	11340.5977	1874.076	16.525	ug/L
Ni	60	19680.408	0.03	11745.4513	1633.705	13.909	ug/L
Cu	65	20681.868	0.03	12022.5146	1934.905	16.094	ug/L
Zn	66	18345.697	0.03	15534.6239	4505.316	29.002	ug/L
Ge	72	640269.049	640269.05				ug/L
As	75	15131.212	0.02	10799.3342	146.247	1.354	ug/L
Se	77	992.701	0.00	9760.0312	314.124	3.218	ug/L
Se	82	1293.334	0.00	9056.8149	155.301	1.715	ug/L
Y	89	540724.312	45606.85				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	79600.565	0.13	10700.9780	141.074	1.318	ug/L
Cd	114	46066.108	0.08	10768.6354	63.780	0.592	ug/L
In	115	612718.888	612718.89				ug/L
Sb	123	1602.653	0.00	349.2051	16.610	4.756	ug/L
Ba	135	21349.329	0.05	14581.5442	1070.660	7.343	ug/L
Ce	140	283111.902	0.62				ug/L
Tb	159	458597.885	458597.89				ug/L
Ho	165	333.345	333.35				ug/L
Tl	203	63344.783	63327.78	11346.8300	174.118	1.535	ug/L
Tl	205	151551.853	151531.85	11320.1017	339.490	2.999	ug/L
Pb	206	71890.942	71860.94	14749.7514	40.076	0.272	ug/L
Pb	207	60791.832	60765.16	14555.5075	252.005	1.731	ug/L
Pb	208	282534.613	282426.61	14866.7296	104.167	0.701	ug/L
Bi	209	503860.638	503860.64				ug/L
Na	23	18011.838	0.08	6.5509	2.069	31.585	mg/L
Mg	24	108074.405	0.52	70.6568	3.557	5.034	mg/L
K	39	845657.447	1.09	53.3826	2.659	4.981	mg/L
Ca	43	1000.058	0.00	110.3566	110.728	100.336	mg/L
Fe	54	1496954.500	7.16	4190.1913	223.336	5.330	mg/L
Fe	57	906944.198	4.36	4834.4231	289.361	5.985	mg/L

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> Sc	45	200021.049	200021.07	mg/L
Cl	35	16676.519	3669.97	mg/L
Kr	83	121.335	6.00	mg/L
U	238	4667.483	4667.48	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		111.476			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		100.485			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		100.229			
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.741			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		112.643			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		111.476			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

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Sample ID: 0400101SD WG115507-05

Sample Date/Time: Wednesday, April 03, 2002 09:17:41
 Number of Replicates: 3
 Aliquot Volume (mL): 0.490
 Diluted To Volume (mL): 50.000
 Autosampler Position: 16
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description: 10
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	28027.912	6344.70				ug/L
Be	9	5667.892	0.03	17284.4195	5133.466	29.700	ug/L
Al	27	16901405.898	80.33	7120486.5701	1028903.775	14.450	ug/L
> Sc-1	45	211899.001	211899.00				ug/L
V	51	108738.763	0.16	16106.6419	923.956	5.736	ug/L
Cr	52	115129.480	0.17	19735.8659	1193.211	6.046	ug/L
Cr	53	11337.838	0.02	15397.7231	832.661	5.408	ug/L
Mn	55	333858.526	0.52	38204.8518	1387.102	3.631	ug/L
Co	59	83248.243	0.13	11051.6189	2173.740	19.669	ug/L
Ni	60	19680.455	0.03	11944.3578	2060.653	17.252	ug/L
Cu	65	26358.430	0.04	15525.0857	3314.882	21.352	ug/L
Zn	66	13339.753	0.02	11379.8858	2619.544	23.019	ug/L
> Ge	72	643596.495	643596.49				ug/L
As	75	15082.042	0.02	10926.3010	57.918	0.530	ug/L
Se	77	918.696	0.00	9133.2007	202.951	2.222	ug/L
Se	82	1250.251	0.00	8858.9584	71.787	0.810	ug/L
Y	89	491659.812	-3457.65				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	80305.266	0.13	10751.8493	235.490	2.190	ug/L
Cd	114	46746.575	0.07	10884.1814	116.388	1.069	ug/L
> In	115	627737.319	627737.32				ug/L
Sb	123	7887.137	0.01	1725.9317	27.602	1.599	ug/L
Ba	135	21016.031	0.05	14412.6536	3742.531	25.967	ug/L
Ce	140	243052.449	0.52				ug/L
> Tb	159	466851.145	466851.14				ug/L
Ho	165	1000.035	1000.04				ug/L
Tl	203	63316.978	63299.98	11573.3142	95.288	0.823	ug/L
Tl	205	156258.829	156238.83	11909.9323	60.129	0.505	ug/L
Pb	206	68162.390	68132.39	14269.8478	237.724	1.666	ug/L
Pb	207	55690.599	55663.93	13605.6871	300.526	2.209	ug/L
Pb	208	261800.426	261692.42	14056.4257	294.919	2.098	ug/L
> Bi	209	507466.163	507466.16				ug/L
Na	23	18679.346	0.08	6.7384	1.711	25.398	mg/L
Mg	24	70178.011	0.34	46.2627	13.965	30.186	mg/L
K	39	765320.995	0.63	31.1994	12.391	39.715	mg/L
Ca	43	0.000	0.00	0.0000	0.000		mg/L
Fe	54	1917807.628	9.01	5383.1398	513.842	9.545	mg/L
Fe	57	813252.982	3.83	4335.6538	572.775	13.211	mg/L

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Cl	35	12338.714	-667.83	mg/L
Kr	83	133.669	18.33	mg/L
U	238	5000.969	5000.97	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		114.213			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		101.007			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		102.686			
Sb	123					
Ba	135					
Ce	140					
Tb	159		100.518			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		113.449			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		114.213			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0400101SD WG115507-05
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Method 6020 - Summary Report

Sample ID: 0400101PS

Sample Date/Time: Wednesday, April 03, 2002 09:22:06
 Number of Replicates: 3
 Aliquot Volume (mL): 0.550
 Diluted To Volume (mL): 500.000
 Autosampler Position: 17
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description: 10
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	16342.707	-5340.50				ug/L
Be	9	18678.972	0.08	47563.3741	8252.723	17.351	ug/L
Al	27	14370927.208	62.62	4944782.0395	691027.972	13.975	ug/L
Sc-1	45	231199.206	231199.21				ug/L
V	51	388027.375	0.61	53498.7328	651.790	1.218	ug/L
Cr	52	323972.053	0.51	52390.9823	3469.030	6.621	ug/L
Cr	53	38386.153	0.06	48577.9497	9612.250	19.787	ug/L
Mn	55	623329.743	0.99	65069.9409	3037.624	4.668	ug/L
Co	59	374215.201	0.60	45537.5061	6090.783	13.375	ug/L
Ni	60	83246.338	0.13	46028.1818	7717.525	16.767	ug/L
Cu	65	94646.301	0.15	50919.6384	2985.324	5.863	ug/L
Zn	66	75201.438	0.12	59745.1005	10989.035	18.393	ug/L
Ge	72	628743.625	628743.62				ug/L
As	75	71574.881	0.11	47822.7951	886.216	1.853	ug/L
Se	77	4929.517	0.01	46431.8402	410.862	0.885	ug/L
Se	82	6558.336	0.01	45360.8339	1264.222	2.787	ug/L
Y	89	517583.050	22465.59				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	382327.689	0.62	46235.0108	1142.306	2.471	ug/L
Cd	114	220525.351	0.36	46377.3005	53.587	0.116	ug/L
In	115	619434.145	619434.14				ug/L
Sb	123	236758.852	0.38	46869.7192	489.391	1.044	ug/L
Ba	135	67157.931	0.16	44939.2211	1926.241	4.286	ug/L
Ce	140	223083.429	0.53				ug/L
Tb	159	425966.565	425966.56				ug/L
Ho	165	333.345	333.35				ug/L
Tl	203	299815.608	299798.61	48833.4260	464.107	0.950	ug/L
Tl	205	722033.640	722013.64	49034.2025	798.166	1.628	ug/L
Pb	206	267835.928	267805.93	49971.1459	1729.400	3.461	ug/L
Pb	207	233537.596	233510.93	50849.5615	1453.762	2.859	ug/L
Pb	208	1058696.523	1058588.52	50657.5670	1075.250	2.123	ug/L
Bi	209	481000.852	481000.85				ug/L
Na	23	19346.572	0.07	5.7263	1.286	22.452	mg/L
Mg	24	60126.923	0.26	31.9905	2.111	6.600	mg/L
K	39	614279.067	-0.32	-14.2333	13.241	93.025	mg/L
Ca	43	1000.035	0.00	88.1491	7.634	8.660	mg/L
Fe	54	1719165.596	7.38	3926.4394	485.874	12.374	mg/L
Fe	57	709933.159	3.04	3069.3393	60.731	1.979	mg/L

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Cl	35	13674.360	667.81	mg/L
Kr	83	127.335	12.00	mg/L
U	238	5667.799	5667.80	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc-1	45		124.615			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		98.676			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
> In	115		101.328			
Sb	123					
Ba	135					
Ce	140					
> Tb	159		91.716			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
> Bi	209		107.532			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
> Sc	45		124.615			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0400101PS

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Sc-1 45 Int Std for sanSc-1	45
K 39 Lower K	39
Sc 45 Int Std for sampSc	45

Method 6020 - Summary Report

Sample ID: 0400101SDL

Sample Date/Time: Wednesday, April 03, 2002 09:26:22
 Number of Replicates: 3
 Aliquot Volume (mL): 0.550
 Diluted To Volume (mL): 2500.000
 Autosampler Position: 18
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description: 50
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	24688.503		3005.29					ug/L
Be	9	0.000		0.00		0.0000	0.000		ug/L
Al	27	2829354.126		14.53		5737932.7300	470999.189	8.209	ug/L
Sc-1	45	194651.095		194651.10					ug/L
V	51	14945.119		0.02		8172.2476	3051.761	37.343	ug/L
Cr	52	16342.777		0.02		8681.3552	1800.660	20.742	ug/L
Cr	53	666.690		0.00		2125.3756	3658.505	172.135	ug/L
Mn	55	48080.940		0.08		24630.9281	1571.004	6.378	ug/L
Co	59	333.345		-0.00		-2.0645	342.913	16609.695	ug/L
Ni	60	333.345		0.00		916.7766	1587.904	173.205	ug/L
Cu	65	666.690		0.00		1779.9470	1541.489	86.603	ug/L
Zn	66	2666.970		0.00		9168.6246	6006.388	65.510	ug/L
Ge	72	636751.665		636751.66					ug/L
As	75	480.324		0.00		903.1043	172.801	19.134	ug/L
Se	77	62.000		0.00		972.8318	401.547	41.276	ug/L
Se	82	95.132		-0.00		-98.6317	518.781	525.978	ug/L
Y	89	515580.238		20462.78					ug/L
Rh	103	0.000		0.00					ug/L
Ag	107	0.000		-0.00		-20.4446	0.000	0.000	ug/L
Cd	114	146.694		0.00		129.8801	8.992	6.923	ug/L
In	115	610464.928		610464.93					ug/L
Sb	123	233.896		0.00		218.3369	33.180	15.197	ug/L
Ba	135	333.345		0.00		1085.3652	1879.908	173.205	ug/L
Ce	140	42063.050		0.10					ug/L
Tb	159	424917.050		424917.05					ug/L
Ho	165	0.000		0.00					ug/L
Tl	203	49.667		32.67		26.6053	4.976	18.704	ug/L
Tl	205	100.010		80.01		27.1681	8.985	33.072	ug/L
Pb	206	2853.904		2823.90		2634.6237	99.789	3.788	ug/L
Pb	207	2347.095		2320.43		2526.4909	251.750	9.964	ug/L
Pb	208	11073.265		10965.26		2623.6508	70.569	2.690	ug/L
Bi	209	462169.804		462169.80					ug/L
Na	23	8002.824		0.03		11.9493	10.358	86.681	mg/L
Mg	24	14341.003		0.07		45.0233	12.997	28.867	mg/L
K	39	529646.318		-0.27		-60.4654	23.502	38.868	mg/L
Ca	43	0.000		0.00		0.0000	0.000		mg/L
Fe	54	366186.603		1.80		4793.3323	273.677	5.710	mg/L
Fe	57	163599.137		0.81		4088.6656	282.622	6.912	mg/L

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> Sc	45	15341.785	2335.24	mg/L
Cl	35	122.002	6.67	mg/L
Kr	83	666.690	666.69	mg/L
U	238			

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
> Sc-1	45		104.916			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
> Ge	72		99.933			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
> In	115		99.860			
Sb	123					
Ba	135					
Ce	140					
> Tb	159		91.490			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
> Bi	209		103.322			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
> Sc	45		104.916			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0400101SDL
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Co 59 Lower	Co	59
Se 82 Lower	Se	82
Ag 107 Lower	Ag	107
K 39 Lower	K	39

Sample ID: 0401403

Sample Date/Time: Wednesday, April 03, 2002 09:31:05

Number of Replicates: 3

Aliquot Volume (mL): 0.510

Diluted To Volume (mL): 50.000

Autosampler Position: 19

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	25356.525	3673.31				ug/L
Be	9	1000.058	0.00	3109.8730	3063.558	98.511	ug/L
Al	27	16968652.871	81.22	6917104.0712	813919.477	11.767	ug/L
> Sc-1	45	210208.338	210208.34				ug/L
V	51	131552.820	0.20	18506.7176	4384.747	23.693	ug/L
Cr	52	85593.958	0.12	13609.4680	2338.133	17.180	ug/L
Cr	53	7669.316	0.01	9663.6484	6557.436	67.857	ug/L
Mn	55	4739251.339	7.26	514293.2885	34810.999	6.769	ug/L
Co	59	64147.135	0.10	8058.2553	1511.996	18.763	ug/L
Ni	60	47411.934	0.07	27221.9128	784.212	2.881	ug/L
Cu	65	39722.852	0.06	22160.9967	3520.333	15.885	ug/L
Zn	66	154501.218	0.24	127657.9090	11181.891	8.759	ug/L
> Ge	72	652875.272	652875.27				ug/L
As	75	37485.608	0.06	25937.7883	403.905	1.557	ug/L
Se	77	170.001	0.00	1259.9390	151.397	12.016	ug/L
Se	82	172.865	0.00	527.8971	112.395	21.291	ug/L
Y	89	850325.001	355207.54				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	1234.621	0.00	156.6554	6.722	4.291	ug/L
Cd	114	1803.431	0.00	403.4815	11.366	2.817	ug/L
> In	115	619290.642	619290.64				ug/L
Sb	123	275.753	0.00	55.2844	4.579	8.283	ug/L
Ba	135	113450.838	0.25	76302.9855	6384.100	8.367	ug/L
Ce	140	526544.837	1.16				ug/L
> Tb	159	455824.665	455824.67				ug/L
Ho	165	8669.351	8669.35				ug/L
Tl	203	2716.953	2699.95	474.2815	22.016	4.642	ug/L
Tl	205	6635.539	6615.54	484.5196	20.536	4.238	ug/L
Pb	206	118178.703	118148.70	23775.0035	478.939	2.014	ug/L
Pb	207	96165.506	96138.84	22577.2677	58.126	0.257	ug/L
Pb	208	453176.660	453068.65	23381.5705	280.554	1.200	ug/L
> Bi	209	492062.300	492062.30				ug/L
Na	23	166305.163	0.79	65.7502	11.004	16.737	mg/L
Mg	24	26181648.850	125.48	16622.2873	3061.594	18.419	mg/L
K	39	3172639.292	12.17	581.7254	64.272	11.049	mg/L
Ca	43	317841.970	1.51	33079.0693	936.968	2.833	mg/L
Fe	54	11244771.014	53.45	30679.1713	3565.139	11.621	mg/L
Fe	57	4659683.814	22.19	24129.4786	2249.138	9.321	mg/L

Sample ID: 0401403

Report Date/Time: Wednesday, April 03, 2002 09:32:01

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Cl	35	16343.011	3336.46	mg/L
Kr	83	152.336	37.00	mg/L
U	238	19013.088	19013.09	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		113.301			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		102.463			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		101.304			
Sb	123					
Ba	135					
Ce	140					
Tb	159		98.144			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		110.005			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		113.301			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0401403

Report Date/Time: Wednesday, April 03, 2002 09:32:01

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Al 27 Upper, S, EEE	27
Mn 55 Upper, S, EEE	Mn 55
Zn 66 Upper, S, EEE	Zn 66
Mg 24 Upper, S, EEE	Mg 24
Ca 43 Upper, S, EEE	Ca 43
Fe 54 Upper, S, EEE	Fe 54
Fe 57 Upper, S, EEE	Fe 57

method 6020 - Summary Report

Sample ID: 0401407

Sample Date/Time: Wednesday, April 03, 2002 09:35:58

Number of Replicates: 3

Aliquot Volume (mL): 0.550

Diluted To Volume (mL): 50.000

Autosampler Position: 20

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description: 10

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	30700.000	9016.79				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	10859140.836	52.59	4152471.3246	506806.573	12.205	ug/L
> Sc-1	45	208525.848	208525.85				ug/L
V	51	108198.263	0.17	14474.5326	1387.845	9.588	ug/L
Cr	52	57451.016	0.08	8458.3612	1749.621	20.685	ug/L
Cr	53	7335.831	0.01	8914.8503	6604.674	74.086	ug/L
Mn	55	5204910.337	8.21	539125.1255	25471.668	4.725	ug/L
Co	59	70846.875	0.11	8517.6168	1865.111	21.897	ug/L
Ni	60	18345.253	0.03	10057.6934	1417.318	14.092	ug/L
Cu	65	33707.610	0.05	17996.7304	4049.990	22.504	ug/L
Zn	66	57786.118	0.09	45311.9749	7927.720	17.496	ug/L
> Ge	72	634218.706	634218.71				ug/L
As	75	11322.871	0.02	7382.8188	135.665	1.838	ug/L
Se	77	134.001	0.00	875.0305	141.630	16.186	ug/L
Se	82	165.083	0.00	468.3780	75.721	16.167	ug/L
Y	89	664439.706	169322.24				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	433.774	0.00	50.0400	19.085	38.140	ug/L
Cd	114	799.387	0.00	168.1533	5.316	3.161	ug/L
> In	115	600286.217	600286.22				ug/L
Sb	123	189.962	0.00	35.5296	1.981	5.577	ug/L
Ba	135	68500.972	0.14	38884.6421	8598.167	22.112	ug/L
Ce	140	326041.273	0.65				ug/L
> Tb	159	503752.391	503752.39				ug/L
Ho	165	7001.879	7001.88				ug/L
Tl	203	1243.733	1226.73	199.8194	3.842	1.923	ug/L
Tl	205	3110.650	3090.65	209.8955	3.782	1.802	ug/L
Pb	206	69910.960	69880.96	13039.4109	98.239	0.753	ug/L
Pb	207	56122.341	56095.67	12215.4467	315.472	2.583	ug/L
Pb	208	266498.557	266390.55	12747.8213	78.747	0.618	ug/L
> Bi	209	494650.907	494650.91				ug/L
Na	23	69837.242	0.33	25.5344	4.653	18.222	mg/L
Mg	24	1932866.466	9.39	1153.3603	180.948	15.689	mg/L
K	39	1807427.408	5.70	252.5224	14.678	5.812	mg/L
Ca	43	13673.612	0.06	1313.9833	307.342	23.390	mg/L
Fe	54	4681175.718	22.63	12043.3820	2008.638	16.678	mg/L
Fe	57	2090492.028	10.05	10138.7783	1048.086	10.337	mg/L

Sample ID: 0401407

Report Date/Time: Wednesday, April 03, 2002 09:36:54

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Cl	35	16009.245	3002.70	mg/L
Kr	83	141.002	25.67	mg/L
U	238	20349.692	20349.69	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		112.394			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		99.535			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		98.195			
Sb	123					
Ba	135					
Ce	140					
Tb	159		108.464			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		110.584			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		112.394			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: 0401407

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Mn 55 Upper, S, EEE Mn	55
Fe 54 Upper, S, EEE Fe	54
Fe 57 Upper, S, EEE Fe	57

Sample ID: QC Std 6

Sample Date/Time: Wednesday, April 03, 2002 09:40:24

Number of Replicates: 3

Aliquot Volume (mL): 0.550

Diluted To Volume (mL): 50.000

Autosampler Position: 5

Method File: C:\elandata\Method\Service\6020 methods\6020A.mth

Sample Description:

Batch ID:

USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	25355.847	3672.64				ug/L
Be	9	12338.807	0.07	45.1271	15.587	34.540	ug/L
Al	27	120173.673	0.68	58.6342	14.231	24.271	ug/L
> Sc-1	45	180816.392	180816.39				ug/L
V	51	340021.376	0.53	51.3322	4.363	8.499	ug/L
Cr	52	310679.557	0.48	54.9951	2.866	5.211	ug/L
Cr	53	41061.826	0.06	57.0464	16.113	28.246	ug/L
Mn	55	422158.963	0.67	48.2931	2.854	5.911	ug/L
Co	59	347891.540	0.55	46.3124	5.406	11.674	ug/L
Ni	60	83244.948	0.13	50.4555	7.196	14.261	ug/L
Cu	65	81234.124	0.13	47.8571	7.419	15.502	ug/L
Zn	66	52429.656	0.08	45.5195	3.406	7.482	ug/L
> Ge	72	631103.842	631103.84				ug/L
As	75	69453.121	0.11	50.8505	1.427	2.806	ug/L
Se	77	4940.854	0.01	50.9978	0.414	0.811	ug/L
Se	82	6582.317	0.01	49.8845	1.025	2.054	ug/L
Y	89	493104.743	-2012.72				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	368493.318	0.60	49.1509	1.195	2.432	ug/L
Cd	114	212696.885	0.34	49.3533	0.710	1.438	ug/L
> In	115	617644.300	617644.30				ug/L
Sb	123	230304.735	0.37	50.2999	0.343	0.681	ug/L
Ba	135	63477.237	0.15	48.0889	7.672	15.954	ug/L
Ce	140	0.000	0.00				ug/L
Tb	159	411861.651	411861.65				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	276760.204	276743.20	49.5858	0.958	1.932	ug/L
Tl	205	676647.757	676627.76	50.5471	0.479	0.948	ug/L
Pb	206	258530.832	258500.83	53.0584	0.587	1.105	ug/L
Pb	207	197519.086	197492.42	47.3068	0.271	0.572	ug/L
Pb	208	951912.934	951804.93	50.1023	0.384	0.767	ug/L
Bi	209	464716.023	464716.02				ug/L
Na	23	11060960.495	62.13	5.3039	0.959	18.085	mg/L
Mg	24	6855924.991	38.13	5.1517	0.402	7.805	mg/L
K	39	18475353.282	100.86	4.9177	0.954	19.397	mg/L
Ca	43	41727.761	0.23	5.2308	1.031	19.704	mg/L
Fe	54	1642801.934	9.08	5.3157	0.865	16.264	mg/L
Fe	57	919336.482	5.18	5.7439	1.624	28.270	mg/L

Sample ID: QC Std 6

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Cl	35	15676.111	2669.56	mg/L
Kr	83	120.668	5.33	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	6					
[	Be	9	90.254				
|	Al	27	117.268				
[>	Sc-1	45		97.459			
[	V	51	102.664				
|	Cr	52	109.990				
|	Cr	53	114.093				
|	Mn	55	96.586				
|	Co	59	92.625				
|	Ni	60	100.911				
|	Cu	65	95.714				
|	Zn	66	91.039				
>	Ge	72		99.046			
|	As	75	101.701				
|	Se	77	101.996				
L	Se	82	99.769				
|	Y	89					
[	Rh	103					
|	Ag	107	98.302				
|	Cd	114	98.707				
>	In	115		101.035			
[	Sb	123	100.600				
[	Ba	135	96.178				
|	Ce	140					
[>	Tb	159		88.679			
[	Ho	165					
|	Tl	203	99.172				
|	Tl	205	101.094				
|	Pb	206	106.117				
|	Pb	207	94.614				
|	Pb	208	100.205				
[>	Bi	209		103.892			
[	Na	23	106.079				
|	Mg	24	103.035				
|	K	39	98.354				
|	Ca	43	104.616				
|	Fe	54	106.314				
|	Fe	57	114.879				
[>	Sc	45		97.459			
|	Cl	35					
|	Kr	83					
|	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 6

Report Date/Time: Wednesday, April 03, 2002 09:41:10

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QC Std 6	Al	27	CCV is out of limits (+/-10%)
QC Std 6	Cr	53	CCV is out of limits (+/-10%)

METHOD 6020 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Wednesday, April 03, 2002 09:45:28
 Number of Replicates: 3
 Aliquot Volume (mL): 0.550
 Diluted To Volume (mL): 50.000
 Autosampler Position: 1
 Method File: C:\elandata\Method\Service\6020 methods\6020A.mth
 Sample Description:
 Batch ID:
 USER ID: JYH

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Sample Unit
Li	6	24688.082	3004.87				ug/L
Be	9	0.000	0.00	0.0000	0.000		ug/L
Al	27	0.000	-0.00	-0.3121	0.000	0.000	ug/L
> Sc-1	45	200425.103	200425.10				ug/L
V	51	253.469	-0.00	-0.4153	0.407	97.992	ug/L
Cr	52	3667.285	-0.00	-0.3466	0.452	130.512	ug/L
Cr	53	0.000	-0.00	-0.4618	0.000	0.000	ug/L
Mn	55	333.345	0.00	0.0010	0.067	6801.913	ug/L
Co	59	0.000	-0.00	-0.0440	0.000	0.000	ug/L
Ni	60	0.000	0.00	0.0000	0.000		ug/L
Cu	65	0.000	0.00	0.0000	0.000		ug/L
Zn	66	0.000	-0.00	-0.2884	0.000	0.000	ug/L
> Ge	72	624920.688	624920.69				ug/L
As	75	161.028	-0.00	-0.0313	0.043	137.178	ug/L
Se	77	60.000	0.00	0.2042	0.088	43.069	ug/L
Se	82	87.784	-0.00	-0.0648	0.100	153.821	ug/L
Y	89	504762.778	9645.32				ug/L
Rh	103	0.000	0.00				ug/L
Ag	107	0.000	-0.00	-0.0045	0.000	0.000	ug/L
Cd	114	22.166	-0.00	-0.0006	0.001	82.876	ug/L
> In	115	607997.354	607997.35				ug/L
Sb	123	287.977	0.00	0.0603	0.007	11.481	ug/L
Ba	135	0.000	0.00	0.0000	0.000		ug/L
Ce	140	0.000	0.00				ug/L
> Tb	159	438292.391	438292.39				ug/L
Ho	165	0.000	0.00				ug/L
Tl	203	19.334	2.33	0.0004	0.001	258.331	ug/L
Tl	205	50.005	30.00	0.0022	0.003	152.752	ug/L
Pb	206	60.006	30.00	0.0062	0.004	66.667	ug/L
Pb	207	40.004	13.33	0.0032	0.000	0.000	ug/L
Pb	208	152.344	44.34	0.0023	0.001	49.229	ug/L
> Bi	209	443653.233	443653.23				ug/L
Na	23	5334.734	0.01	0.0012	0.001	109.448	mg/L
Mg	24	333.345	0.00	0.0002	0.000	173.205	mg/L
K	39	547287.826	-0.21	-0.0101	0.024	237.987	mg/L
Ca	43	0.000	0.00	0.0000	0.000		mg/L
Fe	54	14904.577	-0.00	-0.0028	0.014	499.370	mg/L
Fe	57	7668.826	0.01	0.0106	0.019	177.852	mg/L

Sample ID: QC Std 7
 Report Date/Time: Wednesday, April 03, 2002 09:46:14
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Cl	35	17344.144	4337.59	mg/L
Kr	83	118.668	3.33	mg/L
U	238	0.000	0.00	mg/L

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6					
Be	9					
Al	27					
Sc-1	45		108.028			
V	51					
Cr	52					
Cr	53					
Mn	55					
Co	59					
Ni	60					
Cu	65					
Zn	66					
Ge	72		98.076			
As	75					
Se	77					
Se	82					
Y	89					
Rh	103					
Ag	107					
Cd	114					
In	115		99.457			
Sb	123					
Ba	135					
Ce	140					
Tb	159		94.369			
Ho	165					
Tl	203					
Tl	205					
Pb	206					
Pb	207					
Pb	208					
Bi	209		99.183			
Na	23					
Mg	24					
K	39					
Ca	43					
Fe	54					
Fe	57					
Sc	45		108.028			
Cl	35					
Kr	83					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

Sample ID: QC Std 7
 Report Date/Time: Wednesday, April 03, 2002 09:46:14
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2.3.1.3 Preparation Log (s)

Metals Digestion Log

Analyst(s): UTK
 Date: 04-02-02 @ 745
 LCS: 5ml DSS0042-82
 MS/MSD: 5ml DSS0042-82
 Witness: VC
 HNO₃ Lot #: DN61/N-25
 HCl Lot #: H-21
 H₂O₂ Lot #: PO-07
 Earliest Sample Due Date: 04/04/02

Box: R3

Digestion Work Group: WG 115494
 Analytical Work Group: WG

General Digestion
 ME401 Revision # - Method 3005A-Water
 ME403 Revision # 8 - Method 3050B-Soil
Furnace Digestion
 ME402 Revision # - Method 3020A-Water
 ME403 Revision # - Method 3050B-Soil
AS/SE Digestion
 ME410 Revision # - Method 7060/7740-Water

	KEMRON #	Initial WT/Vol	Final Volume	Comments	Due Date
1	PBS		50 ml	WG 115494-03	
2	LCSS	1.00 g	|	-04	
3	04-001-01	±	L4	-01	4/5
4	-01MS	1.02	|	-05	±
5	-01MSD	1.04	|	-06	±
6	^{04/20} 04-004-01	±	L4	-02	4/4
7	003-0100P	1.05	|	-07	|
8	-02	1.10			
9	-03	±			
10	-04	1.04			
11	-05	1.00			
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					

Comments: _____

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Analyst(s): VC
 Date: 4/2/02 09:00
 LCS: 0.5 mL MS 1-10-2
 MS/MSD: 0.5 mL MS 1-10-2
 Witness: JR
 Earliest Sample Due Date: 4/5/02

Box: P3
 HNO₃ Lot #: N-23
 HCl Lot #: —

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 Digestion Work Group: WG 115507
 Analytical Work Group: WG

ME407 - Method 3015-Water
 ME406 - Method 3051-Soil-Oil

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	KEMRON #	Initial Wt/Vol	Final Volume	Initial Weight	Final Weight	Comments	Due Date
1	PBS		50 mL	23905 g	23904 g	.02	
2	LCS	0.50		23362	23357	.03	
3	04.001-01 F	0.55		23320	23257	WG 115507.01	4/5
4	01 kg	0.50		23174	23170	.06	
5	01 MS	0.50		23331	23326	.04	
6	01 MS	0.49		23303	23301	.05	
7	VC 4/2/02						
8							
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12							
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Comments: to level 4

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Peer Review By: S. Kennedy 04/02/02 Supervisor Review: _____

2.3.1.4 Sample Calculations

Example 6010 Calculations
Perkin Elmer Optima 3000 (PE-ICP)

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards:

The equation is in the form of $I = mC + b$,

Where: I = Mean emission intensity at the element's measured wavelength.
 C = Concentration of the element in mg/L
 m = Slope of the ICAL curve computed by system
 b = Intercept of the ICAL curve computed by system

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C = [(I - b) / (m)] [(Qs) / (Vp)] [D]$$

Where: I = Mean adjusted intensity at the element's measured wavelength.
 b = Intercept of the ICAL curve computed by system
 m = Slope of the ICAL curve computed by system
 Qs = Sample quantity digested (defaults to 1)
 Vp = Prep volume (defaults to 1)
 D = Dilution factor as a multiplier (10X = 10)

Example:
 307088.8
 373.4
 780569.9
 1
 1
 1

C = Concentration of element in ppm (mg/L):

0.39293778

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C = [(I - b) / m] [(Vp) / (Qs)] [D]$$

Where: I = Mean emission intensity at the element's measured wavelength.
 b = Intercept of the ICAL curve computed by system
 m = Slope of the ICAL curve computed by system
 Qs = Sample quantity digested (g)
 Vp = Prep volume (mL)
 D = Dilution factor as a multiplier (10X = 10)

Example:
 307088.8
 373.4
 780569.9
 2
 100
 1

C = Concentration of element in ppm (mg/kg):

19.6468888

5.0 Adjusting the concentration to dry weight:

$$C_{dry} = [(Cx)(100)] / Px$$

Where: Cx = Concentration calculated as received (wet basis):
 Px = Percent solids of sample (%wt)

19.646889
 80
C(mg/kg) 24.5586113

Example 6010 Calculations

TJA - Iris

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards:

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note: this calculation is performed automatically by the data system when correction factors have been entered):

$$C_x = (C_s) (F_c) (D)$$

Example:

Where:

C _s = Concentration computed by the data system (mg/L)(ppm)	0.1
F _c = Correction factor for the preparation data, = Final volume/ initial volume	1
D = Dilution factor as a multiplier (10X = 10)	1

C_x = Concentration of element in ppm (mg/L): 0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: this calculation is performed automatically by the data system when correction factors have been entered):

$$C_x = (C_s) (F_c) (D)$$

Example:

Where:

C _s = Concentration computed by the data system (mg/L)(ppm)	0.1
F _c = Correction factor for the preparation data, = Final volume(mL)/ initial weight (g)	50
D = Dilution factor as a multiplier (10X = 10)	1

C_x = Concentration of element in ppm (mg/kg): 5

4.0 Adjusting the concentration to dry weight:

$$C_{dry} = [(C_x)(100)] / P_x$$

Where:

C _x = Concentration calculated as received (wet basis):	125
P _x = Percent solids of sample (%wt)	80

C(mg/kg) 156.25

**Example 6020 Calculations
Perkin Elmer ELAN ICP/MS**

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards:

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C_x = [C_s] [(V_f / V_i)] [D]$$

Example:

Where:

Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted To Volume (mL)	50
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
 Cx = Concentration of element in ppb (ug/L)	 0.125

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C_x = [C_s] [(V_f / W_s)] [D]$$

Example:

Where:

Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted To Volume (mL)	50
Ws = Aliquot weight (g)	0.5
D = Manual dilution factor	1
 Cx = Concentration of element in ug/kg	 10

4.0 Adjusting the concentration to dry weight:

$$C_{dry} = [(C_x)(100)] / P_x$$

Where:

Cx = Concentration calculated as received (wet basis):	10
Px = Percent solids of sample (%wt)	80
 C(ug/kg)	 12.5

$$12.5 \text{ ug/kg} = 0.0125 \text{ mg/kg}$$

2.3.3 Metals CVAA (Mercury) Data

METALS - CVAA (MERCURY) DATA

Login Number: 6004001

A. QC Summary

Batch QC Summary Form

B. Raw Data

Analyst checksheet

Analysis run log

Instrument data: (actual order may vary)

- Initial and continuing calibration standards
- Initial and continuing calibration blanks
- Preparation blank data
- Laboratory control sample
- Sample data
- Matrix spike
- Matrix spike duplicate
- Duplicate
- Post digestion spike (if applicable)
- Serial dilution (as needed)
- Standard additions results (as needed)

C. Preparation Log(s)

D. Sample Calculations

Checked by: DNJ MMB

Date: 04/05/02

944

2.3.3.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115491-02
 Instrument ID: PS202 Run Time: 16:20 Method: 7471A
 File ID: Analvst: MMB Matrix: Solid
 Workgroup (AAB#): WG115530 Units: mg/kg
 Contract #: Cal ID: PS202-

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury, Total	0.0180	0.250	0.0180	1.00	ND

* Analyte detected above RDL

ND Not detected at or above the reporting limit

946

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0204001 Run Date: 04/02/2002 Sample ID: WG115491-03
Instrument ID: PS202 Run Time: 16:21 Method: 7471A
File ID: Analyst: MMB Matrix: Solid
Workgroup (AAB#): WG115530 Units: mg/kg
Contract #: Cal ID: PS202 -

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury, Total	.167	0.172	103	80 - 120	

947

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 8

AAB#:WG115530 _____

Analytical Method:7471A _____

Contract #:Steve Grant _____

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
027-EQBFS-01	29-MAR-02	30-MAR-02	02-APR-02	28	4	02-APR-02	28	4.27	

* EXT = MISSED EXTRACTION HOLD TIME

*ANAL = MISSED ANALYTICAL HOLD TIME

948

2.3.3.2 Raw Data

Date: 4/2/02
 Analyst: MMB
 Method: 7471A
 Instrument: PS202
 Work Group: 115516 115530

	Analyst
Calibration/Linearity	✓
ICV/CCV	✓
ICB/CCB	✓
icsa/icsab/crī	✓
Blank/LCS	✓
MS/MSD	✓
Postspike/Serial Dilution	✓
Duplicate	✓
Record Results	✓
Excel Spreadsheets	✓
Results Reporting / Data Qualifiers	
Calculations & Correct Factors	
Reanalysis Assign	
Instrument Failure/Reassign	
Case Narrative	
QA Approval - Seedpak 3	
Check for Completeness	
Level IV Data	✓ 04-001

Primary Reviewer Initials & Date Checked MMB 04/02/02

Secondary Reviewer Initials & Date Checked KRA 04/03/02

- _____ • Check for compliance with Method and project-specific requirements
- _____ • Check the completeness of the reported information
- _____ • Check the information for the report narrative
- _____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked _____

Comments: _____

✓ - Checked & OK
 NA - Not Applicable
 DL - Diluted Out

MERCURY RUN LOGBOOK

ANALYST MMB DATE 04/02/02 TIME 1426
 METHOD # 7471A SOP # ME405 REV. # 3 WORK GROUP # 115516 115530
 AL STD SOURCE DSS0043-53 ICV/CCV SOURCE DSS0043-54
 DST SPK SOURCE DSS0043-53 (1c ppb std)

Sample No.	Dil	Prep Conc	Autosampler Runs	Cup #	Sample No.	Dil	Prep Conc	Autosampler Runs
S0				27.	AIMSD	0.01	0.6/100	(CCV/CCB) R6
S0.2				28.	0.5	0.2		
S1.0				29.	PRDL 0.6			CCV/CCB
S2.0				30.	05PS	0.2	0.6/100	CCV/CCB
S5.0				31.	PRDL 0.6			(CCV/CCB) X2
S10			ICV/ICB	32.	PBS IX		0.6/100	WB11549102
PRDL 0.6			CCV/CCB	33.	LCSS IX			03
PBS DL			WB11549203	34.	04001C1			01
LCSSDI	0.6/100		CCV/CCB 04	35.	01PS	0.9		
0401101			01	36.	01MS			04
01MS			05	37.	01MSD			05
01MSD			06	38.	01dup			CCV/CCB 0.6
02			02	39.				
02dup			07	40.				
03				41.				
04				42.				
05				43.				
06				44.				
06 PS 0.9				45.				
07				46.				
0401101	0.01		WB11549201	47.				
02			02	48.				
03				49.				
04				50.				
05				51.				
06				52.				
07			(CCV/CCB) X2	53.				
0401102			02	54.				
02dup			07	55.				
04	0.1			56.				
05				57.				
06				58.				
07				59.				
01MS	0.01			60.				04

MMB 04/02/02

Comments: _____

Note: No entry for Dil represents 1X Dilution

Autosampler Run Key: CCV - Continuing Calibration Verification
 CCB = Continuing Calibration Blank
 % D = Automatic Instrument Rerun due to % RSD > 20%
 FRS = Full Recalibration Sequence

ID = Automatic Instrument Dilution
 R = Analyst Rerun
 BLK = Blank Run

Reviewed By: _____

INSTRUMENT: PS202
 METHOD: 7471
 ANALYST: Mmb
 DATE: 4/2/02
 UNITS: mg/kg

ICV Time: 2:37 PM
 CCV1 Time: 4:17 PM
 CCV2 Time: 4:28 PM

Analyte	Initial Calibration Verification			Continuing Calibration Verification					Q
	True	Found	%R(1)	CCV1		CCV2			
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	1.0	1.05	105.0	1.0	1.04	104.0	1.01	101.0	

(1) Control Limits: 80-120%

FORM 3 - BLANKS

INSTRUMENT: PS202
 METHOD: 7471
 ANALYST: Mmb
 DATE: 4/2/02

UNITS: mg/kg

ICB Time: 2:39 PM
 CCB1 Time: 4:18 PM
 CCB2 Time: 4:29 PM
 CCB3 Time: _____

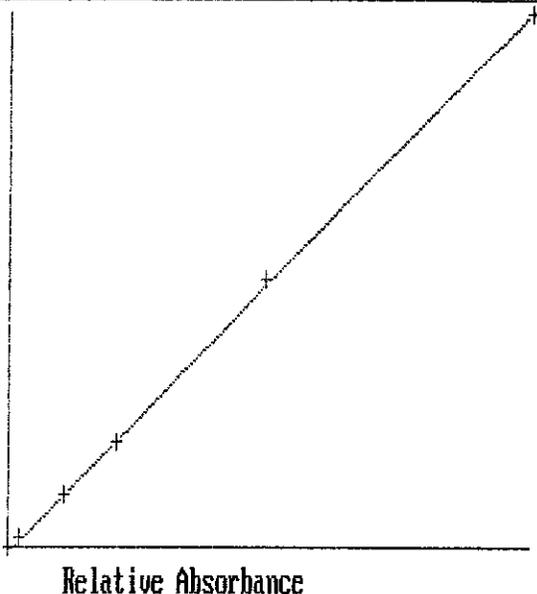
Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)		
		CCB1	CCB2	CCB3
		1	2	3
Mercury	-.029	-.036	-.054	

Hg	.000	ppb	1234		
*** Standard:	2	Rep:	1	Seq:	167
					14:27:58 02 Apr 2002 HG
Hg	.200	ppb	14295		
*** Standard:	3	Rep:	1	Seq:	168
					14:29:18 02 Apr 2002 HG
Hg	1.00	ppb	64397		
*** Standard:	4	Rep:	1	Seq:	169
					14:30:29 02 Apr 2002 HG
Hg	2.00	ppb	125791		
*** Standard:	5	Rep:	1	Seq:	170
					14:31:42 02 Apr 2002 HG
Hg	5.00	ppb	295550		
*** Standard:	6	Rep:	1	Seq:	171
					14:33:02 02 Apr 2002 HG
Hg	10.0	ppb	597399		

RunFold: 032002 Seq: 172 Batch:
 Prnt: R/T On Pump: On
 Rev: 4.2 14:34:05 02 Apr 2002 Xmit: Off Gas: 0.70 LPM
 State: Idle Macro U059AR User: AMT A/S: On

CALIBRATION: Line proto: CLP2

	Hg	Accepted	
S1	Conc. Calc. Dev.	->linear	
S1	.000 -.033 -.033	Quadratic	
S2	.200 .187 -.013	Wtdlinear	
S3	1.00 1.03 .032		C
S4	2.00 2.07 .067	Accept	o
S5	5.00 4.93 -.071		n
S6	10.0 10.0 .018		c
A	.0000000	r .999919	
B	1.68594e-5	C -5.30045e-2	



	Mean	SD	
S1	1234	0	1234
S2	14295	0	14295
S3	64397	0	64397
S4	125791	0	125791
S5	295550	0	295550
S6	597399	0	597399

New cal coefficients stored

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Check Standard: 2 Ck2CCV Seq: 172 14:37:46 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		105.	1.05	1.00	ppb	.000	%	
*** Check Standard: 3 Ck3CCB Seq: 173 14:39:07 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		-14.3	-.029	.200	ppb	.000	%	
*** Sample ID: PRDA Seq: 174 14:40:16 02 Apr 2002 HG								
			0.6 PFB				Wgt .60000	Vol 100.00
Hg	117.	ppb	.000	%	117.			
*** Check Standard: 2 Ck2CCV Seq: 175 14:42:08 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		104.	1.04	1.00	ppb	.000	%	
*** Check Standard: 3 Ck3CCB Seq: 176 14:43:59 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		-17.1	-.034	.200	ppb	.000	%	
*** Sample ID: PBS D1 Seq: 177 14:45:15 02 Apr 2002 HG								
			WG115492-03				Wgt .60000	Vol 100.00
Hg	-8.75	ppb	.000	%	-8.75			
*** Sample ID: LCSS D1 Seq: 178 14:46:25 02 Apr 2002 HG								
			WG115492-04				Wgt .60000	Vol 100.00
Hg	889.	ppb	.000	%	889.			
*** Check Standard: 2 Ck2CCV Seq: 179 15:07:22 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		97.2	.972	1.00	ppb	.000	%	
*** Check Standard: 3 Ck3CCB Seq: 180 15:09:01 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		-27.2	-.054	.200	ppb	.000	%	
*** Sample ID: PBS D1 Seq: 181 15:10:21 02 Apr 2002 HG								
			WG115492-03				Wgt .60000	Vol 100.00
Hg	-7.57	ppb	.000	%	-7.57			
*** Sample ID: LCSS D1 Seq: 182 15:11:38 02 Apr 2002 HG								
			WG115492-04				Wgt .60000	Vol 100.00
Hg	856.	ppb	.000	%	856.			
*** Sample ID: 0401101 Seq: 183 15:12:55 02 Apr 2002 HG								
			0.01 WG115492-01				Wgt .60000	Vol 10000.
Hg	40400	ppb	.000	%	40400			

Peram

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 0401102								
			0.01	WG115492-02			15:14:10	02 Apr 2002 HG
Hg	-224.	ppb	.000 %	-224.			Wgt .60000	Vol 10000.
*** Sample ID: 0401103								
			0.01				15:15:15	02 Apr 2002 HG
Hg	43300	ppb	.000 %	43300			Wgt .60000	Vol 10000.
*** Sample ID: 0401104								
			0.01				15:16:34	02 Apr 2002 HG
Hg	5900	ppb	.000 %	5900			Wgt .60000	Vol 10000.
*** Sample ID: 0401105								
			0.01				15:18:20	02 Apr 2002 HG
Hg	1520	ppb	.000 %	1520			Wgt .60000	Vol 10000.
*** Sample ID: 0401106								
			0.01				15:19:36	02 Apr 2002 HG
Hg	10100	ppb	.000 %	10100			Wgt .60000	Vol 10000.
*** Sample ID: 0401107								
			0.01				15:20:44	02 Apr 2002 HG
Hg	9470	ppb	.000 %	9470			Wgt .60000	Vol 10000.
*** Check Standard: 2 Ck2CCV								
Line Flag	%Rcv.	Found	True	Units			15:21:52	02 Apr 2002 HG
Hg	100.	1.00	1.00	ppb			SD/RSD	
							.000 %	
*** Check Standard: 3 Ck3CCB								
Line Flag	%Rcv.	Found	True	Units			15:23:19	02 Apr 2002 HG
Hg	-22.9	-.045	.200	ppb			SD/RSD	
							.000 %	
*** Check Standard: 2 Ck2CCV								
Line Flag	%Rcv.	Found	True	Units			15:28:03	02 Apr 2002 HG
Hg	102.	1.02	1.00	ppb			SD/RSD	
							.000 %	
*** Check Standard: 3 Ck3CCB								
Line Flag	%Rcv.	Found	True	Units			15:29:32	02 Apr 2002 HG
Hg	-19.9	-.040	.200	ppb			SD/RSD	
							.000 %	
*** Sample ID: 0401102								
							15:30:39	02 Apr 2002 HG
Hg	1200	ppb	.000 %	1200			Wgt .60000	Vol 100.00
*** DUP ID: 02DUP								
RPD		0401102		Seq: 195			15:31:49	02 Apr 2002 HG
Hg	54.3	%	1200	2090				

*reran
straight*

*reran
less
dilute*

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 02DUP								
DUP					Seq: 196		15:31:49	02 Apr 2002 HG
Hg	2090	ppb	.000 %	2090			Wgt .60000	Vol 100.00
*** Sample ID: 0401104								
Hg	7190	ppb	.000 %	7190	Seq: 197		15:32:55	02 Apr 2002 HG
Wgt .60000 Vol 1000.0								
*** Sample ID: 0401105								
Hg	2160	ppb	.000 %	2160	Seq: 198		15:34:11	02 Apr 2002 HG
Wgt .60000 Vol 100.00								
*** Sample ID: 0401106								
Hg	10900	ppb	.000 %	10900	Seq: 199		15:35:27	02 Apr 2002 HG
Wgt .60000 Vol 1000.0								
*** Sample ID: 0401107								
Hg	10000	ppb	.000 %	10000	Seq: 200		15:36:35	02 Apr 2002 HG
Wgt .60000 Vol 1000.0								
*** Sample ID: 0401101S								
Hg	35300	ppb	.000 %	35300	Seq: 201		15:37:40	02 Apr 2002 HG
Wgt .60000 Vol 10000.								
*** DUP ID: 0401101SD 0401101S								
Hg	11.7	%		35300	Seq: 202		15:38:45	02 Apr 2002 HG
RPD Orig. Dup. Wgt .60000 Vol 10000.								
*** Sample ID: 0401101SD								
Hg	39700	ppb	.000 %	39700	Seq: 203		15:38:45	02 Apr 2002 HG
DUP Wgt .60000 Vol 10000.								
*** Check Standard: 2 Ck2CCV								
Line	Flag	%Rcv.	Found	True	Units		15:39:56	02 Apr 2002 HG
Hg		96.5	.965	1.00	ppb	SD/RSD		
*** Check Standard: 3 Ck3CCB								
Line	Flag	%Rcv.	Found	True	Units		15:41:14	02 Apr 2002 HG
Hg		-42.6	-.085	.200	ppb	SD/RSD		
*** Check Standard: 2 Ck2CCV								
Line	Flag	%Rcv.	Found	True	Units		15:45:59	02 Apr 2002 HG
Hg		99.8	.998	1.00	ppb	SD/RSD		
*** Check Standard: 3 Ck3CCB								
Line	Flag	%Rcv.	Found	True	Units		15:47:09	02 Apr 2002 HG
Hg		-29.7	-.059	.200	ppb	SD/RSD		

Meran 115

ng L 74.32 ~~7.074~~ 1.00 ppb .000 %

V- 1071

*** Check Standard: 2 Ck2CCV Seq: 219 16:17:17 02 Apr 2002 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		104.	1.04	1.00	ppb	.000 %

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Check Standard: 3 Ck3CCB Seq: 220 16:18:37 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		-17.9	-.036	.200	ppb	.000 %		
*** Sample ID: PBS 1X Seq: 221 16:20:14 02 Apr 2002 HG								
			WG115491-02			Wgt .60000	Vol 100.00	
Hg	-11.7	ppb	.000 %	-11.7				
*** Sample ID: LCSS 1X Seq: 222 16:21:18 02 Apr 2002 HG								
			WG115491-03			Wgt .60000	Vol 100.00	
Hg	172.	ppb	.000 %	172.				
*** Sample ID: 0400101 Seq: 223 16:22:33 02 Apr 2002 HG								
			WG115491-01			Wgt .60000	Vol 100.00	
Hg	-3.55	ppb	.000 %	-3.55				
*** Sample ID: 01PS 0.9 Seq: 224 16:23:40 02 Apr 2002 HG								
			WG115491-02			Wgt .60000	Vol 100.00	
Hg	172.	ppb	.000 %	172.				
*** Sample ID: 0400101MS Seq: 225 16:24:50 02 Apr 2002 HG								
			WG115491-04			Wgt .60000	Vol 100.00	
Hg	173.	ppb	.000 %	173.				
*** DUP ID: 0400101MSD 0400101MS Seq: 226 16:26:00 02 Apr 2002 HG								
		RPD	Orig.	Dup.				
Hg	.275	%	173.	172.				
*** Sample ID: 0400101MSD Seq: 227 16:26:00 02 Apr 2002 HG								
DUP			WG115491-05			Wgt .60000	Vol 100.00	
Hg	172.	ppb	.000 %	172.				
*** Sample ID: 0400101DUP Seq: 228 16:27:09 02 Apr 2002 HG								
			WG115491-06			Wgt .60000	Vol 100.00	
Hg	-.279	ppb	.000 %	-.279				
*** Check Standard: 2 Ck2CCV Seq: 229 16:28:19 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		101.	1.01	1.00	ppb	.000 %		
*** Check Standard: 3 Ck3CCB Seq: 230 16:29:28 02 Apr 2002 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		-27.1	-.054	.200	ppb	.000 %		

2.3.3.3 Preparation Log (s)

Analyst(s): STK
 Date: 04-02-02 @ 946
 LCS: 1.0ml DSS0043-51
 MS/MSD: 1.0ml DSS0043-51
 Witness: VC
 H₂SO₄ Lot #: 5-08
 K₂SO₄ Lot #: N/A
 KMNO₄ Lot #: PM-65
 HNO₃ Lot #: N-25
 Earliest Sample Due Date: 04/05/02
 ICV/CCV: DSS0043-54 Stds: 0, 0.2, 1, 2, 5, 10: DSS0043-53

Box: 1X

Digestion Work Group: WG 115491

Analytical Work Group: WG

ME404 Revision # - Method 7470A-Water
 ME405 Revision # 3 - Method 7471A-Soil

X

Bath Temperature @ start: N/A
 Bath Temperature @ end: N/A
 Pressure & Time: 15psi For 15 min

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	PBS		100ml	WG 115491-02	
2	LCSS	0.6g	|	-03	
3	04-001-01	|	|	L4 -01	4/5
4	-01MS	|	|	-04	|
5	-01MSD	|	|	-05	|
6	-01AUP			-06	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					

04/02/02 STK

Comments: _____

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Peer Review By: Vicki Collier 4/2/02 Supervisor Review: _____

2.3.3.4 Sample Calculations

**Example Cold Vapor Mercury Calculations
Leeman PS202 Mercury Analyzer**

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and five standards:

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C_x = [C_s] [(V_f / V_i)] [D]$$

Example:

Where:

Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted To Volume (mL)	50
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
 Cx = Concentration of element in ppb (ug/L)	 0.125

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$C_x = [C_s] [(V_f / W_s)] [D]$$

Example:

Where:

Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted To Volume (mL)	50
Ws = Aliquot weight (g)	0.5
D = Manual dilution factor	1
 Cx = Concentration of element in ug/kg	 10

4.0 Adjusting the concentration to dry weight:

$$C_{dry} = [(C_x)(100)] / P_x$$

Where:

Cx = Concentration calculated as received (wet basis):	10
Px = Percent solids of sample (%wt)	80
	C(ug/kg) 12.5

$$12.5 \text{ ug/kg} = 0.0125 \text{ mg/kg}$$

2.4 General Chemistry Data

2.4.1 Miscellaneous General Chemistry

**REPORT NARRATIVE
GENERAL CHEMISTRY**

KEMRON Login No: L0204001

METHOD

Analysis: See report for method reference.

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met

Duplicates: All acceptance criteria were met

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties with this sample group

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: dih__

REVIEWED: _____

dih

DATE: _____

4/4/02

Rev. 6/00

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GENERAL CHEMISTRY DATA

Login Number: LO204001

Analyte: pH

A. QC Summary

NA Batch QC Summary Form(s)

B. Raw Data

- Cover Page
- Analysis benchsheet
- NA Calculation spreadsheet
- NA Calibration data
- NA Example calculation
(at end of package)

Checked By: deh Date: 4/4/02

B. RAW DATA

Wet Lab

Parameter: pH
 Analyst/Date/Time: DLN 4/11/02@1300
 SOP: K- 1501 Revision: 8
 Work Group(s): 115446
 Preservation Check: Yes No

	Analyst	
Calibration/Linearity	✓	Date: <u>4/11/02</u>
Second Source Check		
ICV/CCV (std)		
ICB/CCB		
Blank		
LCS	✓	
MS/MSD		
Duplicate	✓	
Record On ACS Benchsheet	✓	
Data Upload		
EXCEL QC Sheet		
QC Violation Sheet		
Signed Raw Data	✓	
STD/LCS On Benchsheet	✓	

Primary Reviewer Initials & Date Checked DLN 4/11/02

Secondary Reviewer Initials & Date Checked JWR/04/02/02

- Check for compliance with Method and project-specific requirements
- Check the completeness of the reported information
- Check the information for the report narrative
- Check the reasonableness of results

Supervisory Review Initials & Date Checked JWR/04/02/02

Comments: _____

 x/ _____

✓ - Checked & OK
 NA - Not Applicable
 DL - Diluted Out

PERCENT SOLIDS DATA

Login Number: L0204001

Analysis benchsheet

Calculation spreadsheet

Example calculation:

$$[(WT3 - WT1)/(WT2 - WT1)] * 100 = \% \text{ solids}$$

$$100 - (\% \text{ solids}) = \% \text{ moisture}$$

where: WT1 = Weight (grams) of empty container

WT2 = Weight (grams) of container and wet sample

WT3 = Weight (grams) of container and dry sample

100 = factor to get units as percent weight

Checked By: _____

dm

Date: _____

4/2/02

973

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG115438 _____ Run Date:04/01/2002 _____
Method:D2216-90 _____ Run Time:14:00 _____
Analyst:TMM _____

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	UNITS
L0203575-34	1.290	29.90	23.67	78.22	%
L0204001-01	1.280	26.48	24.06	90.40	%
WG115438-01	1.290	29.90	23.67	78.22	%
WG115438-02	1.260	22.72	18.15	78.70	%

OK

975

Appendix G

Geotechnical Test and Results

PENSACOLA TESTING LABORATORIES, INC.

217 East Brent Lane, Pensacola, FL 32503
PHONE (850) 477-5100

REPORT OF: **Field Density Tests**

Job # 6768	Client No. 100-0653	PO#	Page 1 Of 1
Project: CT027, Site 43, NAS Pensacola, FL		RPT# 23948	
		Date: 4/26/02	
Contractor: E.Q. Industrial Services, Inc.			
For: E.Q. Industrial Services, Inc.		cc#	
Address: 470 Great Southwest Parkway			
City: Atlanta, GA 30336			
Att: Mr. Steve Grant			

Test No.	ASTM Test Mthd.		Elevation Of Test	Depth Of Test	Date Tested	Wet Density Pcf	Moisture Cont.%	Dry Density Pcf	Proctor Used	Prctr No.	% Density Required	% Density Obtained
	D2922	D1558										
1	X		14" BELOW FINISHED GRADE	10"	4/25/02	131.1	15.9	113.1	112.8	1	98.0	100.3
2	X		14" BELOW FINISHED GRADE	10"	4/25/02	131.3	16.8	112.4	112.8	1	98.0	99.7
3	X		14" BELOW FINISHED GRADE	10"	4/25/02	130.1	19.1	109.2	112.8	1	98.0	96.8

TEST LOCATION

# 1	SOUTHEAST CORNER OF BACKFILL AREA	# 6	
# 2	CENTER OF BACKFILL AREA	# 7	
# 3	WEST SIDE OF CENTER OF BACKFILL AREA	# 8	
# 4		# 9	
# 5		# 10	

PROCTOR AND SOIL INFORMATION

Prct#	Pcf	%mst. *	Description	Prct#	Pcf	%mst. *	Description
# 1	112.8	14.8	A	# 5			
# 2				# 6			
# 3				# 7			
# 4				# 8			

* ProctorType: (A) ASTM D-698, (B) ASTM D-1567 (C) AASHTO T-99 (D) AASHTO T-100, (E) MIL STD 821A METH 100 CE -55

Comments: Test Area(s): BACKFILL FOR SITE 43

cc#2 cc#3

NA= Not Applicable
Test By RAB Reviewed By PPLW By Patricia Wheeler

REPORT OF: **Field Density Tests**

Job # 6788	Client No. 100-0653	PO#	Page 1 Of 1
Project: CT027, Site 43, NAS Pensacola, FL			RPT# 23949
			Date: 4/26/02
Contractor: E.Q. Industrial Services, Inc.			
For: E.Q. Industrial Services, Inc.		cc#	
Address: 470 Great Southwest Parkway			
City: Atlanta, GA 30336			
Att: Mr. Steve Grant			

Test No.	ASTM Test Mthd.		Elevation Of Test	Depth Of Test	Date Tested	Wet Density Pcf	Moisture Cont. %	Dry Density Pcf	Proctor Used	Prctr No.	% Density Required	% Density Obtained
	D2922	D1566										
1	X		14" BELOW FINISHED GRADE	10"	4/26/02	132.5	15.1	115.0	112.8	1	98.0	102.0

TEST LOCATION

# 1	RETEST OF TEST #3 FROM 4/25/02	# 6
# 2		# 7
# 3		# 8
# 4		# 9
# 5		# 10

PROCTOR AND SOIL INFORMATION

Prct#	Pcf	%mst. *	Description	Prct#	Pcf	%mst. *	Description
# 1	112.8	14.6 A	ORANGE SILTY SAND	# 5			
# 2				# 6			
# 3				# 7			
# 4				# 8			

* Proctor Type: (A) ASTM D-698, (B) ASTM D-1557 (C) AASHTO T-99 (D) AASHTO T-180, (E) MIL STD 621A METH 100 GS -55

Comments: Test Area(s): BACKFILL FOR SITE 43

cc#2

cc#3

NA= Not Applicable
Test By RAB

Reviewed By *[Signature]* By *Patricia Wheeler*

REPORT OF: Field Density Tests

Job #	PO#	RPT#	Page 1 Of
Project: <i>CT0277 SITE 43</i>		NAS <i>INS</i> cc#1 <i>FL</i>	
Contractor: <i>E. Q. INDUSTRIAL SERVICES</i>		Quan	Code
For:			Disc
Address:			
City:			
Att:			

Test No.	ASTM Test Mthd.		Elevation Of Test	Depth Of Test	Date Tested	Wet Density Pcf	Moisture Cont. %	Dry Density Pcf	Proctor Used	Prctr No.	% Density Required	% Density Obtained
	D2922	D1556										
1	X		<i>11.5</i>	<i>10</i>	<i>11-26-02</i>	<i>132.5</i>	<i>15.1</i>	<i>115.0</i>	<i>112.5</i>	<i>1</i>	<i>98.0</i>	<i>102.0</i>
2												
3												

TEST LOCATION

# 1 <i>RETEST OF TEST # 3 FROM 11-25-02</i>	# 6
# 2	# 7
# 3	# 8
# 4	# 9
# 5	# 10

PROCTOR AND SOIL INFORMATION

Prct#	Pcf	%mst. *	Description	Prct#	Pcf	%mst. *	Description
# 1	<i>112.8</i>	<i>14.6</i>	<i>A ORANGE SILTY SAND</i>	# 5			
# 2				# 6			
# 3				# 7			
# 4				# 8			

* ProctorType: (A) ASTM D-698, (B) ASTM D-1557 (C) AASHTO T-99 (D) AASHTO T-180, (E) MIL STD 621A METH 100 CE -55

Comments: *BUCKET FULL FROM SITE 43*

cc#2

cc#3

NA= Not Applicable
 Test By: *[Signature]* Reviewed By: _____ By: _____

PENSACOLA TESTING LABORATORIES, INC.

217 East Brent Lane, Pensacola, FL 32503
 PHONE (850) 477-5100, FAX (850) 477-1310

Job Number	Client Number	P.O. Number	Report Number	Date	Page
6768	100-0653	41102 S G	22613	4/12/2002	1 of 1

REPORT OF: PROCTOR DENSITY OF SOIL

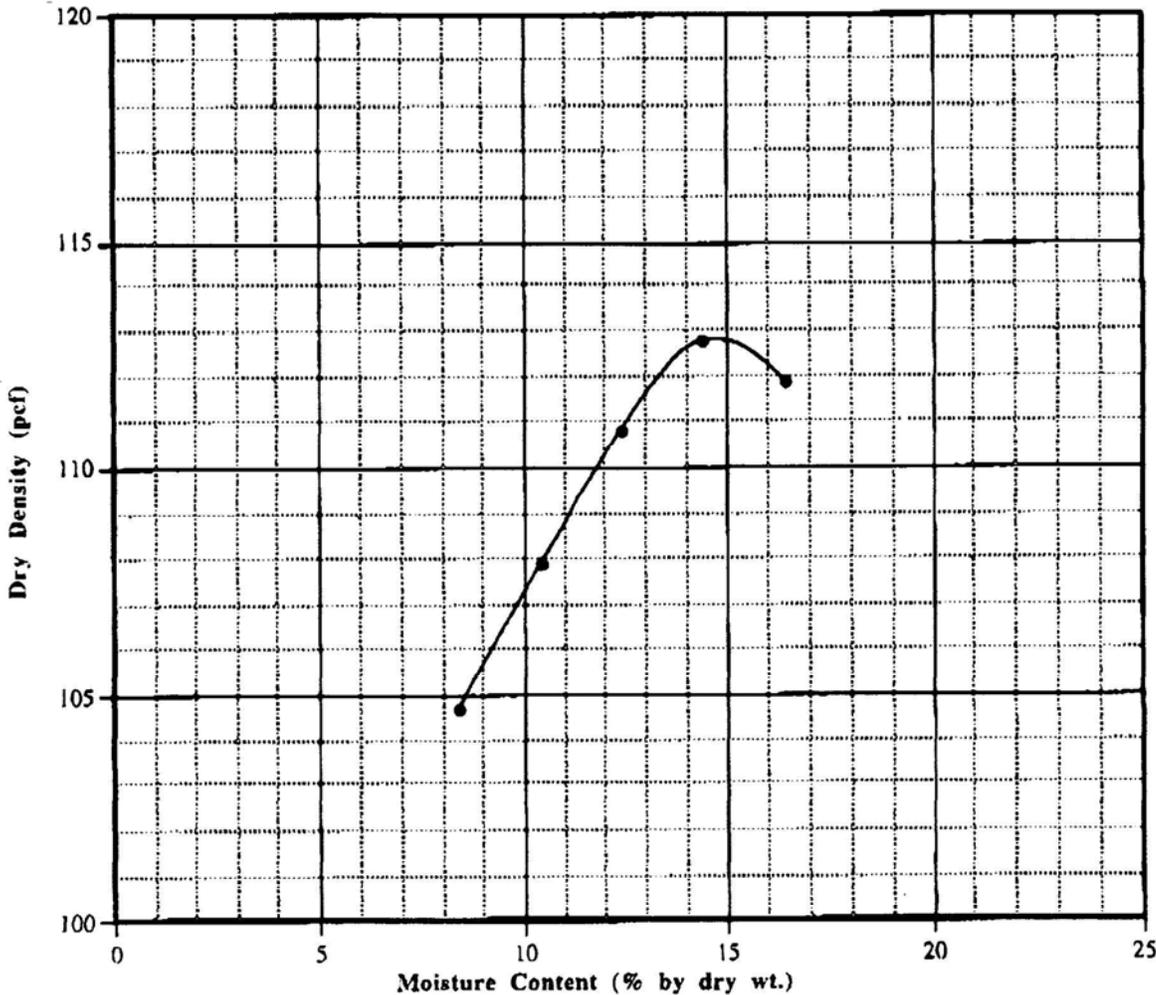
For: E.Q. Industrial Services, Inc.
 470 Great Southwest Parkway
 Atlanta, GA 30336
 Att: Mr. Steve Grant

cc:

Project: CT027, NAS Pensacola, FL	Sampled/Deliv. By: PTL/RAB	Date: 4/11/02
Sampled From: Borrow Pit - Proposed Fill Material	Pit Name: Sand & Dirt, Inc.	Pit No: ---
Pit Location: Diamond Dairy Rd., Pensacola, FL	% Passing #200 Screen: --	Soil Classification: --
Soil Descript. & Color: Orange Silty Sand	Applicable Specs: ASTM D698	

Comments:

Maximum Density (Dry): **112.8** Lbs./Ft³ @ An Optimum Moisture Of: **14.6** %



Reports To: 1 - E.Q. Industrial Services, Inc.

Reviewed By: PAW
 By: Patricia A. Wheeler

Appendix H

Waste Disposal Documentation

Transportation and Disposal Log (Will be included with final report)

Manifests

T and D Log - CTO 0027

CTO No	Project No	Project Name	Site Description	Container Type	Container Desig.	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz well purge water	CCI	Staged onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz well purge water	CCI	Staged Onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz well purge water	CCI	Staged onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz well purge water	CCI	Staged Onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz well purge water	CCI	Staged Onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz Decon Water	CCI	Staged Onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
CTO 0027	154039	NAS Pensacola	Site 15	Drum	RB	Non-haz Decon Water	CCI	Staged Onsite	N/A	N/A	N/A	N/A	N/A	Non-haz	Water	N/A	N/A	N/A								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460795	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460795								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460796	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460796								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460797	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460797								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460813	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460813								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460823	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460823								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460827	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460827								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460828	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460828								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460829	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460829								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460830	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460830								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	12-Apr-2002	ALR000007237	MI8460831	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460831								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	15-Apr-2002	ALR000007237	MI8255562	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8255562						Voided Manifest		
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	15-Apr-2002	ALR000007237	MI8255563	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8255563						Voided Manifest		
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	15-Apr-2002	ALR000007237	MI8255564	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8255564						Voided Manifest		
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	15-Apr-2002	ALR000007237	MI8255567	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8255567						Voided Manifest		
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	15-Apr-2002	ALR000007237	MI8255568	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8255568						Voided Manifest		
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460903	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460903								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460904	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460904								

T and D Log - CTO 0027

CTO No	Project No	Project Name	Site Description	Container Type	Container Desig.	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460892	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460892								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460893	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460893								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460907	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460907								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460908	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460908								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460909	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460909								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460910	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460910								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	22-Apr-2002	ALR000007237	MI8460911	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460911								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460868	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460868								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460869	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460869								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460870	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460870								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460871	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460871								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460872	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460872								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460873	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460873								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460874	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460874								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460875	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460875								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460901	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460901								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460877	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460877								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460878	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460878								
0027	154039	NAS Pensacola	Site 43	Dump Trailer	22 ton	040902MFF	CCI	Action Resources	23-Apr-2002	ALR000007237	MI8460879	Michigan Disposal Waste Treatment Facility	MID000724831	Soil	Haz (Lead)	D008		MI8460879								
0027	154039	NAS Pensacola	Site 43	Unknown Drum	< 3 gallons unknown liquid	N/A	CCI	N/A	N/A	N/A	N/A	N/A	N/A	Water	Non-haz	N/A	N/A	N/A								
0027	154039	NAS Pensacola	Site 43	Unknown Drum	< 1 gallons unknown liquid	N/A	CCI	N/A	N/A	N/A	N/A	N/A	N/A	Water	Non-haz	N/A	N/A	N/A								

T and D Log - CTO 0027

CTO No	Project No	Project Name	Site Description	Container Type	Container Desig.	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			
0027	154039	NAS Pensacola	Site 15 & 43	Decon Water Drum	85 gallons	N/A	CCI	N/A	N/A	N/A	N/A	N/A	N/A	Water	Non-haz	N/A	N/A	N/A								
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014841	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014841			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014845	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014845			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014846	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014846			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014847	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014847			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014848	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014848			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014849	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014849			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014850	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014850			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014852	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014852			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014856	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014856			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014857	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014857			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014858	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014858			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014859	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014859			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014860	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014860			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014861	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014861			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014863	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014863			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014864	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014864			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014865	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014865			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014866	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014866			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	30-Apr-2002	N/A	014867	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	30-Apr-2002	014867			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014842	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014842			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014843	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014843			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014844	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014844			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014851	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014851			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014853	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014853			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014854	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014854			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014872	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014872			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014873	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014873			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014874	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014874			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014875	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014875			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014877	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014877			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014878	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014878			22				tons	
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014879	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014879			22				tons	

T and D Log - CTO 0027

CTO No	Project No	Project Name	Site Description	Container Type	Container Desig.	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014880	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014880			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014881	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014881			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014882	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014882			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014883	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014883			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014884	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014884			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014885	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014885			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	01-May-2002	N/A	014886	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	01-May-2002	014886			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014876	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014876			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014887	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014887			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014892	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014892			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014893	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014893			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014894	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014894			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014895	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014895			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014896	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014896			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014897	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014897			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014898	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014898			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014899	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014899			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	02-May-2002	N/A	014900	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	02-May-2002	014900			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014826	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014826			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014831	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014831			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014832	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014832			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014833	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014833			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014834	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014834			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014835	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014835			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014836	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014836			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014837	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014837			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014838	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014838			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014839	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014839			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	03-May-2002	N/A	014840	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	03-May-2002	014840			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014819	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014819			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014820	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014820			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014821	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014821			22			tons		
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014822	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014822			22			tons		

T and D Log - CTO 0027

CTO No	Project No	Project Name	Site Description	Container Type	Container Desig.	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014823	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014823			22		tons			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014824	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014824			22		tons			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014825	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014825			22		tons			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014827	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014827			22		tons			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014828	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014828			22		tons			
0027	154039	NAS Pensacola	Site 15	Dump Trailer	22 ton	027-15-DP02-S	CCI	BFI	06-May-2002	N/A	014890	BFI/Timberland	FL1205043005L26Y23041	Soil	Non-haz	N/A	06-May-2002	014890			22		tons			

Set #1

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310726

EQ Account #: 4506

Manifest: M8460831

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:06 AM

Time Out: 8:12 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	73,500	31,700	41,800	20.900
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME8460831

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310727

EQ Account #: 4506

Manifest: MI8460830

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:22 AM

Time Out: 8:32 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	77,700	33,720	43,980	21.990
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460830
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310728

EQ Account #: 4506

Manifest: MI8460796

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:20 AM

Time Out: 8:19 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	83,980	27,860	56,120	28.060
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460796

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Sobel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310729

EQ Account #: 4506

Manifest: MI8460813

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:26 AM

Time Out: 8:40 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	78,400	31,120	47,280	23.640
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME8460813

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310730

EQ Account #: 4506

Manifest: MI8460797

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:31 AM

Time Out: 8:56 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,580	32,280	48,300	24.150
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # ME 846079 J

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel

EQ - THE ENVIRONMENTAL QUALITY COMPANY
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310731
EQ Account #: 4506
Manifest: MI8460828
Shipper:
Hauler: ACTION
Date: 04/15/2002
Time In: 7:34 AM
Time Out: 8:46 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	78,500	31,000	47,500	23.750
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 846 0828

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Eckel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310732

EQ Account #: 4506

Manifest: MI8460827

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 7:35 AM

Time Out: 9:01 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,280	32,280	47,000	23.500
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460827

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sabal



EQ - THE ENVIRONMENTAL QUALITY COMPANY
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310733
EQ Account #: 4506
Manifest: MI8460823
Shipper:
Hauler: ACTION
Date: 04/15/2002
Time In: 7:38 AM
Time Out: 8:51 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	82,480	31,820	50,660	25.330
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460823
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310734
EQ Account #: 4506
Manifest: M18460795
Shipper:
Hauler: ACTION
Date: 04/15/2002
Time In: 7:41 AM
Time Out: 9:10 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,920	31,700	49,220	24.610
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF846079S
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Seibel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 310740

EQ Account #: 4506

Manifest: MI8460829

Shipper:

Hauler: ACTION

Date: 04/15/2002

Time In: 8:28 AM

Time Out: 9:20 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	78,680	30,640	48,040	24.020
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460829

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311253

EQ Account #: 4506

Manifest: MI8460869

Shipper:

Hauler: ACTION

Date: 04/24/2002

Time In: 7:26 AM

Time Out: 10:28 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,400	31,820	48,580	24.290
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460869

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311304

EQ Account #: 4506

Manifest: MI8460871

Shipper:

Hauler: ACTION

Date: 04/24/2002

Time In: 1:31 PM

Time Out: 3:06 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	76,400	32,260	44,140	22.070
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # MF 8460871

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Marcy Seibel

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311320

EQ Account #: 4506

Manifest: MI8460872

Shipper:

Hauler: ACTION

Date: 04/24/2002

Time In: 3:28 PM

Time Out: 5:14 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	85,650	33,600	52,050	26.025
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460872

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sobel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311321
EQ Account #: 4506
Manifest: MI8460873
Shipper:
Hauler: ACTION
Date: 04/24/2002
Time In: 3:32 PM
Time Out: 8:15 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	78,280	30,120	48,160	24.080
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460873

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311326

EQ Account #: 4506

Manifest: MI8460874

Shipper:

Hauler: ACTION

Date: 04/24/2002

Time In: 4:23 PM

Time Out: 8:21 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	77,180	30,980	46,200	23.100
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME 8460874
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Schel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311330

EQ Account #: 4506

Manifest: MI8460878

Shipper:

Hauler: BEELMAN

Date: 04/25/2002

Time In: 7:19 AM

Time Out: 10:37 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,720	29,480	50,240	25.120
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460878

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Sobel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311336

EQ Account #: 4506

Manifest: MI8460877

Shipper:

Hauler: BEELMAN

Date: 04/25/2002

Time In: 7:23 AM

Time Out: 10:51 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	76,780	29,640	47,140	23.570
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME8460877

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Seibel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311337

EQ Account #: 4506

Manifest: MI8460875

Shipper:

Hauler: BEELMAN

Date: 04/25/2002

Time In: 7:26 AM

Time Out: 11:00 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	78,200	27,240	50,960	25.480
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MES46087S
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Schel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311338

EQ Account #: 4506

Manifest: MI8460901

Shipper:

Hauler: BEELMAN

Date: 04/25/2002

Time In: 7:30 AM

Time Out: 10:56 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	76,700	27,000	49,700	24.850
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME8460901

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: Tracy Sobel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311339

EQ Account #: 4506

Manifest: MI8460870

Shipper:

Hauler: ACTION

Date: 04/25/2002

Time In: 7:32 AM

Time Out: 1:39 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,640	30,580	49,060	24.530
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME8400870
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Schell



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311343

EQ Account #: 4506

Manifest: MI8460879

Shipper:

Hauler: ACTION

Date: 04/25/2002

Time In: 8:28 AM

Time Out: 1:44 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	68,340	32,860	35,480	17.740
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460879
have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

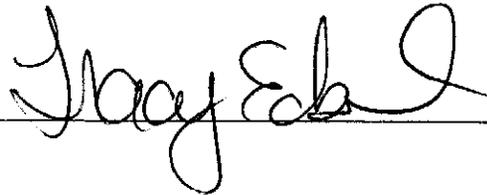
PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

2472

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311215

EQ Account #: 4506

Manifest: MI8460892

Shipper:

Hauler: ACTION

Date: 04/23/2002

Time In: 1:07 PM

Time Out: 5:09 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,500	29,940	49,560	24.780
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # MF 8460892

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sobel

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311216

EQ Account #: 4506

Manifest: MI8460907

Shipper:

Hauler: ACTION

Date: 04/23/2002

Time In: 1:08 PM

Time Out: 5:23 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,340	27,460	52,880	26.440
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MI 8460907

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Schel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311218
EQ Account #: 4506
Manifest: MI8460909
Shipper:
Hauler: BEELMAN
Date: 04/23/2002
Time In: 1:17 PM
Time Out: 5:08 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,520	29,940	49,580	24.790
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # ME 8460909

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Marcy Sabal



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311219

EQ Account #: 4506

Manifest: MI8460911

Shipper:

Hauler: BEELMAN

Date: 04/23/2002

Time In: 1:23 PM

Time Out: 5:18 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	79,600	29,400	50,200	25.100
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460911

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sobel



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311220

EQ Account #: 4506

Manifest: MI8460903

Shipper:

Hauler: BEELMAN

Date: 04/23/2002

Time In: 1:23 PM

Time Out: 4:39 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,100	29,800	50,300	25.150
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460903

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Schell



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311221

EQ Account #: 4506

Manifest: MI8460893

Shipper:

Hauler: ACTION

Date: 04/23/2002

Time In: 1:30 PM

Time Out: 4:43 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	76,620	32,000	44,620	22.310
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # MI 8460893

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Schell

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311233
EQ Account #: 4506
Manifest: MI8460910
Shipper:
Hauler: ACTION
Date: 04/23/2002
Time In: 2:53 PM
Time Out: 4:55 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	77,420	28,420	49,000	24.500
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460910

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature:

Tracy Sobel



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

EQ - THE ENVIRONMENTAL QUALITY COMPANY
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311237
EQ Account #: 4506
Manifest: MI8460908
Shipper:
Hauler: BEELMAN
Date: 04/23/2002
Time In: 3:17 PM
Time Out: 5:34 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,740	27,900	52,840	26.420
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # MF 8460908

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Schel

EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311242
EQ Account #: 4506
Manifest: M18460904
Shipper:
Hauler: RDWOOD
Date: 04/23/2002
Time In: 3:34 PM
Time Out: 5:30 PM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	77,560	30,880	46,680	23.340
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL

This certificate is to verify the wastes specified on Manifest # MF 8460904

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Marcy Schell



EQ - THE ENVIRONMENTAL QUALITY COMPANY

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA

5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 311252
EQ Account #: 4506
Manifest: M18460868
Shipper:
Hauler: ACTION
Date: 04/24/2002
Time In: 7:21 AM
Time Out: 10:24 AM

Line#	Approval/Service	Generator	Waste Code	Bill Unit	Gross	Tare	Net	Quantity
01	040902MFF	FL9170024567	N.A.S.	PENSACOLA				
		D008		TONS	80,260	32,300	47,960	23.980
		Surcharge Exempt						

I understand and acknowledge that entry into an EQ environmental protection facility is permitted only at my own risk. I, both personally and on behalf of my employer, release EQ-the Environmental Quality Company from any and all liability not caused by its gross negligence or willful misconduct.

DELIVERED BY

CERTIFICATE OF DISPOSAL



This certificate is to verify the wastes specified on Manifest # ME 8400868

have been properly disposed of in accordance with all local, state and federal regulations.

"Disposed of" means either: 1) Burial or 2) Processed as specified in 40 CFR et seq.

FACILITY NAME:
(Please check one)

Michigan Disposal Waste Treatment Plant
(EPA I.D. # MID000724831)

Wayne Disposal, Inc.
(EPA I.D. # MID048090633)

ADDRESS:

49350 N. I-94 Service Drive
Belleville, Michigan 48111

PHONE NUMBER:

1-800-592-5489

FAX NUMBER:

1-800-592-5329

Authorized Signature: _____

Tracy Sobel

Appendix I
Field Data Sheets

Field Data Information Log for Groundwater Sampling

Page ____ of ____

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Date (mm/dd/yy)</td><td style="text-align: center;">12/07/2001</td></tr> <tr><td>Field Personnel</td><td style="text-align: center;">Darryl Gates and Phyllis Zerangue</td></tr> <tr><td>Site Name</td><td style="text-align: center;">NAS Pensacola, Site 43</td></tr> <tr><td>Job Number</td><td style="text-align: center;">157338</td></tr> <tr><td>Well ID #</td><td style="text-align: center;">PEN-43-02S</td></tr> <tr><td>Weather Conditions</td><td style="text-align: center;">Clear, Sunny</td></tr> <tr><td>Air Temperature</td><td style="text-align: center;">68F</td></tr> <tr><td>Total Well Depth (TWD)</td><td style="text-align: center;">18.69</td></tr> <tr><td>Depth to Groundwater (DGW)</td><td style="text-align: center;">15.92</td></tr> <tr><td>Length of Water Column (LWC) = TWD - DGW =</td><td style="text-align: center;">2.77</td></tr> <tr><td>1 Casing Volume = LWC x</td><td style="text-align: center;">2.77 x .041 = 0.12 gals</td></tr> <tr><td>Standard Evacuation Volume =</td><td style="text-align: center;">0.12 x 3 = 0.34 gals</td></tr> <tr><td>Method of Well Evacuation</td><td style="text-align: center;">Geo Pump</td></tr> <tr><td>Method of Sample Collection</td><td style="text-align: center;">Dedicated Teflon tubing</td></tr> <tr><td>Total Volume of Water Removed (gallons)</td><td style="text-align: center;">0.50</td></tr> </table>	Date (mm/dd/yy)	12/07/2001	Field Personnel	Darryl Gates and Phyllis Zerangue	Site Name	NAS Pensacola, Site 43	Job Number	157338	Well ID #	PEN-43-02S	Weather Conditions	Clear, Sunny	Air Temperature	68F	Total Well Depth (TWD)	18.69	Depth to Groundwater (DGW)	15.92	Length of Water Column (LWC) = TWD - DGW =	2.77	1 Casing Volume = LWC x	2.77 x .041 = 0.12 gals	Standard Evacuation Volume =	0.12 x 3 = 0.34 gals	Method of Well Evacuation	Geo Pump	Method of Sample Collection	Dedicated Teflon tubing	Total Volume of Water Removed (gallons)	0.50	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Casing Diameter</td><td style="text-align: center;">1-inch</td></tr> <tr><td>Casing Material</td><td style="text-align: center;">PVC</td></tr> <tr><td>Measuring Point Elevation</td><td style="text-align: center;">Top of Casing</td></tr> <tr><td>Height of Riser (above land surface)</td><td style="text-align: center;">Flush mount</td></tr> <tr><td>Land Surface Elevation</td><td></td></tr> <tr><td>Screened Interval</td><td></td></tr> <tr><td>Dedicated Pump or Bailer</td><td style="text-align: center;">No</td></tr> <tr><td>Steel Guard Pipe Around Casing</td><td style="text-align: center;">No</td></tr> <tr><td>Locking Cap</td><td style="text-align: center;">Yes</td></tr> <tr><td>Protective Post/Abutment</td><td style="text-align: center;">No</td></tr> <tr><td>Well Integrity Satisfactory</td><td style="text-align: center;">Yes</td></tr> <tr><td>Well Yield</td><td style="text-align: center;">Good</td></tr> <tr><td>Comments/Observations:</td><td></td></tr> <tr><td style="padding-left: 20px;">H₂O: Clear, no odor</td><td></td></tr> </table>	Casing Diameter	1-inch	Casing Material	PVC	Measuring Point Elevation	Top of Casing	Height of Riser (above land surface)	Flush mount	Land Surface Elevation		Screened Interval		Dedicated Pump or Bailer	No	Steel Guard Pipe Around Casing	No	Locking Cap	Yes	Protective Post/Abutment	No	Well Integrity Satisfactory	Yes	Well Yield	Good	Comments/Observations:		H ₂ O: Clear, no odor	
Date (mm/dd/yy)	12/07/2001																																																										
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Job Number	157338																																																										
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Casing Diameter	1-inch																																																										
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Well Yield	Good																																																										
Comments/Observations:																																																											
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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.2	0.2	0.2	0.2					
Time (military)	918	923	928	933					
pH	5.0	5.7	6.2	6.1					
Specific Conductivity (mS/cm)	24	21	19	19					
Temperature (°C)	23.3	23.7	23.7	23.3					
Turbidity (NTU)	460	43	0	0					
Dissolved Oxygen (mg/L)	3.73	3.5	3.0	3.0					
ORP	146	19	-17	-13					
Salinity	NM	NM	NM	NM					

Additional Comments/Observations

Sampled @ 0935
Sample ID 027-PEN-43-02S-W-S1
Dup ID: 027-PEN-43-07S-W-S1

Field Data Information Log for Groundwater Sampling

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.2	0.2	0.2	0.2					
Time (military)	1038	1043	1048	1053					
pH	6.1	6.1	6.1	6.1					
Specific Conductivity (mS/cm)	16	14	13	13					
Temperature (°C)	24.8	24.8	24.9	24.9					
Turbidity (NTU)	110	0	0	0					
Dissolved Oxygen (mg/L)	0	0	0.95	0.52					
ORP	-18	-20	-17	-13					
Salinity	NM	NM	NM	NM					

Additional Comments/Observations

Sampled @ 1055
Sample ID: 027-PEN-43-3S-W-S1
Equipment Blank collected @ 1105 ID: 027-PEN-43-PREEB2-W-S1

Field Data Information Log for Groundwater Sampling

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.2	0.2	0.2	0.2					
Time (military)	1002	1007	1012	1017					
pH	6.3	5.9	6.0	5.9					
Specific Conductivity (mS/cm)	9	10	10	10					
Temperature (°C)	24.7	24.8	24.9	24.8					
Turbidity (NTU)	810	130	13	11					
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.00					
ORP	9	33	20	27					
Salinity	NM	NM	NM	NM					

Additional Comments/Observations

Sampled @ 1020
Sample ID: 027-PEN-43-5S-W-S1

Field Data Information Log for Groundwater Sampling

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.1	0.1	0.1	0.1					
Time (military)	1150	1152	1154	1156					
pH	5.32	5.21	5.26	5.21					
Specific Conductivity (mS/cm)	0.082	0.082	0.085	0.088					
Temperature (°C)	22.62	22.42	22.27	22.25					
Turbidity (NTU)	999	577	334	202					
Dissolved Oxygen (mg/L)	10.19	7.49	7.4	6.45					
ORP	177	185	184	191					
Salinity	0	0	0	0					

Additional Comments/Observations

Sampled @ 1200
 Sample ID 027-PEN-43-01S-W-S2
 Dup ID 027-PEN-43-06S-W-S2
 Equipment Bland @ 1155, ID 027-PEN-43-PREEB-W-S2

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Field Parameters

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Pumping Rate (gpm)									
Time (military)									
pH									
Specific Conductivity (mS/cm)									
Temperature (°C)									
Turbidity (NTU)									
Dissolved Oxygen (mg/L)									
ORP									
Salinity									

Additional Comments/Observations

Not Sampled

Field Data Information Log for Groundwater Sampling

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.1	0.1	0.1	0.1					
Time (military)	1205	1206	1207	1208					
pH	5.19	5.4	5.4	5.41					
Specific Conductivity (mS/cm)	0.186	0.174	0.176	0.176					
Temperature (°C)	23.39	23.36	23.37	23.37					
Turbidity (NTU)	158	32	10	5					
Dissolved Oxygen (mg/L)	9.75	6.05	5.1	4.98					
ORP	137	82	76	78					
Salinity	0.01	0.01	0.01	0.01					

Additional Comments/Observations

Sampled @ 1210
Sample ID 027-PEN-43-03S-W-S2

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.1	0.1	0.1	0.1					
Time (military)	1108	1111	1114	1117					
pH	5.39	5.44	5.47	5.49					
Specific Conductivity (mS/cm)	0.163	0.159	0.157	0.158					
Temperature (°C)	24.13	24.06	24.05	24.07					
Turbidity (NTU)	103	15.5	2.2	6.0					
Dissolved Oxygen (mg/L)	8.93	6.53	5.79	5.5					
ORP	168	167	168	169					
Salinity	0.01	0.01	0.01	0.01					

Additional Comments/Observations

Sampled @ 1118
Sample ID 027-PEN-43-04S-W-S2

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Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.1	0.1	0.1	0.1					
Time (military)	1125	1127	1129	1131					
pH	5.3	5.2	5.18	5.17					
Specific Conductivity (mS/cm)	0.079	0.083	0.083	0.083					
Temperature (°C)	24.01	23.9	24.02	23.97					
Turbidity (NTU)	260	67.5	160	98					
Dissolved Oxygen (mg/L)	8.71	7.02	6.66	6.44					
ORP	135	154	161	167					
Salinity	0	0	0	0					

Additional Comments/Observations

Sampled @ 1132
Sample ID 027-PEN-43-05S-W-S2

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Well Integrity Satisfactory	Yes																																																										
Well Yield	Good																																																										
Comments/Observations:																																																											
H ₂ O: Clear, no odor																																																											

Field Parameters

Volume Purged (gallons)	Start	1	2	3					
Pumping Rate (gpm)	0.1	0.1	0.1	0.1					
Time (military)	1510	1515	1520	1525					
pH	5.46	5.52	5.54	5.57					
Specific Conductivity (mS/cm)	0.12	0.132	0.137	0.137					
Temperature (°C)	24.58	24.54	24.83	25.05					
Turbidity (NTU)	1.8	-8.7	89.2	30.6					
Dissolved Oxygen (mg/L)	6.27	5.27	5.08	4.99					
ORP	142	135	135	136					
Salinity	0	0	0.01	0.01					

Additional Comments/Observations

Sampled @ 1530
Sample ID 027-PEN-43-02S-W-S2
Turbidity became irregular because tubing came loose and hit the bottom of the well and sediment filled the water column

APPENDIX B
HEALTH AND SAFETY PLAN
SITE 43

**Health and Safety Plan
for the
Remedial Investigation
at
Site 43
Located At
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**



**Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0355**

July 2004

**HEALTH AND SAFETY PLAN
FOR THE
REMEDIAL INVESTIGATION
AT
SITE 43**

**LOCATED AT
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION-NAVY (CLEAN) CONTRACT**

**Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

**Submitted by:
Tetra Tech NUS
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220**

**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0355**

JULY 2004

PREPARED UNDER THE SUPERVISION OF:

APPROVED FOR SUBMITTAL BY:


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TALLAHASSEE, FLORIDA


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1.0 INTRODUCTION

The objective of this Health and Safety Plan (HASP) is to provide the minimum safety practices and procedures to Tech NUS (TtNUS) personnel conducting monitoring well installation and multi-media sampling activities in support of the Remedial Investigation activities at Site 43 located at Naval Air Station Pensacola, located in Pensacola, Florida.

Authorization: This Health and Safety Plan (HASP) and the work described herein have been completed under the authorization of:

Contract: Comprehensive Long Term Environmental Action – Navy (CLEAN) – Southern Division Naval Facilities Engineering Command

Contract Number: N62467-94-D-0888

Contract Task Order Number (CTO): 0355

Statement of Work/Application: SOW #374. This HASP will support the following activities

- Mobilization/Demobilization
- DPT - Surface and subsurface soil sampling
- Hollow Stem Auger (HSA) Drilling and Monitoring Well Installation
- Multi-media - Groundwater Sampling
- Monitoring Well Development
- Aquifer Testing – Slug Testing
- Decontamination
- Geographical Land Surveying
- IDW Management

Proposed Dates of Work: July 2004 until completion (See work plan for detailed schedule).

Compliance: The elements of this HASP are intended to be in compliance with the requirements established by:

- OSHA 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response" (HAZWOPER)
- Applicable sections of 29 CFR 1926 "Safety and Health Regulations for Construction."
- Tetra Tech NUS Health and Safety Program
- NAS Pensacola Policies and Procedures, where and as applicable.

This HASP must be accompanied by the Tetra Tech NUS, Inc. Health and Safety Guidance Manual (TtNUS HSGM). The Guidance Manual provides additional information in the areas of program support, standard operating procedures, and safe work practices.

Modifications/Changes: This HASP has been prepared using the latest available information regarding known or suspected chemical contaminants and potential and foreseeable physical hazards associated with the planned work at NAS Pensacola. The following conditions are considered sufficient basis review and possible changes to this document

- The addition or modification of activities/tasks outside of those specified in Section 4.0, Scope of Work.
- New information becomes available through the course of the investigation or from outside sources.

All changes to this HASP will be requested through the Task Order Manager (TOM) to the Tetra Tech NUS Health and Safety Manager (HSM). It is the responsibility of the TOM to notify all affected personnel of all changes to this HASP.

1.1 KEY PROJECT PERSONNEL AND ORGANIZATION

This section defines responsibilities for site safety and health for TtNUS and subcontractor employees conducting environmental sampling and other field activities. Personnel assigned to these positions shall exercise the primary responsibility for on site health and safety. These persons will be the primary point of contact for any questions regarding the safety and health procedures and the selected control measures.

- The TtNUS TOM is responsible for the overall direction of health and safety for this project. This includes
 - Providing background and historical information regarding the sites to be investigated.
 - Providing points of contact at the facility for emergencies and day to day operations.
 - Provide coordination between Tetra Tech NUS, Inc. and NAS Pensacola.
- The PHSO is responsible for the development of this HASP in accordance with applicable OSHA regulations as specified in Section 1.0 and to serve as technical support regarding all matters of health and safety as it may pertain to the tasks to be completed and this scope of work.

- The TtNUS Field Operations Leader (FOL) is responsible for implementation of the HASP with the assistance of an appointed SHSO. The FOL manages field activities, executes the work plan, and enforces safety procedures as applicable to the work plan.

- The SHSO supports site activities by advising the FOL on all aspects of health and safety on site as they may pertain to regulatory requirements or task related hazards. These duties may include:
 - Verification of training and medical status of on-site personnel in relation to site activities.
 - Assist and represent TtNUS coordinating emergency services (if needed)
 - Providing elements site-specific training for on site personnel.
 - Coordinating health and safety activities
 - Selecting, applying, inspecting, and maintaining personal protective equipment
 - Establishing work zones and control points
 - Implementing air monitoring procedures as directed.
 - Implementing hazard communication, respiratory protection, and other associated safety and health programs.

- Compliance with the requirements stipulated in this HASP is monitored by the SHSO and coordinated through the TtNUS CLEAN HSM.

Note: In some cases one person may be designated responsibilities for more than one position. For example, at NAS Pensacola the FOL may also be responsible for the SHSO duties. This action will be performed only as credentials, experience, and availability permits.

1.2 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

Site Name: Naval Air Station Pensacola Address: Pensacola, Florida

Navy Engineer-In-Charge (EIC): William Hill Phone Number: (843) 820-7324

NAS Pensacola Environmental Coordinator: Greg Campbell Phone Number: (850) 452-4611 ext. 103

Purpose of Site Visit: This activity is divided into a multi-task operation (see Section 4.0), including monitoring well installation, multi media sampling, surveying, and IDW management.

Proposed Dates of Work: July 2004 until completion (See work plan for detailed schedule).

Project Team:

TtNUS Management Personnel:	Discipline/Tasks Assigned:	Phone #'s/E-mail
<u>Gerald Walker, P.G.</u>	<u>Task Order Manager (TOM)</u>	<u>(850) 385-9899</u> walkerg@ttnus.com
<u>Matthew M. Soltis, CIH, CSP</u>	<u>CLEAN Health and Safety Manager</u>	<u>(412) 921-8912</u> soltism@ttnus.com
<u>Howard Engle</u>	<u>Field Operations Leader (FOL)</u>	<u>(850) 385-9899</u> engleh@ttnus.com
<u>TBD</u>	<u>Site Health and Safety Officer (SHSO)</u>	_____
<u>Thomas M. Dickson, CSP</u>	<u>Project Health and Safety Officer (PHSO)</u>	<u>(412) 921-8457</u> dickson@ttnus.com
<u>Thomas Patton</u>	<u>Equipment Manager</u>	<u>(412) 859-4670</u> <u>Fax (412) 859-0521</u> patton@ttnus.com

Non-TtNUS Personnel Affiliation/Discipline/Tasks Assigned		Phone #'s
<u>TBD</u>	<u>Hollow Stem Auger Drilling Subcontractor</u>	_____
<u>TBD</u>	<u>Direct Push Drilling Subcontractor</u>	_____

Hazard Assessment (for purposes of 29 CFR 1910.132) for HASP preparation has been conducted by:

Prepared by: Thomas M. Dickson, CSP

TBD - To be determined

2.0 EMERGENCY ACTION PLAN

2.1 INTRODUCTION

This section of the HASP is part of a preplanning effort to direct and guide field personnel in the event of an emergency. The first measure in accomplishing this objective is to define, what is and is not, an emergency.

An emergency as defined in 1910.120 is:

An occurrence or condition that can or has resulted in an uncontrolled release of a hazardous substance or potential safety hazard (i.e., fire, explosion, chemical exposure) associated with that release.

An incidental release as defined in 1910.120 is:

The releases of a hazardous substance that can be absorbed, neutralized, or otherwise controlled and will not result in potential safety hazard (i.e., fire, explosion, chemical exposure) are not considered emergency responses.

Based on the above definitions, TtNUS will provide through on-site resources and personnel initial incident response measures for incidents such as:

- Initial fire-fighting support and prevention
- Initial spill control and containment measures and prevention
- Removal of personnel from emergency situations
- Provision of initial medical support for injury/illness requiring only first-aid level support
- Provision of site control and security measures as necessary

Incidents and conditions above this level of participation are and will be considered emergencies. These events are considered beyond the capabilities of field personnel and above available resources to provide emergency response safely. The emergency response agencies listed in this plan are capable of providing the most effective response, and as such, will be designated as the primary responders in the event of an emergency. These agencies are located within a reasonable distance from the area of site operations, which ensures adequate emergency response time.

This Emergency Action Plan conforms to the requirements of 29 CFR 1910.38(a), as allowed in 29 CFR 1910.120(I)(1)(ii).

The FOL and/or the SHSO are responsible for this plans implementation. Any and all questions should be directed to them or the PHSO for clarification.

2.2 PRE-EMERGENCY PLANNING – RECOGNITION AND PREVENTION

The primary focus of this section is the ability to recognize and control factors that could contribute to an incident/emergency situation/condition. Situations/conditions recognized that could lead to an incident/emergency situation include

Physical Hazards

- Drilling activities
 - Struck by – Movement in and around operating equipment
 - Entanglement into rotating equipment
 - Contact with overhead or underground energized sources

See Section 5.2 Monitoring Well Installation – Hollow Stem Auger, Section 4.0 of the HSGM, Table 5-1 Monitoring Well Installation, and Section 9.0 Site Control for identified control measures to minimize or eliminate these hazards.

Chemical Hazards

- Groundwater sampling
 - Groundwater contamination
 - Decontamination solvents

See Section 6.1 Chemical Hazards and Tables 5-1 Mobilization/Demobilization, Monitoring Well Installation, Multi-media sampling for identified control measures to minimize or eliminate these hazards.

Natural Hazards

- Mobilization/Demobilization
- Surveying
- Multi-media Sampling
 - Snakes/Snake bite
 - Alligators

See Section 6.3 Natural Hazards, Section 4.0 of the HSGM, and Tables 5-1 Mobilization/Demobilization, Monitoring Well Installation, Multi-media sampling, and surveying for identified control measures to minimize or eliminate these hazards.

2.2.1 General Practices – Pre-Emergency Planning

To further minimize and eliminate these potential emergency situations, emergency planning activities associated with this project, the following responsibilities are assigned to the FOL and/or the SHSO:

- The FOL and/or the SHSO will coordinate response actions with NAS Pensacola Emergency Services personnel to ensure that TtNUS emergency action activities are compatible with facility emergency response procedures. This will serve as the initial review of the Emergency Action Plan.
- Establish and maintain information at the project staging area (Support Zone) for easy access in the event of an emergency. This information includes the following:
 - Chemical Inventory (for substances used on-site), with Material Safety Data Sheets.
 - On-site personnel medical records (medical data sheets).
 - A logbook identifying personnel on-site each day.
 - Emergency notification phone numbers and maps to the hospital will be maintained in site vehicles.

Note: It is the responsibility of the TtNUS FOL and/or the SHSO to ensure that this information is available and present at the site.

- **Identifying a chain of command for emergency action** – The FOL and/or the SHSO will serve as Incident Commander in the event of an on-site incident. He or she will remain in this position unless the incident progresses to an emergency situation. Once emergency response crews arrive, he or she will relinquish command to the responding agency.
- **Educating site workers** - Educating site workers to the potential emergency situations that may exist and the associated control measures will be critical in early recognition and prevention. This will be accomplished through
 - Site specific training
 - Use and application of the Safe Work Permit System (See Section 10.2)
 - Daily Tool Box Meetings
 - Previewing work areas to identify, barricade, or remove physical hazards where identified.
- **Survey Work Areas before committing personnel and resources** - Identify, remove, and/or barricade physical hazards within the estimated work area.
 - Ensure that approach paths to monitoring wells are maintained (cleared, mowed, etc.)

- Inspect monitoring well protective casings are cleared of spider and insect nests.
- Inspect remote sample locations for signs of natural hazards (i.e., heavy brush – ticks; snakes, etc.)
- **Provide the necessary emergency action equipment** to control potential emergencies (i.e., safety cans for flammable liquid storage, spill containment equipment, PPE, and emergency equipment such as portable fire extinguishers). It will be the responsibility of the SHSO to determine how many first aid kits, fire extinguishers, etc. are required based on the number of remote and/or separated concurrent operations are being conducted.
- **Evaluate/Survey operations** to ensure that necessary measures are taken to control and/or minimize the impact of emergency situations/conditions. This includes actions such as, but not limited to, securing the necessary permits and clearances such as Utility and Excavation Clearances provided by the Base and Sunshine State One Call of Florida, Inc.; Ensuring equipment and resources are at the ready for response to incidental measures; Personnel are adequately trained in the provisions of this HASP and this Emergency Action Plan. The information derived from these periodic evaluations will provide some of the content for the daily tool box meetings. The Daily Tool Box meeting will provide the forum for discussion and resolution to these findings.

Field Crew shall:

- Identify, remove, or barricade physical hazards within the estimated work area identified by the FOL and/or the SHSO.
- Follow the guidelines for control of emergency conditions.
- Report any potential emergency situation to the FOL and/or the SHSO.

2.3 SAFE DISTANCES AND PLACES OF REFUGE/EMERGENCY ALERTING

In the event of an incident, personnel will engage identified resources necessary to prevent the condition/situation from becoming an emergency. In the event these initial response measures cannot control the incident personnel will undertake the following measures:

- Evacuate non-essential personnel to identified safe places of refuge and secure the immediate area.
- The FOL and/or the SHSO will notify emergency services
 - Give the emergency operator the location of the emergency and a brief description of what has occurred.
 - Stay on the phone and follow the instructions given by the operator.
 - The appropriate agency will be notified and dispatched.

- Field personnel will provide perimeter security of the work area until emergency services arrive.
- Once emergency services arrive TtNUS and subcontractor personnel will report to the designated safe place of refuge.

2.3.1 Critical Operations

There are no operations being conducted under this scope of work that are considered critical and would require an individual or individuals to man during an emergency. Therefore in the event of an emergency all personnel will cease all operations and report to the safe place of refuge.

2.4 DECONTAMINATION PROCEDURES/EMERGENCY MEDICAL TREATMENT

During an evacuation, decontamination procedures will be performed only if doing so does not further jeopardize the welfare of site workers. However, it is unlikely that an emergency would occur which would require workers to evacuate the site without first performing decontamination procedures. Decontamination of medical emergencies will proceed in the following manner.

2.4.1 Non-Life Threatening Medical Incident (Bruises, Cuts, Scrapes, Etc.)

The area of clothing or suit penetration will be isolated from the decontamination procedure by removing the protective garments or clothing surrounding the area of the injury and applying a light gauze wrap and plastic cover. Decontamination for unaffected areas will proceed as per Table 5-1 of this HASP.

2.4.2 Life Threatening

- Engage Emergency Notification Sequence
- Notify off-site response agencies.
- If it will not endanger the injured individual (i.e., spinal cord injury, etc.) remove any outer PPE. Removal may require the use of bandage scissors to remove the outer garments.
- Begin life saving techniques as appropriate (CPR, cooling or warming regimens, etc.).
- Cover the injured in a blanket to prevent the onset of shock.
- Follow instructions provided in Attachment I.

Note: One person from the field team will accompany the injured to the hospital with his/her medical data sheet, appropriate MSDSs (if applicable), a copy of this HASP, and the incident forms. This person will collect as much information as possible, and transfer that information to the HSM and WorkCare as per the Incident Response Protocol provided in Figure 2-1. All other personnel will engage site control/site security measures.

The SHSO upon insuring care for the injured party will engage an investigation of the incident to gather as much information as possible. This includes as a minimum answering the questions Who? What? Where? When? Why? and How?. This information will then be communicated to the PM and the HSM. Attachment I Tetra Tech NUS, Inc. Injury/Illness Procedure will be used to accomplish this task.

2.4.3 Emergency Medical Treatment

Tetra Tech NUS and subcontractor personnel are only permitted to provide treatment to the level of their First-Aid Training. It should also be noted all first aid shall be administered voluntarily. In all cases, make sure a member of the field crew notifies the emergency services and that they are enroute.

All First-Aid provided will incorporate the following protective measures:

Emergency medical treatment will be initiated under the following guarded restrictions:

- Take the necessary precautions to prevent direct contact with the injured person's body fluids. This may be accomplished through the employment of the following measures:
 - Use surgeons gloves when handling cuts, abrasions, bites, punctures, etc. or any part of the injured person. The use of safety glasses and surgeons masks is recommended, if there is the potential for uncontrolled spread of body fluids. The PHSO will be immediately notified in event that personnel providing emergency first-aid and/or come into contact with body fluids or other potentially infectious tissues.
 - Should Cardio-Pulmonary Resuscitation (CPR) be required, use a CPR Micro-Shield mouthpiece when administering CPR to prevent contact with the injured person's body fluids.

In order to engage these protective measures the FOL shall insure that these items are part of their first-aid kit.

2.5 EMERGENCY CONTACTS

Prior to performing work at the site, all personnel will be thoroughly briefed on the emergency procedures to be followed in the event of an incident. A mobile/cellular phone shall be available on site. It will be the responsibility of the FOL and/or the SHSO to test or otherwise insure that the signal strength is sufficient to contact emergency services. If it is not then a different provider, two way radio, or other supported means of communication will be utilized. Table 2-1 provides a list of emergency contacts and their corresponding telephone numbers. This table must be posted on site where it is readily available to all site personnel or provided to site personnel.

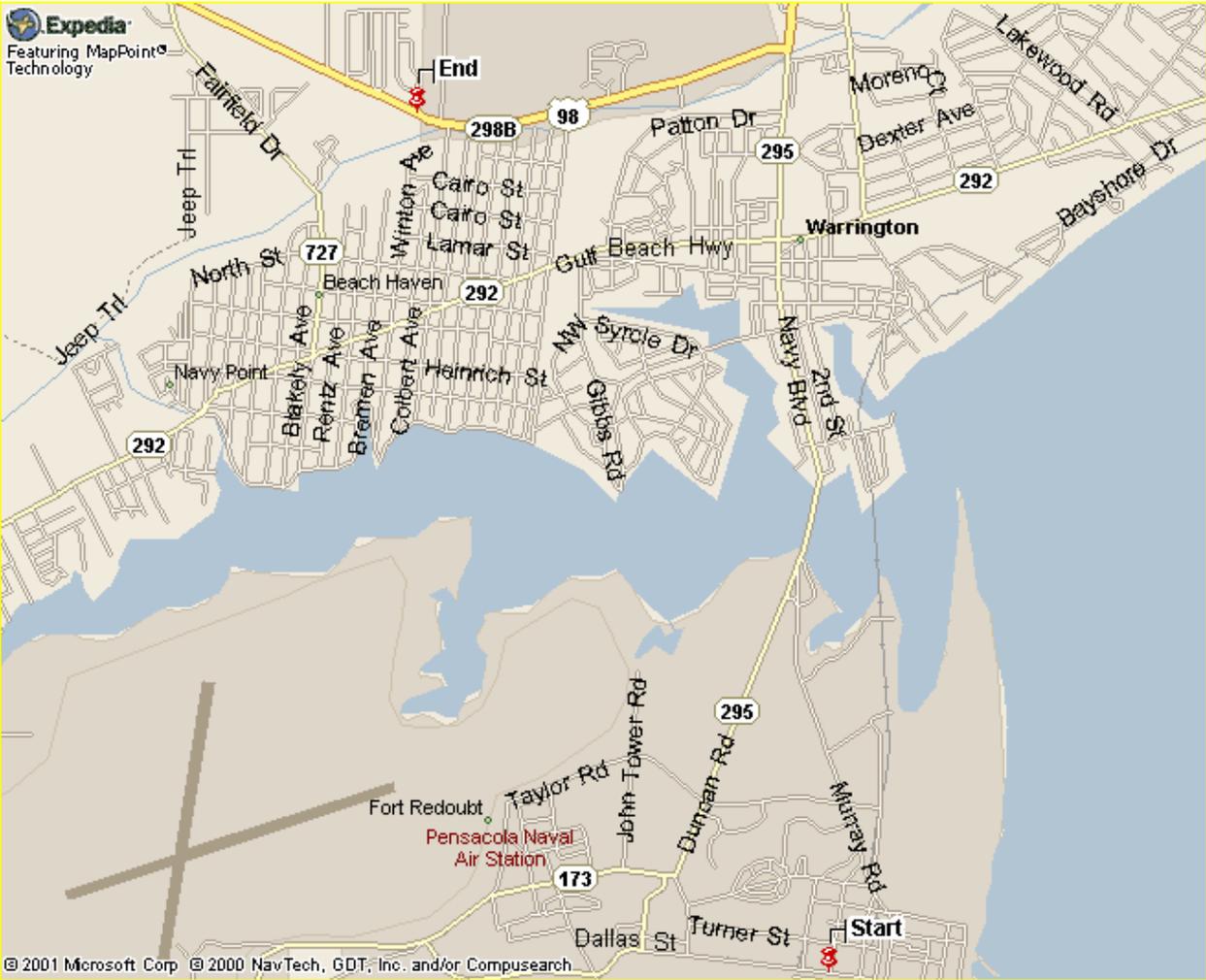
**TABLE 2-1
EMERGENCY CONTACTS
NAS PENSACOLA**

AGENCY	TELEPHONE
EMERGENCY (outside services) (Police, Fire, and Ambulance Services)	911
NAS Pensacola – Emergency Dispatch	(850) 452-3333
Navy Engineer-in-Charge William Hill	(843) 820-7324
Facility Point of Contact Greg Campbell	(850) 452-4611 ext 103
Navy Hospital	(850) 505-6600
Baptist Hospital	(850) 469-2313
Poison Control Center	(800) 222-1222
Florida Game and Fresh Water Fish Commission Northwest Region Office	(850) 265-3676
WorkCare	(800) 229-3674
TtNUS Tallahassee Office and Task Order Manager (Gerry Walker)	(850) 385-9899
CLEAN Health and Safety Manager Matthew M. Soltis, CIH, CSP	(412) 921-8912
Project Health and Safety Officer Thomas M. Dickson, CSP	(412) 921-8457

2.6 ROUTE TO HOSPITALS

Two hospitals could potentially be used during this project depending on the circumstances and degree of the emergency. For emergency situations the Naval Hospital Pensacola (NHP) should be utilized. The hospital is closer to the site and is fully prepared to accept trauma cases as well as potentially chemically contaminated patients. Baptist Hospital will be used for all non-emergency care services. Routes and directions to these hospitals are provided in Figures 2-1 and 2-2, respectively.

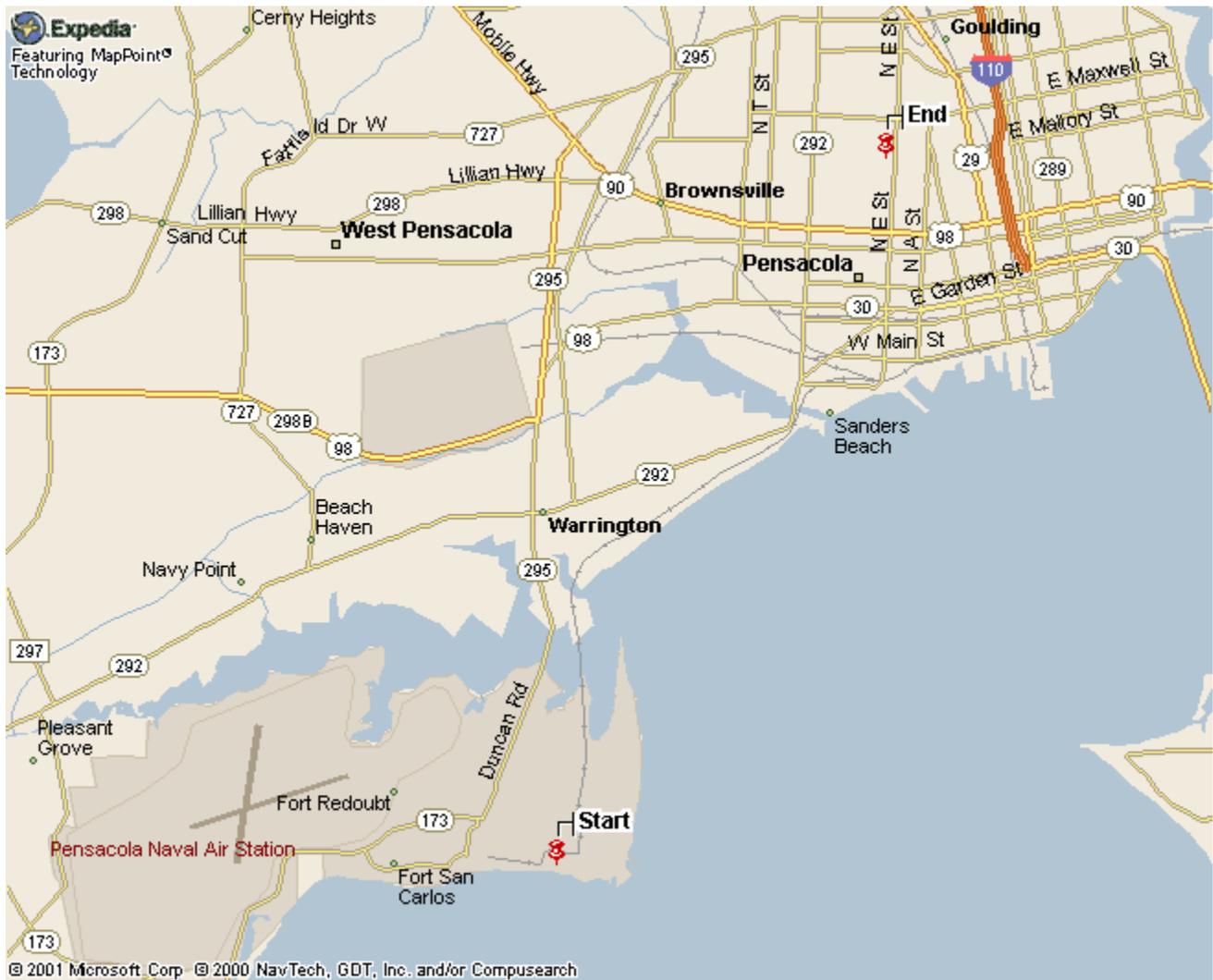
FIGURE 2-1
Navy Hospital Pensacola
6000 W. Highway 98
Pensacola, Florida 32512
(850) 505-6600



- ❶ Proceed out of Main Gate (Navy Blvd/Rt. 295) heading north towards US Highway 98.
- ❷ Turn left (heading west) on US 98 and proceed approximately 1 mile.
- ❸ Hospital will be on the right (Building 2268).

FIGURE 2-2

Route to Baptist Hospital
1000 West Moreno Blvd.
Pensacola, FL 32508
(850-469-2313)



Directions to this Hospital from the Main Gate of NAS Pensacola are:

- ➊ Proceed out of Main Gate (Navy Blvd/Rt. 295) heading north to Hwy 292.
- ➋ Turn right (heading east) on Hwy 292 until it turns into Garden Street (approx. 3 miles).
- ➌ Take Garden Street to intersection with "E" Street.
- ➍ Turn left onto "E" Street and proceed approximately 1 mile to Hospital on left.

2.6 INJURY/ILLNESS REPORTING

In addition, TtNUS personnel who are injured or become ill on the job must notify appropriate company representatives. Figure 2-3 and Attachment I presents the procedure for reporting an injury/illness, and the form to use for this purpose.

FIGURE 2-3 EMERGENCY RESPONSE PROTOCOL

The purpose of this protocol is to provide guidance for the medical management of injury situations.

In the event of a personnel injury or accident:

- Rescue, when necessary, employing proper equipment and methods.
- Give attention to emergency health problems -- breathing, cardiac function, bleeding, and shock.
- Transfer the victim to the medical facility designated in this HASP by suitable and appropriate conveyance (i.e. ambulance for serious events)
- Obtain as much exposure history as possible (a Potential Exposure report is attached).
- If the injured person is a Tetra Tech NUS employee, call the medical facility and advise them that the patient(s) is/are being sent and that they can anticipate a call from the WorkCare physician. WorkCare will contact the medical facility and request specific testing which may be appropriate. WorkCare physicians will monitor the care of the victim. Site officers and personnel should not attempt to get this information, as this activity leads to confusion and misunderstanding.
- Call WorkCare at 1-800-455-6155 and enter Extension 109, or follow the voice prompt for after hours and weekend notification and be prepared to provide:
 - Any known information about the nature of the injury.
 - As much of the exposure history as was feasible to determine in the time allowed.
 - Name and phone number of the medical facility to which the victim(s) has/have been taken.
 - Name(s) of the involved Tetra Tech NUS, Inc. employee(s).
 - Name and phone number of an informed site officer who will be responsible for further investigations.
 - Fax appropriate information to WorkCare at (714) 456-2154.
- Contact Corporate Health and Safety Department (Matt Soltis) and Human Resources Manager Marilyn Duffy at 1-800-245-2730.
- As data is gathered and the scenario becomes more clearly defined, this information should be forwarded to WorkCare.

WorkCare will compile the results of the data and provide a summary report of the incident. A copy of this report will be placed in each victim's medical file in addition to being distributed to appropriately designated company officials.

Each involved worker will receive a letter describing the incident but deleting any personal or individual comments. A personalized letter describing the individual findings/results will accompany this

generalized summary. A copy of the personal letter will be filed in the continuing medical file maintained by WorkCare.

FIGURE 2-3 (continued)
WORKCARE
POTENTIAL EXPOSURE REPORT

Name: _____ Date of Exposure: _____
Social Security No.: _____ Age: _____ Sex: _____
Client Contact: _____ Phone No.: _____
Company Name: _____

I. Exposing Agent
Name of Product or Chemicals (if known): _____

Characteristics (if the name is not known)
Solid Liquid Gas Fume Mist Vapor

II. Dose Determinants
What was individual doing? _____
How long did individual work in area before signs/symptoms developed? _____
Was protective gear being used? If yes, what was the PPE? _____
Was their skin contact? _____
Was the exposing agent inhaled? _____
Were other persons exposed? If yes, did they experience symptoms? _____

III. Signs and Symptoms (check off appropriate symptoms)

Immediately With Exposure:

Burning of eyes, nose, or throat	Chest Tightness / Pressure
Tearing	Nausea / Vomiting
Headache	Dizziness
Cough	Weakness
Shortness of Breath	

Delayed Symptoms:

Weakness	Loss of Appetite
Nausea / Vomiting	Abdominal Pain
Shortness of Breath	Headache
Cough	Numbness / Tingling

IV. Present Status of Symptoms (check off appropriate symptoms)

Burning of eyes, nose, or throat	Nausea / Vomiting
Tearing	Dizziness
Headache	Weakness
Cough	Loss of Appetite
Shortness of Breath	Abdominal Pain
Chest Tightness / Pressure	Numbness / Tingling
Cyanosis	

Have symptoms: (please check off appropriate response and give duration of symptoms)
Improved: _____ Worsened: _____ Remained Unchanged: _____

V. Treatment of Symptoms (check off appropriate response)
None: _____ Self-Medicating: _____ Physician Treated: _____

3.0 SITE BACKGROUND

3.1 SITE DESCRIPTION

NAS Pensacola is located in Escambia County in the panhandle of Northwest Florida. The installation occupies 8,423 acres of land - 5,800 acres at the main installation (NAS), and 2,623 acres at other area locations including Corry Station, Saufley Field and Outlying Landing Field Bronson.

3.2 SITE 43

Site 43 is located at the southwest corner of Murray and Taylor Roads, and currently consists of an area approximately 200 feet by 200 feet in size. The site is planted with grass and contains a tennis court, an old building foundation, and access roads to the officers' quarters.

In December 1992, a child playing with a metal detector discovered two partially buried drums exposed at the surface just east of the tennis court. One drum was reported to be in a vertical position; its end punctured revealing standing water in the interior. The second drum was observed to be intact in a vertical position. A third iron object resembling a drum rim was observed between the fenced area and the tennis court.

EnSafe/Allen & Hoshall conducted a geophysical investigation in March 1994 using gradient and total magnetic surveys to provide the locations of potential buried metal objects, including drums, relatively quickly. The objectives of the investigation were to determine the extent of the drum disposal area.

Results of the geophysical investigation identified metal anomalies consistent with metal drums in an area approximately 100-feet by 120-feet as a possible drum disposal area. A large section of land in the north half of the surveyed area was interpreted as free of drums. Although cultural clutter (buried utilities, metal fences, poles, buildings, etc.) precluded a definitive interpretation. The magnetic anomaly data indicated the disposal area did not contain systematic disposal areas, rather the anomalies were limited in number and randomly dispersed. The actual number of drums disposed in the area could not be determined.

Results from the Site Characterization Investigation indicate that surface soil, subsurface soil to a depth of 3.5 feet, and groundwater at Site 43 have been impacted by the historical use of the site as a drum storage area. Four of the six metals detected in groundwater at concentrations above the FDEP criteria were also found in soils at concentrations exceeding residential DELs. While the inorganic concentrations may reflect turbidity of the water samples, it is likely that inorganic soil contamination has impacted groundwater at the site.

Site Characterization Report Addendum

During the completion of the Site Characterization Investigation, 14 buried drums were excavated onsite and placed in over pack containers for offsite disposal. The contents of the drums were not sampled for laboratory analysis during the investigation, therefore an additional drum characterization sampling event was completed and documented as a Site Characterization Report Addendum (TtNUS 2001). The results of the Site Characterization Report Addendum indicated that 12 of the 14 drums contained insufficient volume/mass to be sample. The two remaining drums were sampled and contained metals and PAHs at concentrations exceeding Florida Soil Cleanup Target Levels. Following the assessment activities the drums were properly disposed as non-hazardous waste.

Interim Removal Action

Following the completion of the Site Characterization Investigation and addendum, an Interim Removal Action was completed CH2MHILL Constructors, Inc. to remove the metal debris and contaminated surface and subsurface soils at the site. The interim removal action is summarized in the "Interim Removal Action Report Excavation of Contaminated Soil and Groundwater Monitoring at Site 43 Naval Air Station Pensacola, Pensacola, Florida".

IRA Conclusions:

- An IRA was completed to remove visible debris and the upper 2 feet of contaminated soil.
- Thirty-one truck loads with an accumulated total of 747.62 tons of soil and debris were transported to Michigan Disposal Waste Treatment Facility in Belleview, Michigan.
- Fourteen drums from the initial site investigation, 20 to 25 drums, and drum parts were loaded and disposed of in the Michigan landfill.
- Ornamental ordnance and munitions were found in the excavation area and were determined to be inert and disposed of in the Michigan landfill.
- Following the IRA, RGs were revisited and it was determined that the initial RGs were not appropriate for the site. Based upon this information, laboratory data were reevaluated to characterize the extent of contamination at the site.
- Due to the change in RGs following the IRA activities, several inorganics and two SVOCs remain in surface and subsurface soil at concentrations above their respective RG.
- Iron concentrations detected in groundwater during the IRA sampling activities were all below the background concentration for iron at NAS Pensacola.

4.0 SCOPE OF WORK

This section discusses the specific tasks that are to be conducted as part of this scope of work as identified by CTO 0355. These tasks are the only ones addressed by this HASP. Any tasks to be conducted outside of the elements listed here will be considered a change in scope requiring modification of this document. The TOM or a designated representative will submit the requested modifications to this document to the HSM.

Specific tasks to be conducted include the following:

- Mobilization/demobilization activities
- Soil borings via Direct Push Technology (DPT)
 - Approximately 25 soil borings will be conducted at Site 43. The soil borings are estimated to be up to approximately 15-feet in depth. Samples will be collected at the surface, estimated 5-feet below the ground surface, and a vadose zone sample will be collected and analyzed from each boring
- Monitoring well installation using HSA - Abandon 5 temporary monitoring wells and replace with 5 new monitoring wells. In addition, eight shallow wells (25-feet) and 2 deep monitoring wells (50-feet) will be installed using HSA.
- Groundwater sampling using low flow purging and sampling techniques and peristaltic pumps. In addition, aquifer testing (slug testing) will be conducted at 3 selected wells.
- Decontamination
- Geographic Surveying
 - Top of casing of each permanent well
 - Horizontal location of each well and DPT location
 - All locations will be referenced to site features (building corners, etc.)
- IDW Management
 - It is estimated that 1 roll off box (for soils) will be generated and approximately 20 drums of purge/development/decontamination water.

For more detailed description of the associated tasks, refer to the Work Plan (WP).

5.0 TASKS/HAZARDS/ASSOCIATED CONTROL MEASURES

Table 5-1 of this section is intended to assist project personnel in the recognition of hazards and recommended control measures necessary for each planned task to minimize potential exposure or injuries related to those hazards. The table also assists field team members in determining which personal protective equipment (PPE) and decontamination procedures are to be used as well as appropriate air monitoring techniques and action levels. This table must be updated if the scope of work, contaminants of concern, or pertinent conditions change.

Safe Work Permits will be issued for all site activities (See Section 10.2). The FOL and/or the SHSO will use the elements defined in Table 5-1 as the primary reference for completing the Safe Work Permit adding additional information as warranted.

The following text provides a general description of the tasks to be conducted and are the basis for the hazard assessment.

5.1 MOBILIZATION/DEMOBILIZATION

This task includes, but not limited to, the following

- The procurement and shipping of equipment, and materials for the field investigation.
- Review of planning documents (i.e., HASP, Sampling and Analysis Plan, Work Plan, Quality Assurance Plan, etc.)
- Site Reconnaissance to include site characterization, site preparation, the layout of drilling/sampling locations, securing the necessary utility clearances and isolating physical hazards, where applicable.
- Secure, construct, or equip decontamination facilities to support the field activities.
- Secure, construct, or equip IDW storage facilities to support the field activities.

Physical Hazards – The hazard types associated with this task are considered primarily to be Physical hazards – Lifting, strains/sprains, lacerations achieved during unpacking of equipment and during site preparation (i.e., cutting open boxes, lifting equipment, locating sample points).

Chemical Hazards - It is not anticipated that personnel will be exposed to chemical hazards during this task. The FOL and/or the SHSO must establish the site-specific Hazard Communication Program to address potential chemical hazards of chemicals brought on-site. See Section 5.0 of the HSGM.

5.2 MONITORING WELL INSTALLATION – HOLLOW STEM AUGER

Five temporary wells are to be abandoned and replaced with new permanent wells at Site 43. In addition, 8 shallow wells and 2 deep wells will be installed as part of this field effort using Hollow Stem Auger techniques. This method of drilling consists of advancing hollow rotating augers into the ground. Cuttings are brought to the surface by the rotating action of the auger. Advantages of this type of drilling include:

- Samples can be obtained while augers remain in the ground. Subsurface soil sampling requires the use of split-barrel or thin-wall tube samplers advanced through the hollow core of the auger.
- No drilling fluids are required.
- A well can be installed inside the auger stem and back-filled as the augers are withdrawn.

Physical Hazards – Physical hazards includes

- Entanglement within rotating equipment (augers); caught between pinches and compressions. These hazards are not only the most serious (entanglement) but also pinches/compressions are the most frequent type of injury the drilling industry. Due to a recent fatality (within the last two years) that occurred when a worker wearing a hooded sweatshirt became entangled in rotating augers, several safe work practices have been incorporated into this activity. These include
 - All emergency stop devices will be tested initially and periodically thereafter. This will be accomplished during the equipment inspection and at random intervals.
 - One person on the drill crew will be designated as the Emergency Stop Device Operator.
 - Prior to the initiation of augers, the driller will announce they are about to start and will insure all personnel are away from rotating apparatus.
 - The SHSO shall insure that all personnel have
 - Secured/removed all loose clothing articles – The fatality listed above as well as a previous fatality were as a result of hooded sweatshirts snagging the rotating augers.
 - Removed all jewelry that could snag
- Energized Systems – Overhead and underground. The utility locating and clearance procedure will serve as the primary mechanism to prevent this hazard. NAS Pensacola will arrange for the utility clearance. Tetra Tech NUS personnel will complete applicable sections within Attachment II Utility Locating and Excavation Clearance SOP as a redundant check mechanism.
- Lifting – auger flights (>100 lbs) bags of Portland Cement (>90 lbs). Again this is a very common occurrence within the drilling industry.

- Pressurized systems – This hazard is compounded due to the workers close proximity to pressurized hydraulic lines and systems on the drill rigs. In addition, pressurized hazards exist as it pertains to the decontamination process. In addition, the potential for burns or water lacerations exists during the decontamination process of auger flights and drill equipment when using pressurized and/or steam cleaners. There was an incident that occurred within the last two years in which a pressurized line broke free and struck a worker also resulting in a near fatality. Therefore, extra efforts will be employed to ensure that fittings and connections are secure, appropriate, and compatible. Those fittings and connections near the operator or drillers helper that are not guarded will be secured by whatever means are necessary (i.e., pressurized line restraints).
- Traffic hazards – This site is located on the corner of Murray and Taylor Roads. This area also occupies access roads to the Officers Quarters and a tennis court. Both foot and vehicular traffic hazards are considered prevalent during certain phases of executing this scope of work. Diligent measures are required constructing and isolating work zones to control traffic away from the work zones.
- Noise – The operating level of a standard hollow stem auger drill rig varies between 86 and 89 dBA presenting potential noise exposure concerns. This potential hazard is also a concern during the decontamination process using pressure washer/steam cleaners. These items typically operate at 94-97 dBA when engaged.

Chemical Hazards – Potential occupational chemical exposure during this activity would be anticipated under the following conditions.

- Contaminant exposure based on direct interaction with contaminated media. See Sections 6.1 Chemical Hazards, Table 6-1, and 7.0 Hazard Monitoring for potential health effect information and exposure potential.
- Exposure to chemicals associated with well construction materials are also a concern. This includes sand, grout and cement (both containing Portland Cement), and Bentonite. Hazards associated with these chemicals include irritation of the eyes, alkali/chromium burns of contact points associated with wet cement, and respiratory irritation.

The Drilling Subcontractor shall provide applicable MSDSs. The SHSO shall incorporate these documents into the Site specific Hazard Communication Program (See Section 5.0 HSGM). The SHSO will add these compound to the chemical inventory list, discuss control measures in employee training, insure proper container labeling, and MSDS use.

5.2.1 Surface/Subsurface Soil Sampling/Temporary Monitoring Well Installation – DPT

Common physical hazards associated with DPT activities include the following:

- Pinch/compression Points – The potential exists during the soil boring using MacroCore Samplers to get fingers caught within pinch points during the hydraulic driving as well as between wrenches and hard surfaces when opening the samplers.
- Pressurized systems – This hazard is compounded due to the workers close proximity to pressurized hydraulic lines and systems on the DPT rigs. In addition, pressurized hazards exist as it pertains to the decontamination process. Those fittings and connections near the operator or drillers helper that are not guarded will be secured by whatever means are necessary (i.e., pressurized line restraints).
- Noise – The operating level of a standard DPT rig varies between 89 and 92 dBA presenting potential noise exposure concerns. During hammering the impact levels may reach higher levels.
- Cuts, pricks, and lacerations – This hazard is possible when cutting the acetate liners. To combat this hazard the Geoprobe Sampling Kit or similar equipment is required. This mechanism secures the acetate liner while cutting. In addition when transporting glassware for sample collection or testing may present a problem should the glassware become broken. To combat this hazard hard sided containers such as coolers will be used to transport glassware. This will prevent possible breakage as well as protect the individual from the glass shards should the glass become broken.

Chemical Hazards – Potential occupational chemical exposure during this activity would be anticipated under the following conditions.

- Contaminant exposure based on direct interaction with contaminated media. See Table 6-1 for potential health effect information for known or suspected site contaminants.

5.3 AQUIFER DEVELOPMENT/TESTING/SAMPLING

5.3.1 Monitoring Well Development

The development of the monitoring wells are intended to remove debris associated with installation and condition the sand pack to facilitate contact with the surrounding aquifer. Monitoring well development is typically accomplished using surge blocks and pumps to force water in and out of the sand pack and formation. The debris dislodged through this action is typically removed using a 1” inch Whale Pumps

with 12-volt battery will be employed to remove specified water volumes as well as any debris. The wells to be developed include the 15 newly installed.

See Section 5.3.4 for potential hazards.

5.3.2 Permanent/Temporary Monitoring Well Sampling

The monitoring wells will be sampled using low-flow purging and sampling techniques. Peristaltic pumps will be used to purge and to collect groundwater samples. Field measurements of pH, temperature, specific conductance, and turbidity will be made during purging using a direct reading instrument. These measurements will be taken at the start of purging and every 5 to 15 minutes until the parameters have stabilized. The wells will be purged until a sufficient predetermined amount of water has been removed and the water quality measurements are acceptable and stable. All tubing used for sampling will be dedicated and disposed of after the sample has been collected.

See Section 5.3.4 for potential hazards.

5.3.3 Water Level Measurements

Water level measurements will be taken at the existing and newly installed temporary monitoring wells during this field investigation. The water levels will be taken with an electric water level indicator using the top of the well casing as the reference point for determining water depths. Water levels will be conducted upon completion of the newly installed wells and prior to and through the course of purging and sampling.

See Section 5.3.4 for potential hazards.

5.3.4 Hydraulic Conductivity Testing

Hydraulic characteristics of the groundwater will be tested to determine the ability of the porous material surrounding the well to transmit water. This information will be employed to evaluate flow patterns as well as contaminant migration to construct a model for the area of investigation. Currently, it is planned that three selected wells will be slug tested.

Slug testing is comprised of rising and falling tests. A pressure transducer is placed in the well, and a slug (of known volume) is either introduced (falling head test) into the water column or extracted (rising head test) from the water column. The pressure transducer measures the changes in water level over an increment of time.

Physical Hazards – The hazard types associated with the above tasks are similar in nature and therefore presented together. Physical hazards as it pertains to development, sampling, hydraulic conductivity testing

–

- Lifting, strains/sprains, associated with handling purge/development waters.
- Cuts, pricks, and lacerations – This hazard is possible when cutting tubing or when transporting glassware for sample collection or testing may present a problem should the glassware become broken
- Traffic hazards – These sites are located within very active industrial areas. Some of the investigation locations are along travel thoroughfares and within active areas of the facility. Both foot and vehicular traffic hazards are considered prevalent during certain phases of executing this scope of work.
- Electrical hazards – Remote but possible when handling and using a 12-volt battery as a power source for the Whale pumps (used in development) or for the peristaltic pumps.

Chemical Hazards - Chemical exposure during this activity maybe facilitated through

- Direct contact - Splash - Contaminant exposure based on direct interaction with contaminated media through possible splash.
- Inhalation – Some wells possibly due to site contaminants or due to the build up biological degradation off-gases. When a field crew member opens the well, he or she may be exposed to vapors/gases coming out of the well and may also encounter excess pressure build up in the well head. To control exposure limit the proximity of the technician to the well head (stand up wind) as well as the amount of time he or she remains there.
- Ingestion – Due to handling of equipment, sample media, and improper work hygiene could result in the ingestion of identified site contaminants. The primary contaminants of concern are in the particulate form. Therefore, inhalation of airborne dusts and ingestion are the primary routes of exposure.
- Sample preservatives/decontamination solutions – Certain chemicals will be brought on-site in support of this field investigation effort. These chemical hazard classes include corrosives, flammable, and oxidizers.

See Section 6.1 for potential health effect information due to chemical exposure. See also the Site Specific Hazard Communication Program for controlling hazards as it pertains to chemical substances brought on-site.

5.4 GEOGRAPHICAL SURVEYING

This activity is generally non-intrusive in nature. Vertical elevations and horizontal locations will be taken from the ground surface at well and soil sampling locations.

Physical Hazards associated with this task includes

- Traffic hazards – This site is located within very active area. Some of the investigation locations are along travel thoroughfares and within or near the recreational area. Both foot and vehicular traffic hazards are considered prevalent during certain phases of executing this scope of work.
- Trips and Falls – This hazard is considered due to uneven ground (curb sides, hill sides) and potentially slippery surfaces.

Natural Hazards – This hazard is not considered prevalent during as this activity as the locations are within active and maintained area.

5.5 DECONTAMINATION

The equipment involved in the field activities for well installation and sampling will be decontaminated prior to during, and after the completion of on-site activities.

5.5.1 Heavy Equipment

Heavy equipment decontamination will be accomplished using a pressure washer and/or steam cleaner within an established temporary decontamination pad.

Procedural steps are as follows

1. Remove gross (visible) materials using scrapers, shovels as necessary (soils, etc.)
2. Use the pressure washer/steam cleaner remove remaining visible debris.
3. As necessary, follow up with scrub brushes with Alconox or Liquinox detergent wash.
4. Potable water rinse using pressure washer/steam cleaner as necessary
5. Solvent rinse (Isopropanol) – This application will only pertain to the sample collecting media (split spoon, reusable trowels and hand augers, See 5.6.2).

6. DI water rinse
7. Air dry

5.5.2 Sampling Equipment

All non-dedicated sampling equipment (i.e. stainless-steel hand augers, trowels, bowls) will be decontaminated prior to the initiation of field sampling, between sample locations, and at the completion of the field activities. The following decontamination steps will be taken.

1. Remove heavy materials (soils, etc.)
2. Alconox or Liquinox detergent wash
3. Potable water rinse
4. Solvent rinse (Isopropanol)
5. DI water rinse
6. Air dry

All dedicated sampling and PPE equipment will be rinse to remove gross contamination and then disposed.

Physical Hazards associated with this activity include:

- Water cuts/lacerations/burns – This is the primary and most severe hazard associated with this activity. Incidents have occurred where persons have placed the pressure wand on their boot and accidentally compressed the trigger resulting in burns and water lacerations.
- Noise – Operating level of the pressure washer/steam cleaners typically operate at 94-97 dBA when engaged.

Chemical Hazards associated with this activity include:

- Exposure to contaminated media
- Exposure to decontamination solvents

5.6 INVESTIGATIVE DERIVED WASTE MANAGEMENT

This task includes the containerization, labeling, staging, monitoring, and final deposition of investigative derived wastes. These are as follows:

Containerization – Materials generated including soils, purge and development waters, decontamination fluids shall be collected, containerized (soils in a roll-off box, purge/development and decontamination waters in 55-gallon drums) and staged in a centralized location identified by NAS Pensacola.

Labeling – All containers will be labeled as to their contents. The labels will include the following information:

Site

Job Number

Location (SWMU)

Date – To be completed once filling the container begins

Drum # - Assign an inventory number to be added to a comprehensive log

Contents – Description

Volume – Final volume

Contact – This person should be available on base. To this end an up-dated inventory should be provided at the close of each shift to this person.

Emergency Number – Contact person provided above

Staging – All drums will be staged on pallets (4 to a pallet) with lid retention ring bolt accessible on the outside as well as the label. Pallet rows will maintain a minimum of 4 feet between rows for access and monitoring for leaks. Containers will be separated according to media and site.

Monitoring – During staging site personnel will examine containers to ensure they are not leaking.

Final Deposition – Waste materials will be separated as determined through sampling and disposed of through pre-determined routes.

Physical Hazards associated with this Waste Management activity include:

- Caught between pinches and compressions. This occurs primarily when moving containers to transport vehicles and when staging the drums on pallets. The prevalent hazard is recognized when moving the drums and hands get caught between drums.

- Lifting – Drums of water can weigh upwards of 475 lbs.

For more detailed description of the associated tasks, refer to the Work Plan (WP) and/or the Quality Assurance Plan (QAP).

5.7 GENERAL SAFE WORK PRACTICES

In addition to the task-specific safe work practices identified in Table 5-1 to be employed to minimize task specific hazards, the following general safe work practices will be observed. These safe work practices establish a pattern of general precautions and measures for reducing risks associated with hazardous site operations.

- Refrain from eating, drinking, chewing gum or tobacco, taking medication, or smoking in contaminated or potentially contaminated areas or where the possibility for the transfer of contamination exists.
- Wash hands and face thoroughly upon leaving a contaminated or suspected contaminated area. This is especially critical between breaks and prior to lunch and associated hand to mouth activities.
- Avoid contact with potentially contaminated substances by walking around puddles, pools, mud, or other such areas. Avoid, whenever possible, kneeling on the ground or leaning or sitting on equipment. Do not place monitoring equipment on potentially contaminated surfaces.
- Be familiar with and adhere to all instructions provided within this site-specific HASP.
- Be aware of the location of the nearest telephone and all emergency telephone numbers. See Section 2.0, Table 2-1.
- Attend briefings on anticipated hazards, equipment requirements, Safe Work Permits, emergency procedures, and communication methods before going on site.
- Plan and mark entrance, exit, and emergency escape routes. See Section 2.0.
- Rehearse unfamiliar operations prior to implementation.
- Use the “buddy system”.
- Maintain visual contact with each other and with other on-site team members by remaining in close proximity in order to assist each other in case of emergency.

- Establish appropriate Safety Zones including Support, Contamination Reduction, and Exclusion Zones.
- Minimize the number of personnel and equipment in contaminated areas (such as the Exclusion Zone). Non-essential vehicles and equipment should remain within the Support Zone.
- Establish appropriate decontamination procedures for leaving the site.
- Immediately report all injuries, illnesses, and unsafe conditions, practices, and equipment to the Site Health and Safety Officer (SHSO).
- Matches and lighters are restricted from entering in the Exclusion Zone or Contamination Reduction Zone. Smoking will only be permitted in specified areas at Site 4.
- Observe coworkers for signs of toxic exposure and heat or cold stress.
- Inform co-workers of potential symptoms of illness, such as headaches, dizziness, nausea, or blurred vision.

5.8 DRILLING (HSA/DPT) SAFE WORK PRACTICES

The following Safe Work Practices are to be followed when working in or around the HSA Drill Rig Operations.

5.8.1 Before Drilling

- Identify all underground utilities and buried structures before drilling. This service is provided by the NAS Pensacola and Sunshine State One Call of Florida. In addition, Tetra Tech NUS, Inc. personnel will use the Utility Locating and Excavation Clearance Standard Operating Procedure provided in Attachment II.
 - 1) A request is submitted to Sunshine State One Call of Florida (1-800-432-4770) for clearance of a location(s). Often times intersections, building numbers, or other location identifiers are provided. It is best to provide as much assistance as possible. Ensure that marks are on the ground using white paint or flagging. Sunshine State One Call of Florida then notifies members within this cooperative. This is sometimes where problems arise. Not all utilities are required to be members. Provisions to accommodate this shortfall are provided in the Tetra Tech NUS, Inc. Utility Locating and Excavation Clearance Standard Operating Procedure provided in Attachment II.

- 2) Typical timeline for marking and providing clearances is 48-hrs. A ticket or ticket number will be provided referring to your clearance. This will have a timeline, generally 14-days. Again problems sometime arise here because site personnel allow their tickets to expire, then accidentally encounter a utility. Tickets must be maintained valid by asking for a re-issue or extension, when necessary, prior to expiration.
 - 3) Another problem that occurs with time is that utility locations marked on the ground may not remain visible. The FOL is responsible for ensuring that utility locations/marks on the ground are maintained so they remain visible (repaint, pin flags, etc.), and to annotate maps with these locations so they may be incorporated into the GIS system.
 - 4) Lastly, once marks are placed on the ground and have been cleared, only limited leeway (2-feet) exists to stray from the planned and approved intrusive locations.
- All drill rigs will be inspected by the SHSO or designee, prior to the acceptance of the equipment at the site and prior to the use of the equipment. All repairs or deficiencies identified will be corrected prior to use. The inspection will be accomplished using the Equipment Inspection Checklist for Drill Rigs provided in Attachment III. Additional inspections will be performed at least once every 10-day shift or following repairs.
 - Check operation of the Kill Switch (initially, then periodically thereafter). See section 5.2 concerning these testing of the emergency stop devices and the other required precautions.
 - Insure all machine guarding is in place and properly adjusted.
 - Block drill rig and use levelers to prevent movement of the drill.
 - The work area around the point of operation will be graded to the extent possible to remove any trip hazards near or surrounding operating equipment.
 - The driller's helper will establish an equipment staging and laydown plan. The purpose of this is to keep the work area clear of clutter and slips, trips, and fall hazards. Mechanisms to secure heavy objects such as drill flights will be provided to avoid the collapse of stacked equipment.
 - All potentially contaminated tooling will be wrapped in polyethylene sheeting for storage and transport to the centrally located equipment decontamination unit.

5.8.2 During Drilling

- Minimize contact to the extent possible with contaminated tooling and environmental media.

- Support functions (sampling and screening stations) will be maintained a minimum distance from the drill rig of the height of the mast plus five feet or 35-feet for HSA, 25-feet for DPT operations whichever is greater to remove these activities from within physical hazard boundaries. These boundaries because they are in areas where the general population exists will be strictly enforced by site personnel.
- Only qualified operators and knowledgeable ground crew personnel will participate in the operation of the drill rig.
- During maintenance, use only manufacturer provided/approved equipment (i.e. auger flight connectors, etc.)
- In order to minimize contact with potentially contaminated tooling and media and to minimize lifting hazards, multiple personnel should move auger flights and other heavy tooling.
- Only personnel absolutely essential to the work activity will be allowed in the exclusion zone. Site visitors will be escorted at all times.

5.8.3 After Drilling

- All equipment used within the exclusion zone will undergo a complete decontamination and evaluation by the SHSO to determine cleanliness prior to moving to the next location, exiting the site, or prior to down time for maintenance.
- All motorized equipment will be fueled prior to the commencement of the days activities. During fueling operations all equipment will be shutdown and bonded to the fuel source.
- When not in use all drill rigs will be shutdown, and emergency brakes set and wheels will be chocked to prevent movement.
- All areas subjected to subsurface investigative methods will be restored to equal or better condition than original to remove any contamination brought to the surface and to remove any physical hazards. In situations where these hazards cannot be removed these areas will be barricaded to minimize the impact on field crews working in the area.

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**TABLE 5-1
TASKS/HAZARDS/CONTROL MEASURES NAS PENSACOLA, PENSACOLA, FLORIDA**

Task/Operation/ Location	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring - Types and Action Levels	Personal Protective Equipment <i>(Items in italics are deemed optional as conditions or the FOL or SHSO dictate.)</i>	Decontamination Procedures
<p>Mobilization/ Demobilization</p> <p>This activity includes, but not limited to:</p> <ul style="list-style-type: none"> - Equipment Preparation and Inspection - Resource acquisition and unpacking of supplies - Site clearance and preparation – Utility clearances, etc. - Establish and construct access routes to sample/work locations, where applicable. - Construct decontamination and IDW operation and storage facilities, as applicable. 	<p>Chemical hazards:</p> <p>1) Exposure to identified site contaminants are not anticipated. However, potential exposure to chemicals brought on-site should be considered.</p> <p>Physical hazards:</p> <p>2) Lifting (strain/muscle pulls) 3) Cuts and lacerations 4) Pinches and compressions/Struck by 5) Slips, trips, and falls 6) Heavy equipment hazards (swinging booms, hydraulic lines, etc.) 7) Vehicular and foot traffic</p> <p>Natural hazards:</p> <p>8) Ambient temperature extremes (heat/cold stress) 9) Insect and animal bites 10) Inclement weather</p>	<p>Chemical hazards:</p> <p>1) The on-site Hazard Communication Program (Section 5.0 TiNUS Health and Safety Guidance Manual) will be followed. All chemicals brought onto the site by Tetra Tech NUS and subcontractor personnel will be inventoried with each applicable chemical having an MSDS on site, on file. This effort shall include</p> <ul style="list-style-type: none"> • Accurate Chemical Inventory List (Entries will match chemicals brought on-site, as the names appear on the MSDS and the label) This list shall also include quantities and storage locations will be maintained in a centralized location and made available upon request. • MSDS's will be maintained in a central location, accessible to all personnel. • All containers will have labels specifying the following information: <ul style="list-style-type: none"> - Chemical Identity (As it appears on the label, MSDS, and Chemical Inventory List) - Appropriate Warning (i.e., Eye and skin irritation, flammable, etc.) - Manufacturer's Name Address and Phone Number <p>All personnel will be required to review the appropriate MSDS's if they are not familiar with the hazards of the chemicals to be used, prior to the use of a specified chemical substance. Information on hazards and PPE will be communicated on the Safe Work Permit for this task. Any specific provisions recommended by the MSDS shall be in place (i.e., eye wash, fire extinguisher, specified PPE, etc.) prior to using the chemical substance.</p> <p>Physical hazards:</p> <p>2) Lifting Hazards – During mobilization/demobilization personnel are required to handle equipment, supplies, and resources in preparation for site activities. This hazard becomes more predominant in the early morning hours (prior to muscles becoming limber) and later in the day (as a result of fatigue). The following provisions shall be instituted in order to minimize hazards of this nature:</p> <ul style="list-style-type: none"> • Use machinery or multiple personnel for heavy lifts, where possible. • Use proper lifting techniques <ul style="list-style-type: none"> - Lift with your legs, not your back, bend your knees move as close to the load as possible, and ensure good hand holds are obtainable. - Minimize the horizontal distance to the center of the lift to your center of gravity. - Minimize turning and twisting when lifting as the lower back is especially vulnerable at this time. - Break lifts into steps if the vertical distance (from the start point to the placement of the lift) is excessive. - Plan your lifts – Place heavy items on shelves between the waist and chest; lighter items on higher shelves. - Periods of high frequency lifts or extended duration lifts should provide sufficient breaks to guard against fatigue and injury. <p>Other considerations associated with lifting injuries and muscle strains include</p> <ul style="list-style-type: none"> • Area available to maneuver the lift. • Area of the lift – Work place clutter, slippery surfaces • Your Overall physical condition <p>3) Cuts and lacerations – To prevent cuts and lacerations associated with unpacking or packing equipment and supplies, during site preparation (clearing access routes), the following provisions are required:</p> <ul style="list-style-type: none"> - Always cut away from yourself and others, then, if a knife slips, you will not impale yourself or others. - Do not place items to be cut in your hand or on your knee. - Change out blades as necessary to maintain a sharp cutting edge. Many accidents result from struggling with dull cutting instruments. <p>If hand tools (brush hooks, machetes, etc.) are used to gain access to sample locations, the following precautions are recommended:</p> <ul style="list-style-type: none"> - Ensure handles are of good construction (no cracks, splinters, loose heads/cutting apparatus. - Ensure all cutting tools are maintained. Blades shall be sharp without nicks and gouges in the blade. - All hand tools (brush hooks, machetes, etc.) with cutting blades shall be provided with a sheath to protect individuals when not in use and when carrying these items over rough or slippery terrain. - All personnel will maintain a 10-foot perimeter or greater around persons clearing brush and access paths to sample and/or well locations. <p>4) Pinches/Compressions/Struck By - Do not modify tooling without manufacturer's expressed permission.</p> <ul style="list-style-type: none"> - Keep any machine guarding in place, avoid moving parts. - Use tools or equipment where necessary to avoid placing hands in areas vulnerable to pinch points. - Adjust machine guarding as necessary to minimize access into the machine. - When staging equipment, insure all stacked loads, shelving, are adequately secure to avoid creating a hazard from falling objects. <p>5) Preview work locations for unstable/uneven terrain.</p> <ul style="list-style-type: none"> - Cover, guard and barricade all open pits, ditches, and floor opening as necessary. - Ruts, roots, tools, and other tripping hazards should be eliminated to minimize trips and falls. - Maintain a clutter free work area. - As part of site control efforts construct fences or other means of demarcation (i.e. signs and postings) to control and isolate traffic in the work area. Means of demarcation shall also be constructed isolating resource and/or staging areas. <p>6) Heavy Equipment Hazards - All equipment will be</p> <ul style="list-style-type: none"> - Inspected in accordance with OSHA and manufacturer's design. - All equipment inspection will be documented on a Equipment Inspection Checklist as provided in (See Attachment III). - Operated by knowledgeable operators and ground crew. <p>7) Vehicular and Foot Traffic Hazards - As part of site preparation activities and zone construction, when preparing traffic and equipment considerations are to include the following:</p> <ul style="list-style-type: none"> - Establish safe zones of approach (i.e. Boom or mast + 5 feet). See Table 5-1 for Soil boring/Monitoring Well Installation for recommended distances. - The mast will be lowered when moving the rig. - Foot and vehicular traffic routes shall be well defined. - Heavy equipment patterns shall be isolated using fences or other suitable barricades from pedestrian pathways. - Bumpers or other suitable traffic stops shall be placed in areas where it is desired that traffic approaching a drop offs or unprotected banks. - All self-propelled equipment with restricted vision moving backwards shall be equipped with back up warning systems. - The FOL and/or the SHSO as a precautionary measure to remove or demarcate physical hazards shall preview traffic routes (foot and vehicular) before the commitment of personnel and resources. <p>Natural hazards:</p> <p>8) Ambient Temperature Extremes - Wear appropriate clothing for weather conditions. Provide acceptable shelter and liquids for field crews. Additional information regarding heat and cold stress is provided in Section 4.0 of the TiNUS Health and Safety Guidance Manual.</p> <p>9) Insect/Animal Bites and Stings - This is not considered a predominant hazard as these activities are to be conducted in a well maintained area on the corner of Murray and Taylor Roads. To combat the potential impact of natural hazards, the following actions are recommended</p> <p>Insects and spiders</p> <ul style="list-style-type: none"> - Wear light color clothes. This will allow easier detection of ticks and insects crawling on your body. It will also assist in heat stress control. - Tape pant legs to work boots to block direct access. This is especially critical when clearing or entering heavy brush and wooded areas. - Do not stick your hand anywhere where you can't see. - Use repellents – Permethrin should be applied liberally to the clothing, but not the skin as it may cause irritation. Concentrate on areas where ticks and other insects may access your body such as pant cuffs, shirt to pants, and collars. Products containing DEET may be applied directly to the skin. As always follow manufacturer's recommendations for use. - If you leave your workboots at the trailer or office over your break make sure you shake them out before sticking your feet in them. <p>10) Inclement Weather - Suspend or terminate operations until directed otherwise by SHSO.</p> <p>See Section 4.0 of the TiNUS Health and Safety Guidance Manual for additional information concerning natural hazards.</p>	<p>Visual observation of work practices by the FOL and/or the SHSO to minimize potential physical hazards (i.e., improper lifting, unsecured loads, cutting practices, etc.).</p> <p>Monitoring for chemical hazards are not required during this activity.</p>	<p>Level D - (Minimum Requirements)</p> <ul style="list-style-type: none"> - Standard field attire (Sleeved shirt; long pants) - Safety shoes (Steel toe/shank) - <i>Snake chaps (for remote and unmaintained areas)</i> - <i>Safety glasses (for moving through brush and when involved in activities that could result in flying projectiles such as hammering or chopping and clearing brush)</i> - <i>Hardhat (when overhead hazards exists, or identified as a operation requirement)</i> - <i>Reflective vest for high traffic areas</i> - <i>Hearing protection for high noise areas (At the direction of the FOL and/or the SHSO).</i> <p>As site conditions may change, the following equipment will be maintained during all on-site activities as prescribed in Section 2.0 of this HASP</p> <ul style="list-style-type: none"> - Fire Extinguishers - First-aid kit <p>Note: <i>The FOL and/or the SHSO will determine the number of fire extinguishers and first-aid kits to be made available based on the number of operations to be conducted at any given time.</i></p>	<p>Not required.</p> <p>Good personal hygiene practices should be employed prior to breaks lunch or other period when hand to mouth contact occurs. This will minimize potential ingestion exposures.</p> <p>Personnel should inspect themselves and one another for the presence of ticks when exiting wooded areas, grassy fields, etc. This action will be employed to assist in stopping the transfer of these insects into vehicles, homes, and offices.</p> <p>In a review of a number of tick bites reported over the past few years, the ticks that went undetected were located on the back and in the shoulder areas. Have your buddy examine this area carefully.</p>

**TABLE 5-1
TASKS/HAZARDS/CONTROL MEASURES NAS PENSACOLA, PENSACOLA, FLORIDA**

Task/Operation/Location	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring - Type and Action Levels	Personal Protective Equipment <i>(Items in italics are deemed optional as conditions or the FOL or SHSO dictate.)</i>	Decontamination Procedures
<p>Monitoring Well Installation using Hollow Stem Augers</p> <p>Five temporary wells will be abandoned and replaced with permanent wells. In addition, eight shallow wells (25-feet) and two deep wells (50-feet) will be installed.</p> <p>Soil Borings – using DPT</p> <p>Approximately 25 soil borings are planned at Site 43. Samples will be collected on the surface, 5-foot bgs, and within the vadose zone.</p>	<p>Chemical hazards:</p> <p>1) Previous analytical data identified the following compound as the primary contaminant of concern</p> <p>Lead 20700 mg/m³</p> <p>PAHs/other metals were identified within the subsurface soils. These compounds were not in sufficient concentrations to present and exposure threat through inhalation.</p> <p>Further information on these contaminants are presented in Section 6.1, and Table 6-1.</p> <p>2) Transfer of contamination into clean areas or onto persons</p> <p>Physical hazards:</p> <p>3) Heavy equipment hazards (pinch/compressions points, rotating equipment, hydraulic lines, etc.)</p> <p>4) Noise in excess of 85 dBA</p> <p>5) Energized systems (contact with underground or overhead utilities)</p> <p>6) Lifting (strain/muscle pulls)</p> <p>7) Slips, trips, and falls</p> <p>8) Cuts and lacerations</p> <p>9) Vehicular and foot traffic Further information on these physical hazards, see Section 6.2 for further discussions.</p> <p>Natural hazards:</p> <p>10) Inclement weather</p> <p>11) Insect bites</p>	<p>Chemical hazards:</p> <p>1) Particulates - As a general rule, avoiding contact with contaminated media (air, water, soils, etc.) through proper use and application of PPE. As the materials in question are solids and/or bound to particulates, dust/particulate suppression will be the next control measure employed to minimize potential exposure. In addition, good work and personal hygiene measures will be employed to control exposure through ingestion. Avoid hand to mouth contact to the extent possible wash hands and face or use hygienic wipes to remove potential contaminants from hands and face prior to breaks or lunch or other hand to mouth activities. It should be noted that exposure during DPT/HSA in an open air environment is not anticipated. During the execution of these two activities limited surface area is being disturbed thereby minimizing the potential to mechanically agitate a sufficient amount of material to become airborne. This minimizes potential exposure. In addition, as these activities are conducted outside where general wind patterns may knock down and disperse airborne dust.</p> <p>2) Transfer of Contamination into Clean Areas or onto Persons - Restrict the cross use of equipment and supplies between locations and activities without first going through a suitable decontamination. Work practices including establishing a rigid decontamination procedure will be employed for all equipment between locations and between clean and potentially dirty work. This provision along with dedicated sampling equipment will insure materials are not carried and deposited in unaffected areas.</p> <p>Physical hazards:</p> <p>3) Heavy Equipment Hazards - All equipment will be:</p> <ul style="list-style-type: none"> - Inspected in accordance with Federal safety and transportation guidelines, OSHA (1926.600.601.602), and manufacturer's design, as applicable. All inspections will be documented using the Equipment Inspection Checklist (for Drill Rigs) found in (See Attachment III) of this HASP. - Operated and supported by knowledgeable operators and ground crew. - Used within safe work zones, with routes of approach clearly demarcated. All personnel not directly supporting this operation will remain at least 35-feet for HSA Rigs/25 feet for DPT rigs from the point of operation or the height of the mast plus 5-feet, whichever is greater. For DPT operations personnel will remain at least 25 feet from the point of operation or the height of the mast plus 5-feet, whichever is greater. See Section 10.1.1 of this HASP. This will be the area identified as the exclusion zone. - All self-propelled equipment with restricted field of vision moving backwards shall be equipped with a Back up alarm. - All personnel will be instructed in the location and operations of the emergency shut-off device(s). This device will be tested initially (and then daily) to ensure its operational status. - One person (usually the driller) will be designated as the Emergency Shut Off Device Operator. - Prior to engaging the augers, the driller will announce, loud enough for all to hear that he is engaging the augers. He will visually confirm that all personnel are removed from the rotating equipment then engage the augers. - Areas will be inspected prior to the movement of the direct push rig and support vehicles to eliminate any physical hazards. This will be the responsibility of the FOL and/or SHSO. - See additional safe work procedures for drilling in Section 5.9 of this HASP as well as in Section 4.0 of the HSGM. <p>4) Noise in Excess of 85 dBA - Hearing protection will be used during all subsurface activities using the HSA Drill Rig and direct push rig or when noise levels are >85 dBA. (during operation). Previous accumulated data indicates an average 8 hour exposure working behind a direct push rig during hydraulic and hammer advancement of the tooling is approximately 87-92 dBA.. Noise levels generated by HSA averages 86-89dBA.. Controlling this hazard shall be accomplished employing two separate approaches as follows:</p> <ul style="list-style-type: none"> - Site control boundaries will be established to limit the affect of the noise hazard (See Item 3, 3rd bullet). - Hearing protection – As a general rule of thumb <p style="text-align: center;"><i>Excessive noise levels (>85dBA) are being approached when you have to raise your voice to talk to someone within 2 feet of your location.</i></p> <p>5) Energized Systems - All drilling activities will proceed in accordance with the Utility Locating and Excavation Clearance SOP in Attachment II of this HASP. All utility clearances will be obtained in writing, and locations identified and marked, prior to activities. If it is not obtainable/unknown or you location infringes within 3-feet of an underground utility advancement must proceed by hand until past the utility. The hand dug hole must at least represent the same diameter of the mechanized tooling that will be used. Utility clearance is being provided by NAS Pensacola.</p> <p>6) Lifting Hazards - Use machinery or multiple personnel for heavy lifts. Use proper lifting techniques as described in Table 5-1 for mobilization/demobilization. Drill stems, auger flights, and well construction supplies are some of the common material that are handled and because of their weight will present a lifting strain hazard associated with this activity.</p> <p>7) Slips, Trips, and Falls - Preview work locations for unstable/uneven terrain.</p> <ul style="list-style-type: none"> - Cover, guard and barricade all open pits, ditches, and floor opening as necessary. - Ruts, roots, tools, and other tripping hazards should be eliminated/demarcated to minimize trips and falls. - Maintain a clutter free work area. - As part of site control efforts construct fences or other means of demarcation (i.e. signs and postings) to control and isolate traffic in the work area. Means of demarcation shall also be constructed isolating resource and/or staging areas. <p>8) Cuts and Lacerations - To prevent cuts and lacerations, the following provisions are required:</p> <ul style="list-style-type: none"> - Obtain and use the knife and acetate tube retention tub recommended by Geoprobe (Geoprobe Sampling Kit) to prevent potential cuts and lacerations when accessing samples within MacroCore acetate liners. These items have been engineered to allow sample acquisition without putting the sampler at risk. - Always cut away from yourself and others, then, if a knife slips, you will not impale yourself or others. - Do not place items to be cut in your hand or on your knee. - Change out blades as necessary to maintain a sharp cutting edge. Many accidents result from struggling with dull cutting attachments. - Wear cut-resistant gloves (leather or heavy cotton) <p>9) Vehicular and Foot Traffic Hazards - Use traffic-warning signs, flag persons, and high visibility vests as determined by the SHSO when work infringes traffic thoroughfares. In addition, use physical barricades, when working within or altering normal traffic flow patterns/traffic lanes.</p> <p>Natural hazards:</p> <p>10) Inclement Weather – To minimize hazards of this nature, the following provisions shall be employed:</p> <ul style="list-style-type: none"> - Wear appropriate clothing for weather conditions. - Provide acceptable shelter and replacement liquids for field crews as relief from excessive ambient temperatures. - Under conditions of elevated levels of PPE, periods of acclimatization, excessive ambient temperature extremes, or if you believe someone is suffering from a heat/cold related disorder, it may be necessary to conduct heat/cold stress monitoring. - Electrical storms/high winds - Suspend or terminate operations until directed otherwise by SHSO. <p>Follow the provisions as specified in Section 4.0 of the Tetra Tech NUS, Inc. Health and Safety Guidance Manual regarding the identification and evaluation of heat/cold stress related conditions.</p> <p>11) Insect bites/Snakes/Alligators. These hazards are not anticipated to be as predominant within this area as it is an active area that is regularly maintained.</p>	<p>1) Monitoring shall be conducted to qualify and quantify estimated source concentrations of on-site contaminants in support of the prescribed worker protection levels. Monitoring shall be conducted using</p> <p style="text-align: center;">Particulate Meter</p> <p><1.0 mg/m3 continue to work, continue to monitor</p> <p>>1.0 mg/m3 use area wetting to control airborne dust emissions.</p> <p>Sustained airborne concentrations above the identified action levels will result in ceasing the operation until airborne concentrations recede to background concentrations.</p> <p>Failure of these concentrations to diminish will require an upgrade in the level of protection and therefore a modification of this HASP. Contact the PHSO.</p> <p>Monitoring shall be conducted at the prescribed depths as indicated on the boring logs at the source (borehole) and drillers breathing zone. Monitoring shall also be conducted at the sampler's location to in the same prescribed frequency when handling samples.</p> <p>Noise monitoring maybe conducted at the discretion of the PHSO and/or the SHSO.</p> <p>Action Level - >85 dBA Participation in the Project Hearing Conservation Program. Hearing protection is required for this operation.</p>	<p>All soil boring operations and monitoring well installation will be initiated in Level D protection, including the following articles:</p> <p>Sampler/Oversight Personnel</p> <ul style="list-style-type: none"> - Standard field dress (long pants, Sleeved shirts) - Steel toe safety shoes or work boots - Hard hat(when within 35-feet of the drill rig) - Safety Glasses(when within 35-feet of the drill rig or when sampling) - Nitrile surgeon style inner gloves for sampling - Hearing protection(when within 35-feet of an operating HSA drill rig; 25-feet of an operating DPT rig) - <i>Impermeable boot covers</i> - <i>Reflective vest for traffic areas</i> <p>Driller and Driller Helper</p> <ul style="list-style-type: none"> - Standard field attire including sleeved shirt and long pants - Safety shoes (Steel toe/shank) - Safety glasses - Nitrile inner and outer gloves or supported neoprene - Hearing protection - Hard hat - <i>Impermeable aprons are recommended for handling contaminated auger flights and drill stems against the body. The apron will prevent soiling and saturation of work clothes</i> - <i>Impermeable boot covers</i> <p>Upgrades to Level C and B protection are not anticipated.</p> <p>Note: Use of respiratory protection will require the implementation of the Tetra Tech NUS, Inc. Respiratory Protection Program provided in the Health and safety Guidance Manual.</p> <p>As site conditions may change, the following equipment will be maintained during all on-site activities</p> <ul style="list-style-type: none"> - Fire Extinguishers - First-aid Kit <p>Note: The Safe Work Permit(s) for this task (See Attachment IV of this HASP) will be issued at the beginning of each day to address the tasks planned for that day. As part of this task, additional PPE may be assigned to reflect site-specific conditions or special considerations or conditions associated with any identified task.</p>	<p>Personnel Decontamination will consist of a soap/water wash and rinse for reusable and non-reusable outer protective equipment (boots, gloves, impermeable apron, as applicable</p> <p>Gross contamination of outer boots and outer gloves will be removed at a satellite location near the operation. Final wash and rinse will take place at the centralized decontamination pad. The sequential procedure is as follows:</p> <p>Stage 1: Equipment drop Decontamination personnel will clean hand tools as necessary.</p> <p>Stage 2: Soap/water wash and rinse of outer boots as applicable and gloves</p> <p>Stage 3: Soap/water wash and rinse of the impermeable apron, as applicable.</p> <p>Stage 4: Disposable PPE will be removed and bagged.</p> <p>Stage 5: Wash face and hands</p> <p>Note: For remote locations away from the centralized decontamination unit</p> <ul style="list-style-type: none"> - Bag and/or wrap all disposable and reusable equipment, respectively for transport back to the decontamination unit. - Hygienic wipes may be used for cleaning hands and face <p>Equipment Decontamination - All heavy and sampling equipment decontamination will take place at a centralized decontamination pad utilizing a steam cleaner or pressure washer as prescribed in Table 5-1 for that task. Heavy equipment will have the wheels and tires cleaned along with any loose debris removed, prior to transporting to the central decontamination area. All site vehicles will have restricted access to exclusion zones. Vehicles will have their wheels/tires cleaned or sprayed off as applicable as not to track mud onto the roadways servicing this installation. Roadways shall be cleared of any debris resulting from the onsite activity.</p> <p>The FOL or the SHSO will be responsible for evaluating equipment arriving on-site, leaving the site, and between locations. No equipment will be authorized access, exit, or movement to another location without this evaluation.</p>

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<p>Multi-media sampling, including</p> <ul style="list-style-type: none"> - Monitoring Well Development using whale pumps and surge blocks - Hydraulic Conductivity testing using slugs - Groundwater Sampling – Peristaltic pumps - Surface and Subsurface soils – MacroCore samplers, disposable trowels. This activity will primarily be addressed under soil boring and monitoring well installation. <p>Hazards are anticipated to be similar in all of these activities.</p>	<p>Chemical hazards:</p> <p>1) Previous analytical data identified the following compound as the primary contaminant of concern</p> <p>Lead 20700 mg/m³</p> <p>PAHs/other metals were identified within the subsurface soils. These compounds were not in sufficient concentrations to present and exposure threat through inhalation.</p> <p>Further information on these contaminants are presented in Section 6.1, and Table 6-1.</p> <p>Chemical reagents and sample preservatives provided by the analytical laboratory.</p> <p>2) Transfer of contamination into clean areas.</p> <p>Physical hazards:</p> <p>3) Slip, trip, and fall hazards</p> <p>4) Strain/muscle pulls from manual lifting</p> <p>5) Cuts and Lacerations</p> <p>6) Ambient temperature extremes (heat/cold stress)</p> <p>7) Site Characterization</p> <p>8) Water Hazards - Drowning</p> <p>Natural hazards:</p> <p>9) Animal and insect bites and encounters</p> <p>10) Inclement weather</p>	<p>Chemical hazards:</p> <p>1) Particulates - As a general rule, avoiding contact with contaminated media (air, water, soils, etc.) through proper use and application of PPE. As the materials in question are solids and/or bound to particulates, dust/particulate suppression will be the next control measure employed to minimize potential exposure. In addition, good work and personal hygiene measures will be employed to control exposure through ingestion. Avoid hand to mouth contact to the extent possible wash hands and face or use hygienic wipes to remove potential contaminants from hands and face prior to breaks or lunch or other hand to mouth activities. It should be noted that exposure during DPT/HSA in an open air environment is not anticipated. During the execution of these two activities limited surface area is being disturbed thereby minimizing the potential to mechanically agitate a sufficient amount of material to become airborne. This minimizes potential exposure. In addition, as these activities are conducted outside where general wind patterns may knock down and disperse airborne dust.</p> <p>When sampling groundwater wells exposure potential is the greatest when opening a well that has been sealed and that gases have built up inside. The following practice should be employed</p> <ul style="list-style-type: none"> - At arms length, open the well and step away. Let the well off gas for a few minutes, while you prepare your equipment. Airborne concentrations will recede and you can continue with your task. <p>2) Transfer of Contamination into Clean Areas - Decontaminate all equipment and supplies between sampling locations and prior to leaving the site. See decontamination of heavy and sampling equipment for direction regarding this task. In addition, the bulk of sampling equipment such as tubing, trowels are disposable therefore dedicated. This will aid in preventing cross contamination.</p> <p>3) Slip, Trip, and Fall Hazards – These hazards shall be minimized by adherence to the practices listed below. This includes</p> <ul style="list-style-type: none"> - Maintain proper housekeeping in all work areas. - Preview and inspect work areas to identify and eliminate slip, trip, or fall hazards. - Cover, guard, barricade, and or place warning postings over/at holes or openings that personnel may fall or step into. - For traversing steep, slippery, or sloped terrain establish rope ladders to control ascent and descent to sampling areas or use alternative pathways. - Use lifeline to sample along waters edge - Use multiple persons and pack small loads to remote locations. <p>4) Strain/Muscle Pulls from Manual Lifting - Use machinery or multiple personnel for heavy lifts. Use proper lifting techniques (See Lifting Mobilization/Demobilization, Page 1 of 6, Table 5-1).</p> <p>5) Cuts and Lacerations – Employ the following measures to reduce and/or eliminate the potential for cuts and lacerations</p> <ul style="list-style-type: none"> - Select and secure the most favorable route to monitoring wells and sampling locations. - Previewing pathways - Where possible, remove or demarcate the physical hazards. - Inspect all cutting equipment to be used to clear access routes for defects. - When cutting items - always use a sharp knife and always cut away from your body. Do not place items to be cut in your opposite hand or on your knee. - Carry all glassware and items that present a potential for cuts, lacerations, or impalement such as machetes or brush hooks in protective packaging or sheathed to avoid breakage or exposure in the event of a slip, trip, and/or fall. <p>6) Ambient Temperature Extremes (Heat/Cold Stress) - Wear appropriate clothing for weather conditions. Provide acceptable shelter and liquids for field crews. Additional information regarding heat/cold stress is provided in Section 4.0 of the Health and Safety Guidance Manual. Care should be exercised when working outdoors due to harmful effects of the sun. To reduce the potential for sunburn and melanoma the following measures should be employed</p> <ul style="list-style-type: none"> - Wear a hat that shades the face, neck, and ears. - Apply sunscreen with a SPF of 15 or higher liberally on any exposed skin at least 15 minutes before going outside, then at least every two hours, more if you are sweating a lot. - Plan/provide suitable equipment to offer shade to avoid the midday sun since the sun's ultraviolet rays are most intense between 10 A.M. and 4 P.M. and can damage your skin even on hazy days. - Wear wrap-around sunglasses to protect the eyes and delicate skin around them. <p>7) Site Characterization - Work areas will be surveyed prior to committing personnel or resources. The survey will be conducted by the FOL and/or the SHSO. The purpose is to identify physical and natural hazards that may impact the proposed work area. These hazards are to be identified, barricaded, or eliminated to the extent possible to minimize potential effect to field crew.</p> <p>8) Insect/Animal Bites and Stings - This is not considered a predominant hazard as these activities are to be conducted in well maintained areas. To combat the potential impact of natural hazards, the following actions are recommended</p> <p>Insects and spiders</p> <ul style="list-style-type: none"> - Wear light color clothes. This will allow easier detection of ticks and insects crawling on your body. It will also assist in heat stress control. - Tape pant legs to work boots to block direct access. This is especially critical when clearing or entering heavy brush and wooded areas. - Do not stick your hand anywhere where you can't see. - When opening existing well heads be cautious of bees and spiders as these are preferred nesting locations. - Use repellents – Permethrin should be applied liberally to the clothing, but not the skin as it may cause irritation. Concentrate on areas where ticks and other insects may access your body such as pant cuffs, shirt to pants, and collars. Products containing DEET can be applied directly to the skin. As always, follow manufacturer's recommendations for use. - If you leave your workboots at the trailer or office over your break make sure you shake them out before sticking your feet in them. <p>See Section 4.0 of the HSGM for more information concerning these natural hazards.</p> <p>9) Suspend or terminate operations during electrical storms. Return to work when directed by the FOL and/or the SHSO.</p>	<p>1) Monitoring shall be conducted to qualify and quantify estimated source concentrations of on-site contaminants in support of the prescribed worker protection levels. Monitoring shall be conducted using Particulate Meter</p> <p><1.0 mg/m3 continue to work, continue to monitor >1.0 mg/m3 use area wetting to control airborne dust emissions.</p> <p>Sustained airborne concentrations above the identified action levels will result in ceasing the operation until airborne concentrations recede to background concentrations.</p> <p>Failure of these concentrations to diminish will require an upgrade in the level of protection and therefore a modification of this HASP. Contact the PHSO.</p> <p>Monitoring shall be conducted at the prescribed depths as indicated on the boring logs at the source (borehole) and drillers breathing zone. Monitoring shall also be conducted at the sampler's location to in the same prescribed frequency when handling samples.</p> <p>Noise monitoring maybe conducted at the discretion of the PHSO and/or the SHSO.</p> <p>Action Level - >85 dBA Participation in the Project Hearing Conservation Program. Hearing protection is required for this operation.</p>	<p>Level D protection will be utilized for the following sampling activities</p> <ul style="list-style-type: none"> - Monitoring Well Development - Hydraulic Conductivity testing - Groundwater Sampling – Peristaltic pumps - Surface/Subsurface soils – MacroCore Samplers, disposable trowels. <p>Sampler/Oversight Personnel</p> <ul style="list-style-type: none"> - Hard Hats - Standard field dress (long pants, Sleeved shirts) - Steel toe safety shoes or work boots - Safety Glasses - Nitrile surgeon style inner gloves for sampling - <i>Hearing protection</i> (when within 25-feet of an operating direct push rig or 35-feet of a HSA Rig) - <i>Impermeable boot covers</i> - <i>Reflective vest for traffic areas</i> <p>Protective Measures as specified for drilling and soil boring will be employed for all subsurface soil sampling at the drill rig.</p> <p>Upgrades to Level C and B protection are not anticipated.</p> <p>Note: Use of respiratory protection will require the implementation of the Tetra Tech NUS, Inc. Respiratory Protection Program provided in the Health and safety Guidance Manual. This action will require this HASP to be modified for this elevated level of protection.</p> <p>Note: The Safe Work Permit(s) for this task (See Attachment IV) will be issued at the beginning of each day to address the tasks planned for that day. As part of this task, additional PPE may be assigned to reflect site-specific conditions or special considerations or conditions associated with any identified task.</p>	<p>Personnel Decontamination</p> <p>Upon completion of the sampling</p> <ul style="list-style-type: none"> - Dedicated trowels, tubing, PPE will be rinsed and bagged for disposal. - Handi-Wipes or similar product will be used to clean hands, prior to moving to the next location. <p>Equipment Decontamination</p> <p>Decontamination of equipment (sampling and hand tools) will proceed as indicated in Table 5-1 of this HASP and/or the Workplan.</p>

**TABLE 5-1
TASKS/HAZARDS/CONTROL MEASURES NAS PENSACOLA, PENSACOLA, FLORIDA**

Tasks/Operation/Locations	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring - Type and Action Levels	Personal Protective Equipment <i>(Items in italics are deemed optional as conditions or the FOL or SHSO dictate.)</i>	Decontamination Procedures
<p>Decontamination of Heavy Equipment using pressure washers or steam cleaners.</p> <p>Decontamination of sampling equipment using 5-gallon buckets/scrub brushes, etc..</p> <p>It is anticipated that this activity will take place at a temporary centralized location. Gross contamination will be removed to the extent possible at the site. Contaminated tooling then will be wrapped in polyethylene sheeting for transport to the centralized location for a full decontamination and evaluation.</p>	<p>Chemical hazards:</p> <p>1) Previous analytical data identified the following compounds as contaminants of concern</p> <p>It is however, not anticipated to be a exposure hazard during this activity</p> <p>2) Decontamination fluids - Liquinox (detergent); isopropanol (decontamination solvent)</p> <p>Physical hazards:</p> <p>3) Lifting (strain/muscle pulls)</p> <p>4) Noise in excess of 85 dBA</p> <p>5) Flying projectiles</p> <p>6) Falling hazards</p> <p>7) Slips, trips, and falls</p> <p>Natural hazards:</p> <p>8) Inclement weather</p>	<p>1) and 2) Employ protective equipment to minimize contact with site contaminants and hazardous decontamination fluids. Control potential non-occupational exposures through good work hygiene practices (i.e., avoid hand to mouth contact; wash hands and face before breaks and lunch; minimize contact with contaminated media). Obtain and familiarize yourself with manufacturer's MSDS for any decontamination fluids used on-site. Solvents may only be used in well-ventilated areas, such as outdoors. Use appropriate PPE as identified on MSDS or within this HASP. All chemicals used must be listed on the Chemical Inventory for the site, and site activities must be consistent with the Hazard Communication Program provided in Section 5.0 of the TtNUS Health and Safety Guidance Manual.</p> <p>3) Use multiple persons where necessary for lifting and handling heavy equipment for decontamination purposes.</p> <ul style="list-style-type: none"> - Employ proper lifting techniques as described in Table 5-1, Mobilization/Demobilization. <p>4) Wear hearing protection when operating the pressure washer and/or steam cleaner. Sound pressure levels measured during the operation of similar pieces of equipment indicate a range of 87 to 93 dBA.</p> <p>5) Use eye and face protective equipment when operating the pressure washer and/or steam cleaner, due to flying projectiles. All other personnel must be restricted from the area. In addition to minimize hazards (flying projectiles, water lacerations and burns) associated with this operation, the following controls will be implemented</p> <ul style="list-style-type: none"> - A Fan Tip 25° or greater will be used on pressurized systems over 3,000 psi. This will reduce the possibility of water lacerations or punctures. - Do not point the wand at persons or place against any part of your body. - Thermostat control will be in place and operational to control the temperature levels of the water where applicable. - Visual evaluations of hoses and fittings for structural defects - Construct deflection screens as necessary to control overspray and to guard against dispersion of contaminants driven off by the spray. <p>6) Insure wash and drying racks are of suitable construction to prevent heavier items such as auger flights and drill rods from falling and striking someone during the decontamination process.</p> <p>7) The decontamination pad should be constructed to contain wash waters generated during decontamination procedures. Temporary decontamination pads are usually 10-30 mil polyethylene or polyvinyl chloride tarp construction. Although these items when used as a liner offer containment, they also present a slipping hazard. When these temporary liners are employed, it is recommended that a light coating of sand be spread over the walking surface to provide traction.</p> <ul style="list-style-type: none"> - In addition, adequate slope should be provided to the pad to permit drainage away from the object being cleaned. The collection point for wash waters should be of adequate distance that the decontamination workers do not have to walk through the wash waters while completing their tasks. - Hoses should be gathered when not in use to eliminate potential tripping hazards. <p>8) Suspend or terminate operations until directed otherwise by SHSO.</p>	<p>Use visual observation and real-time monitoring instrumentation to ensure all equipment has been properly cleaned of contamination and dried.</p> <p>Monitoring instrumentation will be employed to determine If contaminants and all of the decontamination solvent (isopropanol) (where use is applicable) has been removed through the rinse process. Any positive indication/results greater than background require the article that has been decontaminated to be re-rinsed and scanned again. If necessary this process should be repeated until no measurable indication of contaminants and/or the decontamination solvent exists.</p>	<p>For Heavy Equipment</p> <p>This applies to pressure washing and/or steam cleaning operations and soap/water wash and rinse procedures.</p> <p>Level D Minimum requirements:</p> <ul style="list-style-type: none"> - Hard hat with splash shield - Standard field attire (Long sleeve shirt; long pants) - Safety shoes (Steel toe/shank) - Chemical resistant boot covers - Nitrile outer gloves over nitrile inner gloves - Safety glasses underneath a splash shield - Hearing protection (plugs or muffs) - <i>Hooded PVC Rainsuits or PE or PVC coated Tyvek.</i> Impermeable aprons may be used instead of coveralls if they offer adequate protection against overspray and back splash. <p>For sampling equipment (trowels, split spoons,, etc.), the following PPE is required</p> <p>Note: Consult MSDS for additional PPE guidance. Otherwise, observe the following.</p> <p>Level D Minimum requirements -</p> <ul style="list-style-type: none"> - Standard field attire (Long sleeve shirt; long pants) - Safety shoes (Steel toe/shank) - Nitrile outer gloves over nitrile inner gloves - Safety glasses - <i>Impermeable apron</i> <p>Note: The Safe Work Permit(s) for this task (See Attachment IV) will be issued at the beginning of each day to address the tasks planned for that day. As part of this task, additional PPE may be assigned to reflect site-specific conditions or special considerations or conditions associated with any identified task.</p>	<p>Personnel Decontamination will consist of a soap/water wash and rinse for reusable and non-reusable outer protective equipment (boots, gloves, PVC splash suits, as applicable).</p> <p>The sequential procedure is as follows:</p> <p>Stage 1: Equipment drop, remove outer protective wrapping; personnel will wash hand tools and pass hand equipment through as necessary.</p> <p>Stage 2: Soap/water wash and rinse of outer boots and gloves</p> <p>Stage 3: Soap/water wash and rinse of the outer splash suit or apron as applicable</p> <p>Stage 4: Disposable PPE will be removed and bagged.</p> <p>Stage 5: Wash face and hands</p> <p>Equipment Decontamination - All heavy equipment decontamination will take place at a centralized decontamination pad utilizing a steam cleaner or pressure washer.</p> <ol style="list-style-type: none"> 1. Remove gross (visible) materials using scrapers, shovels as necessary (soils, etc.) 2. Use the pressure washer/steam cleaner remove remaining visible debris. 3. As necessary, follow up with scrub brushes with Alconox or Liquinox detergent wash. 4. Potable water rinse using pressure washer/steam cleaner as necessary 5. DI water rinse 6. Air dry <p>Heavy equipment will have the wheels and tires cleaned along with any loose debris removed, prior to transporting to the central decontamination area.</p> <p>Sampling Equipment Decontamination</p> <ol style="list-style-type: none"> 1. Remove heavy materials (soils, etc.) 2. Alconox or Liquinox detergent wash 3. Potable water rinse 4. Solvent rinse (Isopropanol) 5. DI water rinse 6. Air dry <p>All equipment used in the exclusion zone will require a complete decontamination between locations and prior to removal from the site.</p> <p>The FOL or the SHSO will be responsible for evaluating equipment arriving on-site, leaving the site, and between locations. No equipment will be authorized access, exit, or movement to another location without this evaluation.</p>

**TABLE 5-1
TASKS/HAZARDS/CONTROL MEASURES NAS PENSACOLA, PENSACOLA, FLORIDA**

Tasks/Operation/Locations	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring - Type And Action Levels	Personal Protective Equipment <i>(Items In Italics Are Deemed Optional As Conditions Or The FOL Or the SHSO Dictate.)</i>	Decontamination Procedures
<p>Surveying – Geographical</p> <p>The locations identified to be surveyed are largely within improved and well maintained areas. Therefore, the necessity to cut clear lines from vertical and horizontal control monuments is not anticipated.</p>	<p>Chemical hazards:</p> <p>Significant exposure to site contaminants is not anticipated during this task.</p> <p>Physical hazards:</p> <p>1) Slips, trips, and falls - A review of accident/injury statistics associated with land surveying identify slips, trips, and falls as the number one injury, followed by cuts and lacerations, and animal/insect bites.</p> <p>2) Cuts and abrasions</p> <p>3) Traffic hazards</p> <p>Natural hazards:</p> <p>4) Inclement weather</p> <p>5) Insect/animal bites or stings, poisonous plants, etc.</p>	<p>Physical hazards:</p> <p>1) Mark/delineate/barricade trip hazards. Where shoes with rugged soles to provide adequate traction.</p> <p>2) If hand tools (brush hooks, machetes, etc.) are necessary to clear and carry lines and bench marks to the area of operation the following precautions are recommended:</p> <ul style="list-style-type: none"> - Ensure handles are of good construction (no cracks, splinters, loose heads/cutting apparatus. - Ensure all cutting tools are maintained. Blades shall be sharp without nicks and gouges in the blade. - All hand tools (brush hooks, machetes, etc.) with cutting blades shall be provided with a sheath to protect individuals, when not in use. - All personnel will maintain a 10-foot perimeter around persons clearing brush. <p>Note: It is not anticipated that trees >2-inch girth will be required to be dropped as part of this operation or that significant amount of clearing will be required. Therefore the use of chainsaws and chippers is not anticipated.</p> <p>Note: Where possible it is recommended that heavy equipment (tractors and brush hogs or similar equipment) be used to clear grid lines and lines of site.</p> <p>3) Vehicular traffic hazards</p> <ul style="list-style-type: none"> - Wear high visibility vests when working in traffic patterns. - Provide signage in areas where traffic patterns will be altered (Survey crew working; lane restriction, etc.). <p>Natural hazards:</p> <p>4) Electrical storms or high winds - Suspend or terminate operations until directed otherwise by SHSO.</p> <p>Harmful effects of the Sun - Care should be exercised when working outdoors due to harmful effects of the sun. To reduce the potential for sunburn and melanoma the following measures should be employed</p> <ul style="list-style-type: none"> - Wear a hat that shades the face, neck, and ears. - Apply sunscreen with a SPF of 15 or higher liberally on any exposed skin at least 15 minutes before going outside, then at least every two hours, more if you are sweating a lot. - To the extent possible, plan/provide suitable equipment to offer shade to avoid the midday sun since the sun's ultraviolet rays are most intense between 10 A.M. and 4 P.M. and can damage your skin even on hazy days. - Wear wrap-around sunglasses to protect the eyes and delicate skin around them. <ul style="list-style-type: none"> - 5) Insect/Animal Bites and Stings - This is not considered a predominant hazard as these activities are to be conducted in maintained areas. <p>Insects and spiders</p> <ul style="list-style-type: none"> - Wear light color clothes. This will allow easier detection of ticks and insects crawling on your body. It will also assist in heat stress control. - Tape pant legs to work boots to block direct access. This is especially critical when clearing or entering heavy brush and wooded areas. - Use insect repellents – Permethrin should be applied liberally to the clothing, but not the skin as it may cause irritation. Concentrate on areas where ticks and other insects may access your body such as pant cuffs, shirt to pants, and collars. Products containing DEET may be applied directly to the skin. As always, follow manufacturer's recommendations for use. - Upon exiting the high brush and wooded areas perform a close body inspection to remove any ticks or other insects that have attached to your clothing or skin. - Do not stick your hand anywhere where you can't see. - When opening existing well heads be cautious of bees and spiders as these are preferred nesting locations. <p>See Section 4.0 of the TiNUS Health and Safety Guidance Manual for additional information concerning natural hazards.</p>	<p>Air monitoring is not required given the unlikelihood that airborne contaminants will be present. The potential for exposure to site contaminants during this activity is considered minimal.</p>	<p>Surveying activities shall be performed in Level D protection</p> <p>Level D Protection consists of the following:</p> <ul style="list-style-type: none"> - Standard field dress including sleeved shirt and long pants - Shoes rugged lug sole for traction - Work gloves shall be worn when clearing brush. - <i>Safety glasses, hard hats (if working near machinery, overhead hazards, or clearing brush)</i> - <i>Snake chaps for heavily wooded area where encounters are likely.</i> - <i>Tyvek coveralls may be worn to provide additional protection against poisonous plants and insects, particularly ticks.</i> - <i>Reflective or blaze orange vests should be worn when working along traffic thoroughfares.</i> <p>Note: The Safe Work Permit(s) for this task (See Attachment IV) will be issued at the beginning of each day to address the tasks planned for that day. As part of this task, additional PPE may be assigned to reflect site-specific conditions or special considerations or conditions associated with any identified task.</p>	<p>Personnel Decontamination - A structured decontamination is not required as the likelihood of encountering contaminated media is considered remote. However, survey parties should inspect themselves and one another for the presence of ticks when exiting wooded areas, grassy fields, etc. This action will be employed to stop the transfer of these insects into vehicles, homes, and offices. In addition, early detection shall provide for early removal.</p>

**TABLE 5-1
TASKS/HAZARDS/CONTROL MEASURES NAS PENSACOLA, PENSACOLA, FLORIDA**

Tasks/Operation/Locations	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring - Type And Action Levels	Personal Protective Equipment <i>(Items In Italics Are Deemed Optional As Conditions Or The FOL Or the SHSO Dictate.)</i>	Decontamination Procedures
<p>IDW Management and Handling</p> <p>This activity includes the following tasks:</p> <ul style="list-style-type: none"> - Containerization - Labelling - Staging - Monitoring <p>of IDW generated in support of site activities.</p> <p>Soils will be loaded into a roll-off box; waters will be containerized in 55-gallon drums.</p> <p>Dedicated equipment including</p> <ul style="list-style-type: none"> - PPE - Tubing - Disposable trowels, etc. <p>Will have any visible materials removed then rinsed with potable water prior to disposal as normal refuse.</p>	<p>Chemical hazards: The only anticipated chemical hazard associated with IDW management is the potential for a spill. In situations such as that the spill containment program identified in Section 9.0 of this HASP will be employed.</p> <p>Physical hazards:</p> <ol style="list-style-type: none"> 1) Strains and sprains 2) Back injuries 3) Compressions 4) Loading bulk transport containers 	<p>Chemical hazards: It is not anticipated that chemical hazards will be significant during this operation, as the IDW will be in sealed containers. It is anticipated that the IDW will represent a limited chemical hazard, if the container is breached. Control measures in this case will represent PPE and good work hygiene practices to control potential exposures during the implementation of the Spill Containment Program (See Section 9.0 of this HASP).</p> <p>Roll-off Box specifications – Prior to placing soils inside the box will be</p> <ul style="list-style-type: none"> - Lined with plastic sheeting - The gate will be sealable to prevent lose of material or leaks during movement, transfer or disposal - Cover with a tarp when not in use (to prevent the collection of rainwater) - The box will be properly labeled just as any other container <p>55-Gallon Drums – Drums will be handled in the following manner</p> <ul style="list-style-type: none"> - All drums will be closed and sealed when not in use - Drums will be properly labeled as indicated below - The outer shell will be wiped down as necessary <p>Temporary containers (water containers, buckets, etc.) will be</p> <ul style="list-style-type: none"> - Properly labeled - When working at a well sampling, plastic or preferably a mortar tub will be used to provide secondary containment for incidental spills during sampling - A bucket of wash water will be readily available to rinse dedicated equipment prior to disposal. <p>Physical hazards:</p> <p>1 & 2) Strains and sprains (lifting hazards)/Back Injuries – The predominant hazard associated with this activity is the movement of full or partially full 55-gallon drums of water. To minimize hazards of this nature the following provisions shall be incorporated as applicable:</p> <ul style="list-style-type: none"> - Use machinery (preferred method) or multiple personnel for heavy lifts - Use proper lifting techniques <ul style="list-style-type: none"> a. Lift with your legs, not your back, bend your knees move as close to the load as possible, and ensure good hand holds are available. b. Minimize the horizontal distance to the center of the lift to your center of gravity. c. Minimize turning and twisting when lifting as the lower back is especially vulnerable at this time. d. Break lifts into steps if the vertical distance (from the start point to the placement of the lift) is excessive. e. Periods of high frequency lifts or extended duration lifts should provide sufficient breaks to guard against fatigue and injury. <p>In determining whether you can lift or move an item several factors must be considered, these are as follows:</p> <ul style="list-style-type: none"> - Area available to maneuver the lift. - Area of the lift – Work place clutter, slippery surfaces, rough terrain - Overall physical condition <p>3) Compressions – Another hazard frequently associated with this task is the compression of hands and fingers when placing the containers on pallets. This typically occurs when rolling and lowering the container in its place. To combat this hazard, the following provision shall be employed:</p> <p>Material handling devices shall be used for moving drums within the satellite storage area. This includes drum dollies with pneumatic tires, drum grapplers, etc. to handle drums of IDW. These pieces of equipment are engineered to allow placement of these containers while keeping hands from pinch/compression points.</p> <p>Reminder: The drums you are attempting to move, lift and/or relocate may weigh on the average of</p> <ul style="list-style-type: none"> - 55-Gallon container of purge or decontamination waters = 475 lbs. (including the container) <p>Satellite Storage Area – Emphasis has been placed on the physical surroundings and how they can influence the potential hazards associated with material handling aspects of this task. To further reduce material handling hazards, support spill containment and control, and sampling when necessary, the IDW storage area should be structured as follows:</p> <ul style="list-style-type: none"> - Maximum 4-drums to a pallet with retaining ring bolt and label on the outside for easy access/reference. - Maintain a minimum of 4-feet between each row of pallets. This is the minimum distance necessary to wheel drums on a drum dolly - If the site is not secured, the satellite storage area shall be fenced and signs placed indicating the following: <ol style="list-style-type: none"> a. Primary Point of Contact (Preferably someone at the Base, and make sure they know they been identified as the Primary Point of Contact). b. Phone Number c. Emergency Contact (If different from the Primary) - Provide a Drum/Container Inventory to the Primary Point of Contact and to Emergency Services, if they deem it necessary. The inventory should contain: <ol style="list-style-type: none"> a. Each drum shall be assigned a unique identification number. This number shall be placed on the label and drum shell using a paint marker (Note: Do not paint the number on the lid as these have a tendency to get exchanged from time to time.) b. Types of waste materials (Subsurface soils, drill cuttings; purge/development waters, etc.) c. Volumes (Full or level associated with the container after completion of the project location) d. Where it was derived from (IDW should be separated by SWMU and media) e. Dates (For all filled containers and at the completion of work for that area or SWMU) f. Contact – For more information <p>Note: All drums should be labeled with the same information.</p>	<p>None Required, unless spill containment provisions are invoked. Then monitoring will proceed as described in the activity associated with the task when the materials were generated such as Soil boring or well installation.</p>	<p>Level D - (Minimum Requirements)</p> <ul style="list-style-type: none"> - Standard field attire (Sleeved shirt; long pants) - Safety shoes (Steel toe/shank) - Leather or canvas work gloves - <i>Safety glasses (When utilizing cables or slings to move the containers)</i> - <i>Hardhat (when overhead hazards exists, or identified as a operation requirement)</i> <p>PPE changes may be made with the implementation of the Spill Containment Program. This represents the only anticipated modification to this level of protection.</p>	<p>Not required, unless the implementation of the Spill Containment Program is required due to a spill and/or release. At that point the decontamination procedures for those activities such as soil borings and/or well installation. The reference reflects the tasks conducted when the materials were generated.</p>

6.0 HAZARD ASSESSMENT

This section provides information regarding the chemical, physical, and natural hazards associated with the sites to be investigated and the activities that are to be conducted as part of the scope of work. Table 6-1 provides information on potential chemical contaminants, including exposure limits, symptoms of exposure, physical properties, and air monitoring and sampling data.

6.1 CHEMICAL HAZARDS

The potential health hazards associated with NAS Pensacola include inhalation, ingestion, and dermal contact of various contaminants that may be present in shallow and deep soils and groundwater. As the focus of this field investigation is to sample various media, concentrations of the chemical hazards present are not fully determined. Based on the site history and the most recent sampling efforts, PAHs and metals with emphasis on lead as the controlling toxicity substance have been identified as the primary contaminants:

Lead - Lead is also harmful to adults. Adults can suffer from:

- Difficulties during pregnancy
- Other reproductive problems (in both men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

Polyaromatic Hydrocarbons (PAHs) – Generally speaking, these substances are shown to be skin, eye, and mucous membrane irritants. Some of the isomers such as cresol/creosote (fluoranthene and pyrene) are also considered to be photosensitizers. These substances are considered mildly to be moderately toxic by ingestion.

Benzo(a)pyrene is regulated primarily as a result of potential carcinogenic properties and is listed by NTP, IARC, and ACGIH as carcinogenic.

Acute exposures may result in difficulty breathing, respiratory failure and skin and eye burns. Chronic exposure may damage the liver, kidneys, lungs and skin. Due to age, dilution, and impurities these materials may not represent the pure compounds. It is anticipated that these substances if encountered will be in a particulate form.

Metals – Previous sampling results have indicated that various metals were also encountered in excess of FDEP screening guidelines including antimony, arsenic, copper, iron, lead, nickel, zinc, and vanadium. Much of the toxicology information available discusses exposure to metal fume through inhalation. Generally speaking, exposure to these metals in this form (fume) and particulate form may result in irritation of the mucous membranes of the respiratory tract, possible dryness of the throat, coughing, and sometimes accompanied by a metallic taste in the mouth. Gastrointestinal disturbances (nausea, vomiting, diarrhea, colicky abdominal pain) are characteristic of exposure through ingestion. Arsenic and nickel have been identified as carcinogens.

It is anticipated that the greatest potential for exposure to site contaminants is during intrusive activities (soil borings, sampling, etc.). Exposure to these compounds is most likely to occur through inhalation or dermal contact of contaminated soil or water, or through ingestion via hand-to-mouth contact during soil disturbance activities. For this reason, PPE and basic hygiene practices (e.g., washing face and hands before leaving site) will be extremely important. Inhalation exposure will be monitored using a Particulate Meter.

Potential exposure - Given the nature of planned activities, source concentrations, and environmental setting (conducted outside in the open air), it is highly unlikely that any appreciable airborne concentrations will be present.

Other sources of potential chemical exposure are decontamination fluids (e.g., Liquinox, isopropanol), and analytical preservatives. For any substances brought onto the site, the SHSO is responsible for instituting a site-specific Hazard Communication Program (see Section 5.0 of the TtNUS Health and Safety Guidance Manual) and for collecting the appropriate Material Safety Data Sheets (MSDS) from the chemical manufacturers/suppliers. The SHSO is also responsible for completing the Safe Work Permit for the decontamination task using the appropriate MSDS and for reviewing the contents of the MSDSs and Safe Work Permit with anyone who will use these substances.

**TABLE 6-1
CHEMICAL, PHYSICAL, AND TOXICOLOGICAL DATA
NAS PENSACOLA, FLORIDA**

Substance	CAS No.	Air Monitoring/Sampling Information		Exposure Limits	Warning Property Rating	Physical Properties	Health Hazard Information
Lead	7439-92-1	Particulate form - Unable to be detected by either PID or FID.	Air sample using a mixed cellulose ester filter; or HNO ₃ or H ₂ O ₂ desorption; or Atomic absorption detection. NIOSH Method #7082 or #7300.	OSHA: 0.05 mg/m ³ ACGIH: 0.05 mg/m ³ NIOSH: 0.10 mg/m ³ IDLH: 100 mg/m ³ as lead	The use of a air purifying, full-face respirator with high efficiency particulate air filter for up to 2.5 mg/m ³ . Recommended gloves: This is in the particulate form. Therefore any glove suitable to prevent skin contact (Nitrile has been the one most widely used for the other substances).	Boiling Pt: 3164°F; 1740°C Melting Pt: 621°F; 327°C Solubility: Insoluble Flash Pt: Not applicable (Airborne dust may burn or explode when exposed to heat, flame, or incompatible chemicals) LEL/LFL: Not applicable UEL/UFL: Not applicable Vapor Density: Not available Vapor Pressure: 0 mmHg Specific Gravity: 11.34 Incompatibilities: Strong oxidizers, peroxides, sodium acetylide, zirconium, and acids Appearance and Odor: Metal: A heavy ductile, soft gray solid.	Overexposure to this substance via ingestion or inhalation may result in metallic taste in the mouth, dry throat, thirst, Gastrointestinal disorders (burning stomach pain, nausea, vomiting, possible diarrhea sometimes bloody or black, accompanied by severe bouts of colic), CNS effects (muscular weakness, pain, cramps, headaches, insomnia, depression, partial paralysis possibly coma and death. Extended exposure may result in damage to the kidneys, gingival lead line, brain, and anemia.

6.2 PHYSICAL HAZARDS

In addition to the chemical hazards discussed above, the following physical hazards may be present during the performance of the site activities.

- Slips, trips, and falls
- Cuts (or other injuries associated with hand tool use)
- Lifting (strain/muscle pulls)
- Ambient temperature extremes (cold and heat stress)
- Pinches and compressions
- Heavy equipment hazards (rotating equipment, hydraulic lines, etc.)
- Energized systems (contact with underground or overhead utilities)
- Vehicular and foot traffic
- Noise in excess of 85 dBA
- Flying projectiles

Each of these physical hazards is discussed in greater detail in Section 4.0 of the TtNUS health and Safety Guidance Manual. Additionally, information on the associated control measures for these hazards are discussed in Table 5-1 of this HASP.

6.3 NATURAL HAZARDS

Insect/animal bites and stings, poisonous plants, and inclement weather are natural hazards that may be present given the location of activities to be conducted. As previously discussed, this area is well maintained and therefore hazards of this nature are not considered predominant hazards. It should be noted that activities along the water may increase the potential to encounter snakes, insects - ticks, bees, mosquitoes, snakes, alligators, and poisonous vegetation.

For more information concerning these hazards see Section 4.0 of the HSGM. The following information is specific to the region and therefore not in the HSGM.

6.3.1 Insect Bites and Stings

Various insects and animals may be present and should be considered. For example, fire ants present a unique situation when working outdoors in the southern portion of the United States. Their aggressive behavior and their ability to sting repeatedly can pose a unique health threat. The sting injects venom (formic acid) that causes an extreme burning sensation. Pustules form which can become infected if scratched. Allergic reactions of people sensitive to the venom include dizziness, swelling, shock and in

extreme cases unconsciousness and death. People exhibiting such symptoms should see a physician. Fire ants can be identified by their habitat. They build mounds in open sunny areas sometimes supported by a wall or shrub. The mound has no external opening. The size of the mound can range from a few inches across to some which are in excess of two feet or more in height and diameter. When disturbed they defend it by swarming out and over the mound, even running up grass blades and sticks.

Insect/animal bites and stings are difficult to control given the climate and environmental setting of NAS Pensacola. However, in an effort to minimize this hazard the following control measures will be implemented where possible.

- Commercially available bug sprays and repellents will be used whenever possible – Pesticides analytical screening includes chlordane, endrin, lindane, methoxychlor, toxaphene and heptachlor. Commercially available repellants may be used providing they don't contain substances which appear on the analytical list for pesticide analysis. Products such as Permanone should not be applied directly to the skin due to potential irritation. This product, when permitted for use, should be applied over clothing articles. Products such as DEET can be applied directly to the skin. In all cases follow the manufacturers instructions.
- Where possible, loose-fitting and light-colored clothing with long sleeves should be worn. This will also aid in insect control by providing a barrier between the field person and the insects and to provide easy recognition of crawling insects against the lighter background. Pant legs should be secured to the work-boots using duct tape to prevent access by ticks. Mosquito nets are also recommended for use when commercially available repellents are not permitted.
- Clothing/limited body checks for ticks and other crawling insects should be conducted upon exiting heavily vegetated areas. Workers should perform a more detailed check of themselves when showering in the evening. Ticks prefer moist areas of the body (arm-pits, genitals, etc.) and will migrate to those locations. However, in many of the reported cases attachment has occurred on the back near the shoulders.
- The FOL/SHSO will preview access routes and work areas in an effort to identify physical hazards including nesting areas in and around the work sites. These areas will be flagged and communicated to site personnel.
- The FOL/SHSO must determine if site personnel (through completion of Medical Data Sheets), suffer allergic reactions to bee and other insect stings and bites. Field crew members who are allergic to bites

should have their emergency kit containing antihistamine and a preloaded syringe of epinephrine readily available.

Any allergies (insect bites, bee stings, etc.) must be reported on the Medical Data Sheet and to the SHSO.

6.3.1.1 Tick and Mosquito Transmitted Illnesses and Diseases

Ticks and mosquitoes have been identified in the transmission of diseases including Lyme's disease and malaria. Warm months (Spring through early Fall) are the most predominant time for this hazard. Information concerning Lyme's Disease including recognition, evaluation, tick removal, and control is provided in Section 4.0 of the TtNUS Health and Safety Guidance Manual.

Malaria may occur when a mosquito or other infected insect sucks blood from an infected person, and the insect becomes the carrier to infect other hosts. The parasite reproduces within the mosquito, and is then passed on to another person through the biting action. Acute symptoms include chills accompanied by fever and general flu like symptoms. This generally terminates in a sweating stage. These symptoms may recur every 48 to 72 hours.

West Nile Virus (WNV)

The WNV is a type of virus that causes encephalitis or inflammation of the brain. The virus is transmitted by mosquitoes that acquire it from infected birds. Symptoms generally occur five to 15 days following the bite of an infected mosquito, and range from a slight fever or headache to rapid onset of severe headache, high fever, stiff neck, muscle weakness, disorientation and death.

WNV encephalitis has no specific treatment. In northern areas of the world, WNV encephalitis cases occur primarily in the late summer or early fall. In southern climates, where temperatures are milder, WN encephalitis can occur year round. There is no vaccine.

Precautions include:

- Limit outdoor activities during peak mosquito times – at dusk and dawn.
- Avoid standing water
- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Apply insect repellent according to manufacturers instruction to exposed skin. An effective repellent will contain 20% to 30% DEET (N,N-diethyl-meta-toluamide). Avoid products containing more than 30% DEET.

- Spray clothing with repellents containing permethrin or DEET, mosquitoes may bite through thin clothing.

6.3.2 Snakes of Florida

The poisonous snakes found in Florida are the coral snake, cottonmouth or water moccasin, copperhead, and the pygmy, timber, and diamondback rattlesnakes. Initial efforts will be directed to avoid, where possible, nesting and territorial areas. Again, it is not anticipated that these reptiles will be encountered the following is provided only for informational purposes.

Coral Snake

Coral Snakes are extremely poisonous snakes with small, blunt heads and brightly colored bodies. They do not strike as effectively as other venomous snakes, but they bite. They are dangerous if stepped on or handled. The *eastern* coral snake generally ranges from 20 to 40 inches in length. Its body is encircled by broad black and red bands separated by narrow yellow ones. Just behind the snake's black snout is a wide yellow band followed by a black band. Some are covered with black pigment that hides much of the red color. Some nonpoisonous snakes look like coral snakes because they have similar coloring. But coral snakes have red bands next to yellow ones. The harmless snakes have red bands next to black ones.

Cotton Mouth or Water Moccasin

The water moccasin is a pit viper. It has a hollow, or pit, in the side of its head, between and slightly below the eye and nostril. Several harmless water snakes have a broad head like the moccasin, but they lack the pit. Adult water moccasins are about 3 ½ feet long, though some grow to more than 5 feet long. They usually have broad dark bands across their bodies. Water moccasins feed on a wide variety of animals, including frogs, fish, small mammals, and birds. Water moccasins are most often seen in watery places, in the swampy backwaters of rivers and streams, and on marshy lakeshores. The bite of the water moccasin is highly dangerous and may be fatal. This snake is also called a cottonmouth because when threatened it throws back its head and flashes its white-lined mouth as a warning signal.

Copperhead

Copperhead is also a poisonous pit viper. Its body has broad chestnut-red bands. Most copperheads are about 2 ½ feet long while the largest grow to about 4 feet. The copperhead bites people more often than most rattlesnakes, partly because it is silent and smaller, and is not so quickly noticed. The bite is seldom fatal to adults. This reptile usually eats rodents and other small mammals by killing them with

their poison and swallowing them whole. Sometimes the snake eats insects and frogs. The copperhead can be identified by the presence of a pit in front of and below each eye. The snake's nostril is in front of the pit.

Rattlesnake

The rattlesnake is a pit viper with a rattle on the end of its tail. The rattle is used to warn enemies to stay away. However, sometimes they give no warning before they bite. The rattlesnake always lifts its tail when it sounds where as harmless snakes that mimic the rattlesnake move their tail back and forth on top of dry leaves or grass.

The diamondback rattler is the heaviest of the poisonous snakes, though not the longest. It gets its name because diamond-shaped blotches edged with yellow cover its body. Diamondbacks rarely grow over feet long.

Pigmy rattlesnakes are short, relatively thick-bodied snakes. They have a dark line through the eye on each side of the face and a series of dark, roughly circular spots running down the center of the back. These dorsal spots interrupt a thin reddish-orange stripe that runs along the midbody line. Pigmy rattlesnakes first line of defense is to remain motionless. Their color pattern makes them hard to see in grass or leaf litter, especially when they are coiled. They almost never warn approaching people by sounding their rattle. They are likely to remain motionless until stepped on or over.

The Timber Rattlesnake has a large body and ranges in length of five to six feet. It has a broad triangular head, vertical pupils and heat sensitive pits. The body color may be yellow, gray, dark brown or black, with dark, V-shaped crossbands across the back. The head is usually unpatterned and is covered with many small scales. A distinct rattle on the end of a darkly colored tail produces a buzzing sound when vibrated.

Rattlesnakes send out poison through two long hollow fangs, in its upper jaw. The poison forms in a pair of glands behind each eye on the upper jaw. The rattlesnake's fangs are folded back in the mouth when not in use. When an angry rattlesnake strikes, the fangs are erected and the mouth opened wide. Most rattlesnakes eat birds, small mammals, amphibians and reptiles. The larger rattlers rank among the most dangerous of snakes and should be avoided

6.3.2.1 Snake Bite

However, should field personnel come in contact with these animals and receive a bite, the following actions are necessary:

- Obtain a detailed description of the snake. This and the bite mark will enable medical personnel administering medical aid to provide prompt and correct antidotes, as necessary.
- Immobilize the bite victim to the extent possible. Physical exertion will mobilize the toxins (if poisonous varieties) from the bite point systemically through the body.
- Apply a pressure wrap (for extremities), just above and over the bite area. With a couple wraps of the pressure wrap in place over the bite area, apply a splint, and continue the application of the pressure wrap. The purpose for the splint is to restrict the movement of the extremity, this along with the pressure wrap will aid in restricting the toxins from leaving the site of the bite.
- Seek medical attention immediately.

6.3.3 Inclement Weather

Project tasks under this Scope of Work will be performed outdoors. As a result, inclement weather may be encountered. In the event that adverse weather conditions arise (electrical storms, hurricanes, extreme heat and/or cold, etc.), the FOL and/or the SHSO will be responsible for temporarily suspending or terminating activities until hazardous conditions no longer exist.

Tropical Storms and Hurricanes

Pensacola is in a tropical storm, hurricane prone area, the following information is supplied to explain the potential severity of these natural hazards. The decision to curtail operations and evacuate the area should be made by the FOL, TOM, and the HSM.

During the early summer to late fall months, typically from the first of June through the end of November, disturbances migrating off the West Coast of Africa move into the Atlantic Ocean and develop into tropical cyclones known as tropical storms and hurricanes. Many of these cyclones become strong enough to threaten life and property along the Eastern Seaboard and Gulf Coast. There are three main threats associated with tropical storms and hurricanes:

- High winds
- Excessive rainfall
- Storm surge

The impacts of high winds and excessive rainfall occur hours, maybe days, before the tropical storm or hurricane makes landfall. However, the storm surge accompanies the storm or hurricane at the time that landfall occurs.

High Winds

Sustained winds vary greatly from storm to storm, but can range from 39 to 73 miles per hour (wind speeds associated with a tropical storm) to greater than 74 miles per hour (minimal wind speed for a Category 1 hurricane). The table below compares the type of storm or hurricane and the corresponding wind speed.

TABLE 6-2
TROPICAL STORM/HURRICANE RATING SCALE

TYPE	CATEGORY*	WINDS (MPH)
Tropical Depression	NA	>35-38
Tropical Storm	NA	39 – 73
Hurricane	1	74 – 95
Hurricane	2	96 – 110
Hurricane	3	111 – 130
Hurricane	4	131 – 155
Hurricane	5	>155

NA – Not Applicable

* Based on the Saffir-Simpson scale

In addition to strong winds, there is the threat of debris (i.e. building material, trees, etc.) becoming airborne projectiles as they are carried by the high winds. Thunderstorms and tornadoes embedded within the tropical storm or hurricane can further increase the wind speeds on a localized level.

Excessive Rainfall

Heavy rains associated with tropical storms and hurricanes also vary greatly from storm to storm. On average, an inch of rainfall an hour is not uncommon with major hurricanes, somewhat lesser amounts with tropical storms. However, the primary threat is not the intensity of rain, but the duration of rainfall. Since many tropical storms and hurricanes are slow-movers, they are capable of producing sustained heavy rainfall over a long period of time. It is not uncommon for an area to receive nearly 20 inches of rain in 24 hours. Under these conditions, street; stream and creek flooding is inevitable only to be exacerbated by locally heavier rains from thunderstorms.

Storm Surge

The storm surge is an abnormal rise in sea level accompanying a hurricane or tropical storm. The height of the storm surge (usually measured in feet) is the difference in sea level from the observed level (during the storm) and the level that would have occurred in the absence of the storm or hurricane. The more intense the storm or hurricane the higher the storm surge. Storm surges become even higher if they occur during periods of high tide.

The following table defines some of the terminology and possible calls to action regarding tropical cyclones:

TABLE 6-3

**TROPICAL STORM/HURRICANE
WATCH AND WARNING**

STORM DESCRIPTION	DEFINITION	ACTION
Tropical Storm Watch	Tropical storm conditions are possible in the specified area of the watch, usually within 36 hours	Weather conditions should be monitored for further advisories. Prepare for possible evacuation by local officials
Tropical Storm Warning	Tropical storm conditions are expected in the specified area of the warning, usually within 24 hours.	Work should be suspended in areas where lightning, high winds and rainfall could pose a threat to life. Mandatory evacuations may be enforced by local officials.
Hurricane Watch	Hurricane conditions are possible in the specified area of the watch, usually within 36 hours.	Weather conditions should be monitored for further advisories. Prepare for possible evacuation by local officials
Hurricane Warning	Hurricane conditions are expected in the specified area of the warning, usually within 24 hours.	Mandatory evacuations will most likely be enforced by local officials.

A NOAA Weather Radio is the best means to receive watches and warnings from the National Weather Service. The National Weather Service continuously broadcasts updated hurricane advisories that can be received by widely available NOAA Weather Radios.

6.3.3.1 Heat Strain Symptoms

Excessive temperature extremes are considered inclement weather. Given the location and time of the year that work is to be conducted Table 6-4 is provided as a guide to Heat Strain Symptoms.

TABLE 6-4
HEAT STRAIN SYMPTOMS
STOP WORK if Any Worker Demonstrates Any Of The Following

Heart Rate	Sustained (several minutes) heart rate minus worker's age > than 180 beats per minute (bpm) measured at any time.
Body Core Temperature	> 101.3°F (38.5° C)
Recovery Heart Rate	> 110 bpm (Measured 1 minute after peak work effort)
Other symptoms	Sudden and sever fatigue, nausea, dizziness, or headache

Individuals May Be At Greater Risk of Heat Stress If:

Profuse sweating is sustained over hours
Weight loss over a shift is > 1.5% of beginning body weight
24-hour urinary sodium excretion is less than 50 nmoles

7.0 HAZARD MONITORING – TYPES AND ACTION LEVELS

Direct reading instruments will be used at the sites to evaluate the presence of detectable site contaminants and other potentially hazardous conditions. As a result, specific air monitoring measures and requirements are established in Table 5-1 pertaining to the specific hazards and tasks of an identified operation.

7.1 INSTRUMENTS AND USE

Instruments will be used primarily to monitor source points and worker breathing zone areas, while observing instrument action levels. Action levels are discussed in Table 5-1 as they may apply to a specific task or location.

7.1.1 Particulate Meter

- Mathematical calculations indicates that lead is the primary contaminant of concern. The source of lead within the subsurface soils is in sufficient concentrations that a particulate meter must be used to confirm source contaminant are not presenting an exposure condition..

Prior to the commencement of any field activities, the background levels of the site must be determined and noted. Daily background readings will be taken away from any areas of potential contamination. These readings, any influencing conditions (i.e., weather, temperature, humidity) and site location must be documented in the field operations logbook or other site documentation (e.g., sample log sheet).

7.1.2 Hazard Monitoring Frequency

Table 5-1 presents the frequencies that hazard monitoring will be performed as well as the action levels which will initiate the use of elevated levels of protection. The SHSO may decide to increase these frequencies based on instrument responses and site observations. The frequency at which monitoring is performed will not be reduced without the prior consent of the PHSO or HSM.

7.2 INSTRUMENT MAINTENANCE AND CALIBRATION

Hazard monitoring instruments will be maintained and pre-field calibrated by the Tetra Tech NUS Equipment Manager and/or rental service employed. Operational checks and field calibration will be performed on the instruments each day prior to their use. Field calibration will be performed on instruments according to manufacturer's recommendations (for example, the Particulate Meter must be field calibrated daily and an additional field calibration must be performed at the end of each day to

determine any significant instrument drift). These operational checks and calibration efforts will be performed in a manner that complies with the employees health and safety training, the manufacturer's recommendations, and with the applicable manufacturer standard operating procedure. All calibration efforts must be documented. Figure 7-1 is provided for documenting these calibration activities. This information may instead be recorded in a field operations logbook, provided that the information specified in Figure 7-1 is recorded. This required information includes the following:

- Date calibration was performed
- Individual calibrating the instrument
- Instrument name, model, and serial number
- Any relevant instrument settings and resultant readings (before and after) calibration
- Identification of the calibration standard (lot no., source concentration, supplier)
- Any relevant comments or remarks

8.0 TRAINING/MEDICAL SURVEILLANCE REQUIREMENTS

8.1 INTRODUCTORY/REFRESHER/SUPERVISORY TRAINING

This section specifies health and safety training and medical surveillance requirements for both Tetra Tech NUS and subcontractor personnel participating in on site activities.

8.1.1 Requirements For Tetra Tech NUS, Inc. and Subcontractor Personnel

Tetra Tech NUS and subcontractor personnel who will engage in field associated activities as described in this HASP must have:

- Completed 40 hours of introductory hazardous waste site training or equivalent work experience as defined in OSHA Standard 29 CFR 1910.120(e).
- Completed 8-Hour Refresher Training, if the identified persons had introductory training more than 12 months prior to site work.
- Completed 8-hour Supervisory training in accordance with 29 CFR 1910.120(e)(4), if their assigned function will involve the supervision of subordinate personnel.

Documentation of introductory training or equivalent work experience, supervisory, and refresher training as well as site-specific training will be maintained at the site. Copies of certificates or other official documentation will be used to fulfill this requirement.

8.2 SITE-SPECIFIC TRAINING

Tetra Tech NUS will provide site-specific training to Tetra Tech NUS employees and subcontractor personnel who will perform work on this project.

Figure 8-1 will be used to document the provision and content of the project-specific and associated training. Site personnel will be required to sign this form prior to commencement of site activities.

TtNUS will conduct a pre-activities training session prior to initiating site work. Additionally, a brief meeting will be held daily to discuss operations planned for that day. At the end of the workday, a short meeting may be held to discuss the operations completed and any problems encountered. This activity will be supported through the use of a Safe Work Permit System (See Section 10.2).

8.3 MEDICAL SURVEILLANCE

8.3.1 Medical Surveillance Requirements for Tetra Tech NUS and Subcontractor Personnel

Tetra Tech NUS and subcontractor personnel participating in project field activities will have had a physical examination. Physical examinations shall meet the minimum requirements of paragraph (f) of OSHA 29 CFR 1910.120. The physical examinations will be performed to ensure that personnel are medically qualified to perform hazardous waste site work using respiratory protection.

Documentation for medical clearances will be maintained at the job site and made available, as necessary. Subcontractor personnel may use an alternative documentation for this purpose. The "Subcontractor Medical Approval Form" can be used to satisfy this requirement, or a letter from an officer of the company. The letter should state that the persons listed in the letter participate in a medical surveillance program meeting the requirements contained in paragraph (f) of Title 29 of the Code of Federal Regulations (CFR), Part 1910.120, entitled "Hazardous Waste Operations and Emergency Response." The letter should further state the following:

- The persons listed have had physical examinations under this program within the frequency as determined sufficient by their occupational health care provider
- Date of the exam
- The persons identified have been cleared, by a licensed physician, to perform hazardous waste site work and to wear positive- and negative- pressure respiratory protection.

A sample Subcontractor Medical Approval Form and form letter have been provided to eligible subcontractors in the Bid Specification package.

8.3.2 Requirements for Field Personnel

Each field team member, including subcontractors and visitors, entering the exclusion zone(s) shall be required to complete and submit a copy of the Medical Data Sheet that is available in Attachment V of this HASP. This shall be provided to the SHSO, prior to participating in site activities. The purpose of this document is to provide site personnel and emergency responders with additional information that may be necessary in order to administer medical attention.

8.4 SUBCONTRACTOR EXCEPTION

If through the execution of their contract elements the subcontractor will not enter the exclusion zone and there is no potential for exposure to site contaminants, subcontractor personnel may be exempt from the

training and medical surveillance requirements with the exception of Section 8.2. Examples of subcontractors who may qualify as exempt from training and medical surveillance requirements may include surveyors who perform surveying activities in site perimeter areas or areas where there is no potential for exposure to site contaminants and support or restoration services. **Use of this Subcontractor Exception is strictly limited to the authority of the CLEAN Health and Safety Manager.**

9.0 SPILL PREVENTION AND CONTAINMENT PROGRAM

9.1 SCOPE AND APPLICATION

This program applies to the single or aggregate accumulation of bulk storage materials (over 55-gallons). As the classification of certain materials such as IDW is unknown, these materials will be treated as hazardous, pending laboratory certification to the contrary. The types of materials for which this program will apply are as follows:

- Investigative Derived Wastes (IDW) such as decontamination fluids, soil cuttings, and purge and well development waters
- Resource Storage – Limited fuel and lubricant storage

The spill containment and control will be engaged any time there is a release of the above-identified materials from a containment system or vessel. This spill containment program will be engaged in order to minimize associated hazards.

9.2 POTENTIAL SPILL AREAS

Potential spill areas will be periodically monitored in an ongoing attempt to prevent and control further potential contamination of the environment. Currently, limited areas are vulnerable to this hazard including:

- Resource deployment
- Waste transfer
- Central staging

It is anticipated that the IDW generated as a result of this scope of work will be containerized, labeled, and staged to await further analyses. The results of these analyses will determine the method of disposal.

9.3 CONTAINMENT AREAS

In order to facilitate leak and spill inspection and response, and to minimize potential hazards which may impact the integrity of the storage containers, the staging area for these substances will be structured as follows:

9.3.1 IDW

- 55 Gallon Drums (United Nations 1A2 configurations) – 4 Drums to a Pallet; labels and the retaining ring bolt and nut on the outside of each drum to facilitate easy access; Minimum 4-feet between each row of pallets. The decision to construct a bermed and lined area will be the decision of project management. It is currently planned only to drum purge/development/decontamination generated wash waters. All soil cuttings are to be placed in a roll-off container.
- Roll-off container – The roll-off box used will be lined with a sealable gate. When not in use the roll-off will remain covered to prevent rain water from collecting within the box during rain events. Care should be taken not to overload the roll-off Box. Sandy soil will average (depending on % sand and moisture) between 2500 and 3000 lbs/yd³.
- Storage Tank – Polyethylene Construction – Tank shall be placed into a bermed enclosure of sufficient size to accommodate 110% of anticipated volume (Largest container plus 10% for rainwater and container displacement).

Regardless of container types selected, the staging area will be identified as a Satellite Storage Area with proper signage, points of contact in the event of an emergency, alternate contacts, and identification of stored material (i.e., Purge or decontamination waters, soil cuttings, etc.).

An Inventory Log will be maintained by the FOL regarding types of IDW and volumes generated. An updated Inventory List will be provided by the FOL to the designated Emergency Response Agency or Facility Contact during days off and between shifts or phases of operations.

9.3.2 Flammable/POL Storage

Flammable Storage [i.e., fuels, decontamination solvents (Isopropanol)] and Petroleum/oil/lubricants (POL) will require proper dispensing containers and necessary storage for cumulative volumes in excess of 25 gallons. Storage and dispensing will comply with the following requirements:

- All fuels dispensed from portable containers, will utilize safety cans.
- Portable hand held storage containers will be labeled per Hazard Communication requirements.
- Larger volumes stored for fueling equipment will be stored in approved mobile Above Ground Storage Tanks with secondary containment capable of holding the tank volume plus 10%.
- Portable flammable liquid storage tanks will be properly grounded and will have bonding capabilities for the transfer of loading and off-loading of its contents.

- Dispensing locations will be supported by a Fire Extinguisher positioned no closer than 50 feet from the storage tank, properly mounted and identified.
- The storage location will be well marked with proper signage, protective bumper poles and will have straight through access/egress for vehicles.

9.4 MATERIALS HANDLING

To minimize the hazards associated with moving drums and containers (i.e, lifting, pinch and compression points) material handling will be supported in the following manner:

- A drum cart with pneumatic tires will be required, if drums are to be moved at the IDW storage area. This cart will be used to relocate drums within the staging and satellite storage location.
- In addition, a mechanized means such as a suitably equipped skid loader or back-hoe will be provided to move IDW containers from the field location to the staging and satellite storage location. This piece of equipment will also be used in site clearance and restoration as deemed appropriate and necessary. It is anticipated that this piece of equipment will also be used to load, transport, and dump soils into the roll-off box.

Other means of material handling will be evaluated by the SHSO based on their ability to minimize or eliminate material handling hazards.

9.5 LEAK AND SPILL DETECTION

To establish an early detection of potential spills or leaks, a periodic walk-around by the personnel staging or disposing of drums or in the Resource Deployment area will be conducted during working hours to visually determine that storage vessels are not leaking. If a leak is detected, the FOL will be notified and the Spill Containment/Control Response Plan as specified in Section 9.8 will be engaged. Inspections will be documented in the project logbook.

9.6 PERSONNEL TRAINING AND SPILL PREVENTION

Personnel will be instructed in the procedures for incipient spill prevention, containment, and collection of hazardous materials in the site-specific training. The FOL and/or the SHSO will serve as the Spill Response Coordinators for this operation, should the need arise. The FOL shall identify two members (at least two) of the project team as the Incidental Spill Response Team. Should an incidental spill occur these individuals will engage incident response measures. It shall be the responsibility of these

individuals to insure they have the supplies and equipment specified in Section 9.7 to support this function. Insufficient supplies or resources should be reported to the FOL.

9.7 SPILL PREVENTION AND CONTAINMENT EQUIPMENT

The following represents the minimum equipment that will always be maintained at the staging areas the purpose of supporting this Spill Containment/Control Plan.

- Sand, clean fill, vermiculite, or other non combustible absorbent (Oil-dry)
- Extra Drums (55-gallon U.N. 1A2) should the need to transfer material from leaking containers arise.
- Pumps (Gas or Electric necessary for transferring liquids from leaking containers)/tubing
- Shovels, rakes, and brooms
- Container labels
- Personal Protective Equipment
 - Nitrile outer gloves
 - Splash Shield
 - Impermeable over-boots
 - Rain suit

9.8 SPILL CONTAINMENT/CONTROL RESPONSE PLAN

This section describes the procedures the Tetra Tech NUS field personnel will employ upon the detection of a spill or leak.

- Notify the SHSO or FOL immediately upon detection of a leak or spill.
- Employ the personal protective equipment stored at the staging area. Initiate incidental spill response measures. Take immediate actions to stop the leak or spill by plugging or patching the container or raising the leak to the highest point in the vessel. Spread the absorbent material in the area of the spill, covering it completely.
- Transfer the material to a new vessel; collect and containerize the absorbent material. Label the new container appropriately. Await analyses for treatment and disposal options.
- Re-containerize spills, including 2-inch of top cover (if over soils) impacted by the spill. Await test results for treatment or disposal options.

- If the spill cannot be controlled or contained, initiate emergency alerting procedures for that area to remove non-essential personnel.

It is not anticipated that a spill will occur that the field crew cannot handle. Should this occur, notification of the appropriate Emergency Response agencies will be carried out by the FOL or SHSO in accordance with the procedures specified in Section 2.0 of this HASP.

10.0 SITE OPERATIONS AND CONTROL

Site operations and control will be facilitated through the use of established work zones and security and control of those zones. These activities will minimize the impact and spread of contaminants brought to the surface through subsurface investigative methods as well as protect personnel and visitors within these zones during ongoing operations.

10.1 WORK ZONES

Tetra Tech NUS will delineate and use work zones in conjunction with decontamination procedures to prevent the spread of contaminants to other areas of the site. A three-zone approach will be used for work at this site; an Exclusion Zone, a Contamination Reduction Zone, and a Support Zone. These will be used to control access to the work areas, restricting the general public, avoiding potentials to spread any contaminants, and to protect individuals who are not cleared to enter by way of training and/or medical surveillance qualifications.

10.1.1 Exclusion Zone

An Exclusion Zone will be established at each sampling point/location. The purpose of the exclusion zone is to define a area where a more rigorous protocol for workers within what is determined to be an impact area. The impact area is that area which could be adversely impacted by either chemical or physical hazards. Exclusion zone size and dimensions will vary based on activities. Impact areas dimensions will be influenced by the following considerations:

- Physical and topographical features of the site
- Weather conditions
- Field and analytical measurements of air and environmental contaminants
- Air dispersion calculations
- Potential for explosion and dispersion
- Physical, chemical and toxicological properties of the contaminants being investigated
- Tasks to be conducted
- Decontamination procedures
- Potential for exposure

As conditions change the dimensions of the exclusion zone will change. However, the following dimensions represent a starting point from which the exclusion zones will be expanded:

- DPT - Soil Boring. The exclusion zone for this activity will be set at the height of the mast, plus five feet surrounding the point of operation, with a minimum of 25-feet. This distance will also apply when surface and subsurface soil sampling from behind these type rigs.
- HSA – Monitoring Well Installation. The exclusion zone for this activity will be set at the height of the mast, plus five feet surrounding the point of operation, or 35-feet, whichever is greater.
- Monitoring well development, sampling, aquifer testing. The exclusion zone for this activity will be set at 10-feet surrounding the well head and discharge collection container.
- Decontamination operation. The exclusion zone for this activity will be set at 25 feet surrounding the gross contamination wash and rinse as well as 25-feet surrounding the heavy equipment decontamination area.
- Investigative Derived Waste (IDW) area will be constructed and barricaded. Only authorized personnel will be allowed access.

Exclusion zones shall remain marked until the SHSO has evaluated the restoration effort and has authorized changing the zone status.

Exclusion zones will be marked using barrier tape, traffic cones and/or drive poles. Signs will be posted to inform and direct site personnel and site visitors.

10.1.2 Contamination Reduction Zone

The contamination reduction zone will be split to represent two separate functions. The first function will be a control/supply point for supporting exclusion zone activities. The second function, which may take place a sufficient distance from the exclusion zone is the decontamination of personnel and heavy equipment.

In order to move from the exclusion zone to a separate location the following activities will be used:

- As samplers move from location to location during sampling activities, dedicated sampling devices and PPE will be washed of gross contamination, removed, separated, and bagged. Personnel will use hygienic wipes, such as Handy Wipes, as necessary for personnel decontamination until they can access the centralized decontamination unit. At the first available opportunity personnel will wash their face and hands. This is critical prior to breaks and lunch when contamination can be transferred to the mouth through hand to mouth contact.
- Muddy over-boots and gloves may be required to go through a gross contamination wash at the exclusion zone. These items will then be cleaned thoroughly at the centralized decontamination unit.
- Potentially contaminated tooling along with PPE will be wrapped, when necessary, for transport to the decontamination area. These items will be disposed of as general refuse.
- Upon completion of the assigned tasks the personnel will move through the central decontamination area to clean reusable PPE and field equipment. Based on ambient conditions medical evaluations may take place at the termination point of the decontamination line. These evaluations will include pulse rate, oral temperature, breathing rate to evaluate physiological demands on site personnel. As stated earlier, these evaluations will be based on ambient conditions and acclimation periods.

10.1.3 Support Zone

The Support Zone will consist of a field trailer, storage, lay-down areas, or some other uncontaminated, controlled point. The Support Zone for this project will include a staging area where site vehicles can be parked, equipment will be unloaded, and where food and drink containers will be maintained. The support zones will be established in clean areas of the site.

10.2 SAFE WORK PERMITS

Exclusion Zone work conducted in support of this project will be performed using Safe Work Permits to guide and direct field crews on a task by task basis. An example of the Safe Work Permit is included in Figure 10-1. The daily meetings conducted by the FOL/SHSO will further support these work permits. The use of these permits will ensure that site-specific considerations and changing conditions are incorporated into the planning effort. Safe Work Permits will require the signatures of either the FOL or

the SHSO. Personnel engaged in on-site activities must be made aware of the elements indicating levels of protection and precautionary measures to be used.

The use of these permits will establish and provide for reviewing protective measures and hazards associated with each operation. This HASP will be used as the primary reference for selecting levels of protection and control measures. The Safe Work Permit will take precedence over the HASP when more conservative measures are required based on specific site conditions.

Upon completion of the work for which the Safe Work Permit was assigned, the Safe Work Permit will be turned into the FOL or the SHSO. Concerns, complaints, and suggestions may be made on the reverse of the Safe Work Permit for consideration by the FOL and/or the SHSO. Permits turned in with suggestions, difficulties, or complaints will be forwarded to the PHSO for review.

The Safe Work Permit and the HASP will serve as the primary reference for work place evaluations and audits conducted to determine if the task is being conducted under the direction conveyed by the HASP and the Safe Work Permit.

10.3 SITE MAP

Once the areas of contamination, access routes, topography, dispersion routes are determined, a site map will be generated and adjusted as site conditions change. This map will be posted to illustrate up-to-date information of contaminants and adjustment of zones and access points. This map will be posted at the field support trailer.

10.4 BUDDY SYSTEM

Personnel engaged in on-site activities will practice the "buddy system" to ensure the safety of the personnel involved in this operation.

**FIGURE 10-1
SAFE WORK PERMIT**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope (To be filled in by person performing work)

I. Work limited to the following (description, area, equipment used): _____

II. Names: _____

III. On-site Inspection conducted Yes No Initials of Inspector _____

TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

IV. Protective equipment required

Level D Level B
Level C Level A

Respiratory equipment required

Full face APR Escape Pack
Half face APR SCBA
PAPR Bottle Trailer
Skid Rig None

Modifications/Exceptions: _____

V. Chemicals of Concern

Action Level(s)

Response Measures

_____	_____	_____
_____	_____	_____
_____	_____	_____

VI. Additional Safety Equipment/Procedures

Hardhat.....	<input type="checkbox"/> Yes <input type="checkbox"/> No	Hearing Protection (Plugs/Muffs)...	<input type="checkbox"/> Yes <input type="checkbox"/> No
Safety Glasses.....	<input type="checkbox"/> Yes <input type="checkbox"/> No	Safety belt/harness	<input type="checkbox"/> Yes <input type="checkbox"/> No
Chemical/splash goggles	<input type="checkbox"/> Yes <input type="checkbox"/> No	Radio	<input type="checkbox"/> Yes <input type="checkbox"/> No
Splash Shield	<input type="checkbox"/> Yes <input type="checkbox"/> No	Barricades.....	<input type="checkbox"/> Yes <input type="checkbox"/> No
Splash suit/coveralls (Type: _____)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Gloves (Type)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Steel toe/shank Workboots.....	<input type="checkbox"/> Yes <input type="checkbox"/> No	Work/rest regimen	<input type="checkbox"/> Yes <input type="checkbox"/> No
Chemical Protective Over-boots (Type: _____)	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Modifications/Exceptions: _____

VII. Procedure review with permit acceptors

Yes NA

Yes NA

Safety shower/eyewash (Location & Use)	<input type="checkbox"/> Yes <input type="checkbox"/> NA	Emergency alarms.....	<input type="checkbox"/> Yes <input type="checkbox"/> NA
Procedure for safe job completion	<input type="checkbox"/> Yes <input type="checkbox"/> NA	Evacuation routes	<input type="checkbox"/> Yes <input type="checkbox"/> NA
Contractor tools/equipment inspected	<input type="checkbox"/> Yes <input type="checkbox"/> NA	Assembly points.....	<input type="checkbox"/> Yes <input type="checkbox"/> NA

VII. Site Preparation

Yes No NA

Utility Locating and Excavation Clearance completed	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Equipment and Foot Traffic Routes Cleared and Established	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Physical Hazards Barricaded and Isolated	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Emergency Equipment Staged	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

VIII. Additional Permits required (Hot work, confined space entry, excavation, etc.).

Yes No

If yes, See SHSO for appropriate permit

IX. Special instructions, precautions:

Permit Issued by: _____ Permit Accepted by: _____

10.5 MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS

Tetra Tech NUS personnel will provide MSDSs for chemicals brought on-site. The contents of these documents will be reviewed by the SHSO with the user(s) of the chemical substances prior to any actual use or application of the substances on-site. The MSDSs will be maintained in a central location (i.e., temporary office) and will be available for anyone to review upon request. The SHSO will be responsible for implementing a site-specific Hazard Communication Program (See Section 5.0 of the TtNUS Health and Safety Guidance Manual). This includes collection of MSDSs, creation and maintenance of an accurate Chemical Inventory Listing, addressing container labeling and personnel training issues, and other aspects of Hazard Communication.

10.6 COMMUNICATION

It is anticipated that site personnel will be working in close proximity during proposed field activities. In the event that site personnel are in isolated areas or are separated by significant distances, a supported means of communication between field crews will be utilized. Two-way radio communication devices, if needed, will be used only with NAS Pensacola approval.

External communications will be accomplished utilizing telephones at predetermined and approved locations or through cellular phones. External communication will primarily be used for the purpose of resource and emergency resource communications. Prior to the commencement of site activities, the FOL will determine and arrange for telephone communications, if it is determined a cellular means will not be used. Cellular communications will be tested to insure adequate coverage from all areas of operation. If not provisions for external communication will be made prior to the commencement of site activities.

10.7 SITE VISITORS

Potential site visitors that may be encountered during the performance of the field work could include the following:

- Personnel invited to observe or participate in operations by Tetra Tech NUS.
- Regulatory personnel (i.e., DOD, FDEP, EPA, OSHA, etc.)
- Southern Division Navy personnel
- Other authorized visitors

Non-DOD personnel working on this project are required to gain initial access to the base by coordinating with the TtNUS TOM or designee and following established base access procedures.

Once access to the base is obtained, personnel who require access to Tetra Tech NUS work sites (areas of ongoing operations) will be required to obtain permission from the FOL and the Base Contact. Upon gaining access to the work site, site visitors wishing to observe operations in progress will be required to meet the minimum requirements as stipulated below.

- Site visitors will be routed to the FOL, who will sign them into the field logbook. Information to be recorded in the logbook will include the individuals name (proper identification required), who they represent, and the purpose for the visit. The FOL is responsible for ensuring that site visitors are always escorted while on site.
- Site visitors will be required to produce the necessary information supporting clearance on to the site. This includes information attesting to applicable training (40-hours of HAZWOPER training required for Southern Division Navy Personnel), and medical surveillance as stipulated in Section 8.3, of this document. In addition, to enter the sites operational zones during planned activities, visitors will be required to first go through site-specific training covering the topics stipulated in Section 8.2 of this HASP.

Once the site visitors have completed the above items they will be permitted to enter the site and applicable operational areas. Visitors are required to observe the protective equipment and site restrictions in effect at the work areas visited. Any visitors not meeting the requirements as stipulated in this plan for site clearance will not be permitted to enter the site operational zones during planned activities. Any incidence of unauthorized site visitation will cause on-site activities to be terminated until that visitor can be removed. Removal of unauthorized visitors will be accomplished with support from the Base Contact, if necessary. At a minimum, the Base Contact will be notified of any unauthorized visitors.

10.8 SITE SECURITY

As this activity will take place at a Navy facility, the first line of security will be provided by the base gate restricting the general public. The second line of security will take place at the work site referring interested parties to the FOL and Base Contact.

Security at the work areas will be accomplished using field personnel. This is a multiple person operation, involving multiple operational zones. Tetra Tech NUS personnel will retain complete control over active operational zones.

The Base Contact will serve as the focal point for base personnel and interested parties and will serve as the primary enforcement contact.

10.9 SANITATION AND BREAK AREAS

This section will address the following items:

- Toilets
- Potable water
- Showers and change rooms
- Break Areas

10.9.1 Toilets

One toilet will be provided for every 20 people. All toilets will be unisex and will have locking doors. The toilet provided will either be a chemical toilet and service provider or the flush toilet readily accessible at a predetermined approved location.

10.9.2 Potable Water

Potable water as well as electrolyte balance sports drinks such as Gatorade will be provided to the field crews for fluid replacement, as it is necessary under conditions of ambient temperature extremes. Storage and dispensing will proceed as follows:

- All containers will be clean and replenished daily.
- All containers will clearly marked as to their contents (Potable Water – Drinking Water Only; Gatorade, etc.).
- Dispensing locations will be placed in identified break areas within the support zone. The most likely location will be at a support vehicle staged near the work area. This will serve as an area for cooling or warming as well as an identified food and drink consumption area.
- If larger containers are used, dispensing cups will be provided.
- The coolers used for storage of potable drinks and cups will be stored in plastic bags away from potentially contaminating materials when not in use.

Fluid intake recommendations may be made based on the medical evaluations conducted at the end of the decontamination process, as necessary based on ambient conditions.

10.9.3 Showers and Change Rooms

Based on this scope and duration of this project shower facilities and locker rooms will not be required.

10.9.4 Break Areas

Given the location and the time of the year structured suitable locations for work breaks and warming/cooling regimens will be necessary. Shelters such as canopies should be provided for protection from the sun as well as to provide a suitable area to permit cooling in this hot environment.

11.0 CONFINED SPACE ENTRY

It is not anticipated, under the proposed scope of work, that confined space and permit-required confined space activities will be conducted. **Therefore, personnel under the provisions of this HASP are not allowed, under any circumstances, to enter confined spaces.** A confined space is defined as an area which has the following characteristics:

- Is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous employee occupancy.

A Permit-Required Confined Space is one that:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential to engulf an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized, serious, safety or health hazard.

For further information on confined space, consult the Health and Safety Guidance Manual or call the PHSO. If confined space operations are to be performed as part of the scope of work, detailed procedures and training requirements will have to be addressed, and the HSM will have to be notified.

12.0 MATERIALS AND DOCUMENTATION

The TtNUS FOL shall ensure the following materials/documents are taken to the project site and used when required.

- A complete copy of this HASP
- Health and Safety Guidance Manual
- Incident Reports
- Medical Data Sheets
- Material Safety Data Sheets for chemicals brought on site, including decontamination solutions, fuels, sample preservatives, calibration gases, etc.
- A full-size OSHA Job Safety and Health Poster (posted in the site trailers)
- Training/Medical Surveillance Documentation Form (Blank)
- Emergency Reference Information (Section 2.0, extra copy for posting)

12.1 MATERIALS TO BE POSTED OR MAINTAINED AT THE SITE

The following documentation is to be posted or maintained at the site for quick reference purposes. In situations where posting these documents is not feasible, (such as no office trailer), these documents should be separated and immediately accessible.

Chemical Inventory Listing (posted) - This list represents chemicals brought on-site, including decontamination solutions, sample preservations, fuel, etc.. This list should be posted in a central area.

MSDSs (maintained) - The MSDSs should also be in a central area accessible to site personnel. These documents should match the listings on the chemical inventory list for substances used on-site. It is acceptable to have these documents within a central folder and the chemical inventory as the table of contents.

The OSHA Job Safety & Health Protection Poster (posted) - this poster, as directed by 29 CFR 1903.2 (a)(1), should be conspicuously posted in places where notices to employees are normally posted. Each FOL shall ensure that this poster is not defaced, altered, or covered by other material.

Site Clearance (maintained) - This list is found within the training section of the HASP (See Figure 8-2). This list identifies site personnel, dates of training (including site-specific training), and medical surveillance. The lists indicates not only clearance but also status. If personnel do not meet these requirements, they do not enter the site while site personnel are engaged in activities.

Emergency Phone Numbers and Directions to the Hospital(s) (posted) - This list of numbers and directions will be maintained at the phone communications points and in each site vehicle.

Medical Data Sheets/Cards (maintained) - Medical Data Sheets will be filled out by on-site personnel and filed in a central location. The Medical Data Sheet will accompany any injury or illness requiring medical attention to the medical facility. A copy of this sheet or a wallet card will be given to personnel to be carried on their person.

Hearing Conservation Standard (29 CFR 1910.95) (posted) - this standard will be posted anytime hearing protection or other noise abatement procedures are employed.

Personnel Monitoring (maintained) - The results generated through personnel sampling (levels of airborne toxins, noise levels, etc.) will be posted to inform individuals of the results of that effort.

Placards and Labels (maintained) - Where chemical inventories have been separated because of quantities and incompatibilities, these areas will be conspicuously marked using Department of Transportation (DOT) placards and acceptable (Hazard Communication 29 CFR 1910.1200(f)) labels.

The purpose of maintaining or posting this information, as stated above, is to allow site personnel quick access. Variations concerning location and methods of presentation are acceptable, providing the objection is accomplished.

13.0 GLOSSARY

ACGIH	American Conference of Governmental Industrial Hygienists
CERCLA	Comprehensive Environmental Response Compensation, and Liability Act
CFR	Code of Federal Regulations
CNS	Central Nervous System
CRZ	Contamination Reduction Zone
CTO	Contract Task Order
DPT	Direct-Push Technology
FID	Flame Ionization Detector
FOL	Field Operations Leader
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSM	Health and Safety Manager
IDW	Investigation-derived Waste
MSDS	Material Safety Data Sheet
N/A	Not Available
NAS	Naval Air Station
NIOSH	National Institute Occupational Safety and Health
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
PEL	Permissible Exposure Limit
PHSO	Project Health and Safety Officer
PPE	Personal Protective Equipment
SOPs	Standard Operating Procedures
SHSO	Site Health and Safety Officer
STEL	Short Term Exposure Limit
TOM	Task Order Manager
TtNUS	Tetra Tech NUS, Inc.
TWA	Time Weighted Average
VOCs	Volatile Organic Compounds

ATTACHMENT I

**INJURY/ILLNESS PROCEDURE
AND REPORT FORM**

TETRA TECHNUS, INC.

INJURY/ILLNESS PROCEDURE WORKER'S COMPENSATION PROGRAM

WHAT YOU SHOULD DO IF YOU ARE INJURED OR DEVELOP AN ILLNESS AS A RESULT OF YOUR EMPLOYMENT:

- Stop work as needed to ensure no further harm is done.
- If injury is minor, obtain appropriate first aid treatment.
- If injury or illness is severe or life threatening, obtain professional medical treatment at the nearest hospital emergency room. Check with your office location or project health and safety plan for specific instructions.
- If incident involves an injury, illness, or chemical exposure on a project work site, follow instructions in the Health & Safety Plan.
- Immediately report any injury or illness to your supervisor or office manager. In addition, you must contact your Human Resources representative, Marilyn Duffy at (412) 921-8475, and the Corporate Health and Safety Manager, Matt Soltis at (412) 921-8912 within 24 hours of the injury. You will be required to complete an [Injury/Illness Report](#). You may also be required to participate in a more detailed investigation with the Health Sciences Department.
- In the event of a serious near-miss incident, a "Serious Near Miss Report" (Form AR-2, available online at <https://go2.tetrattech.com> under "Departments", "Health and Safety", "Accident Reporting Procedures", hyperlink for "Serious Near Miss Report") must be completed and faxed to the Corporate Health and Safety Manager within 48 hours.
- If further medical treatment is needed, our insurance carrier, ACE, will provide information on the authorized providers customized to the location of the injured employee. You can find this information by accessing the website of ACE's claims handler, ESIS, at : www.esis.com. These providers are to be used for treatment of Worker's Compensation injuries subject to the laws of the state in which you work.

ADDITIONAL QUESTIONS REGARDING WORKER'S COMPENSATION:

Contact your local Human Resources representative (Marilyn Duffy), Corporate Health and Safety Manager (Matt Soltis), or Corporate Administration in Pasadena, California, at (626) 351-4664.

Worker's compensation is a state-mandated program that provides medical and disability benefits to employees who become disabled due to job related injury or illness. Tetra Tech, Inc. and its subsidiaries pay premiums on behalf of their employees. This program is based on a no-fault system, and benefits are provided for covered events as an exclusive remedy to the injured employee regardless of fault. The types of injuries or illnesses covered and the amount of

benefits paid are regulated by the state worker's compensation boards and vary from state to state. Corporate Administration in Pasadena is responsible for administering the Company's worker's compensation program. The following is a general explanation of worker's compensation provided in the event that you become injured or develop an illness as a result of your employment with Tetra Tech or any of its subsidiaries. Please be aware that the term used for worker's compensation varies from state to state.

WHO IS COVERED:

All employees of Tetra Tech, whether they are on a full-time, part-time or temporary status, working in an office or in the field, are entitled to worker's compensation benefits from the first day of work. All employees must follow the above injury/illness reporting procedures. If you are working out-of-state and away from your home office, you are still eligible for worker's compensation benefits.

Consultants, independent contractors, and employees of subcontractors and employees from temporary employment agencies are not covered by Tetra Tech's Worker's Compensation plan.

WHAT IS COVERED:

If you are injured or develop an illness caused by your employment, worker's compensation benefits are available to you subject to the laws of the state you work in. Injuries do not have to be serious; even injuries treated by first aid practices are covered and must be reported.



TETRA TECH, INC.

ACCIDENT AND ILLNESS INVESTIGATION REPORT

To: _____
Subsidiary Health and Safety Representative

Prepared by: _____

Position: _____

cc: _____
Workers Compensation Administrator

Office: _____

Project name: _____

Telephone number: _____

Project number: _____

Fax number: _____

Information Regarding Injured or Ill Employee

Name: _____

Office: _____

Home address: _____

Gender: M F No. of dependents: _____

Marital status: _____

Home telephone number: _____

Date of birth: _____

Occupation (regular job title): _____

Social security number: _____

Department: _____

Date of Accident: _____

Time of Accident: _____ a.m. p.m.

Time Employee Began Work: _____

Check if time cannot be determined

Location of Incident

Street address: _____

City, state, and zip code: _____

County: _____

Was place of accident or exposure on employer's premises? Yes No

Information About the Incident

What was the employee doing just before the incident occurred? Describe the activity as well as the tools, equipment, or material the employee was using. Be specific. Examples: "Climbing a ladder while carrying roofing materials"; "Spraying chlorine from hand sprayer"; "Daily computer key-entry"

What Happened? Describe how the injury occurred. Examples: "When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time"

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.



TETRA TECH, INC.

ACCIDENT AND ILLNESS INVESTIGATION REPORT (Continued)

Information About the Incident (Continued)

What was the injury or illness? Describe the part(s) of the body affected and how it was affected. Be more specific than "hurt," "pain," or "sore." Examples "Strained back"; "Chemical burn, right hand"; "Carpal tunnel syndrome, left wrist"

Describe the Object or Substance that Directly Harmed the Employee: Examples: "Concrete floor"; "Chlorine"; "Radial arm saw." If this question does not apply to the incident, write "Not applicable."

Did the employee die? Yes [] No [] Date of death: _____

Was employee performing regular job duties? Yes [] No []

Was safety equipment provided? Yes [] No [] Was safety equipment used? Yes [] No []

Note: Attach any police reports or related diagrams to this report.

Witness (Attach additional sheets for other witnesses.)

Name: _____

Company: _____

Street address: _____

City: _____ State: _____ Zip code: _____

Telephone number: _____

Medical Treatment Required? [] Yes [] No [] First aid only

Name of physician or health care professional: _____

If treatment was provided away from the work site, provide the information below.

Facility name: _____

Street address: _____

City: _____ State: _____ Zip code: _____

Telephone number: _____

Was the employee treated in an emergency room? [] Yes [] No

Was the employee hospitalized over night as an in-patient? [] Yes [] No

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.



TETRA TECH, INC.

ACCIDENT AND ILLNESS INVESTIGATION REPORT (Continued)

Corrective Action(s) Taken by Unit Reporting the Accident:

Corrective Action Still to be Taken (by whom and when):

Name of Tetra Tech employee the injury or illness was first reported to: _____

Date of Report: _____ **Time of Report:** _____

I have reviewed this investigation report and agree, to the best of my recollection, with its contents.

Printed Name of Injured Employee

Telephone Number

Signature of Injured Employee

Date

The signatures provided below indicate that appropriate personnel have been notified of the incident.

Title	Printed Name	Signature	Telephone Number	Date
Office Manager				
Project Manager				
Site Safety Coordinator or Office Health and Safety Representative				

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.



TETRA TECH, INC.

ACCIDENT AND ILLNESS INVESTIGATION REPORT (Continued)

To Be Completed by the Subsidiary Health and Safety Representative

Classification of Incident:
 Injury Illness

Result of Incident:
 First aid only
 Days away from work
 Remained at work but incident resulted in job transfer or work restriction
 Incident involved days away and job transfer or work restriction
 Medical treatment only

No. of days away from work _____
Date employee left work _____
Date employee returned to work _____
No. of days placed on restriction or job transfer: _____

OSHA Recordable Case Number _____

To Be Completed by Human Resources

Social security number: _____
Date of hire: _____ Hire date for current job: _____
Wage information: \$ _____ per Hour Day Week Month
Position at time of hire: _____
Current position: _____ Shift hours: _____
State in which employee was hired: _____
Status: Full-time Part-time Hours per week: _____ Days per week: _____
Temporary job end date: _____

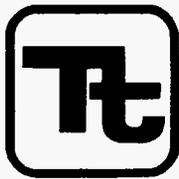
To Be Completed during Report to Workers Compensation Carrier

Date reported: _____ Reported by: _____
Confirmation number: _____
Name of contact: _____
Field office of claims adjuster: _____

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

ATTACHMENT II

**STANDARD OPERATING PROCEDURE
FOR
UTILITY LOCATING AND EXCAVATION CLEARANCE**



TETRA TECH NUS, INC.

STANDARD OPERATING PROCEDURES

Number HS-1.0	Page 1 of 15
Effective Date 12/03	Revision 2
Applicability Tetra Tech NUS, Inc.	
Prepared Health & Safety	
Approved D. Senovich	

Subject
UTILITY LOCATING AND EXCAVATION CLEARANCE

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Subject UTILITY LOCATING AND EXCAVATION CLEARANCE	Number HS-1.0	Page 2 of 15
	Revision 2	Effective Date 12/03

1.0 PURPOSE

Utilities such as electric service lines, natural or propane gas lines, water and sewage lines, telecommunications, and steam lines are very often in the immediate vicinity of work locations. Contact with underground or overhead utilities can have serious consequences including employee injury/fatality, property and equipment damage, substantial financial impacts, and loss of utility service to users.

The purpose of this procedure is to provide minimum requirements and technical guidelines regarding the appropriate procedures to be followed when performing subsurface and overhead utility locating services. It is the policy of Tetra Tech NUS, Inc. (TtNUS) to provide a safe and healthful work environment for the protection of our employees. The purpose of this Standard Operating Procedure (SOP) is to aid in achieving the objectives of this policy, to present the acceptable procedures pertaining to utility locating and excavation clearance activities, and to present requirements and restrictions relevant to these types of activities. This SOP must be reviewed by any employee potentially involved with underground or overhead utility locating and avoidance activities.

2.0 SCOPE

This procedure applies to all TtNUS field activities where there may be potential contact with underground or overhead utilities. This procedure provides a description of the principles of operation, instrumentation, applicability, and implementability of typical methods used to determine the presence and avoidance of contact with utility services. This procedure is intended to assist with work planning and scheduling, resource planning, field implementation, and subcontractor procurement. Utility locating and excavation clearance requires site-specific information prior to the initiation of any such activities on a specific project. This SOP is not intended to provide a detailed description of methodology and instrument operation. Specialized expertise during both planning and execution of several of the methods presented may also be required.

3.0 GLOSSARY

Electromagnetic Induction (EMI) Survey - A geophysical exploration method whereby electromagnetic fields are induced in the ground and the resultant secondary electromagnetic fields are detected as a measure of ground conductivity.

Magnetometer – A device used for precise and sensitive measurements of magnetic fields.

Magnetic Survey – A geophysical survey method that depends on detection of magnetic anomalies caused by the presence of buried ferromagnetic objects.

Metal Detection – A geophysical survey method that is based on electromagnetic coupling caused by underground conductive objects.

Vertical Gradiometer – A magnetometer equipped with two sensors that are vertically separated by a fixed distance. It is best suited to map near surface features and is less susceptible to deep geologic features.

Ground Penetrating Radar – Ground Penetrating Radar (GPR) involves specialized radar equipment whereby a signal is sent into the ground via a transmitter. Some portion of the signal will be reflected from the subsurface material, which is then recorded with a receiver and electronically converted into a graphic picture.

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4.0 RESPONSIBILITIES

Project Manager (PM)/Task Order Manager (TOM) - Responsible for ensuring that all field activities are conducted in accordance with this procedure.

Site Manager (SM)/Field Operations Leader (FOL) - Responsible for the onsite verification that all field activities are performed in compliance with approved SOPs or as otherwise directed by the approved project plan(s).

Site Health & Safety Officer (SHSO) – Responsible to provide technical assistance and verify full compliance with this SOP. The SHSO is also responsible for reporting any deficiencies to the Corporate Health and Safety Manager (HSM) and to the PM/TOM.

Health & Safety Manager (HSM) – Responsible for preparing, implementing, and modifying corporate health and safety policy and this SOP.

Site Personnel – Responsible for performing their work activities in accordance with this SOP and the TtNUS Health and Safety Policy.

5.0 PROCEDURES

This procedure addresses the requirements and technical procedures that must be performed to minimize the potential for contact with underground and overhead utility services. These procedures are addressed individually from a buried and overhead standpoint.

5.1 Buried Utilities

Buried utilities present a heightened concern because their location is not typically obvious by visual observation, and it is common that their presence and/or location is unknown or incorrectly known on client properties. This procedure must be followed prior to beginning any subsurface probing or excavation that might potentially be in the vicinity of underground utility services. In addition, the Utility Clearance Form (Attachment 3) must be completed for every location or cluster of locations where intrusive activities will occur.

Where the positive identification and de-energizing of underground utilities cannot be obtained and confirmed using the following steps, the PM/TOM is responsible for arranging for the procurement of a qualified, experienced, utility locating subcontractor who will accomplish the utility location and demarcation duties specified herein.

1. A comprehensive review must be made of any available property maps, blue lines, or as-builts prior to site activities. Interviews with local personnel familiar with the area should be performed to provide additional information concerning the location of potential underground utilities. Information regarding utility locations shall be added to project maps upon completion of this exercise.
- 2., A visual site inspection must be performed to compare the site plan information to actual field conditions. Any findings must be documented and the site plan/maps revised. The area(s) of proposed excavation or other subsurface activities must be marked at the site in white paint or pin flags to identify those locations of the proposed intrusive activities. The site inspection should focus on locating surface indications of potential underground utilities. Items of interest include the presence of nearby area lights, telephone service, drainage grates, fire hydrants, electrical service vaults/panels, asphalt/concrete scars and patches, and topographical depressions. Note the location of any emergency shut off switches. Any additional information regarding utility

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locations shall be added to project maps upon completion of this exercise and returned to the PM/TOM.

3. If the planned work is to be conducted on private property (e.g., military installations, manufacturing facilities, etc.) the FOL must identify and contact appropriate facility personnel (e.g., public works or facility engineering) before any intrusive work begins to inquire about (and comply with) property owner requirements. It is important to note that private property owners may require several days to several weeks advance notice prior to locating utilities.
4. If the work location is on public property, the state agency that performs utility clearances must be notified (see Attachment 1). State "one-call" services must be notified prior to commencing fieldwork per their requirements. Most one-call services require, by law, 48- to 72-hour advance notice prior to beginning any excavation. Such services typically assign a "ticket" number to the particular site. This ticket number must be recorded for future reference and is valid for a specific period of time, but may be extended by contacting the service again. The utility service will notify utility representatives who then mark their respective lines within the specified time frame. It should be noted that most military installations own their own utilities but may lease service and maintenance from area providers. Given this situation, "one call" systems may still be required to provide location services on military installations.
5. Utilities must be identified and their locations plainly marked using pin flags, spray paint, or other accepted means. The location of all utilities must be noted on a field sketch for future inclusion on project maps. Utility locations are to be identified using the following industry-standard color code scheme, unless the property owner or utility locator service uses a different color code:

white	excavation/subsurface investigation location
red	electrical
yellow	gas, oil, steam
orange	telephone, communications
blue	water, irrigation, slurry
green	sewer, drain
6. Where utility locations are not confirmed with a high degree of confidence through drawings, schematics, location services, etc., the work area must be thoroughly investigated prior to beginning the excavation. In these situations, utilities must be identified using safe and effective methods such as passive and intrusive surveys, or the use of non-conductive hand tools. Also, in situations where such hand tools are used, they should always be used in conjunction with suitable detection equipment, such as the items described in Section 6.0 of this SOP. Each method has advantages and disadvantages including complexity, applicability, and price. It also should be noted that in some states, initial excavation is required by hand to a specified depth.
7. At each location where trenching or excavating will occur using a backhoe or other heavy equipment, and where utility identifications and locations cannot be confirmed prior to groundbreaking, the soil must be probed using a device such as a tile probe which is made of non-conductive material such as fiberglass. If these efforts are not successful in clearing the excavation area of suspect utilities, hand shoveling must be performed for the perimeter of the intended excavation.
8. All utilities uncovered or undermined during excavation must be structurally supported to prevent potential damage. Unless necessary as an emergency corrective measure, TtNUS shall not make any repairs or modifications to existing utility lines without prior permission of the utility owner, property owner, and Corporate HSM. All repairs require that the line be locked-out/tagged-out prior to work.

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5.2 Overhead Power Lines

If it is necessary to work within the minimum clearance distance of an overhead power line, the overhead line must be de-energized and grounded, or re-routed by the utility company or a registered electrician. If protective measures such as guarding, isolating, or insulating are provided, these precautions must be adequate to prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.

The following table provides the required minimum clearances for working in proximity to overhead power lines.

<u>Nominal Voltage</u>	<u>Minimum Clearance</u>
0 -50 kV	10 feet, or one mast length; whichever is greater
50+ kV	10 feet plus 4 inches for every 10 kV over 50 kV or 1.5 mast lengths; whichever is greater

6.0 UNDERGROUND LOCATING TECHNIQUES

A variety of supplemental utility locating approaches are available and can be applied when additional assurance is needed. The selection of the appropriate method(s) to employ is site-specific and should be tailored to the anticipated conditions, site and project constraints, and personnel capabilities.

6.1 Geophysical Methods

Geophysical methods include electromagnetic induction, magnetics, and ground penetrating radar. Additional details concerning the design and implementation of electromagnetic induction, magnetics, and ground penetrating radar surveys can be found in one or more of the TtNUS SOPs included in the References (Section 8.0).

Electromagnetic Induction

Electromagnetic Induction (EMI) line locators operate either by locating a background signal or by locating a signal introduced into the utility line using a transmitter. A utility line acts like a radio antenna, producing electrons, which can be picked up with a radiofrequency receiver. Electrical current carrying conductors have a 60HZ signal associated with them. This signal occurs in all power lines regardless of voltage. Utilities in close proximity to power lines or used as grounds may also have a 60HZ signal, which can be picked up with an EM receiver. A typical example of this type of geophysical equipment is an EM-61.

EMI locators specifically designed for utility locating use a special signal that is either indirectly induced onto a utility line by placing the transmitter above the line or directly induced using an induction clamp. The clamp induces a signal on the specific utility and is the preferred method of tracing since there is little chance of the resulting signals being interfered with. A good example of this type of equipment is the Schonstedt® MAC-51B locator. The MAC-51B performs inductively traced surveys, simple magnetic locating, and traced nonmetallic surveys.

When access can be gained inside a conduit to be traced, a flexible insulated trace wire can be used. This is very useful for non-metallic conduits but is limited by the availability of gaining access inside the pipe.

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Magnetics

Magnetic locators operate by detecting the relative amounts of buried ferrous metal. They are incapable of locating or identifying nonferrous utility lines but can be very useful for locating underground storage tanks (UST's), steel utility lines, and buried electrical lines. A typical example of this type of equipment is the Schonstedt® GA-52Cx locator. The GA-52Cx is capable of locating 4-inch steel pipe up to 8 feet deep.

Non-ferrous lines are often located by using a typical plumbing tool (snake) fed through the line. A signal is then introduced to the snake that is then traced.

Ground Penetrating Radar

Ground Penetrating Radar (GPR) involves specialized radar equipment whereby a signal is sent into the ground via a transmitter. Some portion of the signal will be reflected from the subsurface material, which is then recorded with a receiver and electronically converted into a graphic picture. In general, an object which is harder than the surrounding soil will reflect a stronger signal. Utilities, tunnels, UST's, and footings will reflect a stronger signal than the surrounding soil. Although this surface detection method may determine the location of a utility, this method does not specifically identify utilities (i.e., water vs. gas, electrical vs. telephone); hence, verification may be necessary using other methods. This method is somewhat limited when used in areas with clay soil types or with a high water table.

6.2 Passive Detection Surveys

Acoustic Surveys

Acoustic location methods are generally most applicable to waterlines or gas lines. A highly sensitive Acoustic Receiver listens for background sounds of water flowing (at joints, leaks, etc.) or to sounds introduced into the water main using a transducer. Acoustics may also be applicable to determine the location of plastic gas lines.

Thermal Imaging

Thermal (i.e., infrared) imaging is a passive method for detecting the heat emitted by an object. Electronics in the infrared camera convert subtle heat differentials into a visual image on the viewfinder or a monitor. The operator does not look for an exact temperature; rather they look for heat anomalies (either elevated or suppressed temperatures) characteristic of a potential utility line.

The thermal fingerprint of underground utilities results from differences in temperature between the atmosphere and the fluid present in a pipe or the heat generated by electrical resistance. In addition, infrared scanners may be capable of detecting differences in the compaction, temperature and moisture content of underground utility trenches. High-performance thermal imagery can detect temperature differences to hundredths of a degree.

6.3 Intrusive Detection Surveys

Vacuum Excavation

Vacuum excavation is used to physically expose utility services. The process involves removing the surface material over approximately a 1' x 1' area at the site location. The air-vacuum process proceeds with the simultaneous action of compressed air-jets to loosen soil and vacuum extraction of the resulting

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debris. This process ensures the integrity of the utility line during the excavation process, as no hammers, blades, or heavy mechanical equipment comes into contact with the utility line, eliminating the risk of damage to utilities. The process continues until the utility is uncovered. Vacuum excavation can be used at the proposed site location to excavate below the "utility window" which is usually 8 feet.

Hand Excavation

When the identification and location of underground utilities cannot be positively confirmed through document reviews and/or other methods, borings and excavations may be cleared via the use of non-conductive hand tools. This should always be done in conjunction with the use of detection equipment. This would be required for all locations where there is a potential to impact buried utilities. The minimum hand-excavation depth that must be reached is to be determined considering the geographical location of the work site. This approach recognizes that the placement of buried utilities is influenced by frost line depths that vary by geographical region. Attachment 2 presents frost line depths for the regions of the contiguous United States. At a minimum, hand excavation depths must be at least to the frost line depth (see Attachment 2) plus two (2) feet, but never less than 4 feet below ground surface (bgs). For hand excavation, the hole created must be reamed large enough to be at least the diameter of the drill rig auger or bit prior to drilling. For soil gas surveys, the survey probe shall be placed as close as possible to the cleared hand excavation. It is important to note that a post-hole digger must not be used in this type of hand excavation activity.

Tile Probe Surveys

For some soil types, site conditions, and excavation requirements, non-conductive tile probes may be used. A tile probe is a "T"-handled rod of varying lengths that can be pushed into the soil to determine if any obstructions exist at that location. Tile probes constructed of fiberglass or other nonconductive material are readily-available from numerous vendors. Tile probes must be performed to the same depth requirements as previously specified. As with other types of hand excavating activities, the use of a non-conductive tile probe, should always be in conjunction with suitable utility locating detection equipment.

7.0 INTRUSIVE ACTIVITIES SUMMARY

The following list summarizes the activities that must be performed prior to beginning subsurface activities:

1. Map and mark all subsurface locations and excavation boundaries using white paint or markers specified by the client or property owner.
2. Notify the property owner and/or client that the locations are marked. At this point, drawings of locations or excavation boundaries shall be provided to the property owner and/or client so they may initiate (if applicable) utility clearance.

Note: Drawings with confirmed locations should be provided to the property owner and/or client as soon as possible to reduce potential time delays.

3. Notify "One Call" service. If possible, arrange for an appointment to show the One Call representative the surface locations or excavation boundaries in person. This will provide a better location designation to the utilities they represent. You should have additional drawings should you need to provide plot plans to the One Call service.
4. Implement supplemental utility detection techniques as necessary and appropriate to conform utility locations or the absence thereof.

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5. Complete Attachment 3, Utility Clearance Form. This form should be completed for each excavation location. In situations where multiple subsurface locations exist within the close proximity of one another, one form may be used for multiple locations provided those locations are noted on the Utility Clearance Form. Upon completion, the Utility Clearance Form and revised/annotated utility location map becomes part of the project file.

8.0 REFERENCES

OSHA Letter of Interpretation, Mr. Joseph Caldwell, Attachment 4
 OSHA 29 CFR 1926(b)(2)
 OSHA 29 CFR 1926(b)(3)
 TtNUS Utility Locating and Clearance Policy
 TtNUS SOP GH-3.1; Resistivity and Electromagnetic Induction
 TtNUS SOP GH-3.2; Magnetic and Metal Detection Surveys
 TtNUS SOP GH-3.4; Ground-penetrating Radar Surveys

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**ATTACHMENT 1
LISTING OF UNDERGROUND UTILITY CLEARANCE RESOURCES**



American Public Works Association
2345 Grand Boulevard, Suite 500, Kansas City, MO 64108-2625
Phone (816) 472-6100 • Fax (816) 472-1610
Web www.apwa.net • E-mail apwa@apwa.net

**ONE-CALL SYSTEMS INTERNATIONAL
CONDENSED DIRECTORY**

<p>Alabama Alabama One-Call 1-800-292-8525</p> <p>Alaska Locate Call Center of Alaska, Inc. 1-800-478-3121</p> <p>Arizona Arizona Blue Stake 1-800-782-5348</p> <p>Arkansas Arkansas One Call System, Inc. 1-800-482-8998</p> <p>California Underground Service Alert North 1-800-227-2600 Underground Service Alert of Southern California 1-800-227-2600</p> <p>Colorado Utility Notification Center of Colorado 1-800-922-1987</p> <p>Connecticut Call Before You Dig 1-800-922-4455</p> <p>Delaware Miss Utility of Delmarva 1-800-282-8555</p> <p>Florida Sunshine State One-Call of Florida, Inc. 1-800-432-4770</p> <p>Georgia Underground Protection Center, Inc. 1-800-282-7411</p> <p>Hawaii Underground Service Alert North 1-800-227-2600</p> <p>Idaho Dig Line Inc. 1-800-342-1585 Kootenai County One-Call 1-800-428-4950 Shoshone - Benewah One-Call 1-800-398-3285</p> <p>Illinois JULIE, Inc. 1-800-892-0123 Digger (Chicago Utility Alert Network) 312-744-7000</p> <p>Indiana Indiana Underground Plant Protection Service 1-800-382-5544</p>	<p>Iowa Iowa One-Call 1-800-292-8989</p> <p>Kansas Kansas One-Call System, Inc. 1-800-344-7233</p> <p>Kentucky Kentucky Underground Protection Inc. 1-800-752-6007</p> <p>Louisiana Louisiana One Call System, Inc. 1-800-272-3020</p> <p>Maine Dig Safe System, Inc. 1-888-344-7233</p> <p>Maryland Miss Utility 1-800-257-7777 Miss Utility of Delmarva 1-800-282-8555</p> <p>Massachusetts Dig Safe System, Inc. 1-888-344-7233</p> <p>Michigan Miss Dig System, Inc. 1-800-482-7171</p> <p>Minnesota Gopher State One Call 1-800-252-1168</p> <p>Mississippi Mississippi One-Call System, Inc. 1-800-227-6477</p> <p>Missouri Missouri One-Call System, Inc. 1-800-344-7483</p> <p>Montana Utilities Underground Protection Center 1-800-424-5555 Montana One Call Center 1-800-551-8344</p> <p>Nebraska Diggers Hotline of Nebraska 1-800-331-5666</p> <p>Nevada Underground Service Alert North 1-800-227-2600</p> <p>New Hampshire Dig Safe System, Inc. 1-888-344-7233</p>	<p>New Jersey New Jersey One Call 1-800-272-1000</p> <p>New Mexico New Mexico One Call System, Inc. 1-800-321-2537 Las Cruces- Dona Ana Blue Stakes 1-888-526-0400</p> <p>New York Dig Safely New York 1-800-862-7962 New York City- Long Island One Call Center 1-800-272-4480</p> <p>North Carolina The North Carolina One-Call Center, Inc. 1-800-632-4949</p> <p>North Dakota North Dakota One-Call 1-800-795-0555</p> <p>Ohio Ohio Utilities Protection Service 1-800-362-2764 Oil & Gas Producers Underground Protect'n Svc 1-800-925-0988</p> <p>Oklahoma Call Okie 1-800-522-6543</p> <p>Oregon Oregon Utility Notification Center/One Call Concepts 1-800-332-2344</p> <p>Pennsylvania Pennsylvania One Call System, Inc. 1-800-242-1776</p> <p>Rhode Island Dig Safe System, Inc. 1-888-344-7233</p> <p>South Carolina Palmetto Utility Protection Service Inc. 1-888-721-7877</p> <p>South Dakota South Dakota One Call 1-800-781-7474</p> <p>Tennessee Tennessee One-Call System, Inc. 1-800-351-1111</p>
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ATTACHMENT 1 (Continued)

Texas

Texas One Call System
1-800-245-4545
Texas Excavation Safety System, Inc.
1-800-344-8377
Lone Star Notification Center
1-800-669-8344

Utah

Blue Stakes of Utah
1-800-662-4111

Vermont

Dig Safe System, Inc.
1-888-344-7233

Virginia

Miss Utility of Virginia
1-800-552-7001
Miss Utility (Northern Virginia)
1-800-257-7777

Washington

Utilities Underground Location Center
1-800-424-5555
Northwest Utility Notification Center
1-800-553-4344
Inland Empire Utility Coordinating
Council
509-456-8000

West Virginia

Miss Utility of West Virginia, Inc.
1-800-245-4848

Wisconsin

Diggers Hotline, Inc.
1-800-242-8511

Wyoming

Wyoming One-Call System, Inc.
1-800-348-1030
Call Before You Dig of Wyoming
1-800-849-2476

District of Columbia

Miss Utility
1-800-257-7777

Alberta

Alberta One-Call Corporation
1-800-242-3447

British Columbia

BC One Call
1-800-474-6886

Ontario

Ontario One-Call System
1-800-400-2255

Quebec

Info-Excavation
1-800-663-9228

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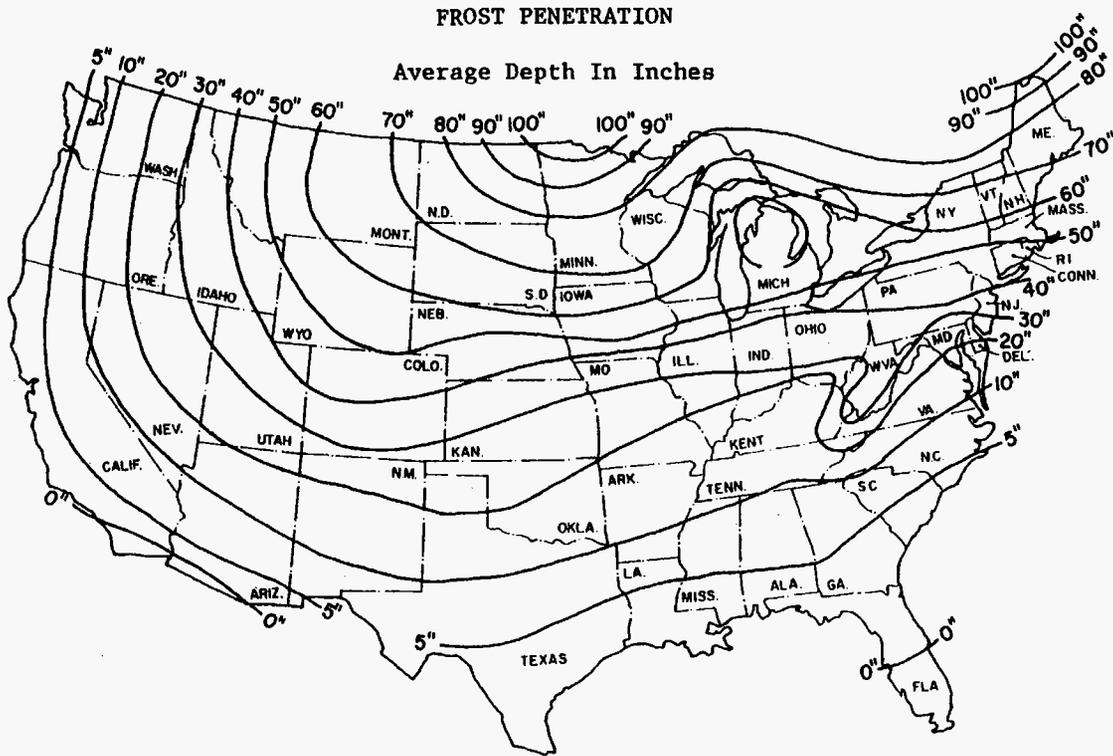
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ATTACHMENT 2

FROST LINE PENETRATION DEPTHS BY GEOGRAPHIC LOCATION



Courtesy U.S. Department Of Commerce

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**ATTACHMENT 3
UTILITY CLEARANCE FORM**

Client: _____ Project Name: _____
Project No.: _____ Completed By: _____
Location Name: _____ Work Date: _____
Excavation Method/Overhead Equipment: _____

1. Underground Utilities Circle One
- a) Review of existing maps? yes no N/A
 - b) Interview local personnel? yes no N/A
 - c) Site visit and inspection? yes no N/A
 - d) Excavation areas marked in the field? yes no N/A
 - e) Utilities located in the field? yes no N/A
 - f) Located utilities marked/added to site maps? yes no N/A
 - g) Client contact notified yes no N/A
Name _____ Telephone: _____ Date: _____
 - g) State One-Call agency called? yes no N/A
Caller: _____
Ticket Number: _____ Date: _____
 - h) Geophysical survey performed? yes no N/A
Survey performed by: _____
Method: _____ Date: _____
 - i) Hand excavation performed (with concurrent use of utility
detection device)? yes no N/A
Completed by: _____
Total depth: _____ feet Date: _____
 - j) Trench/excavation probed? yes no N/A
Probing completed by: _____
Depth/frequency: _____ Date: _____

2. Overhead Utilities Present Absent
- a) Determination of nominal voltage yes no N/A
 - b) Marked on site maps yes no N/A
 - c) Necessary to lockout/insulate/re-route yes no N/A
 - d) Document procedures used to lockout/insulate/re-route yes no N/A
 - e) Minimum acceptable clearance (SOP Section 5.2): _____

3. Notes:

Approval:

Site Manager/Field Operations Leader Date

c: PM/Project File
Program File

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**ATTACHMENT 4
OSHA LETTER OF INTERPRETATION**

Mr. Joseph Caldwell
Consultant
Governmental Liaison
Pipeline Safety Regulations
211 Wilson Boulevard
Suite 700
Arlington, Virginia 22201

Re: Use of hydro-vacuum or non-conductive hand tools to locate underground utilities.

Dear Mr. Caldwell:

In a letter dated July 7, 2003, we responded to your inquiry of September 18, 2002, regarding the use of hydro-vacuum equipment to locate underground utilities by excavation. After our letter to you was posted on the OSHA website, we received numerous inquiries that make it apparent that aspects of our July 7 letter are being misunderstood. In addition, a number of industry stakeholders, including the National Utility Contractors Association (NUCA), have provided new information regarding equipment that is available for this work.

To clarify these issues, we are withdrawing our July 7 letter and issuing this replacement response to your inquiry.

***Question:** Section 1926.651 contains several requirements that relate to the safety of employees engaged in excavation work. Specifically, paragraphs (b)(2) and (b)(3) relate in part to the safety of the means used to locate underground utility installations that, if damaged during an uncovering operation, could pose serious hazards to employees.*

Under these provisions, what constitutes an acceptable method of uncovering underground utility lines, and further, would the use of hydro-vacuum excavation be acceptable under the standard?

Answer

Background

Two sections of 29 CFR 1926 Subpart P (Excavations), 1926.651 (Specific excavation requirements), govern methods for uncovering underground utility installations. Specifically, paragraph (b)(2) states:

When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours * * * or cannot establish the exact location of these installations, the employer may proceed, provided the employer does so with caution, and provided detection equipment or other acceptable means to locate utility installations are used. (emphasis added).

Paragraph (b)(3) provides:

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When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means. (emphasis added).

Therefore, “acceptable means” must be used where the location of the underground utilities have not been identified by the utility companies and detection equipment is not used.

Subpart P does not contain a definition of either “other acceptable means” or “safe and acceptable means.” The preambles to both the proposed rule and the final rule discussed the rationale behind the wording at issue. For example, the preamble to the proposed rule, 52 Fed. Reg. 12301 (April 15, 1987), noted that a 1972 version of this standard contained language that specified “careful probing or hand digging” as the means to uncover utilities. The preamble then noted that an amendment to the 1972 standard later deleted that language “to allow other, *equally effective means* of locating such installations.” The preamble continued that in the 1987 proposed rule, OSHA again proposed using language in section (b)(3) that would provide another example of an acceptable method of uncovering utilities that could be used where the utilities have not been marked and detection equipment is not being used – “probing with hand-held tools.” This method was rejected in the final version of 29 CFR 1926. As OSHA explained in the preamble to the final rule, 54 Fed. Reg. 45916 (October 31, 1989):

OSHA received two comments * * * and input from ACCSH [OSHA’s Advisory Committee on Construction Safety and Health] * * * on this provision. All commenters recommended dropping ‘such as probing with hand-held tools’ from the proposed provision, because this could create a hazard to employees by damaging the installation or its insulation.

In other words, the commenters objected to the use of hand tools being used unless detection equipment was used in conjunction with them. OSHA then concluded its discussion relative to this provision by agreeing with the commentators and ultimately not including any examples of “acceptable means” in the final provision.

Non-conductive hand tools are permitted

This raises the question of whether the standard permits the use of hand tools alone -- without also using detection equipment. NUCA and other industry stakeholders have recently informed us that non-conductive hand tools that are appropriate to be used to locate underground utilities are now commonly available.

Such tools, such as a “shooter” (which has a non-conductive handle and a snub nose) and non-conductive or insulated probes were not discussed in the rulemaking. Since they were not considered at that time, they were not part of the class of equipment that was thought to be unsafe for this purpose. Therefore, we conclude that the use of these types of hand tools, when used with appropriate caution, is an “acceptable means” for locating underground utilities.

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ATTACHMENT 4 (Continued)

Hydro-vacuum excavation

It is our understanding that some hydro-vacuum excavation equipment can be adjusted to use a minimum amount of water and suction pressure. When appropriately adjusted so that the equipment will not damage underground utilities (especially utilities that are particularly vulnerable to damage, such as electrical lines), use of such equipment would be considered a "acceptable means" of locating underground utilities. However, if the equipment cannot be sufficiently adjusted, then this method would not be acceptable under the standard.

Other technologies

We are not suggesting that these are the only devices that would be "acceptable means" under the standard. Industry stakeholders have informed us that there are other types of special excavation equipment designed for safely locating utilities as well.

We apologize for any confusion our July 7 letter may have caused. If you have further concerns or questions, please feel free to contact us again by fax at: U.S. Department of Labor, OSHA, Directorate of Construction, Office of Construction Standards and Compliance Assistance, fax # 202-693-1689. You can also contact us by mail at the above office, Room N3468, 200 Constitution Avenue, N.W., Washington, D.C. 20210, although there will be a delay in our receiving correspondence by mail.

Sincerely,

Russell B. Swanson, Director
Directorate of Construction

NOTE: OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

ATTACHMENT III
EQUIPMENT INSPECTION CHECKLIST

	Good	Needs Repaired	N/A
- Number of U-Type (Crosby) Clips (5/16 – 5/8 = 3 clips minimum) (3/4 – 1 inch = 4 clips minimum) (1 1/8 – 1 3/8 inch = 5 clips minimum)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Kinks, bends – Flattened to > 50% diameter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
➤ Hemp/Fiber rope (Cathead/Split Spoon Hammer)			
- Minimum 3/4; maximum 1 inch rope diameter (Inspect for physical damage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Rope to hammer is securely fastened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Safety Guards:

	Yes	No
Around rotating apparatus (belts, pulleys, sprockets, spindles, drums, flywheels, chains) all points of operations protected from accidental contact? _____	<input type="checkbox"/>	<input type="checkbox"/>
Hot pipes and surfaces exposed to accidental contact? _____	<input type="checkbox"/>	<input type="checkbox"/>
All emergency shut offs have been identified and communicated to the field crew? _____	<input type="checkbox"/>	<input type="checkbox"/>
Are any structural members bent, rusted, or otherwise show signs of damage? _____	<input type="checkbox"/>	<input type="checkbox"/>
Are fueling cans used with this equipment approved type safety cans? _____	<input type="checkbox"/>	<input type="checkbox"/>
Have the attachments designed for use (as per manufacturer's recommendation) with this equipment been inspected and are considered suitable for use? _____	<input type="checkbox"/>	<input type="checkbox"/>

Cleanliness:

- Overall condition (was the decontamination performed prior to arrival on-site considered acceptable)? _____
- Where was this equipment used prior to its arrival on site? _____
- Site Contaminants of concern at the previous site? _____
- Inside debris (coffee cups, soda cans, tools and equipment) blocking free access to foot controls? _____
- Flammable solvents stored in the operators cab? _____

Operator Qualifications (as applicable for all heavy equipment):

- Does the operator have proper licensing where applicable, (e.g., CDL)? _____
- Does the operator, understand the equipment's operating instructions? _____
- Is the operator experienced with this equipment? _____
- Is the operator 21 years of age or more? _____

ADDITIONAL INSPECTION REQUIRED PRIOR TO USE ON-SITE **YES** **NO**

- Does equipment emit noise levels above 90 decibels?
- If so, has an 8-hour noise dosimetry test been performed?
- Results of noise dosimetry: _____
- Defects and repairs needed: _____
- General Safety Condition: _____
- Operator or mechanic signature: _____

Site Health and Safety Officer Signature: _____

Approved for Use: Yes No

ATTACHMENT IV
SAFE WORK PERMITS

**SAFE WORK PERMIT
DECONTAMINATION ACTIVITIES
NAS PENSACOLA, PENSACOLA, FLORIDA**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

- I. **Work limited to the following (description, area, equipment used):** Decontamination of heavy equipment and machinery (i.e., drill rigs and flights) will occur using pressure washers and/or steam cleaning units. This will be accomplished at a constructed temporary decontamination pad at the work site. Decontamination of sampling equipment will be decontaminated using buckets, brushes and spray bottles at the work site or designated location.
- II. **Primary Hazards:** Potential hazards associated with this task include lifting (strain/muscle pulls lifting heavy drilling equipment); Flying projectiles propelled by the force of the pressure washer/stream cleaner; noise in excess of 85 dBA; Burns/water lacerations; Stacked equipment - falling hazards; slips, trips, and falls – slippery surfaces. The direction provided in this HASP, Table 5-1 and this Safe Work Permit are directed at controlling these hazards.
- III. **Field Crew:** _____
- IV. **On-site Inspection conducted** Yes No Initials of Inspector _____ TtNUS
Equipment Inspection required Yes No Initials of Inspector _____ TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

- V. **Protective equipment required** Level D Level B Level C Level A
Respiratory equipment required Yes No Specify on the reverse
 Modifications/Exceptions: None anticipated

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>Liquinox (soap)</u>	<u>None Required</u>	<u>None</u>	<u>Eye irritant/flush with clean water</u>

Primary Route of Exposure/Hazard: Soap – Contact - Eye irritant; ingestion - nausea possible vomiting, diarrhea; Exposure to residual site contaminants during this activity is considered negligible.

(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)

VII. Additional Safety Equipment/Procedures

Hard-hat	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hearing Protection (Plugs/Muffs).....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Safety Glasses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Safety belt/harness	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Chemical/splash goggles.....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Radio/Cellular Phone.....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Splash Shield.....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Barricades	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Splash suits/coveralls	<input type="checkbox"/> Yes <input type="checkbox"/> No	Gloves (Type – Nitrile).....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Impermeable apron	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Work/rest regimen	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Steel toe Work shoes or boots...	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Chemical Resistant Boot Covers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
High Visibility vest.....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Tape up/use insect repellent	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
First Aid Kit	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fire Extinguisher.....	<input type="checkbox"/> Yes <input type="checkbox"/> No
Safety Shower/Eyewash.....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other	<input type="checkbox"/> Yes <input type="checkbox"/> No

Modifications/Exceptions: Impermeable aprons to control splashing/overspray. If this is inadequate replace with rainsuit or PE coated Tyvek. Hard hat, splash shield, hearing protection will be worn for pressure washer/steam cleaner operation. Gloves – Nitrile (surgeons style) or outer for deconning sampling (hand) tools, nitrile supported for steam cleaner/pressure washer operation. Overboots will be used when working in the temporary decon pad.

VIII. Site Preparation

	Yes	No	NA
Utility Locating and Excavation Clearance completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Identified and Isolated (Splash and containment barriers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- IX. **Additional Permits required** (Hot work, confined space entry, excavation etc.) Yes No
If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090

- X. **Special instructions, precautions:** Suspend site activities in the event of inclement weather. Employ proper lifting techniques as described on Table 5-1 for this task. Construct pad as per Table 5-1 Decontamination. Use drying racks to secure heavy equipment to prevent items from falling during washing and drying. In addition, do NOT point the wand at other people or place it against any part of your body. Accidental compression of the trigger can cause water lacerations or burns. All hoses and fittings will be inspected to insure structural integrity prior to use. For pressure washers or steam cleaners in excess of 3,000 psi, a fan tip of 25° or greater will be used to control potential for water cuts or lacerations. A light coating of sand should be applied to the plastic liner should the surface becomes to slippery to prevent slips. Keep hoses gathered to prevent trips and falls. A site control boundary for this activity is 35-feet surrounding the point of operation. Follow MSDS for any decontamination solutions/solvents used.

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
MULTI-MEDIA SAMPLING ACTIVITIES
NAS PENSACOLA, PENSACOLA, FLORIDA**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

- I. Work limited to the following (description, area, equipment used):** Multi-media sampling includes Soil sampling collected using a MacroCore Sampler spoon/disposable trowels; Monitoring well development/hydraulic conductivity testing/groundwater sampling using 1-inch Whale pumps/surge blocks and peristaltic pumps.
- II. Primary Hazards:** Potential hazards associated with this task include lifting (buckets of purge waters and moving drums), cuts and lacerations (cutting tubing), pinches and compressions opening MacroCore Samplers and handling containers); contact with contaminated media. The direction provided in this HASP, Table 5-1 and this Safe Work Permit are directed at controlling these hazards.
- III. Field Crew:** _____
- IV. On-site Inspection conducted** Yes No Inspector Initials TtNUS
- Equipment Inspection required** Yes No Inspector Initials TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

- V. Protective equipment required** **Respiratory equipment required**
- Level D Level B Yes See Reverse
- Level C Level A No
- Modifications/Exceptions: _____

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
Dust (Particulates – Lead)	Particulate meter	>1.0 mg/m3	Employ dust suppression –Wet it down

Primary Route of Exposure/Hazard: Lead – Exposure to lead may result in irritation of the mucous membranes of the respiratory tract, possible dryness of the throat, coughing, and sometimes accompanied by a metallic taste in the mouth. Gastrointestinal disturbances (nausea, vomiting, diarrhea, colicky abdominal pain) are characteristic of exposure through ingestion.

(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)

VII. Additional Safety Equipment/Procedures

- | | | | |
|-----------------------------------|---|--|---|
| Hard-hat | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Hearing Protection (Plugs/Muffs)..... | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Glasses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Safety belt/harness..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Chemical/splash goggles..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Radio/Cellular Phone | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash Shield | <input type="checkbox"/> Yes <input type="checkbox"/> No | Barricades | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash suits/coveralls | <input type="checkbox"/> Yes <input type="checkbox"/> No | Gloves (Type – <u>Nitrile surgeons</u>) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Impermeable apron | <input type="checkbox"/> Yes <input type="checkbox"/> No | Work/rest regimen | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Steel toe Work shoes or boots ... | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| High Visibility vest | <input type="checkbox"/> Yes <input type="checkbox"/> No | Tape up/use insect repellent | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| First Aid Kit | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Fire Extinguisher | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Shower/Eyewash..... | <input type="checkbox"/> Yes <input type="checkbox"/> No | Other | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Modifications/Exceptions: Hard hat, hearing protection, and safety glasses for sampling at the DPT/HSA rig; High Visibility Vests for high traffic areas; Tape up and use insect repellent to combat insect bites; Spiders and bees prefer well protective casings as nesting areas; Open wells and allow to vent/off gas 3-5 minutes while preparing your equipment from an upwind position.

VIII. Site Preparation

	Yes	No	NA
Utility Locating and Excavation Clearance completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle and Foot Traffic Routes Cleared and Established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Barricaded and Isolated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- IX. Additional Permits required** (Hot work, confined space entry, excavation etc.) Yes No
If yes, complete permit required or contact Health Sciences, Pittsburgh Office

X. Special instructions, precautions: Personal sampling at remote locations will bag contaminated PPE and reusable sampling tools. Use hygienic wipes for hands and face until persons can reach the structured decontamination unit. Minimize contact with potentially contaminated media. Suspend site activities in the event of inclement weather. Employ proper lifting techniques as described on Table 5-1 for mobilization/demobilization. For remote locations pack glass ware in hard sided containers to prevent falls breakage of glassware and possible lacerations. Provisions for protection against the sun should be provided to site personnel including shade providing devices requirements for hats, sun block, wrap around sun glasses.

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
MONITORING WELL INSTALLATION/SOIL BORING ACTIVITIES
NAS PENSACOLA, PENSACOLA, FLORIDA**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

I. Work limited to the following (description, area, equipment used): Surface and subsurface soil samples will be acquired using DPT and MacroCore Samplers to continuously sample to the first water. Personnel will be required to meet the requirements of both the Safe Work Permit for Multi-media sampling and this Safe Work Permit. Monitoring well installation – Installation will be accomplished using HSAs. The well will be installed inside the augers as they are extracted. During the extraction of the augers sand is added to 2-feet above the screen, then a 2-foot bentonite seal, finished then with grout to the surface.

II. Primary Hazards: Potential hazards associated with this task include lifting (bags of sand, grout, auger flights and moving drums of soil), cuts and lacerations (cutting bags, well riser, etc.), pinches and compressions (wrenches slipping) and handling containers; pressurized systems (hydraulic lines); contact with contaminated media. The direction provided in this HASP, Table 5-1 and this Safe Work Permit are directed at controlling these hazards. It should be noted that every situation cannot be anticipated therefore evaluated. Site personnel therefore may have to conduct hazard assessments on a per task basis and employ controls as necessary.

III. Field Crew: _____

IV. On-site Inspection conducted Yes No Inspector Initials _____ TtNUS

Equipment Inspection required Yes No Inspector Initials _____ TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

V. Protective equipment required

Level D Level B
Level C Level A

Respiratory equipment required

Yes See Reverse
No

Modifications/Exceptions: _____

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
Dust (sand, grout, bentonite)	Visual –Visible dust	>2 mg/m3	Employ dust suppression –Wet it down
Dust (Particulates – Lead)	Particulate meter	>1.0 mg/m3	Employ dust suppression –Wet it down

Primary Route of Exposure/Hazard: Lead – Exposure to lead may result in irritation of the mucous membranes of the respiratory tract, possible dryness of the throat, coughing, and sometimes accompanied by a metallic taste in the mouth. Gastrointestinal disturbances (nausea, vomiting, diarrhea, colicky abdominal pain) are characteristic of exposure through ingestion.

(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)

VII. Additional Safety Equipment/Procedures (Note to FOL and/or SHSO: Each item must be checked Yes or No)

Hard-hat	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hearing Protection (Plugs/Muffs)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Safety Glasses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Safety belt/harness	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Chemical/splash goggles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Radio/Cellular Phone	<input type="checkbox"/> Yes <input type="checkbox"/> No
Splash Shield	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Barricades	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Splash suits/coveralls	<input type="checkbox"/> Yes <input type="checkbox"/> No	Gloves (Type – See Note)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Impermeable apron	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Work/rest regimen	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Steel toe Work shoes or boots	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Chemical Resistant Boot Covers	<input type="checkbox"/> Yes <input type="checkbox"/> No
High Visibility vest	<input type="checkbox"/> Yes <input type="checkbox"/> No	Tape up/use insect repellent	<input type="checkbox"/> Yes <input type="checkbox"/> No
First Aid Kit	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fire Extinguisher	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Safety Shower/Eyewash	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other	<input type="checkbox"/> Yes <input type="checkbox"/> No

Modifications/Exceptions: High Visibility Vests for high traffic areas; Tape up and use insect repellent to combat insect bites in forested or areas of heavy vegetation; Fire extinguisher for all vehicles in excess of 1-ton; Nitrile or neoprene supported gloves and impermeable aprons for handling contaminated auger flights, nitrile surgeon gloves for handling sampling tools and well screens and risers.

VIII. Site Preparation	Yes	No	NA
Utility Locating and Excavation Clearance completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle and Foot Traffic Routes Cleared and Established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Barricaded and Isolated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IX. Additional Permits required (Utility Locating and Excavation Clearance – Attachment II) Yes No
If yes, SHSO complete permit or contact Health Sciences, Pittsburgh Office(412) 921-7090

X. Special instructions, precautions: Follow the safe work practices for drilling specified in Section 5.9 of this HASP. Use proper lifting techniques defined in Table 5-1 for mobilization/demobilization. Test all emergency stop devices initially then periodically to insure operational status. Identify a person on the field crew as the Emergency Stop Operator. Visually insure all persons are removed from rotating apparatus. Verbally alert all persons as to the activation of the augers. Remove jewelry, loose clothing and other entanglement hazards. Personnel decontamination will consist of disposing of single use PPE and washing hands and face prior to breaks or meals. The potential for exposure can occur only through mechanical dispersion (inhalation) or hand to mouth contact (ingestion) through poor work hygiene practices. Utility clearance will proceed all subsurface installation.

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
GEOGRAPHICAL SURVEYING ACTIVITIES
NAS PENSACOLA, PENSACOLA, FLORIDA**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

- I. **Work limited to the following (description, area, equipment used):** Geographical surveying within a light industrial area. These activities include site reconnaissance, site preparation including the layout of control station as well as shooting vertical and horizontal control. In addition, fixed features such as intersections
- II. **Primary Hazards:** Potential hazards associated with this task are primarily physical in nature including lifting, cuts and lacerations, pinches and compressions; flying projectiles; slips, trips, and falls; insect and animal bites The direction provided in this HASP, Table 5-1 and this Safe Work Permit are directed at controlling these hazards. It should be noted that not every situation can be anticipated therefore evaluated. Site personnel will therefore have to conduct hazard assessments on a per task basis and employ controls as necessary.
- IV. **Field Crew:** _____
- IV. **On-site Inspection conducted** Yes No Initials of Inspector _____ TtNUS
Equipment Inspection required Yes No Initials of Inspector _____ TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

- V. **Protective equipment required** Level D Level B Level C Level A
- Respiratory equipment required** Yes No See Reverse
- Modifications/Exceptions: None anticipated

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>None anticipated</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

Primary Route of Exposure/Hazard: None

(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)

VII. Additional Safety Equipment/Procedures

- | | | | |
|-----------------------------------|---|--|---|
| Hard-hat | <input type="checkbox"/> Yes <input type="checkbox"/> No | Hearing Protection (Plugs/Muffs)..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Safety Glasses | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety belt/harness..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Chemical/splash goggles..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Radio/Cellular Phone | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash Shield | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Barricades | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash suits/coveralls | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Gloves (Type – <u>Leather/Cotton</u>) | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Impermeable apron | <input type="checkbox"/> Yes <input type="checkbox"/> No | Work/rest regimen | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Steel toe Work shoes or boots ... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Chemical Resistant Boot Covers | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| High Visibility vest | <input type="checkbox"/> Yes <input type="checkbox"/> No | Tape up/use insect repellent | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| First Aid Kit..... | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Fire Extinguisher | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Shower/Eyewash..... | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Other | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Modifications/Exceptions: Pant legs are to be taped to work boots to prevent entry under the clothing by ticks and other insects when working in heavy brush and wooded areas. Use insect repellants according to manufacturers recommendations. Tyvek coveralls may be used in heavy brush to protect against natural hazards (e.g., ticks) and also to make identification easier. If working in areas where snakes are a threat, wear snake chaps to protect against bites. Surveyors working along highways and traffic pathways shall wear high visibility vests to increase visual recognition. Safety glasses and Hard Hats should be worn when cutting sight lines; leather or cotton work gloves when cutting brush.

VIII. Site Preparation	Yes	No	NA
Utility Locating and Excavation Clearance completed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Identified and Isolated.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- IX. **Additional Permits required** (Hot work, confined space entry, excavation etc.) Yes No
If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090

- X. **Special instructions, precautions:** Suspend site activities in the event of inclement weather. Employ proper lifting techniques as described on Table 5-1 for this task. Employ sharp tools for cutting brush, when not in use keep the sheath on the blade.

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
IDW MANAGEMENT ACTIVITIES
NAS PENSACOLA, PENSACOLA, FLORIDA**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

- I. **Work limited to the following (description, area, equipment used):** IDW management activities includes containerization, staging, monitoring for leaks of IDW accumulated wastes. Wastes types include soil cutting, purge and decontamination wash waters.
- II. **Primary Hazards:** Potential hazards associated with this task are primarily physical in nature including lifting, pinches and compressions; flying projectiles; slips, trips, and falls. The direction provided in this HASP, Table 5-1 and this Safe Work Permit are directed at controlling these hazards. It should be noted that not every situation can be anticipated therefore evaluated. Site personnel will therefore have to conduct hazard assessments on a per task basis and employ controls as necessary.
- V. **Field Crew:** _____
- IV. **On-site Inspection conducted** Yes No Initials of Inspector _____ TtNUS
Equipment Inspection required Yes No Initials of Inspector _____ TtNUS

SECTION II: General Safety Requirements (To be filled in by permit issuer)

- V. **Protective equipment required** **Respiratory equipment required**
 Level D Level B Yes See Reverse
 Level C Level A No

Modifications/Exceptions: None anticipated

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
None anticipated	NA	NA	NA

Primary Route of Exposure/Hazard: None

(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)

VII. Additional Safety Equipment/Procedures

- | | | | | | |
|-----------------------------------|---|--|---|---|--|
| Hard-hat | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Hearing Protection (Plugs/Muffs)..... | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Safety Glasses | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety belt/harness..... | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Chemical/splash goggles..... | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Radio/Cellular Phone | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Splash Shield | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Barricades | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Splash suits/coveralls | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Gloves (Type – <u>Leather/Cotton</u>)..... | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Impermeable apron | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Work/rest regimen | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Steel toe Work shoes or boots ... | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Chemical Resistant Boot Covers | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| High Visibility vest | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Tape up/use insect repellent | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| First Aid Kit | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Fire Extinguisher | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Safety Shower/Eyewash..... | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Other | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Modifications/Exceptions: If you are using pneumatic/electric power to open drums – Safety glasses are required; If power equipment is employed to move drums or you are working near operating equipment hard hats will be employed.

VIII. Site Preparation

	Yes	No	NA
Utility Locating and Excavation Clearance completed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Identified and Isolated.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- IX. **Additional Permits required** (Hot work, confined space entry, excavation etc.) Yes No
If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090

- X. **Special instructions, precautions:** Suspend site activities in the event of inclement weather. Employ proper lifting techniques as described on Table 5-1 for this task. When/where possible use heavy equipment to move and place containers. When placing drums – Place the label and retention ring nut on the outside where it is readily visible. Place 4-drums to a pallet. Maintain a minimum distance of 4-feet between pallet rows. An IDW inventory shall be generated to provide the number of drums, contents, and volumes. This inventory should be provided to the facility contact _____

Permit Issued by: _____ Permit Accepted by: _____

ATTACHMENT V
MEDICAL DATA SHEET

MEDICAL DATA SHEET

This brief Medical Data Sheet will be completed by all onsite personnel and visitors who are cleared and will enter defined areas of operation. The medical data sheets will be kept in a central location during the conduct of site operations. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

Project: NAS Pensacola; CTO 0355, Site 43

Name: _____ Home Telephone: _____

Address: _____

Age: _____ Height: _____ Weight: _____

Name of Next Kin: _____

Telephone Numbers: Home: _____ Work: _____ Cell: _____

Address _____

Drug or other Allergies: _____

Particular Sensitivities: _____

Do You Wear Contacts? _____

Provide a Checklist of Previous Illnesses or Overexposure to Hazardous Chemicals Resulting in signs and symptoms of overexposure and/or the necessity for Medical Attention and/or First-aid: _____

Do you have any medical restrictions? _____

Past Medical History/Review of Systems (Check if you have had positive history)

- | | |
|---|---|
| <input type="checkbox"/> Heart Conditions (Chest pains, angina, heart attacks) | <input type="checkbox"/> Endocrine (Thyroid, diabetes) |
| <input type="checkbox"/> Gastrointestinal Conditions (Ulcers, liver, GI Bleeding) | <input type="checkbox"/> Hematological (Clotting, anemia) |
| <input type="checkbox"/> Pulmonary (Difficulty in breathing, coughing, asthma, pneumonia) | <input type="checkbox"/> Cancer |
| <input type="checkbox"/> Neurological [Headaches, dizziness, strokes (CVA, TIA)] | <input type="checkbox"/> Muscular/Skeleton (Arthritis, Fractures, etc.) |
| <input type="checkbox"/> Kidney/Urological Disorder (kidney stones, renal failure) | <input type="checkbox"/> Other (Recent Illnesses, weight loss, fever, etc.) |

Comments: (Please explain positive indications): _____

Immunization History: Last Tetanus Shot or Booster (Date): _____ Pneumonia Vaccination (Date): _____

Flu Vaccination (Date): _____ Other: _____

Name, Address, and Phone Number of personal physician: _____

I am the individual described above. I have read and understand this HASP.

Signature

Date

ATTACHMENT VI

HEARING CONSERVATION PROGRAM

<u>SECTION</u>	<u>PAGE</u>
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TETRA TECH NUS, INC.
HEARING CONSERVATION PROGRAM

1.0 PURPOSE

To establish general and site-specific hearing conservation procedures and guidelines.

2.0 SCOPE

Applies to all hazardous waste and other field activities where exposure to high levels of noise may occur. This program is designed to comply with OSHA General Industry Standard 29 CFR 1910.95.

3.0 RESPONSIBILITIES

Project Health and Safety Officer (PHSO) - The PHSO shall ensure that hearing conservation measures are adequately addressed in the Site Specific Health and Safety Plan.

Site Health Safety Officer (SHSO) - The SHSO is responsible for establishing and implementing a hearing conservation program. The SHSO also ensures that adequate procedures are followed to prevent excessive exposure of individuals to high levels of noise.

Project Manager (PM) - The PM will ensure that sufficient information has been provided to the PHSO to prepare adequate procedures for inclusion in the site-specific Health and Safety Plan (HASP). The PM is also ultimately responsible for the effective compliance with these requirements.

4.0 MONITORING AND ESTABLISHING HIGH-NOISE AREAS

4.1 The SHSO, as necessary, will perform an initial noise survey on Tetra Tech NUS and Subcontractors operations and work areas by the use of a sound meter and/or dosimetry. All monitoring will be done in accordance with 29 CFR 1910.95. Areas and operations which are expected to reach or exceed 85 decibels (dBA) will be required to adhere to the requirements for this program. It should be noted that both real-time as stated above and historical monitoring is sufficient for determining potential for excessive noise hazards.

4.2 The HASP will specify the tasks directing the mandatory use of hearing protection. The FOL and/or SHSO will notify all Tetra Tech NUS and Subcontractor personnel of high noise areas and operations prior to work initiation.

The FOL and/or the SHSO will be responsible for implementation and enforcement of the site-specific Hearing Conservation elements.

- 4.3** The FOL and/or the SHSO will post or otherwise identify areas of operations which exceed 85 dBA. If significant changes in noise levels occur (such as a shutdown in an operating unit, change in procedures), the noise levels shall be re-evaluated by the SSO to determine if hearing protection will be worn.

5.0 HEARING PROTECTION

Each employee will have the opportunity to choose from a variety of hearing protection devices. Hearing protectors shall be replaced as necessary. The SHSO with the assistance of the PHSO will evaluate the attenuation factors of hearing protection devices and will select appropriate types based on sound level monitoring or personal dosimetry.

6.0 TRAINING PROGRAM

The Health Sciences Department will institute and maintain an initial training program for new employees and provide an annual training program for employees who may be exposed to noise sources 85 dBA or greater. The annual training will be incorporated with the refresher health and safety training curricula. All affected employees will be involved in the program and their participation documented.

- 6.1** The training program shall include the effects of noise on hearing. It will also include the purpose of hearing protectors; the advantages, disadvantages, and attenuation factors of the various types. Instruction shall be given on audiometric testing, selection, fitting, use and care of hearing protectors.
- 6.2** A copy of the OSHA Noise Standard and applicable informational and training material will be available to all employees.

7.0 RECORDKEEPING

Exposure measurements, related records will be kept at the site. Record retention will be done in accordance with the time periods stated in 29 CFR 1910.95 and 1910.20.

8.0 ATTACHMENTS

8.1 29 CFR 1910.95 Occupational Noise Exposure

8.1.1 Code of Federal Regulations, Subsection 1910.95

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ATTACHMENT 8.1

29 CFR 1910.95 OCCUPATIONAL NOISE EXPOSURE

Site:		Type of Audio Monitoring Equipment:		Date:
Employee Name	Operation	Hearing Protection Type Attenuation Factor	Noise Levels Measured	Duration of Use

Forward completed table (with backup noise monitoring data) to the Manager, Health Sciences.

ATTACHMENT 8.1.1

CODE OF FEDERAL REGULATIONS, SUBSECTION 1910.95

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FR 5322, Feb. 10, 1984; 55 FR 32015, Aug. 6, 1990; 58 FR 35308, June 30, 1993]

TABLE G-16—PERMISSIBLE NOISE EXPOSURES ¹

Duration per day, hours	Sound level dBA slow response
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1½.....	102
1.....	105
½.....	110
¼ or less.....	115

§ 1910.95 Occupational noise exposure.

(a) Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:

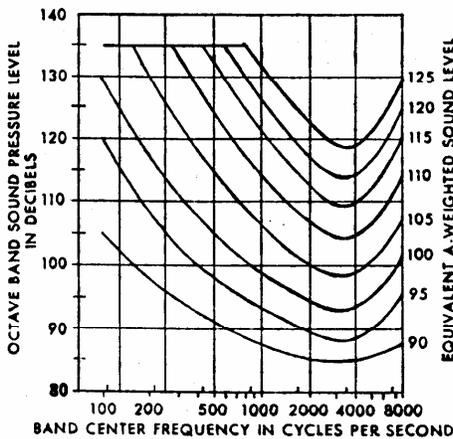


FIGURE G-9

Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.

(b)(1) When employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

(2) If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

¹ When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C_1/T_1 + C_2/T_2$, C_n/T_n , exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

(c) Hearing conservation program.

(1) The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.

(2) For purposes of paragraphs (c) through (n) of this section, an 8-hour time-weighted average of 85 decibels or a dose of fifty percent shall also be referred to as the action level.

(d) Monitoring. (1) When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.

(i) The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

(ii) Where circumstances such as high worker mobility, significant variations in sound level, or a significant

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component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless the employer can show that area sampling produces equivalent results.

(2)(i) All continuous, intermittent and impulsive sound levels from 80 decibels to 130 decibels shall be integrated into the noise measurements.

(ii) Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.

(3) Monitoring shall be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:

(i) Additional employees may be exposed at or above the action level; or

(ii) The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements of paragraph (j) of this section.

(e) *Employee notification.* The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 decibels of the results of the monitoring.

(f) *Observation of monitoring.* The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to this section.

(g) *Audiometric testing program.* (1) The employer shall establish and maintain an audiometric testing program as provided in this paragraph by making audiometric testing available to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels.

(2) The program shall be provided at no cost to employees.

(3) Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using,

maintaining and checking calibration and proper functioning of the audiometers being used. A technician who operates microprocessor audiometers does not need to be certified. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or physician.

(4) All audiograms obtained pursuant to this section shall meet the requirements of Appendix C: *Audiometric Measuring Instruments.*

(5) *Baseline audiogram.* (i) Within 6 months of an employee's first exposure at or above the action level, the employer shall establish a valid baseline audiogram against which subsequent audiograms can be compared.

(ii) *Mobile test van exception.* Where mobile test vans are used to meet the audiometric testing obligation, the employer shall obtain a valid baseline audiogram within 1 year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than 6 months after the employee's first exposure at or above the action level, employees shall wear hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

(iii) Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

(iv) The employer shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

(6) *Annual audiogram.* At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

(7) *Evaluation of audiogram.* (i) Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift as defined in paragraph (g)(10) of this section has oc-

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curred. This comparison may be done by a technician.

(ii) If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

(iii) The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. The employer shall provide to the person performing this evaluation the following information:

(A) A copy of the requirements for hearing conservation as set forth in paragraphs (c) through (n) of this section;

(B) The baseline audiogram and most recent audiogram of the employee to be evaluated;

(C) Measurements of background sound pressure levels in the audiometric test room as required in Appendix D: Audiometric Test Rooms.

(D) Records of audiometer calibrations required by paragraph (h)(5) of this section.

(8) *Follow-up procedures.* (i) If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift as defined in paragraph (g)(10) of this section has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination.

(ii) Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that the following steps are taken when a standard threshold shift occurs:

(A) Employees not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.

(B) Employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.

(C) The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a

medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.

(D) The employee is informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

(iii) If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour TWA of 90 decibels indicates that a standard threshold shift is not persistent, the employer:

(A) Shall inform the employee of the new audiometric interpretation; and

(B) May discontinue the required use of hearing protectors for that employee.

(9) *Revised baseline.* An annual audiogram may be substituted for the baseline audiogram when, in the judgment of the audiologist, otolaryngologist or physician who is evaluating the audiogram:

(i) The standard threshold shift revealed by the audiogram is persistent; or

(ii) The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

(10) *Standard threshold shift.* (i) As used in this section, a standard threshold shift is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

(ii) In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging (presbycusis) to the change in hearing level by correcting the annual audiogram according to the procedure described in Appendix F: *Calculation and Application of Age Correction to Audiograms.*

(h) *Audiometric test requirements.*

(1) Audiometric tests shall be pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz. Tests at each frequency shall be taken separately for each ear.

(2) Audiometric tests shall be conducted with audiometers (including microprocessor audiometers) that

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meet the specifications of, and are maintained and used in accordance with, American National Standard Specification for Audiometers, S3.6-1969.

(3) Pulsed-tone and self-recording audiometers, if used, shall meet the requirements specified in Appendix C: *Audiometric Measuring Instruments*.

(4) Audiometric examinations shall be administered in a room meeting the requirements listed in Appendix D: *Audiometric Test Rooms*.

(5) *Audiometer calibration*. (i) The functional operation of the audiometer shall be checked before each day's use by testing a person with known, stable hearing thresholds, and by listening to the audiometer's output to make sure that the output is free from distorted or unwanted sounds. Deviations of 10 decibels or greater require an acoustic calibration.

(ii) Audiometer calibration shall be checked acoustically at least annually in accordance with Appendix E: *Acoustic Calibration of Audiometers*. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check. Deviations of 15 decibels or greater require an exhaustive calibration.

(iii) An exhaustive calibration shall be performed at least every two years in accordance with sections 4.1.2; 4.1.3.; 4.1.4.3; 4.2; 4.4.1; 4.4.2; 4.4.3; and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this calibration.

(1) *Hearing protectors*. (1) Employers shall make hearing protectors available to all employees exposed to an 8-hour time-weighted average of 85 decibels or greater at no cost to the employees. Hearing protectors shall be replaced as necessary.

(2) Employers shall ensure that hearing protectors are worn:

(i) By an employee who is required by paragraph (b)(1) of this section to wear personal protective equipment; and

(ii) By any employee who is exposed to an 8-hour time-weighted average of 85 decibels or greater, and who:

(A) Has not yet had a baseline audiogram established pursuant to paragraph (g)(5)(ii); or

(B) Has experienced a standard threshold shift.

(3) Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the employer.

(4) The employer shall provide training in the use and care of all hearing protectors provided to employees.

(5) The employer shall ensure proper initial fitting and supervise the correct use of all hearing protectors.

(j) *Hearing protector attenuation*. (1) The employer shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The employer shall use one of the evaluation methods described in Appendix B: *Methods for Estimating the Adequacy of Hearing Protection Attenuation*.

(2) Hearing protectors must attenuate employee exposure at least to an 8-hour time-weighted average of 90 decibels as required by paragraph (b) of this section.

(3) For employees who have experienced a standard threshold shift, hearing protectors must attenuate employee exposure to an 8-hour time-weighted average of 85 decibels or below.

(4) The adequacy of hearing protector attenuation shall be re-evaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. The employer shall provide more effective hearing protectors where necessary.

(k) *Training program*. (1) The employer shall institute a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 decibels, and shall ensure employee participation in such program.

(2) The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.

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(3) The employer shall ensure that each employee is informed of the following:

- (i) The effects of noise on hearing;
- (ii) The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care; and
- (iii) The purpose of audiometric testing, and an explanation of the test procedures.

(1) *Access to information and training materials.* (1) The employer shall make available to affected employees or their representatives copies of this standard and shall also post a copy in the workplace.

(2) The employer shall provide to affected employees any informational materials pertaining to the standard that are supplied to the employer by the Assistant Secretary.

(3) The employer shall provide, upon request, all materials related to the employer's training and education program pertaining to this standard to the Assistant Secretary and the Director.

(m) *Recordkeeping*—(1) *Exposure measurements.* The employer shall maintain an accurate record of all employee exposure measurements required by paragraph (d) of this section.

(2) *Audiometric tests.* (i) The employer shall retain all employee audiometric test records obtained pursuant to paragraph (g) of this section:

- (ii) This record shall include:
 - (A) Name and job classification of the employee;
 - (B) Date of the audiogram;
 - (C) The examiner's name;
 - (D) Date of the last acoustic or exhaustive calibration of the audiometer; and
 - (E) Employee's most recent noise exposure assessment.
- (F) The employer shall maintain accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

(3) *Record retention.* The employer shall retain records required in this paragraph (m) for at least the following periods.

- (i) Noise exposure measurement records shall be retained for two years.

(ii) Audiometric test records shall be retained for the duration of the affected employee's employment.

(4) *Access to records.* All records required by this section shall be provided upon request to employees, former employees, representatives designated by the individual employee, and the Assistant Secretary. The provisions of 29 CFR 1910.20 (a)-(e) and (g)-(i) apply to access to records under this section.

(5) *Transfer of records.* If the employer ceases to do business, the employer shall transfer to the successor employer all records required to be maintained by this section, and the successor employer shall retain them for the remainder of the period prescribed in paragraph (m) (3) of this section.

(n) *Appendices.* (1) Appendices A, B, C, D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

(2) Appendices F and G to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

(o) *Exemptions.* Paragraphs (c) through (n) of this section shall not apply to employers engaged in oil and gas well drilling and servicing operations.

(p) *Startup date.* Baseline audiograms required by paragraph (g) of this section shall be completed by March 1, 1984.

(Approved by the Office of Management and Budget under control number 1218-0048)

APPENDIX A TO § 1910.95—NOISE EXPOSURE COMPUTATION
This Appendix is Mandatory

I. Computation of Employee Noise Exposure

(1) Noise dose is computed using Table G-16a as follows:

- (i) When the sound level, L, is constant over the entire work shift, the noise dose, D, in percent, is given by: $D = 100 C/T$ where C is the total length of the work day, in hours, and T is the reference duration corresponding to the measured sound level, L, as given in Table G-16a or by the formula shown as a footnote to that table.

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(ii) When the workshift noise exposure is composed of two or more periods of noise at different levels, the total noise dose over the work day is given by:

$$D=100 (C_1/T_1+C_2/T_2+ \dots + C_n/T_n),$$

where C_n indicates the total time of exposure at a specific noise level, and T_n indicates the reference duration for that level as given by Table G-16a.

(2) The eight-hour time-weighted average sound level (TWA), in decibels, may be computed from the dose, in percent, by means of the formula: $TWA=16.61 \log_{10} (D/100)+90$. For an eight-hour workshift with the noise level constant over the entire shift, the TWA is equal to the measured sound level.

(3) A table relating dose and TWA is given in Section II.

TABLE G-16a

A-weighted sound level, L (decibel)	Reference duration, T (hour)
80.....	32
81.....	27.9
82.....	24.3
83.....	21.1
84.....	18.4
85.....	16
86.....	13.9
87.....	12.1
88.....	10.6
89.....	9.2
90.....	8
91.....	7.0
92.....	6.1
93.....	5.3
94.....	4.6
95.....	4
96.....	3.5
97.....	3.0
98.....	2.6
99.....	2.3
100.....	2
101.....	1.7
102.....	1.5
103.....	1.3
104.....	1.1
105.....	1
106.....	0.87
107.....	0.76
108.....	0.66
109.....	0.57
110.....	0.5
111.....	0.44
112.....	0.38
113.....	0.33
114.....	0.29
115.....	0.25
116.....	0.22
117.....	0.19
118.....	0.16
119.....	0.14
120.....	0.125
121.....	0.11
122.....	0.095
123.....	0.082

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TABLE G-16a—Continued

A-weighted sound level, L (decibel)	Reference duration, T (hour)
124.....	0.072
125.....	0.063
126.....	0.054
127.....	0.047
128.....	0.041
129.....	0.036
130.....	0.031

In the above table the reference duration, T, is computed by

$$T = \frac{8}{2^{(L-90)/5}}$$

where L is the measured A-weighted sound level.

II. Conversion Between "Dose" and "8-Hour Time-Weighted Average" Sound Level

Compliance with paragraphs (c)-(r) of this regulation is determined by the amount of exposure to noise in the workplace. The amount of such exposure is usually measured with an audiodosimeter which gives a readout in terms of "dose." In order to better understand the requirements of the amendment, dosimeter readings can be converted to an "8-hour time-weighted average sound level." (TWA).

In order to convert the reading of a dosimeter into TWA, see Table A-1, below. This table applies to dosimeters that are set by the manufacturer to calculate dose or percent exposure according to the relationships in Table G-16a. So, for example, a dose of 91 percent over an eight hour day results in a TWA of 89.3 dB, and, a dose of 50 percent corresponds to a TWA of 85 dB.

If the dose as read on the dosimeter is less than or greater than the values found in Table A-1, the TWA may be calculated by using the formula: $TWA=16.61 \log_{10} (D/100)+90$ where TWA=8-hour time-weighted average sound level and D=accumulated dose in percent exposure.

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TABLE A-1—CONVERSION FROM “PERCENT NOISE EXPOSURE” OR “DOSE” TO “8-HOUR TIME-WEIGHTED AVERAGE SOUND LEVEL” (TWA)

TABLE A-1—CONVERSION FROM “PERCENT NOISE EXPOSURE” OR “DOSE” TO “8-HOUR TIME-WEIGHTED AVERAGE SOUND LEVEL” (TWA)—Continued

Dose or percent noise exposure	TWA	Dose or percent noise exposure	TWA
10.....	73.4	180.....	94.2
15.....	76.3	185.....	94.4
20.....	78.4	190.....	94.6
25.....	80.0	195.....	94.8
30.....	81.3	200.....	95.0
35.....	82.4	210.....	95.4
40.....	83.4	220.....	95.7
45.....	84.2	230.....	96.0
50.....	85.0	240.....	96.3
55.....	85.7	250.....	96.6
60.....	86.3	260.....	96.9
65.....	86.9	270.....	97.2
70.....	87.4	280.....	97.4
75.....	87.9	290.....	97.7
80.....	88.4	300.....	97.9
81.....	88.5	310.....	98.2
82.....	88.6	320.....	98.4
83.....	88.7	330.....	98.6
84.....	88.7	340.....	98.8
85.....	88.8	350.....	99.0
86.....	88.9	360.....	99.2
87.....	89.0	370.....	99.4
88.....	89.1	380.....	99.6
89.....	89.2	390.....	99.8
90.....	89.2	400.....	100.0
91.....	89.3	410.....	100.2
92.....	89.4	420.....	100.4
93.....	89.5	430.....	100.5
94.....	89.6	440.....	100.7
95.....	89.6	450.....	100.8
96.....	89.7	460.....	101.0
97.....	89.8	470.....	101.2
98.....	89.9	480.....	101.3
99.....	89.9	490.....	101.5
100.....	90.0	500.....	101.6
101.....	90.1	510.....	101.8
102.....	90.1	520.....	101.9
103.....	90.2	530.....	102.0
104.....	90.3	540.....	102.2
105.....	90.4	550.....	102.3
106.....	90.4	560.....	102.4
107.....	90.5	570.....	102.6
108.....	90.6	580.....	102.7
109.....	90.6	590.....	102.8
110.....	90.7	600.....	102.9
111.....	90.8	610.....	103.0
112.....	90.8	620.....	103.2
113.....	90.9	630.....	103.3
114.....	90.9	640.....	103.4
115.....	91.1	650.....	103.5
116.....	91.1	660.....	103.6
117.....	91.1	670.....	103.7
118.....	91.2	680.....	103.8
119.....	91.3	690.....	103.9
120.....	91.3	700.....	104.0
125.....	91.6	710.....	104.1
130.....	91.9	720.....	104.2
135.....	92.2	730.....	104.3
140.....	92.4	740.....	104.4
145.....	92.7	750.....	104.5
150.....	92.9	760.....	104.6
155.....	93.2	770.....	104.7
160.....	93.4	780.....	104.8
165.....	93.6	790.....	104.9
170.....	93.8	800.....	105.0
175.....	94.0	810.....	105.1

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TABLE A-1—CONVERSION FROM “PERCENT NOISE EXPOSURE” OR “DOSE” TO “8-HOUR TIME-WEIGHTED AVERAGE SOUND LEVEL” (TWA)—Continued

Dose or percent noise exposure	TWA
820	105.2
830	105.3
840	105.4
850	105.4
860	105.5
870	105.6
880	105.7
890	105.8
900	105.8
910	105.9
920	106.0
930	106.1
940	106.2
950	106.2
960	106.3
970	106.4
980	106.5
990	106.5
999	106.6

APPENDIX B TO § 1910.95—METHODS FOR ESTIMATING THE ADEQUACY OF HEARING PROTECTOR ATTENUATION

This Appendix is Mandatory

For employees who have experienced a significant threshold shift, hearing protector attenuation must be sufficient to reduce employee exposure to a TWA of 85 dB. Employers must select one of the following methods by which to estimate the adequacy of hearing protector attenuation.

The most convenient method is the Noise Reduction Rating (NRR) developed by the Environmental Protection Agency (EPA). According to EPA regulation, the NRR must be shown on the hearing protector package. The NRR is then related to an individual worker's noise environment in order to assess the adequacy of the attenuation of a given hearing protector. This appendix describes four methods of using the NRR to determine whether a particular hearing protector provides adequate protection within a given exposure environment. Selection among the four procedures is dependent upon the employer's noise measuring instruments.

Instead of using the NRR, employers may evaluate the adequacy of hearing protector attenuation by using one of the three methods developed by the National Institute for Occupational Safety and Health (NIOSH), which are described in the "List of Personal Hearing Protectors and Attenuation Data," HEW Publication No. 76-120, 1975, pages 21-37. These methods are known as NIOSH methods #1, #2 and #3. The NRR described below is a simplification of NIOSH method

#2. The most complex method is NIOSH method #1, which is probably the most accurate method since it uses the largest amount of spectral information from the individual employee's noise environment. As in the case of the NRR method described below, if one of the NIOSH methods is used, the selected method must be applied to an individual's noise environment to assess the adequacy of the attenuation. Employers should be careful to take a sufficient number of measurements in order to achieve a representative sample for each time segment.

NOTE: The employer must remember that calculated attenuation values reflect realistic values only to the extent that the protectors are properly fitted and worn.

When using the NRR to assess hearing protector adequacy, one of the following methods must be used:

(i) When using a dosimeter that is capable of C-weighted measurements:

(A) Obtain the employee's C-weighted dose for the entire workshift, and convert to TWA (see appendix A, II).

(B) Subtract the NRR from the C-weighted TWA to obtain the estimated A-weighted TWA under the ear protector.

(ii) When using a dosimeter that is not capable of C-weighted measurements, the following method may be used:

(A) Convert the A-weighted dose to TWA (see appendix A).

(B) Subtract 7 dB from the NRR.

(C) Subtract the remainder from the A-weighted TWA to obtain the estimated A-weighted TWA under the ear protector.

(iii) When using a sound level meter set to the A-weighting network:

(A) Obtain the employee's A-weighted TWA.

(B) Subtract 7 dB from the NRR, and subtract the remainder from the A-weighted TWA to obtain the estimated A-weighted TWA under the ear protector.

(iv) When using a sound level meter set on the C-weighting network:

(A) Obtain a representative sample of the C-weighted sound levels in the employee's environment.

(B) Subtract the NRR from the C-weighted average sound level to obtain the estimated A-weighted TWA under the ear protector.

(v) When using area monitoring procedures and a sound level meter set to the A-weighting network.

(A) Obtain a representative sound level for the area in question.

(B) Subtract 7 dB from the NRR and subtract the remainder from the A-weighted sound level for that area.

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(vi) When using area monitoring procedures and a sound level meter set to the C-weighting network:

(A) Obtain a representative sound level for the area in question.

(B) Subtract the NRR from the C-weighted sound level for that area.

APPENDIX C TO § 1910.95—AUDIOMETRIC MEASURING INSTRUMENTS

This Appendix is Mandatory

1. In the event that pulsed-tone audiometers are used, they shall have a tone on-time of at least 200 milliseconds.

2. Self-recording audiometers shall comply with the following requirements:

(A) The chart upon which the audiogram is traced shall have lines at positions corresponding to all multiples of 10 dB hearing level within the intensity range spanned by the audiometer. The lines shall be equally spaced and shall be separated by at least ¼ inch. Additional increments are optional. The audiogram pen tracings shall not exceed 2 dB in width.

(B) It shall be possible to set the stylus manually at the 10-dB increment lines for calibration purposes.

(C) The slewing rate for the audiometer attenuator shall not be more than 6 dB/sec except that an initial slewing rate greater than 6 dB/sec is permitted at the beginning of each new test frequency, but only until the second subject response.

(D) The audiometer shall remain at each required test frequency for 30 seconds (± 3 seconds). The audiogram shall be clearly marked at each change of frequency and the actual frequency change of the audiometer shall not deviate from the frequency boundaries marked on the audiogram by more than ± 3 seconds.

(E) It must be possible at each test frequency to place a horizontal line segment parallel to the time axis on the audiogram, such that the audiometric tracing crosses the line segment at least six times at that test frequency. At each test frequency the threshold shall be the average of the mid-points of the tracing excursions.

APPENDIX D TO § 1910.95—AUDIOMETRIC TEST ROOMS

This Appendix is Mandatory

Rooms used for audiometric testing shall not have background sound pressure levels exceeding those in Table D-1 when measured by equipment conforming at least to the Type 2 requirements of American National Standard Specification for Sound Level Meters, S1.4-1971 (R1976), and to the Class II requirements of American National Standard Specification for Octave, Half-Octave, and Third-Octave Band Filter Sets, S1.11-1971 (R1976).

TABLE D-1—MAXIMUM ALLOWABLE OCTAVE-BAND SOUND PRESSURE LEVELS FOR AUDIO-METRIC TEST ROOMS

Octave-band center frequency (Hz)	500	1000	2000	4000	8000
Sound pressure level (dB).....	40	40	47	57	62

APPENDIX E TO § 1910.95—ACOUSTIC CALIBRATION OF AUDIOMETERS

This Appendix is Mandatory

Audiometer calibration shall be checked acoustically, at least annually, according to the procedures described in this appendix. The equipment necessary to perform these measurements is a sound level meter, octave-band filter set, and a National Bureau of Standards 9A coupler. In making these measurements, the accuracy of the calibrating equipment shall be sufficient to determine that the audiometer is within the tolerances permitted by American Standard Specification for Audiometers, S3.6-1969.

(1) Sound Pressure Output Check

A. Place the earphone coupler over the microphone of the sound level meter and place the earphone on the coupler.

B. Set the audiometer's hearing threshold level (HTL) dial to 70 dB.

C. Measure the sound pressure level of the tones at each test frequency from 500 Hz through 6000 Hz for each earphone.

D. At each frequency the readout on the sound level meter should correspond to the levels in Table E-1 or Table E-2, as appropriate, for the type of earphone, in the column entitled "sound level meter reading."

(2) Linearity Check

A. With the earphone in place, set the frequency to 1000 Hz and the HTL dial on the audiometer to 70 dB.

B. Measure the sound levels in the coupler at each 10-dB decrement from 70 dB to 10 dB, noting the sound level meter reading at each setting.

C. For each 10-dB decrement on the audiometer the sound level meter should indicate a corresponding 10 dB decrease.

D. This measurement may be made electrically with a voltmeter connected to the earphone terminals.

(3) Tolerances

When any of the measured sound levels deviate from the levels in Table E-1 or Table E-2 by ± 3 dB at any test frequency between 500 and 3000 Hz, 4 dB at 4000 Hz, or 5 dB at 6000 Hz, an exhaustive calibra-

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tion is advised. An exhaustive calibration is required if the deviations are greater than 15 dB or greater at any test frequency.

TABLE E-1—REFERENCE THRESHOLD LEVELS FOR TELEPHONICS—TDH-39 EARPHONES

Frequency, Hz	Reference threshold level for TDH-39 ear-phones, dB	Sound level meter reading, dB
500.....	11.5	81.5
1000.....	7	77
2000.....	9	79
3000.....	10	80
4000.....	9.5	79.5
6000.....	15.5	85.5

TABLE E-2—REFERENCE THRESHOLD LEVELS FOR TELEPHONICS—TDH-49 EARPHONES

Frequency, Hz	Reference threshold level for TDH-49 ear-phones, dB	Sound level meter reading, dB
500.....	13.5	83.5
1000.....	7.5	77.5
2000.....	11	81.0
3000.....	9.5	79.5
4000.....	10.5	80.5
6000.....	13.5	83.5

APPENDIX F TO § 1910.95—CALCULATIONS AND APPLICATION OF AGE CORRECTIONS TO AUDIOGRAMS

This Appendix Is Non-Mandatory

In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging to the change in hearing level by adjusting the most recent audiogram. If the employer chooses to adjust the audiogram, the employer shall follow the procedure described below. This procedure and the age correction tables were developed by the National Institute for Occupational Safety and Health in the criteria document entitled "Criteria for a Recommended Standard . . . Occupational Exposure to Noise," ((HSM)-11001).

For each audiometric test frequency;
 (1) Determine from Tables F-1 or F-2 the age correction values for the employee by:
 (A) Finding the age at which the most recent audiogram was taken and recording the corresponding values of age corrections at 1000 Hz through 6000 Hz;

(B) Finding the age at which the baseline audiogram was taken and recording the corresponding values of age corrections at 1000 Hz through 6000 Hz.

(ii) Subtract the values found in step (i)(B) from the value found in step (i)(A).

(iii) The differences calculated in step (ii) represented that portion of the change in hearing that may be due to aging.

EXAMPLE: Employee is a 32-year-old male. The audiometric history for his right ear is shown in decibels below.

Employee's age	Audiometric test frequency (Hz)				
	1000	2000	3000	4000	6000
26.....	10	5	5	10	5
*27.....	0	0	0	5	5
28.....	0	0	0	10	5
29.....	5	0	5	15	5
30.....	0	5	10	20	10
31.....	5	10	20	15	15
*32.....	5	10	10	25	20

The audiogram at age 27 is considered the baseline since it shows the best hearing threshold levels. Asterisks have been used to identify the baseline and most recent audiogram. A threshold shift of 20 dB exists at 4000 Hz between the audiograms taken at ages 27 and 32.

(The threshold shift is computed by subtracting the hearing threshold at age 27, which was 5, from the hearing threshold at age 32, which is 25). A retest audiogram has confirmed this shift. The contribution of aging to this change in hearing may be estimated in the following manner:

Go to Table F-1 and find the age correction values (in dB) for 4000 Hz at age 27 and age 32.

	Frequency (Hz)				
	1000	2000	3000	4000	6000
Age 32.....	6	5	7	10	14
Age 27.....	5	4	6	7	11
Difference.....	1	1	1	3	3

The difference represents the amount of hearing loss that may be attributed to aging in the time period between the baseline audiogram and the most recent audiogram. In this example, the difference at 4000 Hz is 3 dB. This value is subtracted from the hearing level at 4000 Hz, which in the most recent audiogram is 25, yielding 22 after adjustment. Then the hearing threshold in the baseline audiogram at 4000 Hz (5) is subtracted from the adjusted annual audio-

ATTACHMENT VII

**FIRE EXTINGUISHER
USE AND INSPECTION**

FIRE EXTINGUISHER

USE AND INSPECTION

Fire Extinguisher Use and Inspection procedures will be conducted in support of the activities to be conducted at NAS Pensacola, Pensacola, Florida. The following text is intended to provide general instruction to the field personnel charged with this responsibility.

Fire Extinguisher Use

All personnel trained in incidental response measures may be required to use and operate a fire extinguisher in response to an incipient stage fire. Therefore, the following instruction is provided and will be conveyed to all field personnel as part of site-specific training.

To use a portable fire extinguisher, the user should be familiar with the operation of the specific fire extinguisher located in the workplace. The following procedure will properly extinguish a small fire.

1) IDENTIFY THE TYPE OF FIRE (CLASS A, B, C, D).

CLASSES OF FIRE/FIRE EXTINGUISHER IDENTIFICATION

Fire is divided into four classes for easy identification and extinguishment. The type of fuel or ignition source will determine the type of extinguishing medium required.

Class A - Ordinary combustibles (wood, paper, rubber, plastic, and cloth). Extinguishers suitable for Class A fires should be identified by a triangle containing the letter "A." If colored, the triangle is green.



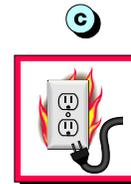
ORDINARY
COMBUSTIBLES
GREEN
(TRIANGLE)

Class B - Flammable liquids, gases, and greases. Extinguishers suitable for Class B fires should be identified by a square containing the letter "B." This type of extinguisher is effective on small petroleum product fires.



FLAMMABLE
LIQUIDS
RED
(SQUARE)

Class C - Electrically energized systems. Extinguishers suitable for Class C fires should be identified by a circle containing the letter "C." If colored, the circle is blue.



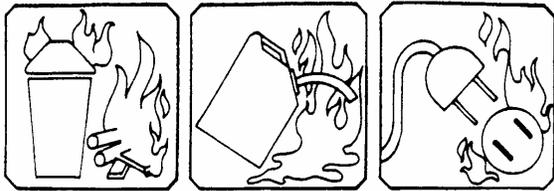
ELECTRICAL
EQUIPMENT
BLUE
(CIRCLE)

Class D - Combustible metals (sodium, magnesium, phosphorus). Extinguishers suitable for fires involving metals should be identified by a five-pointed star containing the letter "D." If colored, the star is yellow.

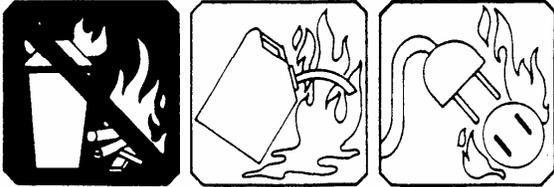


COMBUSTIBLE
METALS
YELLOW
(STAR)

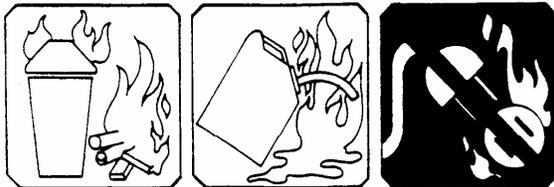
Note: Water and other extinguishing media, such as carbon dioxide and dry chemicals, are ineffective on metal fires.



Class A, B, C



Class B, C



Class A, B



Class A

Multi-class (ABC) Fire extinguishers will be provided for use on site. If you will buy a Fire Extinguisher, this is the type recommended. Size or rating recommended is 2 1/2 to 5 lbs.

1. Determine whether the extinguisher is adequate for this fire.

Rating number – The rating number assigned to a fire extinguisher is based on the capabilities of that fire class, for example

Class 5 A – Will provide extinguishing capabilities equal to that of 5 gallons of water.

Class 20 B - Will provide extinguishing capabilities equal to 20 square feet of flammable liquid burning.

Class C & D are not rated as to their limitations.

2. If adequate, hold the extinguisher upright and pull the ring pin.
3. Stand back 10 feet and aim at base of fire. Be careful not to spread burning material with pressurized extinguishing material.
4. Squeeze lever; sweep extinguisher in a side-to-side motion.

Portable Fire Extinguisher Placement/Mounting

Portable Fire Extinguishers will be placed/mounted in clear view in the areas where flammable materials are stored and/or dispensed. Mounting and placement of fire extinguishers will follow the following requirements

Fixed Locations (Flammable Storage)

- Extinguisher location will be marked by a red painted post or signage to indicate extinguisher location
- The travel distance to access a fire extinguisher shall be no greater than 50 feet.
- The fire extinguisher will be mounted at a maximum height of four feet.

Mobile Locations (Drill Rigs, Support Vehicles)

All vehicles carrying fuel containers or used in the dispensing of fuel will carry at a minimum a 5 pound rated fire extinguisher.

Portable Fire Extinguisher Inspection

All fire extinguishers used in support of this field effort will be inspected on the following frequencies:

- A certified provider will perform maintenance checks of fire extinguishers at least once a year. A tag attached to the neck of the fire extinguisher will indicate documentation of the maintenance check.
- All fire extinguishers will have a current hydrostatic inspection. For the type of extinguishers selected for use at NAS Pensacola hydrostatic inspections are required every 12 years.
- All fire extinguishers will be inspected monthly. The monthly inspection will cover the following
 - Are the fire extinguisher(s) placed in their designated location(s)?
 - Is the location conspicuously marked (Top 18 inches of the mounting pole to be painted red, signs, etc.)?
 - Is the access impeding travel to the fire extinguisher blocked or restricted in any way?
 - Has the fire extinguisher been partially or completely discharged?
 - Is there signs of obvious physical damage?
 - Does the fire extinguisher shows sufficient pressure and are all of the tamper indicators are in place?

This inspection shall be documented on the attached tag provided by the maintenance/hydrostatic inspection service.

FIRE EXTINGUISHER CHECKLIST
NAS PENSACOLA, PENSACOLA, FLORIDA

Project Name: <u>NAS Pensacola</u>	CTO 0355	Date of Inspection: _____		
Fire Extinguisher Identification Number: _____		Fire Extinguisher Location: _____		
Measurement Criteria	Yes	No	N/A	Needs Repaired
Are the fire extinguisher(s) placed in their designated location(s)?				
Is the location conspicuously marked (Top 18 inches of the mounting pole to be painted red, sign, etc.)?				
Is the access impeding travel to the fire extinguisher blocked or restricted in any way?				
Has the fire extinguisher been partially or completely discharged?				
Are there signs of obvious physical damage?				
Does the fire extinguisher shows sufficient pressure and are all of the tamper indicators are in place?				

FIRE EXTINGUISHER CHECKLIST
NAS PENSACOLA, PENSACOLA, FLORIDA

Project Name: <u>NAS Pensacola</u>	CTO 0355	Date of Inspection: _____		
Fire Extinguisher Identification Number: _____		Fire Extinguisher Location: _____		
Measurement Criteria	Yes	No	N/A	Needs Repaired
Are the fire extinguisher(s) placed in their designated location(s)?				
Is the location conspicuously marked (Top 18 inches of the mounting pole to be painted red, sign, etc.)?				
Is the access impeding travel to the fire extinguisher blocked or restricted in any way?				
Has the fire extinguisher been partially or completely discharged?				
Are there signs of obvious physical damage?				
Does the fire extinguisher shows sufficient pressure and are all of the tamper indicators are in place?				

APPENDIX C

RESPONSE TO COMMENTS FROM REGULATORY AGENCIES

**RESPONSE TO COMMENTS FROM
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FOR THE SAMPLING AND ANALYSIS PLAN FOR REMEDIAL INVESTIGATION AT
SITE 43, NAVAL AIR STATION PENSACOLA, PENSACOLA, FLORIDA**

COMMENT 1: Page 3-3, Section 3.2, Subsurface Soil Sampling Plan:

The Department recommends reviewing the latest version of the Global RBCA Rule 62-780, in section 62-780.600(5) (c) 1, which describes how to conduct soil sampling when the remedial approach for the surface soil is proposed to be 95% UCL. To obtain the latest version of this rule go to the following URL address.

<http://www.dep.state.fl.us/waste/categories/wc/pages/ERCAoptionHearing020205.htm>

When you are on this page scroll down until you get to the text shown below and click on the “Text of Rule and Table”, at this point look for the section given above for soil sampling details required when using 95% UCL.

Chapter 62-780 Contaminated Site Cleanup Criteria:

- Text of Rule and Table

RESPONSE:

TtNUS has reviewed the rule and compared it to the proposed sampling plan. Although the sampling plan is not overly detailed we believe the two documents are compliant. However, the text will be supplemented with the following insert:

“The sampling methodology will be compliant with FDEP’s Global RBCA Rule 62-780, including section 62-780.600(5) (c) 1, which describes how to conduct soil sampling when the remedial approach for the surface soil is proposed to be 95% UCL.”

RESPONSE TO COMMENTS
FROM UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ON
SAMPLING AND ANALYSIS PLAN FOR REMEDIAL INVESTIGATION AT
SITE 43, NAS PENSACOLA, PENSACOLA, FLORIDA

GENERAL COMMENTS

COMMENT 1: The above referenced Sampling and Analysis Plan is regarded as a reasonably good document. The following specific comments are intended to improve the overall quality of the document.

SPECIFIC COMMENTS

COMMENT I: Cover Page (Page 1 of 181 of the electronic version).
Please add an “S” to correctly spell “ANALYSIS” on the cover of this document.

RESPONSE:
Corrections were made to the text.

COMMENT II: Section 2.2, Page 2-3, 3rd Paragraph (of the section), 2nd Sentence
This sentence says, “Test Pitting was completed at 17 of the geophysical anomaly areas.” For the sake of completeness and clarity, please list which 17 of the 25 geophysical anomaly areas had test pits completed on them.

RESPONSE:
The text was supplemented as follows “Test pitting was completed at 17 of the geophysical anomaly areas including anomaly area 4 and areas 10 through 25. As recommended, test pits were advanced to a depth of 5 feet using a track hoe and shovels.”

COMMENT III: Section 2.2, Page 2-3 3rd Paragraph (of the section) 4th Sentence
This sentence says, “Following the excavation seven subsurface soil samples were collected from depths ranging from 2 to 3.5 feet below land surface (bls) underneath the buried drum area.” Please comment on whether this depth was, in fact, beneath the buried drums that were encountered. Please also comment on whether the test pits were excavated to a depth of 5 feet bls, as had been recommended in Section 2.1 of this report. Were the subsurface soil samples collected from such a relatively shallow depth bls in order to remain above the water table? Please comment.

RESPONSE:
The soil samples were collected immediately beneath the buried drums generally 2 to 3.5 feet below land surface. The test pits were completed to a depth of 5 feet below land surface, as recommended. The soil samples were collected above the water table and depth to groundwater measurements ranged from 8.73 to 16.79 feet below top of casing in on-site monitoring wells. The text was supplemented as follows “Following the excavation, seven subsurface soil samples were collected. Due to the shallow burial of the drums, soil samples were collected immediately

beneath the buried drums at depths ranging from 2 feet to 3.5 feet below land surface. All soil samples were collected above the water table.”

COMMENT IV: Section 2.2, Page 2-3, 5th Paragraph (of the section), 1st Sentence.

Please confirm that these five additional soil samples were collected from the “Soil Boring and Monitoring Well Locations” shown on Figure 2-2, and add text to this paragraph to make that perfectly clear.

RESPONSE:

The five additional soil samples were collected from the soil boring and monitoring well locations shown on Figure 2-2.

The text was supplemented as follows “In addition to the test pitting subsurface soil sampling, a direct-push technology (DPT) rig was used to collect five additional soil samples from above the water table. The additional soil samples were collected at locations corresponding to the soil boring and monitoring well locations shown on Figure 2-2. The samples were analyzed for the same parameters as the previous subsurface soil samples.”

COMMENT V: Section 3.2, Page 3-1, 1st Paragraph.

The word “delineate” is misspelled three times in this paragraph and the word “anomaly” is misspelled once. Please spell them correctly. The 2nd sentence lists five anomaly areas, yet fails to include geophysical anomaly area 13, which on Page 2-6 was included as an area with exceedances that were not excavated. Please explain why anomaly 13 was not include, and include it, if appropriate.

RESPONSE:

Corrections to the text were made for the misspelled words. Geophysical Anomaly Area 13 was inadvertently omitted from the text and has been included in the revised document.

COMMENT VI: Section 3.2, Page 3-2, 3rd Paragraph (of the section), Bullet List.

The 1st sentence of this paragraph says, “The specific metals to be analyzed for each anomaly area are as follows.” However, SVOCs are included in the lists. Please substitute the word “parameters” or “analytes” for “metals”, or eliminate SVOCs from the lists. Also, vanadium is misspelled twice in this paragraph. Please spell it correctly. Also, Anomaly Area 23 ought to be given its own bullet list. Please make it so.

RESPONSE:

The first sentence of the 3rd paragraph was reworded substituting the word “parameters” for “metals”. Text corrections were made for the spelling of “vanadium”. Finally, a bullet was added for Anomaly Area 23.

COMMENT VII: Table 3-1.

For the convenience of the reader, please add the acronyms “TCL” and “SVOCs” to the NOTES section of this table, as they are not included in this table. Also, please remove “mL”, “oz”, and “HNO₃” from the NOTES section of this table, as they are not included in this table. Also, in

the “Preservation” column, please capitalize the word “cool” in the 1st row and remove the semicolon in the 2nd row.

RESPONSE:

Corrections were made to Table 3-1 as follows: The acronyms “TCL” and “SVOCs” were added to the NOTES section of the table. As directed, “mL” and “HNO₃” were deleted from same. However, “oz” was left in the NOTES section of the table, because it is used in the sample volume column of the table. In the “Preservation” column, the word “cool” was capitalized in the 1st row and the semicolon was removed from the 2nd row.

COMMENT VIII: Section 3.2, Subsurface Soil Sampling Plan, Page 3-3, 1st Paragraph (of the subsection).

The word “delineate” is misspelled once in the first sentence. Please spell it correctly. The 2nd sentence lists five anomaly areas, yet fails to include geophysical anomaly area 13, which on Page 2-6 was included as an area with exceedances that were not excavated. Please explain why anomaly area 13 was not included, and include it, if appropriate.

RESPONSE:

The text was corrected for the spelling of “delineate”. Geophysical Area 13, which was inadvertently omitted, was added to the list of anomaly areas.

COMMENT IX: Section 3.2, Subsurface Soil Sampling Plan, Page 3-3, 2nd Paragraph (of the subsection).

The 4th sentence of this paragraph mentions the 20 surface soil borings that were already discussed in the previous subsection. Please remove the reference to these surface soil borings from this subsection. Please add the word “subsurface” to the 5th sentence of this paragraph so that the sentence reads, “The proposed subsurface soil investigation area is shown on Figure 3-2.”

RESPONSE:

The indicated corrections were made to the Sampling and Analysis Plan text.

COMMENT X: Section 3.2, Subsurface Soil Sampling Plan, Page 3-3, 3rd Paragraph (of the subsection), 1st Sentence.

The word “vanadium” is misspelled once in this sentence. Please spell it correctly.

RESPONSE:

The spelling of “vanadium” was corrected.

COMMENT XI: Figure 3-2.

The locations of the two proposed subsurface soil samples within the footprint of the former tennis court location that are not directly adjacent to Geophysical Anomaly 15 appear to be rather arbitrary. Please comment on the wisdom of performing a search for geophysical anomalies within the footprint of the former tennis court location now that the tennis court has been removed. Mind you, this comment assumes that the March 1994 geophysical survey did not include the footprint of the former tennis court location (owing to cultural clutter and its

resulting interference in geophysical surveys), and that the tennis court was constructed sometime after drums were disposed of in this area.

RESPONSE:

The purpose of the soil borings adjacent to Geophysical Anomaly Area 15 is not to search for additional anomalies but instead, as indicated in the text on Page 3-3, “to address potential subsurface soil contamination not previously evaluated due to the presence of the structure.” The Interim Removal Action Report (CH2M Hill, 2003) indicated that delineation sampling and excavation activities were terminated at the edge of the tennis courts because of the presence of the structure. Because the structure has now been removed additional sampling will be completed to confirm the extent of contamination.

Additional investigation for geophysical anomalies is not believed warranted. Because of the shallow nature of the drum disposal and that construction activities for the tennis courts would require the installation of footers and grading of the site. It is believed that any nonnative materials encountered would have been removed.

COMMENT XII: Figure 3-3.

Eight proposed shallow monitoring well and soil boring locations should be shown on this figure, not seven which are currently shown.

RESPONSE:

Figure 3-3 has been updated to include one additional shallow monitoring well location for a total of 8 locations.

COMMENT XIII: Table 3-2

For the convenience of the reader, please add the acronyms “CLP”, “TCL”, “VOCs”, and “TAL” to the NOTES section of this table. Also, please make the word “degree” plural in the NOTES section of this table.

RESPONSE:

For clarification the acronyms “CLP”, “TCL”, “VOCs”, and “TAL” were added to the NOTES section of the table. An “s” was added to the word “degree” to make it plural.

COMMENT XIV: Section 3.2, Aquifer Testing, Page 3-9, 1st Paragraph (of the subsection), 2nd Sentence.

It is assumed that the acronym “UST” as used here stands for Underground Storage Tank, however, for the sake of clarity, please define the acronym here and/or include it in the list of acronyms at the beginning of the report.

RESPONSE:

The acronym “UST” was added to the Acronyms list located on page V.