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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT ADDENDUM SOLID WASTE MANAGEMENT UNIT 24 (SWMU 24) ZONE G CNC CHARLESTON SC

4/26/2002

CH2M HILL

RFI REPORT ADDENDUM

Solid Waste Management Unit 24, Zone G

Charleston Naval Complex
North Charleston, South Carolina

SUBMITTED TO
U.S. Navy Southern Division
Naval Facilities Engineering Command

CH2M-Jones

April 2002

Contract N62467-99-C-0960

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April 26, 2002

Mr. David Scaturo
Division of Hazardous and Infectious Wastes
South Carolina Department of Health and
Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

Re: RFI Report Addendum (Revision 0) – SWMU 24, Zone G

Dear Mr. Scaturo:

Enclosed please find four copies of the RFI Report Addendum (Revision 0) for SWMU 24 in Zone G of the Charleston Naval Complex (CNC). This report has been prepared pursuant to agreements by the CNC BRAC Cleanup Team for completing the RCRA Corrective Action process.

The principal author of this document is Casey Hudson. Please contact him at 407/423-0030, extension 251, if you have any questions or comments.

Sincerely,

CH2M HILL

Dean Williamson, P.E.

cc: Rob Harrell/Navy, w/att
Gary Foster/CH2M HILL, w/att

RFI REPORT ADDENDUM

Solid Waste Management Unit 24, Zone G

Charleston Naval Complex
North Charleston, South Carolina

SUBMITTED TO
U.S. Navy Southern Division
Naval Facilities Engineering Command

PREPARED BY
CH2M-Jones

April 2002

Revision 0
Contract N62467-99-C-0960
158814.ZG.PR.11

Certification Page for RFI Report Addendum (Revision 0) -- SWMU 24, Zone G

I, Dean Williamson, certify that this report has been prepared under my direct supervision. The data and information are, to the best of my knowledge, accurate and correct, and the report has been prepared in accordance with current standards of practice for engineering.

South Carolina

P.E. No. 21428

Dean Williamson

Dean Williamson, P.E.

4/24/2001

Date

Contents

Section **Page**

Acronyms and Abbreviations ..... **vii**

1.0 Introduction **1-1**
1.1 Background 1-1
1.2 Purpose of the RFI Report Addendum 1-2
1.3 Report Organization 1-3
Figure 1-1 Site Location 1-4
Figure 1-2 Site Layout 1-5
Figure 1-3 Utility Plan 1-6

2.0 Summary of RFI Conclusions for SWMU 24 ..... **2-1**
2.1 Site Geology and Hydrogelogy 2-1
2.2 Surface Soil 2-2
2.3 Subsurface Soil 2-3
2.4 Groundwater 2-3
2.4.1 Groundwater Screening Results 2-3
2.4.2 Groundwater Monitoring Results 2-4
2.5 Human Health Risk Assessment 2-5
2.6 Conclusions and Recommendations 2-6
Figure 2-1 Shallow Groundwater Potentiometric Surface 2-7
Figure 2-2 RFI Soil Sample Location Plan 2-8
Figure 2-3 RFI Groundwater Sample Location Plan 2-9

3.0 Interim Measures and UST/AST Removals **3-1**

4.0 Summary of Additional Investigations **4-1**
4.1 Additional Soil Investigations 4-1
4.1.1 Surface Soil 4-1
4.1.2 Subsurface Soil 4-2
4.2 Additional Groundwater Investigations 4-3
4.3 Summary of COPCs Identified 4-4
4.3.1 Surface Soil 4-4
4.3.2 Subsurface Soil 4-5

Contents, Continued

4.3.3 Groundwater 4-5
Table 4-1 Analytes Detected in Surface Soil, RFI Addendum Investigation 4-6
Table 4-2 Analytes Detected in Subsurface Soil, RFI Addendum Investigation 4-16
Table 4-3 Analytes Detected in Groundwater, RFI Addendum Investigation 4-24
Figure 4-1 RFI Addendum Soil Sample Location Plan 4-27
Figure 4-2 BEQs in Soil 4-28

5.0 COPC/COC Refinement 5-1
5.1 Surface Soil 5-1
5.1.1 Heptachlor Epoxide 5-1
5.1.2 Total BEQs 5-2
5.2 Subsurface Soil 5-3
5.2.1 Isophorone 5-3
5.2.2 N-Nitrosodiphenylamine 5-4
5.3 Groundwater 5-5
5.3.1 Arsenic 5-5
5.3.2 Antimony 5-6
Table 5-1 Heptachlor Epoxide in Surface Soil 5-7
Table 5-2 Heptachlor Epoxide in CNC Grid Surface Soil 5-8
Table 5-3 BEQs in Surface Soil 5-15
Table 5-4 Summary Statistics for PAHs in Surface Soil 5-16
Table 5-5 Isophorone in Subsurface Soil 5-17
Table 5-6 N-Nitrosodiphenylamine in Subsurface Soil 5-18
Table 5-7 Arsenic, Iron, and Manganese in Groundwater 5-19
Table 5-8 Antimony in Groundwater 5-21

6.0 Summary of Information Related to Site Closeout Issues 6-1
6.1 RFI Status 6-1
6.2 Presence of Inorganics in Groundwater 6-1
6.3 Potential Linkage to SWMU 37, Investigated Sanitary Sewers at the CNC 6-1
6.4 Potential Linkage to AOC 699, Investigated Storm Sewers at the CNC 6-2
6.5 Potential Linkage to AOC 504, Investigated Railroad Lines at the CNC 6-2
6.6 Potential Migration Pathways to Surface Water Bodies at the CNC 6-2
6.7 Potential Contamination in Oil/Water Separators (OWSs) 6-3

Contents, Continued

6.8 Land Use Control Management Plan 6-3

7.0 Recommendations 7-1

8.0 References 8-1

Appendices

A Excerpts from the *Zone G RFI Report, Revision 0* (EnSafe, 1998a)

B Analytical Data from RFI Addendum Investigation

C Data Validation Reports

D Responses to SCDHEC Comments on *Zone G RFI Report, Revision 0*

Acronyms and Abbreviations

AOC	Area of concern
AST	Aboveground storage tank
BCT	BRAC Cleanup Team
BEQ	Benzo(a)pyrene equivalent
BRAC	Base Realignment and Closure Act
BRC	Background reference concentration
CA	Corrective action
CFR	*Code of Federal Regulations*
CMS	Corrective measures study
CNC	Charleston Naval Complex
COC	Chemical of concern
COPC	Chemical of potential concern
CPT	Cone penetrometer testing
DAF	Dilution attenuation factor
DPT	Direct-push technology
EnSafe	EnSafe Inc.
EPA	U.S. Environmental Protection Agency
FDS	Fuel distribution system
ft bls	Feet below land surface
ft msl	Feet mean sea level
HHRA	Human health risk assessment
HI	Hazard index
ILCR	Incremental lifetime cancer risk
IM	Interim measure
LUC	Land use control
MCL	Maximum contaminant level
MDL	Method dectection limit
μg/kg	Micrograms per kilogram
μg/L	Micrograms per liter

Acronyms and Abbreviations, Continued

mg/kg	Milligrams per kilogram
NAVBASE	Naval Base
OWS	Oil/water separator
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
RBC	Risk-based concentration
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SCDHEC	South Carolina Department of Health and Environmental Control
SSL	Soil screening level
SWMU	Solid waste management unit
SVOC	Semivolatile organic compound
TEAP	Terminal electron accepting process
TPH	Total petroleum hydrocarbon
UCL_{95}	95-percent upper confidence limit
UST	Underground storage tank
VOC	Volatile organic compound

Section 1.0

1.0 Introduction

In 1993, Naval Base (NAVBASE) Charleston was added to the list of bases scheduled for closure as part of the Defense Base Realignment and Closure Act (BRAC), which regulates closure and transition of property to the community. The Charleston Naval Complex (CNC) was formed as a result of the dis-establishment of the Charleston Naval Shipyard and NAVBASE on April 1, 1996.

Corrective Action (CA) activities are being conducted under the Resource Conservation and Recovery Act (RCRA), with the South Carolina Department of Health and Environmental Control (SCDHEC) as the lead agency for CA activities at the CNC. All RCRA CA activities are performed in accordance with the Final Permit (Permit No. SC0 170 022 560).

In April 2000, CH2M-Jones was awarded a contract to provide environmental investigation and remediation services at the CNC. This submittal has been prepared by CH2M-Jones to complete the RCRA Facility Investigation (RFI) for Solid Waste Management Unit (SWMU) 24 in Zone G of the CNC. The site is recommended for no further action (NFA). Figure 1-1 presents the location of Zone G and SWMU 24 at the CNC.

1.1 Background

SWMU 24, the former waste oil reclamation facility for the CNC, consists of tanks 39-A and 39-D. The facility is located south of Hobson Avenue and east of Wood Street. Included within the boundary of SWMU 24 is SWMU 3, which is a pesticide mixing area. SWMU 3 was investigated separately from SWMU 24, and the RFI Report Addendum for this site will be submitted under separate cover. Figure 1-2 depicts the layout of SWMU 24, which includes the location of SWMU 3.

Tanks 39-A and 39-D operated as settling tanks to which waste oil, which contained water and presumably other impurities, was delivered through a pipeline system. The tanks were used to separate and store both the water and oil phase liquids. Separated wastewater was subsequently discharged to the sanitary sewer system. The waste materials potentially associated with site operations include waste oil and petroleum products. SWMU 24 was originally investigated under the petroleum program as part of the fuel distribution system (FDS) but was transferred to the RCRA program to characterize metals in site groundwater.

Most of the area surrounding SWMU 24 is unpaved (vegetative), with a paved area primarily between tanks 39-A and 39-D and in the immediate area of Building 249. The surface of the secondary containment berms around Tanks 39-A and 39-D and ground surface around the tanks are also covered with an old, somewhat degraded asphaltic material. Storm and sanitary sewer systems that transverse through SWMU 24 are depicted in Figure 1-3. The site is zoned M-1, for future light industrial use. In the future this immediate area is expected to remain in industrial and commercial use, similar to the current use for the area.

1.2 Purpose of the RFI Report Addendum

This RFI Report Addendum provides information concerning SWMU 24 that documents the conclusions from the *Zone G RFI Report, Revision 0* (EnSafe, Inc. [EnSafe], 1998a) provides the results of additional sampling and investigations performed after the original RFI activities, and evaluates the additional data.

The results of additional investigations subsequent to the *Zone G RFI Report, Revision 0* are presented to complete the nature and extent investigation for chemicals of potential concern (COPCs) identified in surface soil, subsurface soil, and groundwater. As a result of the additional investigation, SWMU 24 is recommended for NFA. As a part of the evaluation for NFA and prior to changing the status of any site in the CNC RCRA CA permit, the BRAC Cleanup Team (BCT) agreed that the following issues be considered:

- Status of the RFI
- Presence of metals (inorganics) in groundwater
- Potential linkage to SWMU 37, Investigated Sanitary Sewers at the CNC
- Potential linkage to AOC 699, Investigated Storm Sewers at the CNC
- Potential linkage to AOC 504, Investigated Railroad Lines at the CNC
- Potential linkage to surface water bodies (Zone J)
- Potential contamination associated with oil/water separators (OWSs)
- Relevance or need for land use controls (LUCs) at the site

Information regarding these issues is provided in Section 6.0 of this report addendum to expedite evaluation of site closure.

1.3 Report Organization

This RFI Report Addendum consists of the following sections, including this introductory section:

1.0 Introduction — Presents the purpose of the report and background information relating to the RFI Report Addendum.

2.0 Summary of RFI Conclusions for SWMU 24 — Summarizes the conclusions from the original RFI and risk evaluations for SWMU 24.

3.0 Interim Measures and UST/AST Removals — Provides information regarding any interim measure (IM) or underground storage tank (UST)/aboveground storage tank (AST) removal or investigation performed at the site.

4.0 Summary of Additional Investigations — Summarizes information collected after completion of the *Zone G RFI Report, Revision 0*.

5.0 COPC/COC Refinement — Provides further evaluation of COPCs based on RFI and additional data to assess them as chemicals of concern (COCs).

6.0 Summary of Information Related to Site Closeout Issues — Discusses the various site closeout issues that the BCT agreed to evaluate prior to site closeout.

7.0 Recommendations — Provides recommendations for NFA at SWMU 24.

8.0 References — Lists the references used in this document.

Appendix A provides excerpts from the *Zone G RFI Report, Revision 0* (EnSafe, 1998a), including a summary of detected chemicals in soil and groundwater samples, and various figures showing contaminant plume maps.

Appendix B contains analytical data from the sampling events completed subsequent to the *Zone G RFI Report, Revision 0*.

Appendix C contains validation reports for the data from sampling subsequent to the *Zone G RFI Report, Revision 0*.

Appendix D contains responses to SCDHEC comments for this site from the *Zone G RFI Report, Revision 0* (EnSafe, 1998a).

All tables and figures appear at the end of their respective sections.

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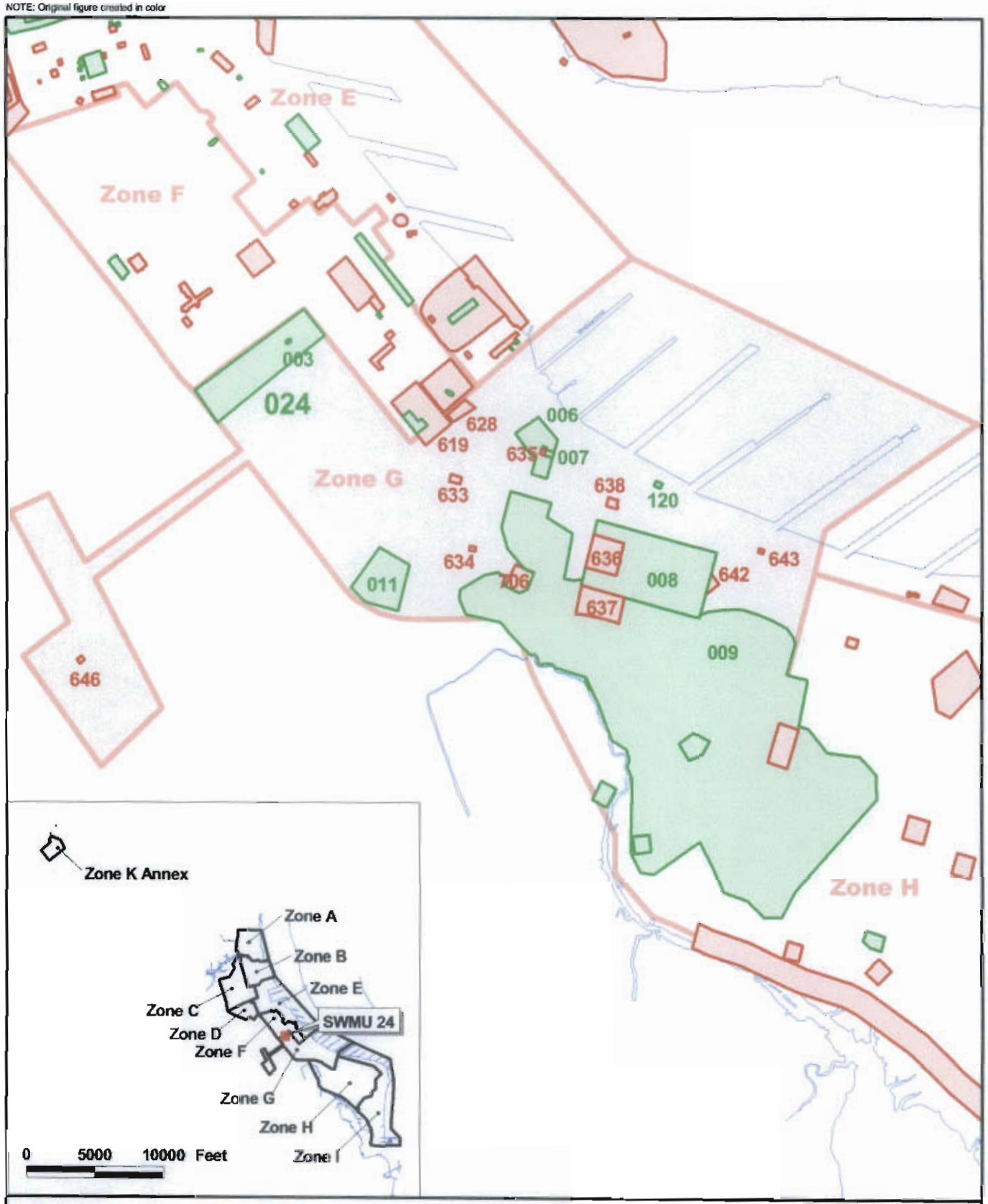


AOC Boundary
SWMU Boundary
Shoreline
Zone Boundary
Zone G

N

0 1000 2000 Feet

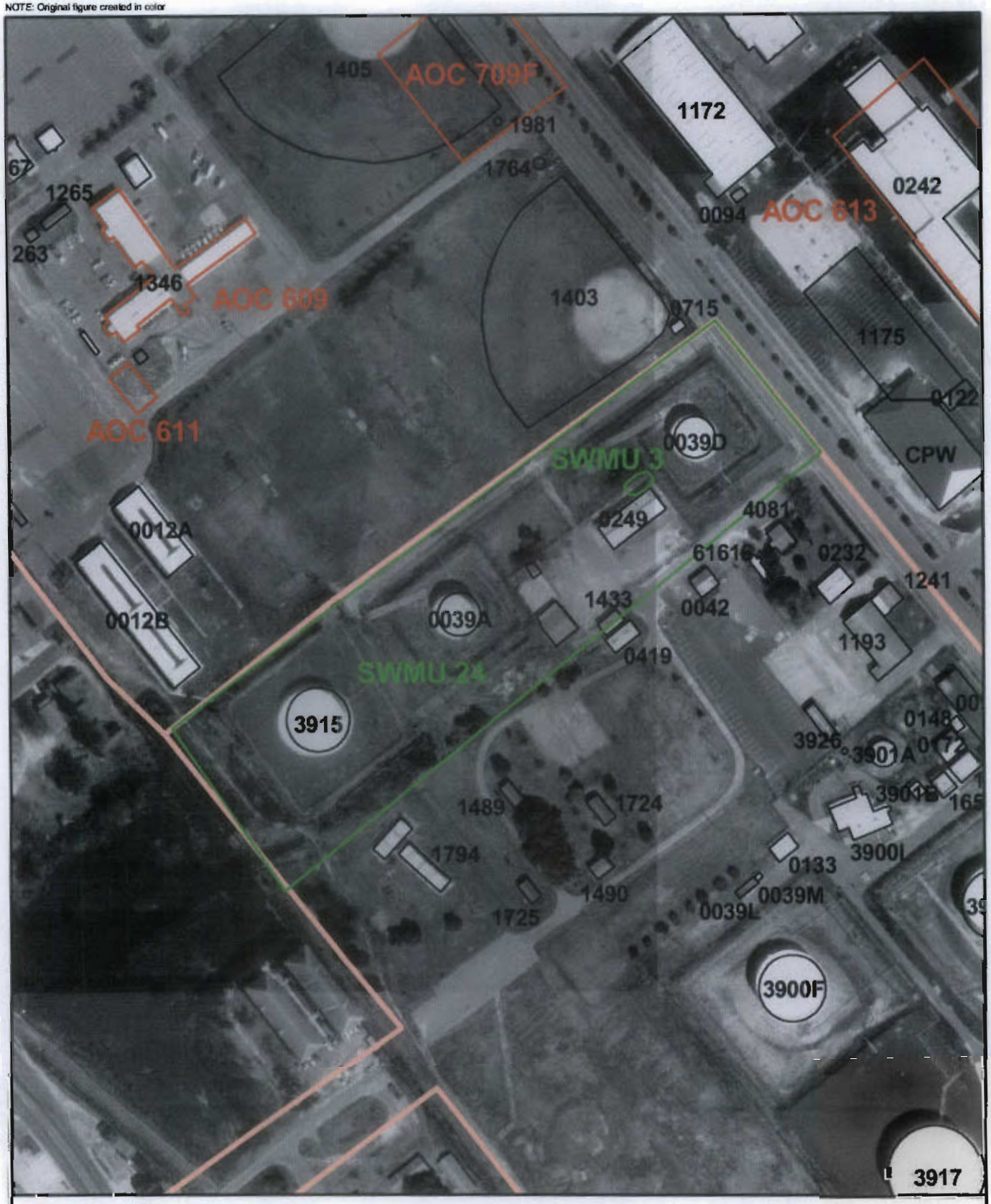
1 inch = 1000 feet

Figure 1-1
Site Location
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

File Path: c:\18gis\projects\zone_g\swmu_24\aprs\swmu24l.apr, Date: 13 Mar 2002 10:44, User: ASPOSATO, EGIS: Charleston Naval Complex - Figure 1-1 Site Location

NOTE: Aerial Photo Date is 1997
NOTE: Original figure created in color



AOC Boundary
SWMU Boundary
Buildings
Zone Boundary

N

0 200 400 Feet

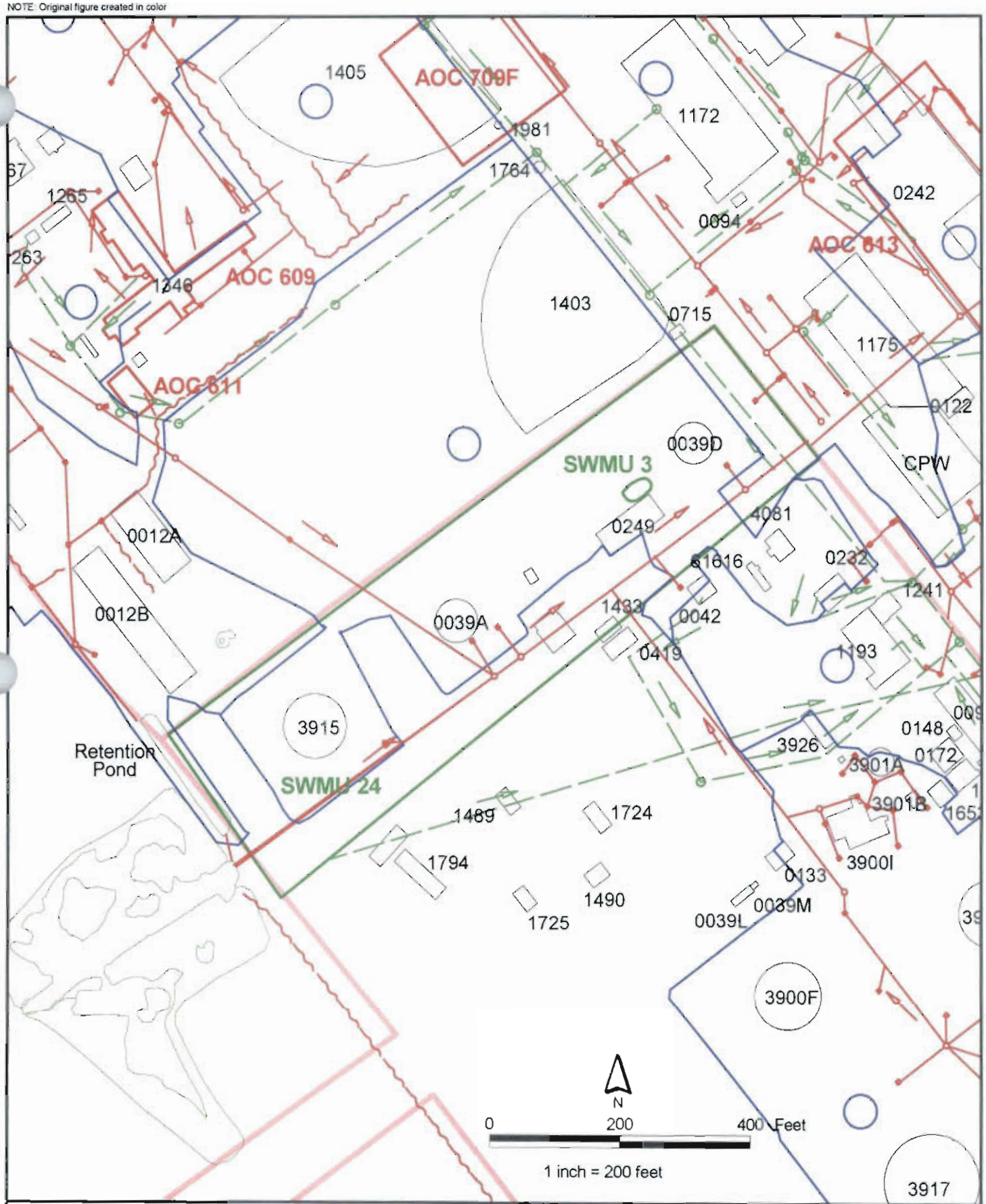
1 inch = 200 feet

Figure 1-2
Site Layout
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

File Path: c:\18gis\projects\zone_g\swmu_24\aps\swmu24.apr, Date: 13 Mar 2002 12:28, User: A.SPOSATO, EGIS: Charleston Naval Complex - Figure 1-2 Site Layout

NOTE: Original figure created in color



Stormwater Drain - Basin
Stormwater Line
Stormwater Flow Direction
Sanitary Sewer Line
Sanitary Sewer Flow Direction
Wetland
AOC Boundary
SWMU Boundary
Buildings
Zone Boundary

Figure 1-3
Utility Plan
SWMU 24, Zone G
Charleston Naval Complex

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Section 2.0

2.0 Summary of RFI Conclusions for SWMU 24

The *Zone G RFI Report, Revision 0* (EnSafe, 1998a) presented the results of the soil and groundwater investigations, including conclusions concerning site geology and hydrogeology, nature and extent of contamination, and risk assessment for SWMU 24. Conclusions from the *Zone G RFI Report, Revision 0* are summarized as part of this section.

2.1 Site Geology and Hydrogeology

A detailed description of Zone G geology and hydrogeology are summarized in Section 2 of the *Zone G RFI Report, Revision 0*. The lowermost stratigraphic unit identified in Zone G is the Ashley Formation (Ta) member of the Mid-Tertiary age Cooper Group. According to the *Zone G RFI Report, Revision 0*, the Ta was encountered throughout Zone G at elevations ranging from –16.6 to –49 feet mean sea level (ft msl) and is higher in the eastern portion of Zone G than in the western and southern portions. The Ta is a tight, slightly calcareous, clayey silt with varying amounts of fine-grained sand which decreases rapidly with depth.

Overlying the Ta are younger Upper-Tertiary and Quaternary-age stratigraphic units. The Quaternary-age sediments range from 25 to 55 feet thick. During the RFI field activities three distinct Quaternary-age litho-stratigraphic units were identified as Quaternary Clay (Qc), Quaternary Marsh (Qm), and Quaternary Sand (Qs). The Qc deposits consist of a stiff very fine to fine grained sandy and silty clay. The Qc unit was commonly found in the upper 10 to 15 feet of the shallow subsurface. The Qm is a soft, sticky clay, occasionally laminated with sand, silt, and shelly lenses. It has a high organic content, low plasticity, and a distinctive hydrogen sulfide odor. According to the *Zone G RFI Report, Revision 0*, the Qm is approximately 45 feet thick in the southeastern portion of Zone G and decreases to approximately 7 feet thick in the western portion. The uppermost unit, Qs, is primarily very fine to medium silty sand, well to moderately well sorted and loose. The Qs deposits in Zone G range from thin lenses ranging from 0.5 to 1.7 feet thick to thicker lenses of four feet thick.

SWMU 24 groundwater elevations vary seasonally and range widely from 2 to 9 feet below land surface (ft bls). As reported in the *Zone G RFI Report, Revision 0*, groundwater flow in the surficial aquifer is highly variable in gradient and direction. Figure 2-1 presents a potentiometric surface map using groundwater elevation data collected on March 28, 2002.

2.2 Surface Soil

As part of the original RFI field work, four soil sample locations identified as GFDSSH024 through GFDSSH027 were used to characterize the surface (0 to 1 ft bls) soil in select locations of the fuel distribution pipeline system. The soil sample locations, which are depicted in Figure 2-2, were placed adjacent to tanks 39-A and 39-D and the existing concrete slab on the southwest portion of the site, identified as 3915.

The four surface soil samples collected on October 21, 1996 were analyzed for total petroleum hydrocarbons (TPH) with the results reported as diesel, fuel oil number 6, gasoline, jet fuel JP-4 with a carbon range of C6 to C14, kerosene, and naphtha for the carbon range of C6 to C12. Surface soil samples collected from GFDSSH024 and GFDSSH026 were also analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, pesticides, polychlorinated biphenyls (PCBs), and cyanide. Table 10.15.4 of the *Zone G RFI Report, Revision 0* presents a summary of the concentrations of analytes detected in the four surface soil samples collected during the original RFI. A copy of this table is provided in Appendix A.

Surface soil sample analytical results were compared to their corresponding U.S. Environmental Protection Agency (EPA) Region III residential risk-based concentration (RBC) (hazard index [HI]=0.1), and the Zone G background reference concentration (BRC) for metals. As indicated in the *Zone G RFI Report, Revision 0*, the BRCs were calculated using twice the mean grid sample concentrations. Surface soil analytical results were not compared to soil screening levels (SSLs) in the *Zone G RFI Report, Revision 0*.

Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene, detected at concentrations of 2,500 J; 1,700 J; 1,600 J; and 290 J micrograms per kilogram (μg/kg) (respectively) in the soil sample collected from GFDSSH026, were the only SVOC constituents that were detected at concentrations above their corresponding EPA Region III RBC. The EPA Region III RBC value for benzo(a) pyrene and dibenz(a,h)anthracene is 87 μg/kg while the value is 870 μg/kg for benzo(a)anthracene and benzo(b)fluoranthene. The calculated benzo(a)pyrene equivalent (BEQ) concentration in the surface soil sample collected form GFDSSH026 is 2,501 μg/kg. Figure 10.15.4 in the *Zone G RFI Report, Revision 0* presents the soil sample locations with the detected concentrations of BEQs in surface soil. A copy of figure 10.15.4 is provided in Appendix A.

Iron was detected at concentrations of 8,180 and 4,180 milligrams per kilogram (mg/kg) in the samples collected from GFDSSH024 and GFDSSH026, respectively. These detected concentrations are above the EPA Region III RBC (HI=0.1) value of 2,300 mg/kg. According

to the *Zone G RFI Report, Revision 0*, a background concentration for iron was not established because it is considered an essential nutrient.

Detected concentrations of VOCs were not above their corresponding EPA Region III RBC values. PCBs, pesticides, and cyanide were not detected in the two samples above the laboratory method detection limits (MDLs).

The *Zone G RFI Report, Revision 0* identified BEQs as COCs in the surface soil at SWMU 24.

2.3 Subsurface Soil

During the RFI, subsurface (3 to 5 ft bls) soil samples were not collected from the four surface soil sample locations (i.e., GFDSSH024 through GFDSSH027). However, soil samples were collected from 10 cone penetrometer testing (CPT) locations at elevations representing the depth of the buried fuel distribution pipelines, approximately 4 to 11 ft bls. These CPT locations, identified as GFDSSC069, GFDSSC072 through GFDSSC075, and GFDSSC085 through GFDSSC089, were advanced at the site from September 30 to October 2, 1996. One sample was collected from each location and analyzed for TPH, and the results were reported identically as were the surface soil samples that were analyzed for TPH. Samples were collected at 2-foot intervals at various termination depths ranging from 6 to 11 ft bls. Because of these collection depths, it could not be verified that the samples were collected in the vadose zone and thereby representative of unsaturated soil. The soil sample locations are provided in Figure 2-2.

No subsurface soil COPCs were identified at SWMU 24 in the *Zone G RFI Report, Revision 0*.

2.4 Groundwater

2.4.1 Groundwater Screening Results

Four direct-push technology (DPT) borings were advanced within SWMU 24 to investigate potential impacts from the storm sewer, which is identified as Area of Concern (AOC) 699. On August 12, 1997, one sample was collected from each of the four borings identified as LF699GP044 through LF699GP046, and LF699GP048. In addition, one DPT boring was advanced within SWMU 24 to investigate potential impacts from the sanitary sewer system, which is identified as SWMU 37. On June 12, 1997, one sample was collected from LF037GP052, the SWMU 37 boring. The five DPT borings are presented in Figure 2-3.

Section 10, Volume 2 of 12 of the *Zone L RFI Report* (EnSafe, 1998b) indicates that DPT groundwater samples were collected up to a depth of approximately 15 ft bls.

Based on information obtained from the sewer line surveys conducted during the Zone L investigations, the invert elevations ranged from 6 to 13 ft bls. Groundwater DPT samples were collected at or below the pipe invert elevation. The sample locations were determined based on the sampling scheme provided in the *Zone L RFI Work Plan* (EnSafe, 1995). Samples were collected at manhole locations, and approximately every 200 ft along the sewer line.

The information for the sampling effort conducted near the sanitary sewer lines can be found in the *Zone L RFI Work Plan* and the *Zone L RFI Report, Revision 0.*

The five DPT samples were analyzed for VOCs, metals, and cyanide. VOCs and cyanide were not detected above MDLs. The *Zone G RFI Report, Revision 0* did not provide a comparison of detected concentrations from the DPT samples against screening criteria.

2.4.2 Groundwater Monitoring Results

During the original RFI field activities, four shallow groundwater monitoring wells identified as G024GW001 through G024GW004 were installed at SWMU 24 to characterize the nature of potential contaminants in the saturated zone above the Ashley Formation from operations associated with the waste oil reclamation operations. The locations of these wells are shown in Figure 2-3.

Each shallow monitoring well designed to intersect the groundwater table consists of a 10-foot well screen, with the top of the well screen placed at a range of approximately 2 to 5 ft bls. Groundwater samples were collected from the four wells during two sampling events conducted on April 20-24, 1998 and October 28-29, 1998, and analyzed for VOCs, SVOCs, and metals. Table 10.15.8 of the *Zone G RFI Report, Revision 0* presents a summary of the concentrations of analytes detected in the groundwater samples collected from the four monitoring wells during the original RFI. A copy of this table is provided in Appendix A.

Detected chemicals in the shallow groundwater samples were compared with their respective maximum contaminant levels (MCLs), EPA Region III tap water RBCs, and Zone G BRCs for metals in groundwater.

VOCs and SVOCs were not detected at concentrations above their corresponding screening criteria. Arsenic and iron were the only metals detected at concentrations above their screening criteria. Arsenic was detected in the sample collected from G025GW001 during the October 1998 sampling event at a concentration of 86.1 micrograms per liter ($\mu g/L$) which is above its MCL of 50 $\mu g/L$. Figure 10.15.5 in the *Zone G RFI Report, Revision 0* depicts the detected concentrations of arsenic in the samples collected from the four shallow

monitoring wells. A copy of this figure is presented in Appendix A of this report addendum.

Iron was detected in each sample collected from the four monitoring wells during the two events completed in April and October 1998 at concentrations ranging from 1,460 $\mu g/L$ (G024GW003; October 1998) to 5,770 $\mu g/L$ (G024GW001; October 1998). These concentrations are above the EPA Region III tap water RBC (HI=0.1) of 1,100 $\mu g/L$. These concentrations were not screened against a background concentration, since according to the *Zone G RFI Report, Revision 0*, a background concentration for iron was not established because it is an essential nutrient.

The *Zone G RFI Report, Revision 0* identified arsenic as a COC in the groundwater at SWMU 24.

2.5 Human Health Risk Assessment

As part of the *Zone G RFI Report, Revision 0*, EnSafe conducted a human health risk assessment (HHRA) for the single COPC identified in surface soil (i.e., BEQs). Exposure to surface soil was evaluated for a future residential receptor scenario and a future site worker scenario, using the incidental ingestion and dermal contact exposure routes.

The incremental lifetime cancer risks (ILCRs) to a future resident (based on the adult and child lifetime weighted average) were estimated at a total ILCR of 4E-05, with 3E-05 for ingestion and 1E-05 for dermal exposure routes to SWMU 24 surface soils. The ILCRs to a future site worker were estimated at a total ILCR of 8E-06, with an ILCR of 3E-06 for ingestion and 5E-06 for dermal exposure routes.

The HHRA identified arsenic as a COPC in the groundwater. Exposure to groundwater was evaluated for a future residential receptor scenario and a future site worker scenario using shallow groundwater ingestion. No volatile COPC was identified for groundwater and, as a result, the inhalation pathway was not considered for SWMU 24. The non-carcinogenic hazards were evaluated for future site residents, where an HI was calculated separately for a child receptor and an adult receptor.

Potential risks from the use of shallow groundwater for potable purposes by a future resident exceeds the acceptable risk criteria for combined risks from the ingestion exposure pathway, with cumulative risks to a future adult resident estimated at 2E-03, and HI for an adult and child residents at 8 and 18, respectively. Similarly, risks from the ingestion

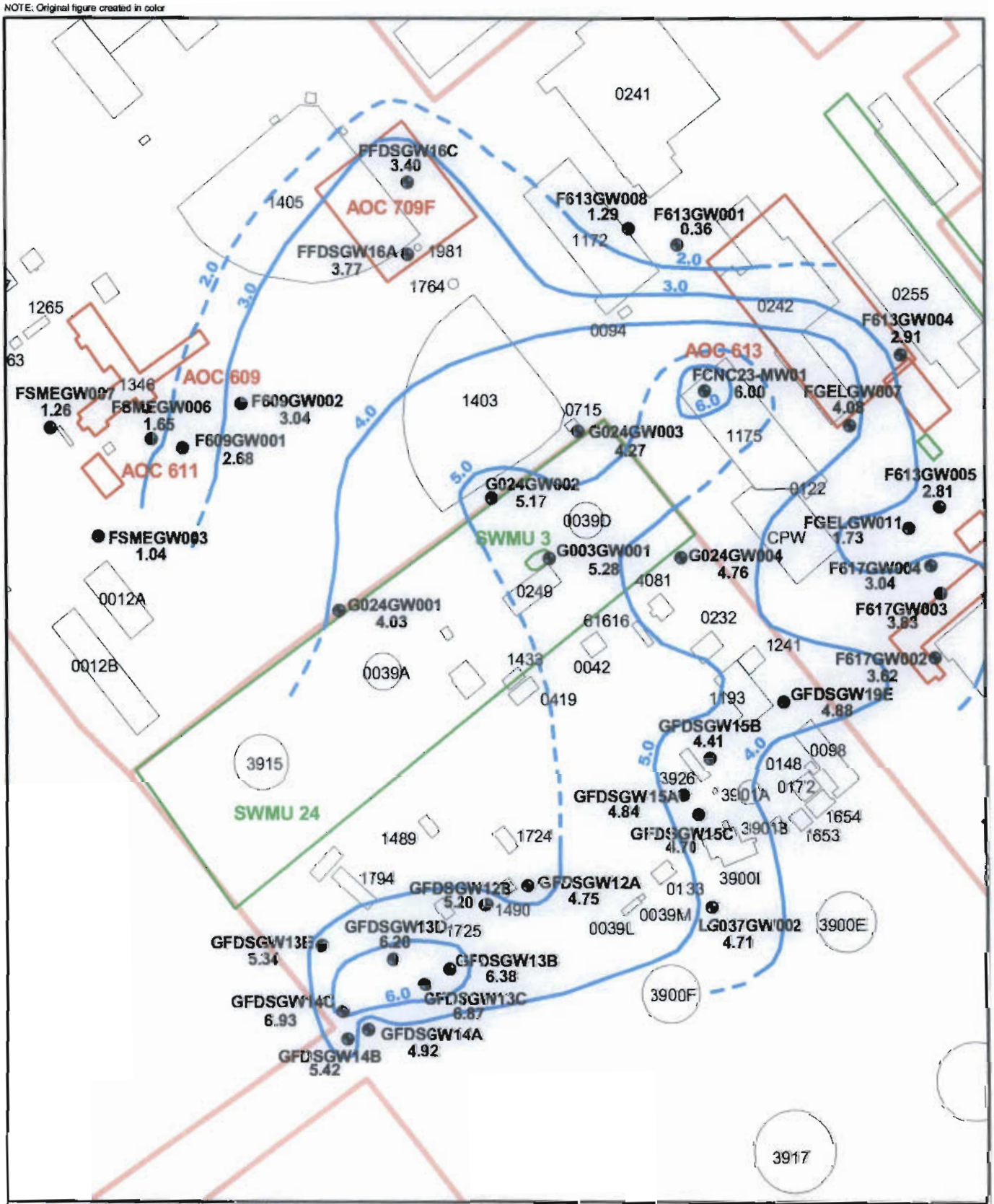
exposure pathway to a future worker were estimated at 5E-04 and HI at 3. All of these risk values are above the 1 in a million risk level.

In the *Zone G RFI Report, Revision 0*, BEQs were identified as a COC in surface soil and arsenic was listed as a COC in the groundwater. Section 5.0 of this report addendum further addresses the surface soil and groundwater COCs that were identified in the *Zone G RFI Report, Revision 0* by evaluating whether they are COCs based on the current CNC project criteria.

2.6 Conclusions and Recommendations

The *Zone G RFI Report, Revision 0* concluded that the primary risk in surface soil was from BEQs, and the primary risk in shallow groundwater was from arsenic. The *Zone G RFI Report, Revision 0* recommended a CMS for these COCs identified at the site.

NOTE: Original figure created in color



- Groundwater Well (ft/msl) - 3/28/02
- GW Shallow Contours (ft/msl) - 3/28/02 - inferred
- GW Shallow Contours (ft/msl) - 3/28/02 - known
- AOC Boundary
- SWMU Boundary
- Buildings
- Zone Boundary

N

0 200 400 Feet

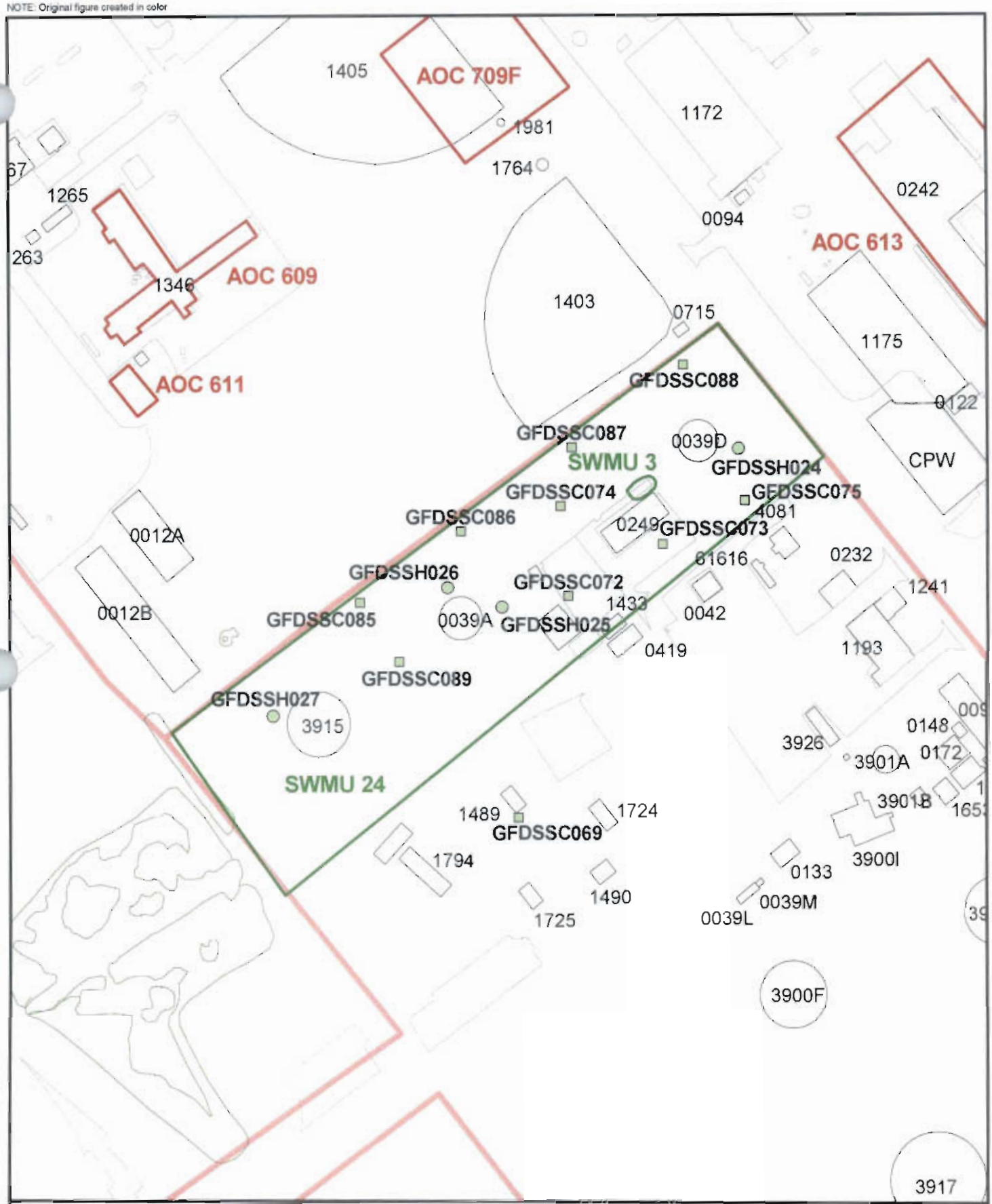
1 inch = 233.333 feet

Figure 2-1
Shallow Groundwater Potentiometric Surface
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

File Path: C:\18gis\Projects\Zone_G\Swmu_24\Aprs\swmu24.apx, Date: 04 Apr 2002 12:50, User: ASP0SATO, EGIS: Charleston Naval Complex - Figure 2-1 Shallow GW Potentiometric Surface

NOTE: Original figure created in color



Soil Boring
Surface Soil
Wetland
Pavement
AOC Boundary
SWMU Boundary
Buildings
Zone Boundary

N

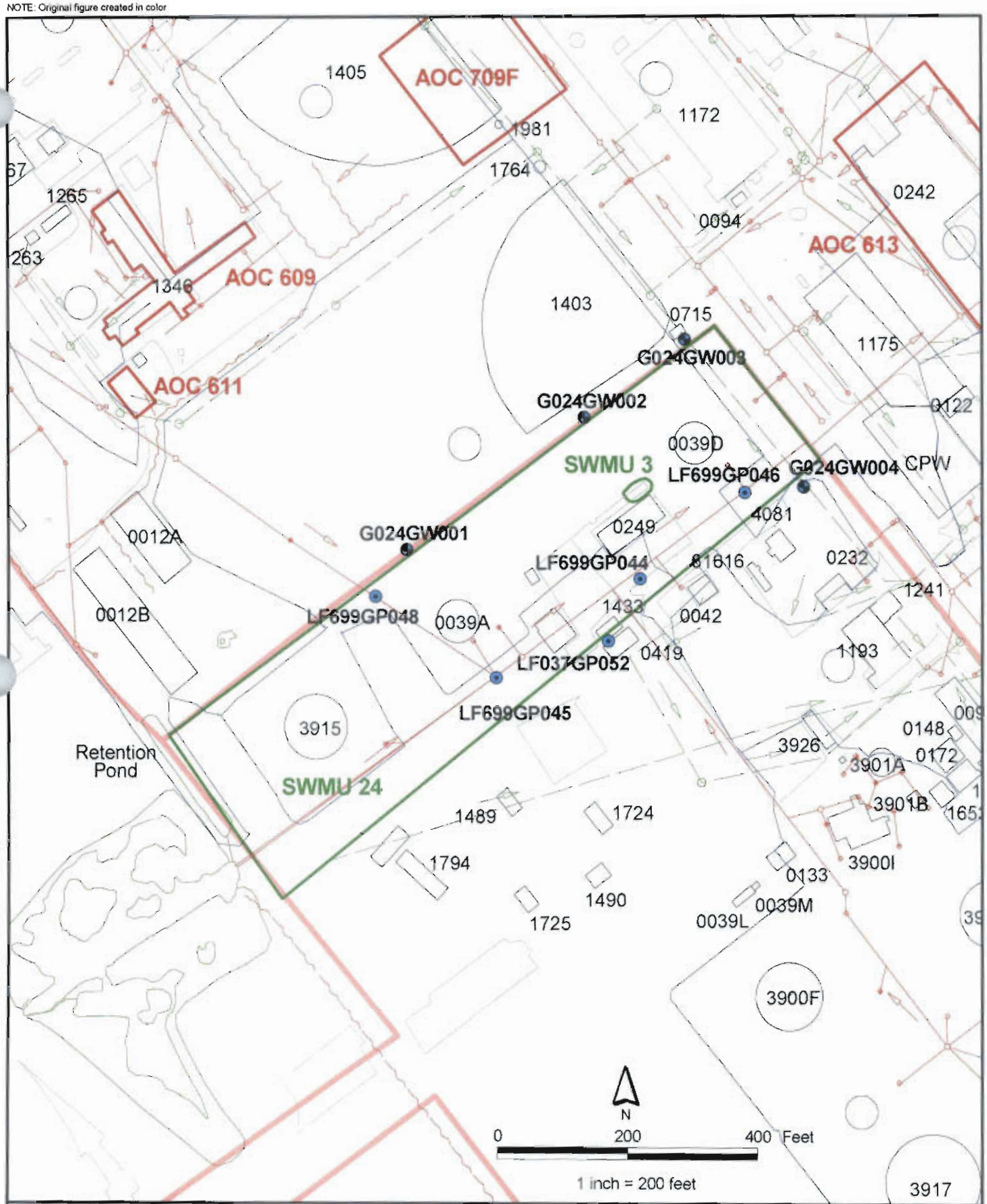
0 200 400 Feet

1 inch = 200 feet

Figure 2-2
RFI Soil Sample Location Plan
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

NOTE: Original figure created in color



- Groundwater Probe
- Groundwater Well
- Stormwater Drain - Basin
- Stormwater Line
- Stormwater Flow Direction
- Sanitary Sewer Line
- Sanitary Sewer Flow Direction
- Pavement
- Wetland
- AOC Boundary
- SWMU Boundary
- Buildings
- Zone Boundary

Figure 2-3
RFI Groundwater Sample Location Plan
SWMU 24, Zone G
Charleston Naval Complex

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Section 3.0

3.0 Interim Measures and UST/AST Removals

There is no documentation supporting the completion of an IM at SWMU 24 as part of the RCRA CA program. There were no documented uses of a UST or AST within the SWMU 24 boundary, based on a review of the UST program files. In addition, there were no other UST/AST-related investigations under the SCDHEC UST program.

Section 4.0

4.0 Summary of Additional Investigations

Additional investigations conducted subsequent to the *Zone G RFI Report, Revision 0* (EnSafe, 1998a) to characterize the nature and extent of BEQs in surface soil are summarized in this section. In addition, this section summarizes the two additional groundwater sampling events that were conducted in 1999.

4.1 Additional Soil Investigations

According to the *Zone G RFI Work Plan Addendum* (EnSafe, 2000), four additional surface (0 to 1 ft bls) and subsurface soil (3 to 5 ft bls) samples were collected on July 28 and 29, 1999 to further evaluate potential soil contamination from the FDS in the areas west, south, and southeast of tank 39-A. The soil samples collected from these four locations, identified as GFDSSH028 through GFDSSH031, were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. These four soil sample locations are presented in Figure 4-1.

As a result of the data obtained from these soil samples, an additional investigation was conducted by EnSafe as recommended in the *Zone G RFI Work Plan Addendum* (EnSafe, 2000) to delineate the extent of BEQs in surface and subsurface soil at SWMU 24. Nine additional surface soil and subsurface soil samples were collected in December 1999 and January 2000 to evaluate the extent of BEQs in surface soil surrounding GFDSSH026, GFDSSH029, and GFDSSH030. Soil samples collected from these locations, identified as G024SB001 through G024SB007, G024SB009, and G024SB010, were analyzed for SVOCs. In addition, the surface and subsurface soil samples collected from G024SB005 through G024SB007 were analyzed for metals. The nine soil sample locations are presented in Figure 4-1. The four soil sample locations from the original RFI, identified as GFDSSH024 through GFDSSH027, are also presented in Figure 4-1 for reference.

4.1.1 Surface Soil

Detected concentrations of contaminants in surface soil samples were compared to their corresponding EPA Region III residential RBC and the Zone G background range for metals. In addition, detected surface soil concentrations were compared to SSLs from the *EPA Soil Screening Guidance: Technical Background Document* (EPA, 1996) with a dilution attenuation factor (DAF) of 10. Detected concentrations of VOCs were compared to SSLs with a DAF of 1. Individual PAH constituents and the total calculated BEQ concentrations were compared to their background reference concentrations developed by the CNC BCT as

documented in the CH2M-Jones *Technical Memorandum: PAHs Background Study*, dated February 2001 (CH2M-Jones, 2001a). The calculated base-wide BEQ reference concentration for surface soil is 1,304 μg/kg.

The SVOCs benzo(a)anthracene, benzo(a)pyrene, benzob)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene were detected in the surface soil samples GFDSSH029 and GFDSSH030 above their corresponding EPA Region III residential RBC and BEQ background concentration (CH2M-Jones, 2001a). Total BEQ concentrations of 3,953 and 3,148 μg/kg were calculated using the analytical results from the surface soil samples collected from GFDSSH029 and GFDSSH030, respectively. These values are above the established BEQ surface soil reference concentration of 1,304 μg/kg. Figure 4-2 depicts an areal extent of BEQs in surface soil at SWMU 24.

The pesticide heptachlor epoxide was detected in the surface soil sample GFDSSH031 at an estimated concentration of 0.27 J mg/kg. This concentration is slightly above its EPA Region III RBC (HI=0.1) of 0.07 mg/kg.

Total BEQ concentrations in two surface soil samples were above the base-wide background reference concentration. In addition, the pesticide heptachlor epoxide exceeds its corresponding screening criteria in a single surface soil sample; as a result it is considered a COPC. The analytical data from the samples collected from the 13 surface soil sample locations are provided in Appendix B, Table B-1. Analytes estimated or detected in the surface soil samples above the MDLs are summarized in Table 4-1. Values that exceed screening criteria are in bold text and outlined within the table. The data validation reports from the additional RFI sampling investigation completed by EnSafe are provided in Appendix C of this report addendum.

4.1.2 Subsurface Soil

Detected concentrations of contaminants in surface soil samples were compared to their corresponding SSLs (EPA, 1996) with a DAF of 10 (VOCs with a DAF of 1) and the Zone G background range for metals. Individual PAH constituents and total BEQ concentrations were compared to their background reference concentrations (CH2M-Jones, 2001a). The calculated base-wide BEQ reference concentration for subsurface soil is 1,400 μg/kg.

The SVOCs isophorone and n-nitrosodiphenylamine were the only contaminants detected in the 13 subsurface soil samples at concentrations above their corresponding screening criteria. Isophorone was detected at concentrations of 0.37 J and 0.7 mg/kg in the subsurface soil samples G024SB005 and G024SB007, respectively. These concentrations slightly exceed its SSL (DAF=10) of 0.25 mg/kg.

N-nitrosodiphenylamine was detected at concentrations of 0.89 and 3.9 J mg/kg in the subsurface soil samples G024SB005 and G024SB006, respectively. These concentrations exceed its SSL (DAF=10) of 0.5 mg/kg.

Isophorone and n-nitrosodiphenylamine were detected in subsurface soil at concentrations above their corresponding screening criteria and as a result are considered COPCs. The analytical data from the samples collected from the 13 surface soil sample locations are provided in Appendix B, Table B-1. Analytes estimated or detected in the surface soil samples above the MDLs are summarized in Table 4-2. Values that exceed screening criteria are in bold text and outlined within the table. The data validation reports from the additional RFI sampling investigation completed by EnSafe are provided in Appendix C.

4.2 Additional Groundwater Investigations

Subsequent to the submittal of the *Zone G RFI Report, Revision 0* (EnSafe, 1998a), the four site monitoring wells, G024GW001 through G024GW004, were sampled on January 28-29, 1999 and June 9-10, 1999, and analyzed for VOCs, SVOCs, and metals. These sampling events including any additional groundwater investigations were not part of the *Zone G RFI Work Plan Addendum* (EnSafe, 2000). According to the *Zone G RFI Work Plan Addendum* no data gaps in groundwater quality are evident at SWMU 24, and thus no additional monitoring wells are recommended.

Detected groundwater contaminant concentrations were compared to their corresponding MCLs, or for those chemicals that have no MCL, the EPA Region III tap water RBC (HI=0.1). In addition, metals were compared to their corresponding Zone G background range of concentration.

VOCs were not detected above the MDLs in any of the samples collected during the two events. Detected concentrations of SVOCs were not above their corresponding EPA Region III tap water RBC (HI=0.1). MCLs do not exist for the five SVOCs detected in the various groundwater samples. Antimony detected at a concentration of 14.4 J μg/L in the sample collected from G024GW002 during the June 1999 sampling event was the only metal that exceeded its corresponding MCL, EPA Region III tap water RBC, and Zone G background range. Arsenic was detected in the samples collected from G024GW001 at concentrations of 74.8 and 67.2 μg/L during the January and June 1999 sampling events, respectively. These concentration exceed the MCL of 50 μg/L but are within the Zone G background range of 8 to 166 μg/L.

Because the single detected concentration of antimony exceeds its screening criteria it is considered a COPC in groundwater. The analytical data from the groundwater samples collected during the January and June 1999 sampling events are provided in Appendix B, Table B-2. Analytes estimated or detected in the groundwater samples above the MDLs are summarized in Table 4-3. Values that exceed screening criteria are in bold text and outlined within the table. The data validation reports from the additional groundwater sampling events completed by EnSafe are provided in Appendix C.

4.3 Summary of COPCs Identified

Analytes detected or estimated in groundwater were not considered COPCs if the concentrations were less than their corresponding MCLs, or for those chemicals that have no MCL, the EPA Region III tap water RBC (HI=0.1). In addition, metals were compared to their corresponding Zone G background range to evaluate if a constituent was considered a COPC.

Analytes estimated or detected in soil samples were not considered COPCs if the concentrations were less than their corresponding EPA Region III residential RBC for surface soil samples and less than their corresponding SSL (DAF=10) (SSL with a DAF=1 for VOCs) for subsurface soil samples. The Zone G background ranges for metals were also used as additional screening criteria when identifying COPCs in surface and subsurface soil. In addition for surface and subsurface soil, the seven individual PAH constituents used in calculating total BEQs (including the total calculated BEQ concentration itself) were not considered COPCs if the concentrations were less than their corresponding background reference concentrations (CH2M-Jones, 2001a).

4.3.1 Surface Soil

The new COPC identified in the surface soil samples collected as part of the additional investigations conducted subsequent to the *Zone G RFI Report, Revision 0* is the pesticide heptachlor epoxide. During the additional RFI sampling investigation, five PAH constituents (i.e., benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-c,d]pyrene) were detected at concentrations above their corresponding screening criteria. These PAH concentrations contributed to calculated BEQs above the base-wide background reference concentration. BEQs were identified in the *Zone G RFI Report, Revision 0* as COCs in the surface soil at SWMU 24.

4.3.2 Subsurface Soil

During the additional RFI sampling investigation isophorone and n-nitrosodiphenylamine were detected in subsurface soil at concentrations above their corresponding screening criteria; as a result they are considered COPCs. Subsurface soil COPCs were not identified in the *Zone G RFI Report, Revision 0*.

4.3.3 Groundwater

Antimony was the only new groundwater COPC identified as a result of the additional groundwater sampling investigations since it was detected in one sample above its corresponding MCL, EPA Region III tap water RBC, and Zone G background range. Arsenic was detected above its MCL during the original RFI sampling investigation, and was therefore identified as a COC in the *Zone G RFI Report, Revision 0*.

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
Acetone	GFDSSH028	0.08	=	780	0.8	NA
Ethylbenzene	GFDSSH028	0.006	J	780	0.7	NA
2-Methylnaphthalene	G024SB005	0.34	J	160	NA	NA
	GFDSSH028	16	=			
Acenaphthene	G024SB006	0.21	J	470	285	NA
	GFDSSH029	0.19	J			
Acenaphthylene	G024SB004	0.021	J	NA	NA	NA
Anthracene	GFDSSH029	0.92	=	2,300	6,000	NA
	G024SB006	0.079	J			
	GFDSSH030	0.6	=			
BEQs	G024SB001	0.389	=	NA	NA	1.304[d]
	G024SB002	0.229	=			
	G024SB003	0.309	=			
	G024SB004	0.165	=			
	G024SB005	0.416	=			
	G024SB006	0.451	=			
	G024SB007	0.435	=			
	G024SB009	0.108	=			
	G024SB010	0.251	=			
	GFDSSH028	0.229	=			
	GFDSSH029	**3.953**	=			
	GFDSSH030	**3.148**	=			
	GFDSSH031	0.291	=			
Benzo(a)Anthracene	GFDSSH031	0.082	J	0.87	1	0.616[d]
	G024SB009	0.05	J			
	G024SB002	0.031	J			
	G024SB007	0.1	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
Benzo(a)Anthracene	G024SB001	0.02	J	0.87	1	0.616[d]
	G024SB004	0.071	J			
	G024SB010	0.036	J			
	G024SB003	0.069	J			
	GFDSSH029	**2.9**	=			
	GFDSSH028	0.035	J			
	GFDSSH030	**2.2**	=			
Benzo(a)Pyrene	G024SB007	0.19	J	0.087	4	0.598[d]
	G024SB004	0.11	J			
	GFDSSH031	0.094	J			
	GFDSSH029	**2.6**	=			
	G024SB010	0.041	J			
	G024SB003	0.087	J			
	GFDSSH030	**2.0**	=			
	G024SB002	0.035	J			
	GFDSSH028	0.023	J			
	G024SB009	0.063	J			
Benzo(b)Fluoranthene	G024SB009	0.051	J	0.87	2.5	0.608[d]
	G024SB007	0.26	J			
	G024SB010	0.035	J			
	GFDSSH028	0.026	J			
	GFDSSH029	**2.2**	=			
	GFDSSH031	0.14	J			
	GFDSSH030	**1.9**	=			
	G024SB003	0.085	J			
	G024SB004	0.1	J			
	G024SB002	0.039	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
Benzo(g,h,i)Perylene	GFDSSH029	1.4	=	NA	NA	NA
	G024SB004	0.087	J			
	GFDSSH028	0.018	J			
	G024SB009	0.056	J			
	G024SB003	0.064	J			
	G024SB002	0.022	J			
	G024SB010	0.028	J			
	GFDSSH030	1.2	=			
	G024SB007	0.12	J			
	GFDSSH031	0.039	J			
Benzo(k)Fluoranthene	GFDSSH029	2	=	8.7	24.5	0.596[d]
	G024SB004	0.094	J			
	G024SB010	0.03	J			
	G024SB009	0.058	J			
	G024SB007	0.27	J			
	G024SB003	0.077	J			
	G024SB002	0.028	J			
	GFDSSH030	1.6	=			
	GFDSSH031	0.073	J			
Benzoic Acid	G024SB002	0.029	J	31,000	200	NA
	G024SB010	0.036	J			
	G024SB004	0.04	J			
	G024SB003	0.05	J			
	G024SB009	0.05	J			
	G024SB001	0.029	J			
Bis(2-ethylhexyl) Phthalate	GFDSSH028	0.14	J	46	1,800	NA
	GFDSSH030	0.044	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
Chrysene	G024SB007	0.2	J	87	80	0.620[d]
	GFDSSH028	0.075	J			
	G024SB002	0.044	J			
	G024SB009	0.061	J			
	GFDSSH029	2.7	=			
	GFDSSH030	2.2	=			
	GFDSSH031	0.11	J			
	G024SB004	0.11	J			
	G024SB010	0.038	J			
	G024SB003	0.072	J			
Di-n-butyl Phthalate	G024SB010	0.023	J	780	1,150	NA
	G024SB004	0.029	J			
	G024SB009	0.032	J			
	G024SB001	0.02	J			
	GFDSSH031	0.017	J			
Dibenz(a,h)Anthracene	G024SB004	0.029	J	0.087	1	0.525[d]
	GFDSSH030	**0.6**	=			
	GFDSSH029	**0.69**	=			
	G024SB009	0.03	J			
Dibenzofuran	G024SB006	0.29	J	31	NA	NA
	GFDSSH029	0.064	J			
Dimethyl Phthalate	G024SB009	0.44	=	78,000	NA	NA
Fluoranthene	GFDSSH030	4.2	=	310	2,150	NA
	GFDSSH028	0.12	J			
	GFDSSH029	5.7	=			
	G024SB001	0.036	J			
	G024SB002	0.052	J			
Fluoranthene	G024SB003	0.11	J	310	2,150	NA

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
	G024SB010	0.057	J			
	GFDSSH031	0.099	J			
	G024SB004	0.16	J			
	G024SB009	0.088	J			
Fluorene	GFDSSH030	0.19	J	310	280	NA
	GFDSSH028	0.95	=			
	GFDSSH029	0.13	J			
Indeno(1,2,3-c,d)Pyrene	G024SB003	0.055	J	0.87	7	0.525[d]
	G024SB004	0.076	J			
	G024SB002	0.021	J			
	GFDSSH030	**1.2**	=			
	GFDSSH031	0.039	J			
Indeno(1,2,3-c,d)Pyrene	G024SB010	0.029	J	0.87	7	0.525[d]
	G024SB009	0.038	J			
	GFDSSH029	**1.3**	=			
	G024SB006	0.33	J			
	G024SB007	0.11	J			
N-Nitrosodiphenylamine	G024SB006	0.64	J	130	0.5	NA
Naphthalene	GFDSSH028	3.6	=	160	42	NA
Phenanthrene	G024SB010	0.021	J	NA	NA	NA
	GFDSSH028	1.8	=			
	G024SB002	0.026	J			
	GFDSSH029	3	=			
	G024SB004	0.13	J			
	G024SB006	1.1	J			
	G024SB009	0.038	J			
Phenanthrene	GFDSSH030	1.2	=	NA	NA	NA
	G024SB003	0.056	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
Pyrene	G024SB004	0.13	J	230	2,100	NA
	GFDSSH029	5.4	=			
	GFDSSH028	0.13	J			
	G024SB001	0.027	J			
	GFDSSH030	3.1	=			
	G024SB010	0.043	J			
	G024SB009	0.074	J			
	G024SB007	0.12	J			
	G024SB002	0.046	J			
	GFDSSH031	0.094	J			
	G024SB003	0.085	J			
Alpha-chlordane	GFDSSH031	2.4	J	NA	5	NA
Endrin Aldehyde	GFDSSH029	0.056	J	NA	NA	NA
	GFDSSH028	0.0088	=			
Gamma-chlordane	GFDSSH031	2.7	J	NA	5	NA
	GFDSSH028	0.0025	=			
Heptachlor	GFDSSH031	0.11	J	0.14	11.5	NA
Heptachlor Epoxide	GFDSSH031	**0.27**	J	0.07	0.35	NA
Methoxychlor	GFDSSH031	0.059	J	39	80	NA
p,p'-DDD	GFDSSH028	0.029	J	2.7	8	NA
p,p'-DDT	GFDSSH031	0.054	J	1.9	16	NA
	GFDSSH029	0.052	J			
Aluminum	G024SB005	7,030	=	7,800	NA	2,190 -17,800
	G024SB007	5,650	=			
Aluminum	GFDSSH028	4,350	=	7,800	NA	2,190 -17,800
	GFDSSH031	8,820	=			
	G024SB006	8,490	=			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
	GFDSSH029	11,700	=			
	GFDSSH030	7,820	=			
Antimony	G024SB007	0.37	J	3.1	2.5	0.79 - 5.7
	G024SB006	0.41	J			
	G024SB005	0.46	J			
Arsenic	GFDSSH028	1.4	=	0.43	14.5	0.64 - 18
	G024SB007	8.1	=			
	G024SB006	5.7	=			
	GFDSSH031	3.9	=			
	GFDSSH030	4.8	=			
	GFDSSH029	10.9	=			
	G024SB005	2.5	=			
Barium	GFDSSH028	16.3	=	550	800	11 - 129
	G024SB005	31.2	=			
	G024SB006	15.8	J			
	G024SB007	19.9	=			
	GFDSSH030	23.4	=			
	GFDSSH029	28.9	=			
	GFDSSH031	22.6	=			
Beryllium	GFDSSH030	0.37	J	16	31.5	0.47 - 1.1
	GFDSSH028	0.25	J			
	GFDSSH029	0.33	J			
	GFDSSH031	0.36	J			
Cadmium	GFDSSH028	0.04	J	3.9	4	0.12 - 1.7
	GFDSSH030	0.28	J			
Chromium, Total	GFDSSH030	17	=	23[c]	19	7 - 39
	GFDSSH029	19.9	=			
	GFDSSH031	17.6	=			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
	GFDSSH028	4.9	=			
	G024SB007	15.4	J			
	G024SB005	9.6	J			
	G024SB006	25.9	J			
Cobalt	GFDSSH031	2.2	J	470	NA	1.1 - 6.2
	GFDSSH030	5.3	=			
	G024SB005	2.2	J			
	GFDSSH028	1.5	J			
	G024SB007	1.6	J			
	GFDSSH029	2	J			
	G024SB006	1.3	J			
Copper	GFDSSH031	2	J	310	NA	23 - 431
	G024SB006	1.1	J			
	G024SB005	3	J			
	G024SB007	10.4	J			
	GFDSSH029	8	=			
	GFDSSH030	5.1	J			
Iron	G024SB006	19,900	=	2,300	NA	4,300 - 32,700
	G024SB007	5,880	=			
	GFDSSH028	2,280	=			
	GFDSSH029	15,300	=			
	GFDSSH030	12,000	=			
	G024SB005	4,920	=			
	GFDSSH031	12,500	=			
Lead	GFDSSH031	8.4	=	NA	400[e]	3.5 - 275
	GFDSSH028	63.4	=			
	G024SB005	110	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
	G024SB006	58.9	J			
	GFDSSH030	179	=			
	G024SB007	62.1	J			
	GFDSSH029	41	=			
Manganese	GFDSSH029	47.1	=	160	NA	39 - 359
	GFDSSH028	15.4	=			
	G024SB007	74.8	=			
	GFDSSH030	117	=			
	G024SB006	37	=			
	GFDSSH031	36.5	=			
	G024SB005	23.2	=			
Mercury	G024SB007	0.06	=	NA	1	0.06 - 2
	GFDSSH031	0.05	=			
	GFDSSH028	0.04	=			
	G024SB006	0.04	=			
	GFDSSH030	0.39	=			
	GFDSSH029	0.09	=			
Nickel	GFDSSH029	5.2	=	160	65	2 - 27
	GFDSSH030	7.6	=			
	GFDSSH028	2.2	J			
	G024SB006	2.7	J			
	G024SB007	5.4	=			
	GFDSSH031	3.4	J			
	G024SB005	3.4	=			
Selenium	GFDSSH029	0.55	J	39	2.5	0.45 - 1.4
	G024SB007	0.72	J			
	G024SB005	0.45	J			

TABLE 4-1
Analytes Detected in Surface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL (DAF=10)[a]	Zone G Background Concentration (or Range)[b]
	G024SB006	1.5	=			
Vanadium	G024SB007	16.6	=	55	3,000	7.2 - 57
	GFDSSH029	25.8	=			
	G024SB006	34.4	=			
	GFDSSH031	22.2	=			
	GFDSSH028	5.8	=			
	G024SB005	13.8	=			
	GFDSSH030	21.8	=			
Zinc	G024SB005	38.5	J	2,300	6,000	18 - 1,650
	GFDSSH029	67.5	=			
	GFDSSH031	18.3	=			
	GFDSSH030	47.8	=			
	GFDSSH028	16	=			
	G024SB006	11.7	J			
	G024SB007	47.2	J			

Concentrations in bold and outlined text exceed the appropriate screening criteria.

[a] Generic soil to groundwater soil screening level (SSL) with a dilution attenuation factor (DAF)=10 except for volatile organic compounds (VOCs) which were screened using SSL (DAF=1). SSLs were obtained from Appendix I of the *Charleston Naval Complex Project Team Notebook and Instructions*, Revision 1A (CH2M-Jones, December 2001d).

[b] Except as noted by footnote "d", the Zone G Background Ranges of Concentrations were obtained from Appendix J of the *Charleston Naval Complex Project Team Notebook and Instructions – Charleston Naval Complex, Environmental Restoration Project*, Revision 1A (CH2M-Jones, December 2001d).

[c] The conservative U.S. Environmental Protection Agency (EPA) Region III residential risk-based concentration (RBC) (Hazard Index [HI]=0.1) of 23 milligrams per kilogram (mg/kg) for Chromium VI was used as the screening criteria for Chromium, Total.

[d] Base-wide polycyclic aromatic hydrocarbon (PAH) background concentrations were obtained from the *Technical Memorandum: PAHs Background Study* (CH2M-Jones, February 2001a).

[e] A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (EPA, 1994).

= Indicates that the analyte is detected at the concentration shown.

HI Hazard Index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg milligrams per kilogram

NA Screening criteria not available for the referenced compound.

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Acetone	GFDSSH030	0.06	=	0.8	NA
Carbon Disulfide	GFDSSH031	0.001	J	2	NA
1,4-Dichlorobenzene	G024SB004	0.034	J	1	NA
2-Methylnaphthalene	G024SB005	8.9	=	NA	NA
	G024SB004	0.057	J		
	GFDSSH028	27	=		
	G024SB006	42	=		
	G024SB007	11	=		
Acenaphthene	GFDSSH028	0.98	=	285	NA
Acenaphthylene	G024SB004	0.038	J	NA	NA
Anthracene	G024SB006	0.27	J	6,000	NA
	G024SB005	0.12	J		
BEQs	G024SB001	0.439	=	NA	1.4[c]
	G024SB002	0.497	=		
	G024SB003	0.451	=		
	G024SB004	0.195	=		
	G024SB005	0.462	=		
	G024SB006	0.451	=		
	G024SB007	0.474	=		
	G024SB009	0.158	=		
	G024SB010	0.462	=		
	GFDSSH028	0.411	=		
	GFDSSH029	0.449	=		
	GFDSSH030	0.411	=		
	GFDSSH031	0.439	=		
Benzo(a)Anthracene	G024SB009	0.09	J	1	0.627[c]
	GFDSSH029	0.022	J		
	GFDSSH030	0.023	J		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Benzo(a)Anthracene	GFDSSH028	0.024	J	1	0.627[c]
	G024SB004	0.075	J		
Benzo(a)Pyrene	G024SB009	0.087	J	4	0.623[c]
	G024SB004	0.14	J		
Benzo(b)Fluoranthene	G024SB009	0.082	J	2.5	0.631[c]
	GFDSSH029	0.035	J		
	G024SB004	0.095	J		
Benzo(g,h,i)Perylene	G024SB004	0.15	J	NA	NA
	G024SB009	0.078	J		
Benzo(k)Fluoranthene	G024SB009	0.068	J	24.5	0.609[c]
	G024SB004	0.075	J		
Benzoic Acid	G024SB010	0.051	J	200	NA
	G024SB003	0.067	J		
	G024SB004	0.074	J		
	G024SB002	0.042	J		
	G024SB009	0.08	J		
Bis(2-ethylhexyl) Phthalate	GFDSSH028	0.024	J	1,800	NA
	GFDSSH030	0.03	J		
Chrysene	GFDSSH028	0.047	J	80	0.616[c]
	GFDSSH030	0.026	J		
	G024SB009	0.083	J		
	GFDSSH029	0.023	J		
	G024SB004	0.086	J		
Di-n-butyl Phthalate	G024SB004	0.036	J	1,150	NA
	G024SB009	0.05	J		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Dibenz(a,h)anthracene	G024SB004	0.03	J	1	0.586[c]
	G024SB009	0.048	J		
Dibenzofuran	G024SB004	0.027	J	NA	NA
	G024SB006	1.4	=		
	G024SB005	0.46	=		
	G024SB007	0.38	J		
Fluoranthene	G024SB004	0.078	J	2,150	NA
	GFDSSH030	0.076	J		
	G024SB009	0.15	J		
	G024SB001	0.022	J		
	GFDSSH029	0.037	J		
Fluorene	GFDSSH028	2	=	280	NA
	GFDSSH030	0.5	=		
	G024SB006	2.4	=		
	G024SB007	0.51	=		
Indeno(1,2,3-c,d)Pyrene	G024SB004	0.068	J	7	0.592[c]
	G024SB009	0.048	J		
Isophorone	G024SB007	**0.7**	=	0.25	NA
	G024SB005	**0.37**	J		
N-Nitrosodiphenylamine	G024SB006	**3.9**	J	0.5	NA
	G024SB005	**0.89**	=		
Naphthalene	G024SB006	10	=	42	NA
	G024SB007	4.2	=		
	GFDSSH028	1.3	=		
Phenanthrene	G024SB006	5.5	=	NA	NA
	G024SB005	2	=		
	GFDSSH030	0.29	J		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Phenanthrene	G024SB009	0.033	J	NA	NA
	GFDSSH028	4.4	=		
	G024SB007	0.89	=		
Pyrene	G024SB004	0.079	J	2,100	NA
	G024SB006	0.25	J		
	GFDSSH030	0.079	J		
	G024SB009	0.13	J		
	GFDSSH028	0.21	J		
	G024SB007	0.11	J		
	G024SB005	0.09	J		
	GFDSSH029	0.029	J		
Alpha-chlordane	GFDSSH031	0.31	=	5	NA
Gamma-chlordane	GFDSSH031	0.33	=	5	NA
Heptachlor	GFDSSH031	0.018	=	11.5	NA
Heptachlor Epoxide	GFDSSH031	0.029	J	0.35	NA
p,p'-DDD	GFDSSH028	0.01	=	8	NA
Aluminum	G024SB007	4,650	=	NA	2,630 - 36,800
	GFDSSH030	7,860	=		
	GFDSSH031	15,300	=		
	GFDSSH029	17,700	=		
	G024SB006	5,700	=		
	G024SB005	7,600	=		
	GFDSSH028	15,500	=		
Antimony	G024SB006	0.27	J	2.5	NA
	G024SB005	0.53	J		
Arsenic	GFDSSH029	7.8	=	14.5	1.4 - 36
	G024SB006	1.6	=		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Arsenic	GFDSSH028	9.3	=	14.5	1.4 - 36
	G024SB007	2.8	=		
	GFDSSH030	2.4	=		
	GFDSSH031	8.3	=		
	G024SB005	8.1	=		
Barium	G024SB005	16.6	J	800	7.7 - 63
	GFDSSH031	23.7	=		
	G024SB006	22.4	=		
	GFDSSH030	13.6	=		
	GFDSSH028	31.7	=		
	GFDSSH029	24.6	=		
	G024SB007	8.5	J		
Beryllium	GFDSSH031	0.38	J	31.5	0.45 - 2.4
	GFDSSH030	0.17	J		
	GFDSSH029	0.34	J		
	GFDSSH028	0.52	J		
Chromium, Total	GFDSSH031	38.3	=	19	7.4 - 65
	GFDSSH028	25.6	=		
	G024SB005	22.6	J		
	GFDSSH029	31.6	=		
	G024SB006	8	J		
	GFDSSH030	14.8	=		
	G024SB007	10.8	J		
Cobalt	G024SB007	0.76	J	NA	0.9 - 15
	GFDSSH029	3	J		
	GFDSSH030	1	J		
	GFDSSH028	3.1	=		
	GFDSSH031	2.1	J		
	G024SB005	1.4	J		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
Cobalt	G024SB006	0.92	J	NA	0.9 - 15
Copper	G024SB007	0.39	J	NA	4.5 - 46
	G024SB005	0.86	J		
	GFDSSH029	2.4	J		
	G024SB006	0.75	J		
Iron	GFDSSH031	28,900	=	NA	3,110 - 58,100
	GFDSSH029	24,600	=		
	GFDSSH028	19,800	=		
	GFDSSH030	11,200	=		
	G024SB005	19,100	=		
	G024SB007	9,870	=		
	G024SB006	6,670	=		
Lead	G024SB006	16	J	400[d]	2.4 - 76
	G024SB007	3.3	J		
	GFDSSH029	12.9	=		
	GFDSSH030	22.2	=		
	G024SB005	6.6	J		
	GFDSSH028	9.6	=		
	GFDSSH031	9.6	=		
Manganese	GFDSSH030	22	=	NA	20 - 409
	GFDSSH031	18.8	=		
	GFDSSH028	72.6	=		
	G024SB005	54.5	=		
	GFDSSH029	78.1	=		
	G024SB006	25.5	=		
	G024SB007	16.9	=		
Mercury	GFDSSH030	0.04	J	1	0.05 - 0.37
	G024SB007	0.06	=		
Mercury	GFDSSH031	0.26	=	1	0.05 - 0.37

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
	G024SB005	0.04	=		
	GFDSSH029	0.06	=		
	GFDSSH028	0.13	=		
Nickel	GFDSSH030	1.8	J	65	1.9 - 22
	GFDSSH029	5.8	=		
	G024SB005	2.2	J		
	GFDSSH028	5.1	=		
	G024SB006	1.7	J		
	G024SB007	1.4	J		
	GFDSSH031	4.1	J		
Selenium	GFDSSH031	1.7	=	2.5	0.54 - 1.0
	G024SB005	2.2	=		
	G024SB007	1.1	=		
	G024SB006	0.76	J		
	GFDSSH028	0.47	J		
Thallium	GFDSSH031	0.62	J	0.35	1.0
Vanadium	GFDSSH029	37.9	=	3,000	5.9 - 112
	GFDSSH028	42.2	=		
	G024SB007	18.2	=		
	G024SB006	12.6	=		
	G024SB005	43.9	=		
	GFDSSH031	48.4	=		
	GFDSSH030	23.1	=		
Zinc	GFDSSH031	16.8	=	6,000	20 - 198
	G024SB007	4.7	J		
	GFDSSH028	18.5	=		
	GFDSSH030	18.3	=		
Zinc	GFDSSH029	34.2	=	6,000	20 - 198
	G024SB006	5.9	J		

TABLE 4-2
Analytes Detected in Subsurface Soil, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	SSL[a]	Zone G Background Concentration (or Range)[b]
	G024SB005	8.7	J		

Concentrations in bold and outlined text exceed the appropriate screening criteria.

[a] Generic soil to groundwater soil screening level (SSL) with a dilution attenuation factor (DAF)=10 except for volatile organic compounds (VOCs) which were screened using SSL (DAF=1). SSLs were obtained from Appendix I of the *Charleston Naval Complex Project Team Notebook and Instructions*, Revision 1A (CH2M-Jones, December 2001d).

[b] Except as noted by footnote "c", the Zone G Background Ranges of Concentrations were obtained from Appendix J of the *Charleston Naval Complex Project Team Notebook and Instructions*, Revision 1A (CH2M-Jones, December 2001d).

[c] Base-wide PAH background concentrations were obtained from the *Technical Memorandum: PAHs Background Study* (CH2M-Jones, February 2001a).

[d] A screening level of 400 mg/kg has been set for lead based on Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (EPA, 1994).

= Indicates that the analyte is detected at the concentration shown.

HI Hazard Index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg milligrams per kilogram

NA Screening criteria not available for the referenced compound.

TABLE 4-3
Analytes Detected in Groundwater, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Date Collected	Concentration (µg/L)	Qualifier	MCL	EPA Region III Tap Water RBC (HI=0.1)	Zone G Background Concentration (or Range)[a]
4-Nitrophenol	G024GW004	01/29/99	4	J	NA	29	NA
Benzoic Acid	G024GW004	06/10/99	1	J	NA	15,000	NA
	G024GW003	06/10/99	1	J			
	G024GW001	06/10/99	2	J			
	G024GW002	06/09/99	1	J			
	G024GW004	01/29/99	1	J			
Benzyl Alcohol	G024GW004	06/10/99	1	J	NA	1,100	NA
Bis(2-ethylhexyl) Phthalate	G024GW004	01/29/99	1	J	NA	4.8	NA
	G024GW003	01/28/99	1	J			
	G024GW001	01/28/99	2	J			
Di-n-butyl Phthalate	G024GW003	06/10/99	1	J	NA	370	NA
	G024GW002	01/28/99	0.5	J			
Aluminum	G024GW004	06/10/99	42.4	J	NA	3,700	136 -1,770
	G024GW003	01/28/99	167	J			
	G024GW001	01/28/99	1,620	J			
	G024GW002	01/28/99	81.8	J			
Antimony	G024GW002	06/09/99	**14.4**	J	6	1.5	3 - 6
	G024GW004	01/29/99	3	J			
	G024GW002	01/28/99	3.2	J			
	G024GW001	01/28/99	3.4	J			
Arsenic	G024GW003	06/10/99	17.8	=	50	0.045	8 - 166
	G024GW001	06/10/99	67.2	=			
	G024GW004	06/10/99	6.6	J			
	G024GW002	06/09/99	2.4	J			
	G024GW002	01/28/99	4	J			
	G024GW003	01/28/99	11.8	=			

TABLE 4-3
Analytes Detected in Groundwater, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Date Collected	Concentration (µg/L)	Qualifier	MCL	EPA Region III Tap Water RBC (HI=0.1)	Zone G Background Concentration (or Range)[a]
Arsenic	G024GW001	01/28/99	74.8	=	50	0.045	8 - 166
Barium	G024GW001	06/10/99	23	J	2,000	260	14 - 937
	G024GW003	06/10/99	14.4	J			
	G024GW004	06/10/99	33.3	J			
	G024GW002	06/09/99	16.6	J			
	G024GW004	01/29/99	42.7	=			
	G024GW002	01/28/99	11.9	J			
	G024GW003	01/28/99	35.3	=			
	G024GW001	01/28/99	27.5	=			
Chromium, Total	G024GW001	01/28/99	2.4	J	100	11[b]	2-14
Cobalt	G024GW001	01/28/99	2.6	J	NA	220	1.2-8
	G024GW002	01/28/99	2.2	J			
Copper	G024GW001	01/28/99	2.8	J	1,300	150	12 - 87
Iron	G024GW001	06/10/99	6,470	=	NA	1,100	2,000 - 35,700
	G024GW004	06/10/99	2,980	=			
	G024GW003	06/10/99	1,230	=			
	G024GW002	06/09/99	1,710	=			
	G024GW004	01/29/99	222	=			
	G024GW002	01/28/99	2,340	=			
	G024GW001	01/28/99	7,930	=			
	G024GW003	01/28/99	1,540	=			
Lead	G024GW001	01/28/99	1.5	J	15	NA	6 - 52
Manganese	G024GW004	06/10/99	181	=	NA	73	149 - 7,980
	G024GW001	06/10/99	212	=			
	G024GW003	06/10/99	41.9	=			
	G024GW002	06/09/99	68.6	=			
	G024GW004	01/29/99	57.3	=			

TABLE 4-3
Analytes Detected in Groundwater, RFI Addendum Investigation
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Date Collected	Concentration (µg/L)	Qualifier	MCL	EPA Region III Tap Water RBC (HI=0.1)	Zone G Background Concentration (or Range)[a]
Manganese	G024GW003	01/28/99	25.6	=	NA	73	149 - 7,980
	G024GW001	01/28/99	192	=			
	G024GW002	01/28/99	64	=			
Nickel	G024GW002	06/09/99	3.7	J	NA	73	1.2 - 20
	G024GW001	01/28/99	1.2	J			
Selenium	G024GW004	01/29/99	9	J	50	18	4
	G024GW003	01/28/99	5.1	=			
Vanadium	G024GW004	01/29/99	2.8	J	NA	26	3 - 30
	G024GW003	01/28/99	1.5	J			
	G024GW001	01/28/99	4.2	J			
Zinc	G024GW002	01/28/99	36	=	NA	1,100	18 - 124

Concentrations in bold and outlined text exceed the appropriate screening criteria.

[a] The Zone G Background Ranges of Concentrations were obtained from Appendix J of the *Charleston Naval Complex Project Team Notebook and Instructions*, Revision 1A (CH2M-Jones, December 2001d).

[b] The conservative EPA Region III Tap Water RBC (HI=0.1) of 11 micrograms per kilogram (µg/kg) for Chromium VI was used as the screening criteria for Chromium, Total.

= Indicates that the analyte is detected at the concentration shown.

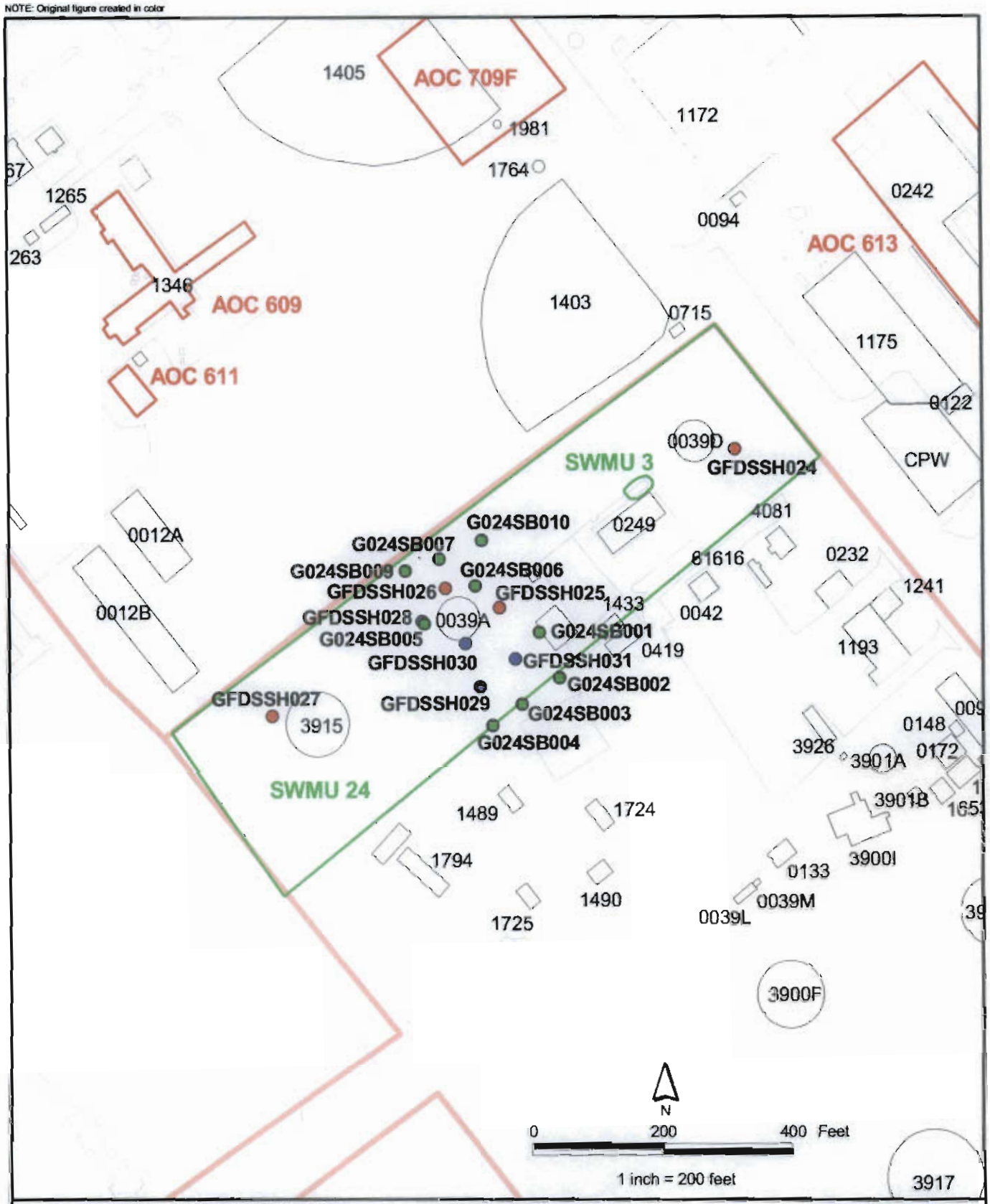
HI Hazard Index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

µg/L micrograms per liter

NA Screening criteria not available for the referenced compound.

NOTE: Original figure created in color



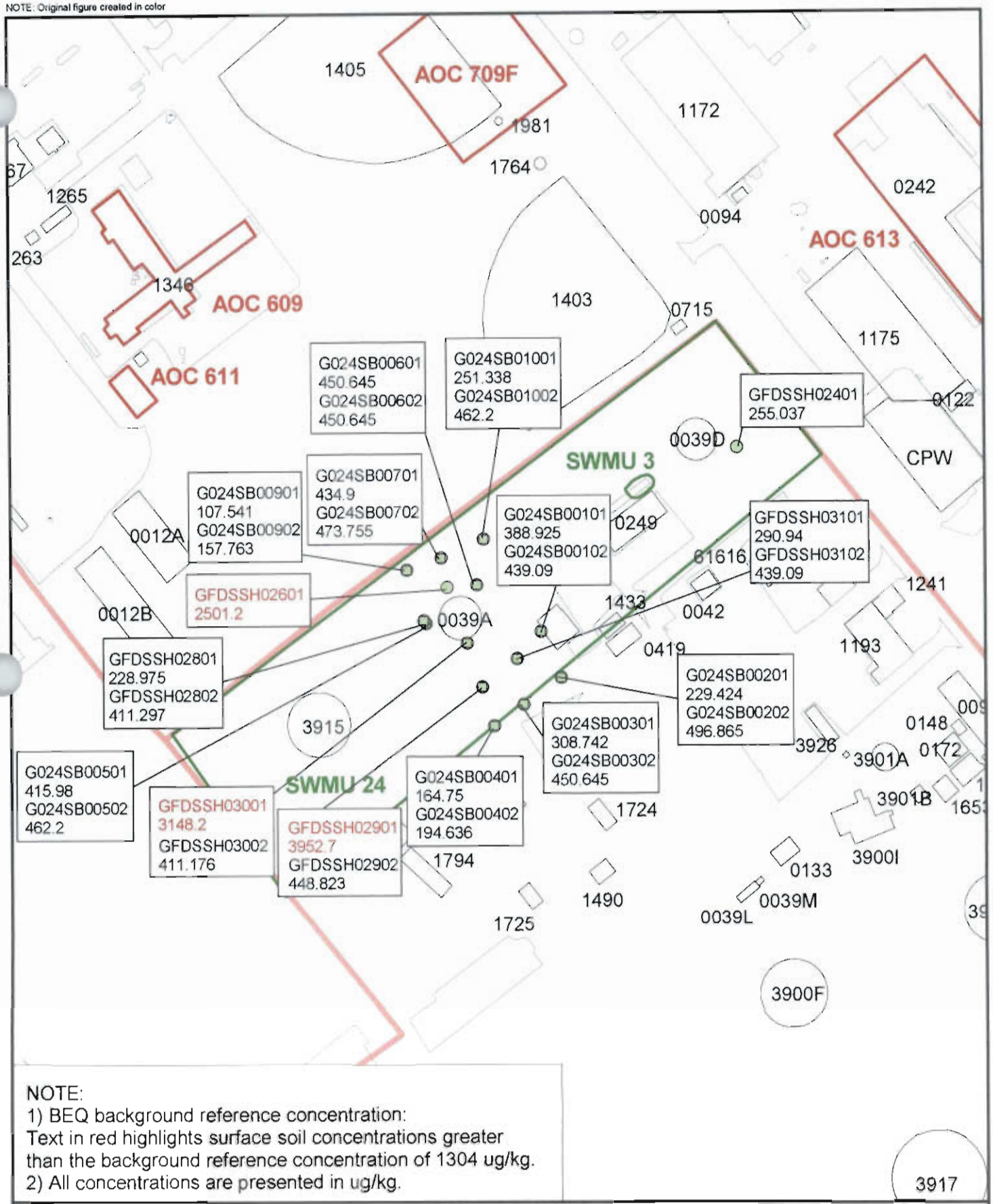
- Surface Soil RFI 10/96 (GFDSSH024-027)
- Surface Soil RFI Addendum 07/99 (GFDSSH028-031)
- Soil Boring RFI Addendum 12/99-01/00 (G024SB*)
- Surface Soil RFI Addendum 12/99-01/00 (G024SB*)
- Pavement
- AOC Boundary
- SWMU Boundary
- Buildings
- Zone Boundary

Figure 4-1
RFI Addendum Soil Sample Location Plan
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

File Path: C:\18gis\Projects\Zone_G\Swmu_24\Aprs\swmu24.apr, Date: 29 Mar 2002 14:02, User: ASPOSATO, EGIS: Charleston Naval Complex - Figure 4-1 RFI Addendum Soil Sample Location Plan

NOTE: Original figure created in color



NOTE:
1) BEQ background reference concentration:
Text in red highlights surface soil concentrations greater than the background reference concentration of 1304 ug/kg.
2) All concentrations are presented in ug/kg.

- Soil Boring
- Surface Soil
- Pavement
- AOC Boundary
- SWMU Boundary
- Buildings
- Zone Boundary

N

0 200 400 Feet

1 inch = 200 feet

Figure 4-2
BEQs in Soil
SWMU 24, Zone G
Charleston Naval Complex

CH2MHILL

Section 5.0

5.0 COPC/COC Refinement

CH2M-Jones evaluated the initial data collected during the original RFI as presented in the *Zone G RFI Report, Revision 0* (EnSafe, 1998a), along with the additional investigation data, to consistently identify all COPCs. These COPCs were further evaluated to determine whether any of these chemicals meets the criteria for being considered a COC on the basis of current EPA and SCDHEC risk management criteria. Results from these findings are presented in this section.

5.1 Surface Soil

BEQs were the only surface soil COCs identified in the *Zone G RFI Report, Revision 0*. The COPCs in surface soil identified as a result of the additional RFI sampling investigations conducted at SWMU 24 are the pesticide heptachlor epoxide and BEQs. During the additional RFI sampling investigation, five PAH constituents (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-c,d]pyrene) were detected at concentrations that exceeded their corresponding screening criteria. PAHs are evaluated as BEQs to determine if they meet the criteria for being considered COCs.

5.1.1 Heptachlor Epoxide

The pesticide heptachlor epoxide was detected in the surface soil sample GFDSSH031 at an estimated concentration of 0.27 J mg/kg. This concentration is slightly above its EPA Region III residential RBC (HI=0.1) of 0.07 mg/kg, but below the industrial RBC of 0.63 mg/kg. This detected concentration is below its SSL (DAF=10) of 0.35 mg/kg. It was not detected in any of the five remaining surface soil samples collected at the site and analyzed for pesticides. Heptachlor epoxide was detected at an estimated concentration of 0.029 J mg/kg in the subsurface soil (3 to 5 ft bls) collected at the same location (GFDSSH031). This concentration is one order of magnitude less than the SSL of 0.35 mg/kg.

Using both the heptachlor epoxide detected concentrations and non-detects at half the method detection limits (MDLs), a 95-percent Upper Confidence Limit (UCL_{95}) calculation indicated that data are log-normally distributed; however the log normal UCL_{95} calculation defaulted to the maximum detected value, due to high variability in distribution and low frequency of detection. Therefore, a UCL_{95} value was not considered. The site-wide average value estimated using half the MDLs for non-detects is 0.046 mg/kg; with an average of

0.0462 mg/kg when using non-detects at the reported MDLs. This average value is lower than the screening criteria (i.e., EPA Region III residential RBC and the SSL).

Additionally, heptachlor epoxide is an organo-chlorine pesticide used for general facility maintenance across the base, and was detected in one of the Zone G grid samples, and in 22 of the 200 grid samples collected across the CNC at concentrations ranging from 0.0002 to 0.03 mg/kg. The analytical results from theses grid samples is presented in Table 5-2. The one detection of heptachlor epoxide in surface soil is likely from past facility maintenance applications. SWMU 3, located within the SWMU 24 boundary, is currently being investigated for pesticides, however , the drivers for the proposed actions are mainly DDT/DDD/DDE. Heptachlor and heptachlor epoxide were not found at SWMU 3 at concentrations indicative that a release of these chemicals has occurred. Out of 19 surface soil samples analyzed for heptachlor during the RFI at SWMU 3, it was only detected in two samples, at concentrations of 0.52 and 0.21 mg/kg. Heptachlor epoxide was not detected in RFI soil samples collected at SWMU 3 above its residential RBC or SSL.

The detection of heptachlor epoxide in 11 percent of the grid samples supports the fact that pesticide use was not limited to SWMU 24, but rather was used throughout the CNC. Because heptachlor epoxide was used in pesticides throughout the CNC and does not appear to be related to previous operations involving the waste oil reclamation facility at tanks 39-A and 39-D, because it was only detected in one of the six surface soil samples collected and analyzed for pesticides, and because the site average concentration is below the screening criteria, heptachlor expoxide is not considered a COC in surface soil at SWMU 24.

5.1.2 Total BEQs

A total of 15 surface soil samples were collected at SWMU 24 and analyzed for PAHs. Thirteen of the 15 samples had detected concentrations of individual constituents of PAHs. Calculated BEQ concentrations in the 15 samples ranged from 107.5 to 3,952.7 μg/kg, when non-detects are included at half the MDLs. Calculated concentrations of BEQs are presented in Table 5-3. Figure 4-2 depicts BEQs in surface soil at SWMU 24.

Twelve of the 15 surface soil samples have calculated concentrations less that 455 μg/kg, which is well below the base-wide reference concentration of 1,304 μg/kg. Calculated BEQ concentrations in three surface soil samples (i.e., GFDSSH026, GFDSSH029, GFDSSH030) are above 2,500 μg/kg and are north-northwest and south-southwest of tank 39-A. At least parts of the berm and the bermed area surrounding tanks 39-A and 39-D are covered with an old, degraded asphalt-type material. It is likely that these areas were covered with

material containing asphalt, which could account for the sporadic detections of BEQs in the soil samples. In addition, the presence of this surface material provides the rationale supporting the fact that BEQs were not detected in subsurface soil samples at elevated concentrations in the same location as the three surface soil samples with BEQ concentrations greater than 2,500 μg/kg. As a result, it is likely that BEQs are associated with the asphalt material used in covering the berm areas, and are not likely from waste oils.

A 95-percent UCL_{95} was estimated at 1,376 μg/kg when using both the BEQ detected concentrations and non-detects at half the MDLs. The results of the UCL_{95} calculation are provided in Table 5-4. This calculated UCL_{95} value is only 5.5 percent above the base-wide reference concentration for surface soil, and is heavily influenced by the results from surface soil samples GFDSSH026, GFDSSH029, and GFDSSH030. In addition, the sporadic pattern of detection indicate that BEQs may be due to the presence of asphalt-type material around the tank areas and are not related to SWMU 24 waste oil reclamation operations.

Detected concentrations of BEQs in subsurface soil samples collected at SWMU 24 were not above their respective screening criteria. As a result, BEQs are not considered COCs in the surface soil at SMWU 24.

5.2 Subsurface Soil

During the additional RFI sampling investigation, isophorone and n-nitrosodiphenylamine were detected in subsurface soil at concentrations above their corresponding screening criteria and as a result are considered COPCs. These SVOCs will be further evaluated to determine if they meet the criteria for being considered a COC.

No subsurface soil COPCs were identified in the *Zone G RFI Report, Revision 0.*

5.2.1 Isophorone

During the additional RFI sampling investigation completed by EnSafe, isophorone was detected at concentrations of 0.37 J and 0.7 mg/kg in the subsurface soil samples collected from sample locations G024SB005 and G024SB007, respectively. These concentrations are slightly above its corresponding SSL (DAF=10) of 0.25 mg/kg and its site-wide average concentration of 0.26 mg/kg when non-detects are used at half the MDLs. The MDLs ranged from 0.38 U to 0.64 U mg/kg. The site-wide mean concentration is approximately equal to the SSL.

Isophorone was not detected above the MDLs in any other subsurface soil, surface soil, or groundwater sample collected during the original and subsequent additional RFI sampling events. Isophorone results from the 13 subsurface soil samples collected during the original and additional RFI sampling investigations are provided in Table 5-5. Isophorone is a colorless-to-pale yellow liquid used as a solvent for resins, lacquers, fats and oils, and as an intermediate in making pesticides and herbicides. The use of isophorone does not appear to be consistent with the previous site activities associated with waste oil reclamation. Due to its low frequency of detection (i.e., 2 out of 13 samples), the fact that the detected concentrations are the same order of magnitude as its SSL (DAF=10), and because it was not detected in site groundwater, isophorone is not considered a COC in subsurface soil at SWMU 24.

5.2.2 N-Nitrosodiphenylamine

During the additional RFI sampling investigations, n-nitrosodiphenylamine was detected at concentrations of 0.89 and 3.9 J mg/kg in the subsurface soil samples G024SB005 and G024SB006, respectively. These concentrations exceed its SSL (DAF=10) of 0.5 mg/kg. The site-wide average (mean) subsurface soil concentration of N-nitrosodiphenylamine is calculated as 0.55 mg/kg when non-detects are used at half the MDLs, which is approximately equal to its SSL. N-nitrosodiphenylamine was not detected above the MDLs in any other subsurface soil or groundwater sample collected during the original and subsequent additional RFI sampling events. N-nitrosodiphenylamine was detected in the surface soil sample G024SB006 at a concentration of 0.64 J mg/kg which is below its EPA Region III RBC (HI=0.1) of 130 mg/kg. As a result, n-nitrosodiphenylamine was not considered a COPC in surface soil. N-nitrosodiphenylamine results from the 13 subsurface soil samples collected during the original and additional RFI sampling investigations are provided in Table 5-6. Because n-nitrosodiphenylamine was detected in only one surface and two subsurface soil samples, this chemical is not consistently present throughout the site. In addition, n-nitrosodiphenylamine was not detected above the MDLs in any of the groundwater samples collected from the site.

N-nitrosodiphenylamine is an orange-brown or yellow solid, and is used in the production of rubber products or in the production of other chemicals. N-nitrosodiphenylamine adsorbs to soil and breaks down in the subsurface within a few weeks. N-nitrosodiphenylamine is also very soluble. If it were present in significant amounts, it would likely have migrated to groundwater. Given its low frequency of detection (i.e., two out of 13 subsurface soil samples), its absence in groundwater, its high potential for attenuation within a short period of time, and because the detected concentrations are not a

direct exposure concern (the detected surface and subsurface soil concentrations are two to three orders of magnitude less than the EPA Region III residential RBC), n-nitrosodiphenylamine is not considered a COC in subsurface soil at SWMU 24.

5.3 Groundwater

Arsenic was identified in the *Zone G RFI Report, Revision 0* as a COC in groundwater. Antimony was identified as a COPC as a result of the additional RFI sampling events conducted in January and June 1999. Groundwater contaminant concentrations were compared to their corresponding MCLs, or for those chemicals that have no MCL, the EPA Region III tap water RBC. In addition, detected concentrations of metals were compared to their corresponding Zone G background reference range of concentrations. Arsenic and antimony are further evaluated to determine if they meet the criteria for being considered COCs.

5.3.1 Arsenic

Arsenic was identified in the *Zone G RFI Report, Revision 0* as a COC in groundwater. Arsenic is present at elevated concentrations (i.e., above the current MCL of 50 μg/L) in many wells at the CNC. As documented in the Technical Memorandum *An Overview of Arsenic Geochemistry, Terminal Electron Accepting Processes in Groundwater Systems, and Implications for the CNC Hydrogeologic Environment* (CH2M-Jones, 2001c), elevated iron and manganese concentrations in shallow groundwater suggest that iron and manganese reduction are significant Terminal Electron Accepting Processes (TEAP) at the CNC. The presence of elevated iron (i.e., average concentration of 3,003 μg/L) and manganese (i.e., average concentration of 121 μg/L) in shallow groundwater at SWMU 24 indicates conditions are favorable for iron and manganese reduction and that such reduction is occurring. Table 5-7 presents the results of arsenic, iron, and manganese in the 16 groundwater samples collected during the four original and additional RFI sampling events. The elevated concentrations of arsenic coupled with elevated concentrations of iron and manganese in the samples collected from G024GW001 support the theory regarding the geochemical reduction processes that are occurring at the site.

These reduction processes allow the natural release of arsenic from soil into the groundwater, even in the absence of a discrete arsenic "source area," or release from regulated or waste handling/disposal activities. Elevated dissolved iron or manganese concentrations in site wells, and a lack of an arsenic source area in soil at the site, would present conditions favorable to concluding that elevated arsenic concentrations in

groundwater are due to natural processes (CH2M-Jones, 2001c). Arsenic concentrations in soil samples collected from SWMU 24 do not exceed screening criteria.

Because the detected arsenic concentrations are within the Zone G background range, similar elevated arsenic levels are present in other background wells elsewhere within CNC, its absence in soil above screening criteria indicative of an identifiable source,, and since elevated concentrations of iron and manganese present in site groundwater indicate iron and manganese reduction is likely occurring, it is likely that arsenic is occurring due to geochemical processes. Based on these considerations, arsenic is not considered a COC in groundwater at SWMU 24.

5.3.2 Antimony

Antimony was detected at a concentration of 14.4 J μg/L in the sample collected from G024GW002 during the June 1999 sampling event. This detected concentration exceeded its corresponding MCL of 6 μg/L, and Zone G background range of 3 to 6 μg/L. Antimony did not exceed the EPA Region III tap water RBC (HI=1.0) of 15 μg/L. Antimony was detected in three other samples collected during the additional RFI sampling events at concentrations less than 3.5 μg/L, and was not detected above MDLs in the samples collected during the original RFI sampling events. Table 5-8 presents the results of antimony in the groundwater samples collected during the four RFI sampling events. It is unlikely that the presence of antimony in groundwater can be linked to the waste oil reclamation operations at SWMU 24 because of its absence in soil above screening criteria, which is indicative of a potential source. Given its low frequency of detection (i.e., one out of 16 groundwater samples) above its MCL, and because its presence in groundwater is not related to historic site operations, antimony is not considered a COC in groundwater at SWMU 24.

TABLE 5-1
Heptachlor Epoxide in Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier	EPA Region III Residential RBC (HI=0.1)	SSL[a]
Heptachlor Epoxide	GFDSSH024	0.0014	U	0.07	0.35
	GFDSSH026	0.0014	U		
	GFDSSH028	0.0015	U		
	GFDSSH029	0.0016	U		
	GFDSSH030	0.0015	U		
	GFDSSH031	**0.27**	J		

Concentrations in bold and outlined text exceed the appropriate screening criteria.

[a] Generic soil to groundwater soil screening level (SSL) with a dilution attenuation factor (DAF)=10. SSL was obtained from the *Soil Screening Guidance: Technical Background Document* (EPA, 1996).

= Indicates that the analyte is detected at the concentration shown.

HI Hazard Index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg Milligrams per kilogram

NA Screening criteria not available for the referenced compound.

U Indicates the analyte was not detected above the laboratory detection limit.

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
A	Heptachlor Epoxide	AGDASB001	0.0019	U
		AGDASB002	0.0022	UJ
		AGDASB003	0.002	U
		AGDASB005	0.002	U
		AGDASB006	0.0024	UJ
		AGDASB007	0.002	U
		AGDASB008	0.0022	J
		AGDASB009	0.0058	=
		AGDASB010	0.0019	UJ
		AGDASB011	0.0019	U
		AGDASB012	0.027	=
		AGDASB013	0.0019	U
		AGDASB014	0.0019	U
B	Heptachlor Epoxide	BGDBSB001	0.0027	U
		BGDBSB002	0.0022	U
		BGDBSB003	0.0022	U
		BGDBSB004	0.0017	U
		BGDBSB005	0.0019	U
		BGDBSB006	0.031	=
		BGDBSB007	0.002	U
		BGDBSB008	0.0021	=
		BGDBSB009	0.0059	=
		BGDBSB010	0.002	U
		BGDBSB011	0.0026	U
		BGDBSB012	0.0019	U
		BGDBSB013	0.002	U
		BGDBSB014	0.00077	J
		BGDBSB015	0.0019	U
		CGDCSB001	0.022	U
C	Heptachlor Epoxide	CGDCSB002	0.0011	U
		CGDCSB003	0.0011	U

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
C	Heptachlor Epoxide	CGDCSB004	0.00021	J
		CGDCSB005	0.0012	U
		CGDCSB006	0.0012	U
		CGDCSB007	0.0022	J
		CGDCSB008	0.0011	U
		CGDCSB009	0.0011	U
		CGDCSB038	0.0012	=
		CGDCSB039	0.01	=
		CGDCSB040	0.0018	J
		CGDCSB045	0.0026	U
		CGDCSB046	0.0026	=
		CGDCSB047	0.00056	U
		CGDCSB048	0.0023	=
D	Heptachlor Epoxide	DGDDSB002	0.0014	U
		DGDDSB003	0.0015	U
		DGDDSB005	0.0016	U
		DGDDSB006	0.0014	U
E	Heptachlor Epoxide	EGDESB001	0.0015	U
		EGDESB002	0.0014	UJ
		EGDESB003	0.0015	U
		EGDESB004	0.0016	UJ
		EGDESB005	0.0014	U
		EGDESB006	0.0014	U
		EGDESB007	0.0018	U
		EGDESB008	0.0015	U
		EGDESB009	0.0017	U
		FGDESB009	0.0017	U
		EGDESB010	0.0015	U
		EGDESB011	0.0015	U
		EGDESB012	0.0014	U
		EGDESB013	0.0014	U

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
E	Heptachlor Epoxide	EGDESB014	0.0016	U
		EGDESB015	0.0015	U
		EGDESB016	0.0016	U
		EGDESB017	0.0015	U
		EGDESB018	0.0014	U
		EGDESB019	0.0014	U
		EGDESB020	0.0015	U
		EGDESB021	0.0022	U
		EGDESB022	0.0016	U
		EGDESB023	0.0014	U
		EGDESB024	0.0015	U
		EGDESB025	0.0014	U
F	Heptachlor Epoxide	FGDFSB001	0.0014	U
		FGDFSB002	0.0014	U
		FGDFSB003	0.0021	U
		FGDFSB004	0.0014	U
		FGDFSB005	0.0015	U
G	Heptachlor Epoxide	GGDGSB001	0.0018	U
		GGDGSB002	0.0015	U
		GGDGSB003	0.0016	U
		GGDGSB004	0.0016	U
		GGDGSB005	0.0015	U
		GGDGSB006	0.0015	UJ
		GGDGSB007	0.0016	U
		GGDGSB008	0.016	U
		GGDGSB009	0.0022	=
H	Heptachlor Epoxide	HGDHSB001	0.02	U
		HGDHSB002	0.005	U
		HGDHSB003	0.004	U
		HGDHSB004	0.004	U
		HGDHSB005	0.004	U

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
H	Heptachlor Epoxide	HGDHSB006	0.004	U
		HGDHSB007	0.02	U
		HGDHSB008	0.004	U
		HGDHSB009	0.004	U
		HGDHSB010	0.005	U
		HGDHSB011	0.004	U
		HGDHSB012	0.004	U
		HGDHSB013	0.004	U
		HGDHSB014	0.004	U
		HGDHSB015	0.008	=
		HGDHSB016	0.004	U
		HGDHSB017	0.004	U
		HGDHSB018	0.004	U
		HGDHSB019	0.004	U
		HGDHSB020	0.004	U
		HGDHSB021	0.004	U
		HGDHSB022	0.004	U
		HGDHSB023	0.04	U
		HGDHSB024	0.02	U
		HGDHSB025	0.004	U
		HGDHSB026	0.004	U
		HGDHSB027	0.004	U
		HGDHSB028	0.004	U
		HGDHSB029	0.004	U
		HGDHSB030	0.004	U
		HGDHSB031	0.004	U
		HGDHSB032	0.004	U
		HGDHSB033	0.02	U
		HGDHSB034	0.005	U
		HGDHSB035	0.005	U
		HGDHSB036	0.005	U

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
H	Heptachlor Epoxide	HGDHSB037	0.004	U
		HGDHSB038	0.04	U
		HGDHSB039	0.004	U
		HGDHSB040	0.006	=
		HGDHSB041	0.005	U
		HGDHSB042	0.004	U
		HGDHSB043	0.004	U
		HGDHSB044	0.004	U
		HGDHSB045	0.004	U
		HGDHSB046	0.004	U
		HGDHSB047	0.004	U
		HGDHSB048	0.005	U
		HGDHSB049	0.005	U
		HGDHSB050	0.004	U
		HGDHSB051	0.004	U
		HGDHSB052	0.004	U
		HGDHSB053	0.004	U
		HGDHSB054	0.009	=
		HGDHSB055	0.004	U
		HGDHSB056	0.004	U
		HGDHSB057	0.004	U
		HGDHSB058	0.004	U
		HGDHSB059	0.004	U
		HGDHSB060	0.005	U
		HGDHSB061	0.004	U
		HGDHSB062	0.005	U
		HGDHSB063	0.01	U
		HGDHSB064	0.002	J
		HGDHSB065	0.003	U
		HGDHSB066	0.004	U
		HGDHSB067	0.04	UJ

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
H	Heptachlor Epoxide	HGDHSB068	0.004	U
		HGDHSB069	0.004	U
		HGDHSB070	0.004	U
		HGDHSB071	0.004	U
		HGDHSB072	0.005	U
		HGDHSB073	0.004	U
		HGDHSB074	0.0023	U
		HGDHSB075	0.0023	U
		HGDHSB076	0.0021	U
		HGDHSB077	0.0023	U
		HGDHSB078	0.0019	U
		HGDHSB079	0.0023	U
		HGDHSB080	0.0019	U
		HGDHSB081	0.0019	U
		HGDHSB082	0.0021	U
		HGDHSB083	0.0019	U
		HGDHSB084	0.004	U
		HGDHSB085	0.004	U
		HGDHSB086	0.004	U
		HGDHSB087	0.005	U
		HGDHSB088	0.004	U
		HGDHSB089	0.005	U
		HGDHSB090	0.005	U
		HGDHSB091	0.004	U
		HGDHSB092	0.004	U
		HGDHSB093	0.004	U
		HGDHSB104	0.004	U
		HGDHSB105	0.004	U
		HGDHSB107	0.004	U
		HGDHSW04D	0.05	U
I	Heptachlor Epoxide	IGDISB002	0.0012	U

TABLE 5-2
Heptachlor Epoxide in CNC Grid Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Zone	Analyte	Location	Concentration (mg/kg)	Qualifier
		IGDISB005	0.0015	U
		IGDISB006	0.0014	U
		IGDISB007	0.0015	U
		IGDISB008	0.0015	U
		IGDISB009	0.0015	U
		IGDISB010	0.0087	J
		IGDISB011	0.0012	U
		IGDISB012	0.0012	U
		IGDISB013	0.011	J
		IGDISB014	0.0012	U
		IGDISB015	0.0012	U
		IGDISB016	0.0012	U
		IGDISB017	0.012	J
		IGDISB018	0.0012	U

EPA Region III residential RBC (HI=0.1) for heptachlor epoxide is 0.07 mg/kg.

= Indicates that the analyte is detected at the concentration shown.

J Indicates an estimated value. A "J" qualifer may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg milligrams per kilogram

U Indicates contaminant not detected above laboratory detection limit.

TABLE 5-3
BEQs in Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Sample Location	Concentration (mg/kg)	Qualifier
BEQs	GFDSSH024	0.26	=
	GFDSSH026	**2.50**	=
	G024SB001	0.39	=
	G024SB002	0.23	=
	G024SB003	0.31	=
	G024SB004	0.17	=
	G024SB005	0.42	=
	G024SB006	0.45	=
	G024SB007	0.44	=
	G024SB009	0.11	=
	G024SB010	0.25	=
	GFDSSH028	0.23	=
	GFDSSH029	**3.95**	=
	GFDSSH030	**3.15**	=
	GFDSSH031	0.29	=

Concentrations in bold and outlined text exceed the appropriate screening criteria.

Base-wide PAH background concentration for surface soil is 1.304 mg/kg as outlined in the *Technical Memorandum: PAHs Background Study* (CH2M-Jones, February 2001).

= Indicates that the analyte is detected at the concentration shown.

HI Hazard Index

mg/kg Milligrams per kilogram

TABLE 5-4
Summary Statistics for PAHs in Surface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

No. of Samples	No. of Detects	Range of Concentrations (μg/kg)	Mean (μg/kg)	UCL_{95} (μg/kg)	Basis
15	13	107.5 – 3,952.7	875.3	1,376	Non-parametric

μg/kg micrograms per kilogram

UCL_{95} 95-percent Upper Confidence Limit

TABLE 5-5
Isophorone in Subsurface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Location	Concentration (mg/kg)	Qualifier
Isophorone	G024SB001	0.38	U
	G024SB002	0.43	U
	G024SB003	0.39	U
	G024SB004	0.52	U
	G024SB005	**0.37**	J
	G024SB006	0.39	UJ
	G024SB007	**0.70**	=
	G024SB009	0.64	U
	G024SB010	0.40	U
	GFDSSH028	0.37	U
	GFDSSH029	0.42	U
	GFDSSH030	0.37	U
	GFDSSH031	0.38	U

Concentrations in bold and outlined text exceed the appropriate screening criteria.

Generic soil to groundwater soil screening level (SSL) with a DAF=10 is 0.25 mg/kg. SSL was obtained from the Soil Screening Guidance: Technical Background Document (EPA, 1996).

Average isophorone concentration in subsurface soil samples IS 0.26 mg/kg when non-detects are included at half the MDL.

= Indicates that the analyte is detected at the concentration shown.

J Indicates an estimated value. A "J" qualifer may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg milligrams per kilogram

U Indicates analyte not detected above laboratory detection limit.

TABLE 5-6
N-Nitrosodiphenylamine in Subsurface Soil
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Location	Concentration (mg/kg)	Qualifier
N-Nitrosodiphenylamine	G024SB001	0.38	U
	G024SB002	0.43	U
	G024SB003	0.39	U
	G024SB004	0.52	U
	G024SB005	**0.89**	=
	G024SB006	**3.9**	J
	G024SB007	0.41	U
	G024SB009	0.64	U
	G024SB010	0.40	U
	GFDSSH028	0.37	U
	GFDSSH029	0.42	U
	GFDSSH030	0.37	U
	GFDSSH031	0.38	U

Concentrations in bold and outlined text exceed the appropriate screening criteria.

Generic soil to groundwater soil screening level (SSL) with a DAF=10 is 0.5 mg/kg. SSL was obtained from the Soil Screening Guidance: Technical Background Document (EPA, 1996).

Average n-nitrosodiphenylamine concentration in subsurface soil samples is 0.55 mg/kg when non-detects are included at half the MDL.

= Indicates that the analyte is detected at the concentration shown.

J Indicates an estimated value. A "J" qualifer may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

mg/kg milligrams per kilogram

U Indicates analyte not detected above laboratory detection limit.

TABLE 5-7
Arsenic, Iron, and Manganese in Groundwater
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

		Arsenic		Iron		Manganese	
Location	**Sample Collection Date**	**Concentration (µg/L)**	**Qualifier**	**Concentration (µg/L)**	**Qualifier**	**Concentration (µg/L)**	**Qualifier**
MCL		50		NA		NA	
EPA Region III Tap Water RBC (HI=0.1)		0.045		1,100		73	
Zone G Mean Background Reference Concentration[a]		76		14,683		1,904	
Zone G Background Range Concentration[a]		8 - 166		2,000 - 35,700		149 - 7,980	
G024GW001	04/22/1998	47.2	=	4,340	=	203	=
G024GW001	10/28/1998	**86.1**	=	5,770	=	208	=
G024GW001	01/28/1999	74.8	=	7,930	=	192	=
G024GW001	06/10/1999	67.2	=	6,470	=	212	=
G024GW002	04/20/1998	6.5	J	2,100	=	70.5	=
G024GW002	10/29/1998	5.6	J	1,640	=	59.8	=
G024GW002	01/28/1999	4.0	J	2,340	=	64	=
G024GW002	06/09/1999	2.4	J	1,710	=	68.6	=
G024GW003	04/20/1998	10.5	=	3,710	=	114	=
G024GW003	10/29/1998	16.4	=	1,460	=	50.2	=
G024GW003	01/28/1999	11.8	=	1,540	=	25.6	=
G024GW003	06/10/1999	17.8	=	1,230	=	41.9	=
G024GW004	04/24/1998	3.3	U	1,740	=	198	=
G024GW004	10/29/1998	8.9	J	2,870	=	183	=

TABLE 5-7
Arsenic, Iron, and Manganese in Groundwater
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

		Arsenic		Iron		Manganese	
Location	**Sample Collection Date**	**Concentration (μg/L)**	**Qualifier**	**Concentration (μg/L)**	**Qualifier**	**Concentration (μg/L)**	**Qualifier**
MCL		50		NA		NA	
EPA Region III Tap Water RBC (HI=0.1)		0.045		1,100		73	
Zone G Mean Background Reference Concentration[a]		76		14,683		1,904	
Zone G Background Range Concentration[a]		8 - 166		2,000 - 35,700		149 - 7,980	
G024GW004	01/29/1999	2.9	U	222	=	57.3	=
G024GW004	06/10/1999	6.6	J	2,980	=	181	=

[a] The Zone G Mean Background Reference Concentrations and Range of Concentrations were obtained from Appendix J of the *Project Team Notebook and Instructions - Charleston Naval Complex, Environmental Restoration Project, Revision 1A* (CH2M-Jones, December 2001).

Concentrations in bold and outlined text exceed the appropriate screening criteria.

= Indicates that the analyte is detected at the concentration shown.

HI Hazard index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

μg/L micrograms per liter

NA Screening criteria not available for the referenced compound.

U Indicates analyte not detected above laboratory detection limit.

TABLE 5-8
Antimony in Groundwater
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Location	Sample Collection Date	Concentration	Qualifier	Units	MCL	EPA Region III Tap Water RBC (HI=0.1)	Zone G Mean Background Reference Concentration and Range of Concentrations[a]
Antimony	G024GW001	04/22/1998	5	U	µg/L	6	1.5	5 (3-6)
	G024GW001	10/28/1998	4.5	U				
	G024GW001	01/28/1999	3.4	J				
	G024GW001	06/10/1999	14	U				
	G024GW002	04/20/1998	5	U				
	G024GW002	10/29/1998	2.7	U				
	G024GW002	01/28/1999	3.2	J				
	G024GW002	06/09/1999	**14.4**	J				
	G024GW003	04/20/1998	5	U				
	G024GW003	10/29/1998	2.7	U				
	G024GW003	01/28/1999	2.7	U				
	G024GW003	06/10/1999	14	U				
	G024GW004	04/24/1998	5	U				
	G024GW004	10/29/1998	2.8	U				
	G024GW004	01/29/1999	3	J				
	G024GW004	06/10/1999	14	U				

[a] The Zone G Mean Background Reference Concentrations and Range of Concentrations were obtained from Appendix J of the *Project Team Notebook and Instructions - Charleston Naval Complex, Environmental Restoration Project, Revision 1A* (CH2M-Jones, December 2001).

TABLE 5-8
Antimony in Groundwater
RFI Report Addendum, SWMU 24, Zone G, Charleston Naval Complex

Analyte	Location	Sample Collection Date	Concentration	Qualifier	Units	MCL	EPA Region III Tap Water RBC (HI=0.1)	Zone G Mean Background Reference Concentration and Range of Concentrations[a]

Concentrations in bold and outlined text exceed the appropriate screening criteria.

= Indicates that the analyte is detected at the concentration shown.

HI Hazard index

J Indicates an estimated value. A "J" qualifier may signify that the concentration is below the PQL, or that the "J" has been applied as a result of the data validation.

µg/L micrograms per liter

NA Screening criteria not available for the referenced compound.

U Indicates analyte not detected above laboratory detection limit.

Section 6.0

6.0 Summary of Information Related to Site Closeout Issues

6.1 RFI Status

The *Zone G RFI Report, Revision 0* (EnSafe, 1998a) presented the results of initial investigations at SWMU 24. This RFIRA presents the results of subsequent investigations at the site. Responses to SCDHEC comments on the *Zone G RFI Report, Revision 0* are provided in Appendix D. Based on an evaluation of the data collected during the original and subsequent investigations, the RFI is considered to be complete.

6.2 Presence of Inorganics in Groundwater

For the purpose of site closeout documentation, the inorganics in groundwater issue refers to the occasional or intermittent detection of several metals (primarily arsenic, thallium, and antimony) in groundwater at concentrations above the applicable MCL, preceded or followed by detections of these same metals below the MCL or below the practicable quantitation limit.

Arsenic was identified in the *Zone G RFI Report, Revision 0* as a COC in groundwater due to exceedance of its MCL (50 μg/L) in several groundwater samples. Based on a review of the site data as discussed in Section 5.3 of this RFIRA, arsenic is not considered a COC for the site.

Antimony was detected at a concentration of 14.4 J μg/L in the sample collected from G024GW002 during the June 1999 sampling event exceeded its corresponding MCL (i.e., 6 μg/L) and Zone G background range (i.e., 3 to 6 μg/L). The RFI data indicates the soil-to-groundwater pathway is not significant at SWMU 24 and there was no elevated antimony identified in site soils. The presence of antimony is sporadic and not related to any source area. As a result, further groundwater investigation for antimony is not warranted.

6.3 Potential Linkage to SWMU 37, Investigated Sanitary Sewers at the CNC

None of the groundwater data collected at the site from the monitoring wells or Geoprobe samples indicate that groundwater impacts have occurred. Therfore, there is no reason to

believe that a contamination linkage exists between this site and the investigated portion of the sanitary sewer (SWMU 37). Further evaluation of this issue is not warranted.

6.4 Potential Linkage to AOC 699, Investigated Storm Sewers at the CNC

Potential linkage of a SWMU or AOC to a storm sewer refers to the possibility of a groundwater plume at a SWMU or AOC migrating into a storm sewer from which it would subsequently migrate to the water bodies around the CNC, or to the presence of a cross connection between the sanitary sewer and storm sewer.

None of the groundwater data collected at site indicate that groundwater impacts have occurred. Therefore, there is no reason to suspect that a contamination linkage exists between the site and the investigated portion of the storm sewers (AOC 699). Further evaluation of this issue is not warranted.

6.5 Potential Linkage to AOC 504, Investigated Railroad Lines at the CNC

The nearest investigated railroad line is located across the street on the east side of Hobson Avenue approximately 48 feet northeast from the SWMU 24 boundary and approximately 150 feet from the nearest site tank (Tank 39-D). Due to the location of the nearest railroad, and given that there are no known railroad activities that can be linked to the waste oil reclamation operations at SWMU 24, further evaluation of this issue is not warranted.

6.6 Potential Migration Pathways to Surface Water Bodies at the CNC

The nearest named surface water body is the Cooper River, which is located approximately 1,110 feet northeast from the SWMU 24 boundary. Two potential migration pathways from a site to surface water are overland flow via stormwater runoff and subsurface flow via groundwater.

No surface soil or groundwater COCs were identified at SWMU 24. There do not appear to be any surface water migration pathways of concern at this site; therefore, further evaluation of this issue is not warranted.

6.7 Potential Contamination in Oil/Water Separators (OWSs)

The issue of potential contamination of OWSs refers to the possible presence of an OWS that has not yet been investigated at a SWMU or AOC as part of the RCRA UST process.

Neither the RFA nor the *Zone G RFI Report, Revision 0* refer to the presence or possible presence of an OWS at SWMU 24. In addition, there is no reference made to an OWS at this facility in the Oil Water Separator Data report (Navy, 2000). Further evaluation of this issue is not warranted.

6.8 Land Use Control Management Plan

This site is zoned M-1, for light industrial use, and will likely be designated for non-residential use. Since there were no COCs identified in surface soil, LUCs restricting the site to industrial type uses and limiting potential for direct contact with soil (i.e., deed restrictions/engineering controls) are not required.

Section 7.0

7.0 Recommendations

Tanks 39-A and 39-D operated as settling tanks where waste oil, containing water and presumably other impurities, was delivered via a pipeline system. The tanks were used to separate and store both the water and oil phase liquids. Separated wastewater was subsequently discharged to the sanitary sewer system. SWMU 24 was originally investigated under the petroleum program as part of the FDS but was transferred to the RCRA program to characterize metals in site groundwater.

Surface soils, subsurface soils, and the shallow portion of the surficial aquifer at SWMU 24 were investigated during the period from October 1996 to October 1998. Included in this investigation were portions of the sanitary sewer (SWMU 37) and the storm sewer (AOC 699) that transverses through the SWMU 24 boundary. The findings and conclusions from the original RFI, which detailed the sampling investigations conducted through October 1998, are provided in *Zone G RFI Report, Revision 0*. Additional RFI sampling investigations completed subsequent to October 1998 are summarized in this RFI Report Addendum.

PAH constituents identified as BEQs were identified in the *Zone G RFI Report, Revision 0* as surface soil COCs with greater concentrations detected in two surface soil samples collected during the additional RFI sampling investigations. Heptachlor epoxide was identified as a COPC as a result of the additional RFI sampling investigations.

Based on an evaluation of the data in Section 5 of this report, BEQs were not identified as COCs in surface soil since the calculated 95 percent Upper Confidence Limit (UCL_{95}) value was close to the background value, only 5.5 percent above the base-wide reference concentration for surface soil. The detected BEQs may be associated with asphalt cover material applied to the berm areas in and around tanks 39-A and 39-D. BEQs in subsurface soil are low with concentrations below the background reference concentration. Heptachlor epoxide was not identified as a COC in surface soil since it does not appear related to site operations, it was only detected in one of the six surface soil samples collected and analyzed for pesticides, and it has been detected in background samples across the base, suggesting that it is present due to typical pesticide applications in the past.

No subsurface soil COCs were identified in the *Zone G RFI Report, Revision 0*. New COPCs identified as a result of the additional RFI sampling investigations conducted at SWMU 24 included isophorone and n-nitrosodiphenylamine. However, these two SVOCs were not considered to be COCs in subsurface soil due to their low frequency of detection, their

average concentrations are near or below SSLs, and they were not detected in any of the groundwater samples above the MDLs.

Arsenic was identified as a COC in groundwater in the *Zone G RFI Report, Revision 0.* Antimony was identified as a new COPC as a result of the additional RFI sampling events conducted from the existing SWMU 24 monitoring wells. However, arsenic and antimony are not considered COCs in groundwater at SWMU 24. Detected arsenic concentrations are within the Zone G background range, and elevated concentrations of iron and manganese present in site groundwater indicate that natural geochemical processes may be releasing arsenic from soil to groundwater. Antimony was detected in only one of 16 groundwater samples collected during the original and additional RFI sampling investigations above its MCL, and its presence in groundwater does not appear related to historic site operations.

In the *Zone G RFI Report, Revision 0,* SWMU 24 was recommended for a CMS. However, because no COCs were identified at the site based on the evaluation process presented in Section 5.0 of this report, SWMU 24 is recommended for NFA status.

Section 8.0

8.0 References

CH2M-Jones. *Background PAHs Study Report - Technical Information for Development of Background BEQ Values*. February 2001a.

CH2M-Jones. *Application of Soil-Screening Levels (SSLs) at Charleston Naval Complex*. Technical Memorandum. March 9, 2001b.

CH2M-Jones. *An Overview of Arsenic Geochemistry, Terminal Electron Accepting Processes in Groundwater Systems, and Implications for the CNC Hydrogeologic Environment*. Technical Memorandum. August 17, 2001c.

CH2M-Jones. *Project Team Notebook and Instructions, Charleston Naval Complex, Environmental Restoration Project*. Revision 1A. December 4, 2001d.

EnSafe, Inc./Allen & Hoshall. *Zone G RFA Report*. June 6, 1985.

EnSafe Inc. *Zone L RFI Workplan, NAVBASE Charleston*. 1995.

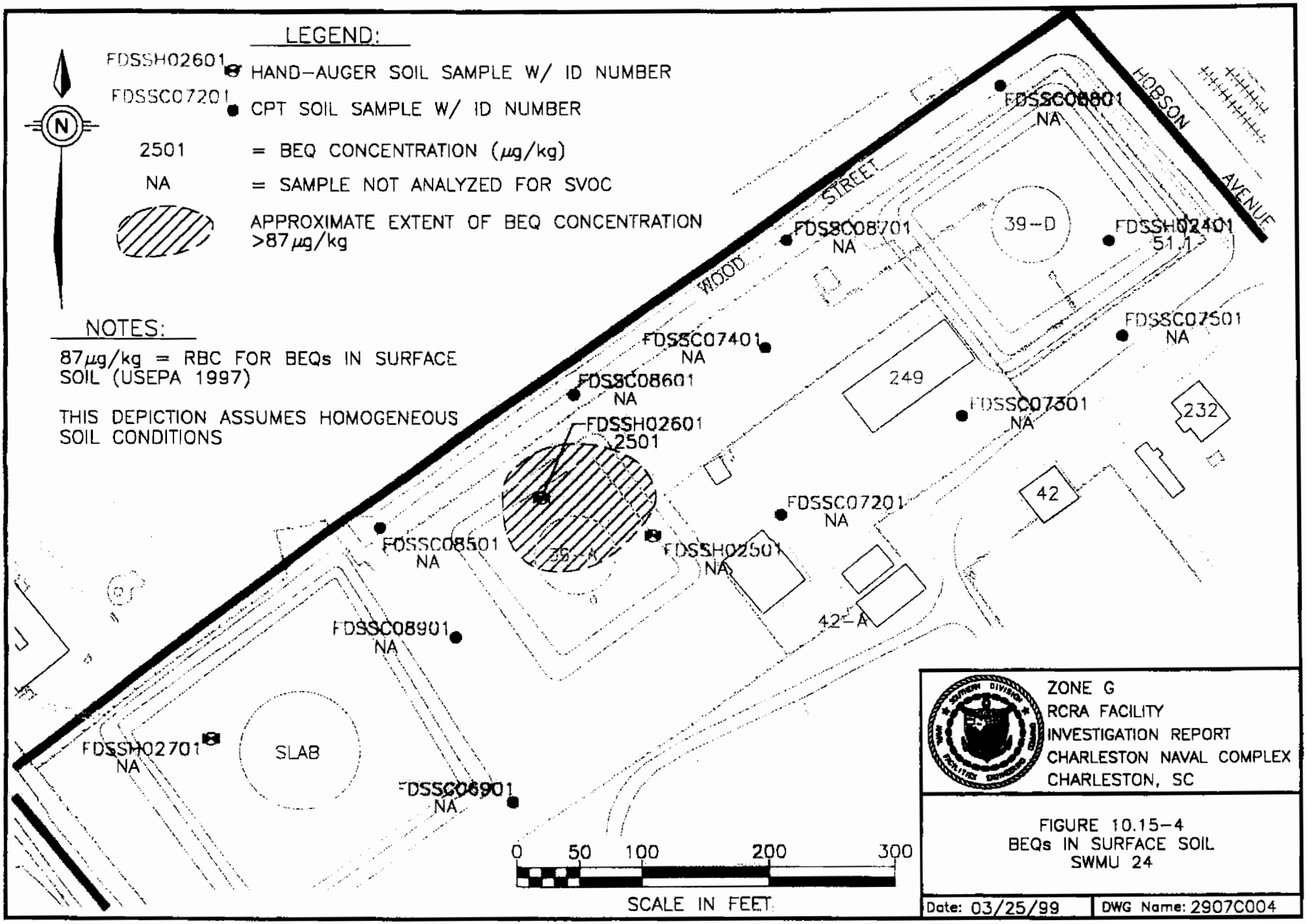
EnSafe, Inc. *Zone G RFI Report NAVBASE Charleston*. Revision 0. February 20, 1998a.

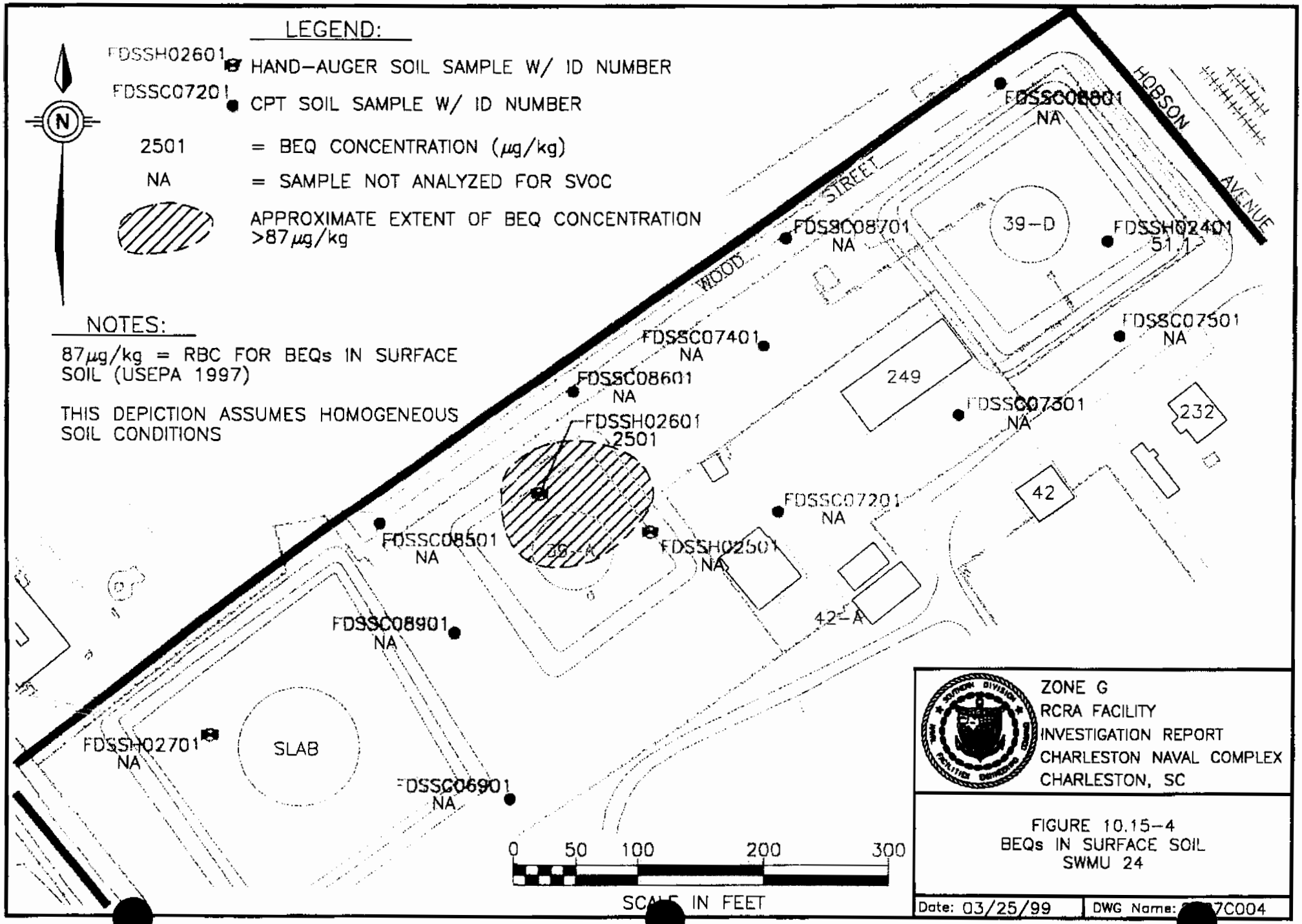
EnSafe Inc. *Zone L RFI Report, NAVBASE Charleston*. Revision 0. December 18, 1998b.

EnSafe, Inc. *Zone G RFI Report Work Plan Addendum, NAVBASE Charleston*. Revision 0. January 17, 2000.

U.S. Environmental Protection Agency. *EPA Soil Screening Guidance: Technical Background Document* (Table A-1), EPA/540/R-95/128. May 1996.

Appendix A


LEGEND:
FDSSH02601 HAND-AUGER SOIL SAMPLE W/ ID NUMBER
FDSSC07201 CPT SOIL SAMPLE W/ ID NUMBER
2501 = BEQ CONCENTRATION (µg/kg)
NA = SAMPLE NOT ANALYZED FOR SVOC
APPROXIMATE EXTENT OF BEQ CONCENTRATION >87 µg/kg
NOTES:
87µg/kg = RBC FOR BEQs IN SURFACE SOIL (USEPA 1997)
THIS DEPICTION ASSUMES HOMOGENEOUS SOIL CONDITIONS
N
WOOD STREET
HOBSON AVENUE
FDSSC08801 NA
FDSSC08701 NA
39-D
FDSSH02401 51.1
FDSSC07501 NA
FDSSC07401 NA
FDSSC08601 NA
249
FDSSC07301 NA
232
FDSSH02601 2501
42
FDSSC07201 NA
FDSSC08501 NA
39-A
FDSSH02501 NA
42-A
FDSSC08901 NA
SLAB
FDSSH02701 NA
FDSSC06901 NA
0 50 100 200 300
SCALE IN FEET
ZONE G
RCRA FACILITY
INVESTIGATION REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC
FIGURE 10.15-4
BEQs IN SURFACE SOIL
SWMU 24
Date: 03/25/99
DWG Name: 2907C004


LEGEND:
FDSSH02601 HAND-AUGER SOIL SAMPLE W/ ID NUMBER
FDSSC07201 CPT SOIL SAMPLE W/ ID NUMBER
2501 = BEQ CONCENTRATION (µg/kg)
NA = SAMPLE NOT ANALYZED FOR SVOC
APPROXIMATE EXTENT OF BEQ CONCENTRATION >87 µg/kg
NOTES:
87µg/kg = RBC FOR BEQs IN SURFACE SOIL (USEPA 1997)
THIS DEPICTION ASSUMES HOMOGENEOUS SOIL CONDITIONS
N
HOBSON AVENUE
WOOD STREET
FDSSC08801 NA
FDSSC08701 NA
39-D
FDSSH02401 51.1
FDSSC07501 NA
FDSSC07401 NA
249
FDSSC08601 NA
FDSSC07301 NA
232
FDSSH02601 2501
42
FDSSC07201 NA
FDSSC08501 NA
39-K
FDSSH02501 NA
42-A
FDSSC08901 NA
SLAB
FDSSH02701 NA
FDSSC06901 NA
0 50 100 200 300
SCALE IN FEET
ZONE G
RCRA FACILITY
INVESTIGATION REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC
FIGURE 10.15-4
BEQs IN SURFACE SOIL
SWMU 24
Date: 03/25/99
DWG Name: 7C004

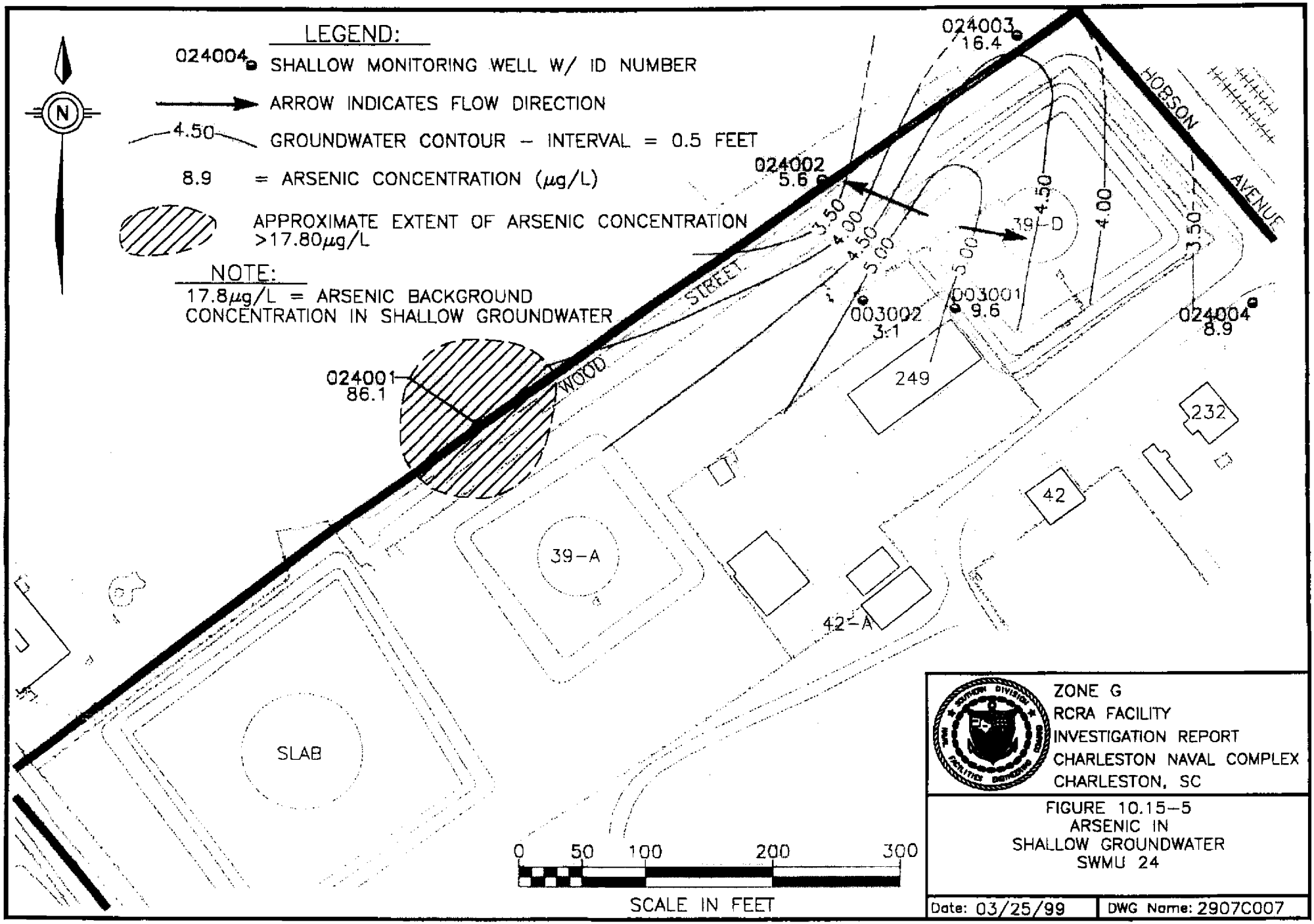

LEGEND:
024004 SHALLOW MONITORING WELL W/ ID NUMBER
ARROW INDICATES FLOW DIRECTION
4.50 GROUNDWATER CONTOUR – INTERVAL = 0.5 FEET
8.9 = ARSENIC CONCENTRATION (μg/L)
APPROXIMATE EXTENT OF ARSENIC CONCENTRATION >17.80μg/L
NOTE:
17.8μg/L = ARSENIC BACKGROUND CONCENTRATION IN SHALLOW GROUNDWATER
N
024003 16.4
024002 5.6
024001 86.1
003002 3.1
003001 9.6
024004 8.9
3.50
4.00
4.50
5.00
WOOD STREET
HOBSON AVENUE
39-D
249
232
42
39-A
42-A
SLAB
0 50 100 200 300
SCALE IN FEET
ZONE G
RCRA FACILITY
INVESTIGATION REPORT
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC
FIGURE 10.15-5
ARSENIC IN
SHALLOW GROUNDWATER
SWMU 24
Date: 03/25/99
DWG Name: 2907C007

Table 10.15.4
Zone G
SWMU 24
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ = 0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF = 20)	Subsurface Background
Volatile Organic Compounds (μg/kg)							
Ethylbenzene	FDSSH026	3	780,000	NA	NT	13,000	NA
Xylene (Total)	FDSSH026	1	16,000,000	NA	NT	140,000	NA
Semivolatile Organic Compounds (μg/kg)							
BEQs[1]	FDSSH024	51.1	87	NA	ND	1,600	NA
	FDSSH026	2,501			ND		
Benzo(a)anthracene	FDSSH024	38	870	NA	ND	2,000	NA
	FDSSH026	2,500			ND		
Benzo(a)pyrene	FDSSH024	42	87	NA	ND	8,000	NA
	FDSSH026	1,700			ND		
Benzo(b)fluoranthene	FDSSH024	51	870	NA	ND	5,000	NA
	FDSSH026	1,600			ND		
Benzo(k)fluoranthene	FDSSH024	58	8,700	NA	ND	49,000	NA
	FDSSH026	1,700			ND		
Chrysene	FDSSH024	57	87,000	NA	ND	160,000	NA
	FDSSH026	3,200			ND		
Dibenz(a,h)anthracene	FDSSH026	290	87	NA	ND	2,000	NA

Table 10.15.4
Zone G
SWMU 24
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ = 0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF = 20)	Subsurface Background
Indeno(1,2,3-cd)pyrene	FDSSH026	810	870	NA	ND	14,000	NA
Acenaphthene	FDSSH026	200	470,000	NA	ND	570,000	NA
Anthracene	FDSSH026	640	2,300,000	NA	ND	12,000,000	NA
Benzo(g,h,i)perylene	FDSSH026	860	310,000	NA	ND	1.14E + 08	NA
bis(2-Ethylhexyl)phthalate (BEHP)	FDSSH024	55	46,000	NA	ND	3,600,000	NA
Di-n-butylphthalate	FDSSH024	64	780,000	NA	ND	2,300,000	NA
Fluoranthene	FDSSH024 FDSSH026	74 3,400	310,000	NA	ND ND	4,300,000	NA
Fluorene	FDSSH026	190	310,000	NA	ND	560,000	NA
2-Methylnaphthalene	FDSSH026	890	160,000	NA	ND	36,000	NA
Naphthalene	FDSSH026	700	160,000	NA	ND	61,000	NA
Phenanthrene	FDSSH026	2,500	230,000	NA	ND	1,300,000	NA
Pyrene	FDSSH024 FDSSH026	96 7,500	230,000	NA	ND ND	4,200,000	NA

Table 10.15.4
Zone G
SWMU 24
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ = 0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF = 20)	Subsurface Background
TPH-GRO (µg/kg)							
Gasoline	FDSSH026	20	NA	NA	NT	NA	NA
	FDSSC069	NT			8		
	FDSSC072	NT			8		
	FDSSC073	NT			15		
	FDSSC074	NT			8		
	FDSSC088	NT			9		
	FDSSC089	NT			35		
Inorganics (mg/kg)							
Aluminum (Al)	FDSSH024	7,850	7,800	18,700	NT	1,000,000	23,600
	FDSSH026	4,500			NT		
Arsenic (As)	FDSSH024	3.9	0.43	17.2	NT	29	15.5
Barium (Ba)	FDSSH024	41.5	550	109	NT	1,600	64.5
	FDSSH026	28.3			NT		
Beryllium (Be)	FDSSH024	0.52	16	1.2	NT	63	1.63
	FDSSH026	0.36			NT		
Cadmium (Cd)	FDSSH026	0.04	3.9	1.07	NT	8	0.48
Calcium (Ca)	FDSSH024	10,300	NL	NL	NT	NL	NL
	FDSSH026	11,200			NT		

Table 10.15.4
Zone G
SWMU 24
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ = 0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF = 20)	Subsurface Background
Chromium (Cr)	FDSSH024	12.5	23	42.8	NT	1,000,000	43.4
	FDSSH026	6.7			NT		
Cobalt (Co)	FDSSH024	2.1	470	6.6	NT	2,000	8.14
	FDSSH026	1.4			NT		
Iron (Fe)	FDSSH024	8,180	2,300	NL	NT	NL	NL
	FDSSH026	4,180			NT		
Lead (Pb)	FDSSH024	350	400	181	NT	400	66.3
	FDSSH026	381			NT		
Magnesium (Mg)	FDSSH024	631	NL	NL	NT	NL	NL
	FDSSH026	432			NT		
Manganese (Mn)	FDSSH024	109	160	325	NT	950	291
	FDSSH026	38.9			NT		
Mercury (Hg)	FDSSH024	0.06	2.3	1.03	NT	2	0.31
Potassium (K)	FDSSH024	267	NL	NL	NT	NL	NL
Selenium (Se)	FDSSH026	0.47	39	1.22	NT	5	1.26
Vanadium (V)	FDSSH024	15.5	55	60.9	NT	6,000	72.5
	FDSSH026	8			NT		

Table 10.15.4
Zone G
SWMU 24
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ = 0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF = 20)	Subsurface Background
Zinc (Zn)	FDSSH024	30.7	2,300	519	NT	12,000	145
	FDSSH026	30.5			NT		

Notes:

* = Residential RBCs (THQ = 0.1) were used as a reference concentration for upper interval samples. Generic soil to groundwater SSLs (DAF=20) from the *Soil Screening Guidance: Technical Background Document* (USEPA, 1996) were used as a reference concentration for lower interval samples

1 = Calculated from methods described in USEPA Interim *Supplemental Guidance to RAGS: Human Health Risk Assessment*, Bulletin 2 (USEPA, 1995)

NA = Not Applicable/Not Available
ND = Not Detected/Not Determined
NL = Not Listed
NT = Not Taken
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram

Bolded concentrations exceed both the reference concentration (RBC or SSL) and the zone background

All background values for Zone G are based on twice the mean of the grid sample concentrations

Table 10.15.8
Zone G
SWMU 24
Analytes Detected in Shallow Groundwater

Parameters	Location	First Round Conc. Apr-98	Second Round Conc. Oct-98	Tap Water RBC*	MCL/SMCL*	Shallow Background
Volatile Organic Compounds (μg/L)						
Tetrachloroethene	024001	0.87	ND	1.1	5	NA
Semivolatile Organic Compounds (μg/L)						
bis(2-Ethylhexyl)phthalate (BEHP)	024002	ND	2	4.8	NL	NA
Inorganics (μg/L)						
Aluminum (Al)	024001	429	235	3,700	50	692
	024002	123	107			
	024003	14.3	119			
	024004	195	57.2			
Arsenic (As)	024001	47.2	86.1	0.045	50	17.8
	024002	6.5	5.6			
	024003	10.5	16.4			
	024004	ND	8.9			
Barium (Ba)	024001	26.6	26.9	260	2,000	31
	024002	10.7	9.2			
	024003	39	28.1			
	024004	57.05	46.1			
Calcium (Ca)	024001	21,300	19,000	NL	NL	NL
	024002	3,150	3,020			
	024003	37,700	19,800			
	024004	34,200	23,100			

Table 10.15.8
Zone G
SWMU 24
Analytes Detected in Shallow Groundwater

Parameters	Location	First Round Conc. Apr-98	Second Round Conc. Oct-98	Tap Water RBC*	MCL/SMCL*	Shallow Background
Chromium (Cr)	024002	ND	0.78	11	100	3.88
Cobalt (Co)	024001	2.2	3.9	220	NL	1.45
	024002	2.2	1.6			
	024004	0.91	1.3			
Iron (Fe)	024001	4,340	5,770	1,100	300	NL
	024002	2,100	1,640			
	024003	3,710	1,460			
	024004	1,750	2,870			
Magnesium (Mg)	024001	15,100	14,900	NL	NL	NL
	024002	1,530	1,300			
	024003	8,180	4,040			
	024004	36,950	31,500			
Manganese (Mn)	024001	203	208	73	50	2,906
	024002	70.5	59.8			
	024003	114	50.2			
	024004	194.5	183			
Nickel (Ni)	024001	ND	2	73	100	4.08
	024002	ND	1.4			
Potassium (K)	024001	13,700	11,300	NL	NL	NL
	024002	611	ND			
	024003	3,600	1,990			
	024004	22,400	21,500			
Selenium (Se)	024004	5	ND	18	50	4.3

Table 10.15.8
Zone G
SWMU 24
Analytes Detected in Shallow Groundwater

Parameters	Location	First Round Conc. Apr-98	Second Round Conc. Oct-98	Tap Water RBC*	MCL/SMCL*	Shallow Background
Sodium (Na)	024001	344,000	340,000	NL	NL	NL
	024002	27,300	25,100			
	024003	46,600	76,600			
	024004	81,150	76,000			
Vanadium (V)	024003	ND	0.97	26	NL	15.4
	024004	1.15	ND			

Notes:
NA = Not Applicable/Not Available
ND = Not Detected/Not Determined
NL = Not Listed
NT = Not Taken
µg/L = Micrograms per liter
* = Tap Water RBCs (THQ = 0.1) from *Risk-Based Concentration Table* (USEPA, October 1, 1998).
MCLs/SMCLs from *Drinking Water Regulations and Health Advisories* (USEPA, 1996) were used as a reference concentration
Bolded concentrations exceed both the RBC and the zone background. All background values for Zone G are based on twice the mean of the grid sample concentrations

Appendix B

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00102		024GW00103	
	DateCollected	4/22/1998		10/28/1998		1/28/1999	
	DateExtracted	4/27/1998		10/29/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/5/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	11	U	10	U
4-Methylphenol (p-Cresol)	ug/L	10	U	11	U	10	U
N-Nitrosodiphenylamine	ug/L	10	U	11	U	10	U
Phenol	ug/L	10	U	11	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	11	U	10	U
2-Chlorophenol	ug/L	10	U	11	U	10	U
1,3-Dichlorobenzene	ug/L	10	U	11	U	10	U
1,4-Dichlorobenzene	ug/L	10	U	11	U	10	U
Benzyl alcohol	ug/L	10	U	11	U	10	U
1,2-Dichlorobenzene	ug/L	10	U	11	U	10	U
2-Methylphenol (o-Cresol)	ug/L	10	U	11	U	10	U
N-Nitrosodi-n-propylamine	ug/L	10	U	11	U	10	U
Hexachloroethane	ug/L	10	U	11	U	10	U
Nitrobenzene	ug/L	10	U	11	U	10	U
Isophorone	ug/L	10	U	11	U	10	U
2-Nitrophenol	ug/L	10	U	11	U	10	U
2,4-Dimethylphenol	ug/L	10	U	11	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	11	U	10	U
2,4-Dichlorophenol	ug/L	10	U	11	U	10	U
Benzoic acid	ug/L	50	U	56	U	10	U
Naphthalene	ug/L	10	U	11	U	10	U
4-Chloroaniline	ug/L	10	U	11	U	10	U
Hexachlorobutadiene	ug/L	10	U	11	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	11	U	10	U
2-Methylnaphthalene	ug/L	10	U	11	U	10	U
Hexachlorocyclopentadiene	ug/L	10	U	11	U	10	U
2,4,6-Trichlorophenol	ug/L	10	U	11	U	10	U
2,4,5-Trichlorophenol	ug/L	50	U	56	U	50	U
2-Chloronaphthalene	ug/L	10	U	11	U	10	U
2-Nitroaniline	ug/L	50	U	56	U	50	U

	StationID	G024GW001		G024GW001		G024GW002	
	SampleID	024GW00104		024GW00104DL		024GW00201	
	DateCollected	6/10/1999		6/10/1999		4/20/1998	
	DateExtracted	6/15/1999		6/15/1999		4/27/1998	
	DateAnalyzed	6/20/1999		6/21/1999		5/9/1998	
	SDGNumber	EN017		EN017		ECZG02	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	5	U	10	R	10	U
4-Methylphenol (p-Cresol)	ug/L	5	U	10	R	10	U
N-Nitrosodiphenylamine	ug/L	5	U	10	R	10	U
Phenol	ug/L	5	U	10	R	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	U	10	R	10	U
2-Chlorophenol	ug/L	5	U	10	R	10	U
1,3-Dichlorobenzene	ug/L	5	U	10	R	10	U
1,4-Dichlorobenzene	ug/L	5	U	10	R	10	U
Benzyl alcohol	ug/L	5	U	10	R	10	U
1,2-Dichlorobenzene	ug/L	5	U	10	R	10	U
2-Methylphenol (o-Cresol)	ug/L	5	U	10	R	10	U
N-Nitrosodi-n-propylamine	ug/L	5	U	10	R	10	U
Hexachloroethane	ug/L	5	U	10	R	10	U
Nitrobenzene	ug/L	5	U	10	R	10	U
Isophorone	ug/L	5	U	10	R	10	U
2-Nitrophenol	ug/L	5	U	10	R	10	U
2,4-Dimethylphenol	ug/L	5	U	10	R	10	U
bis(2-Chloroethoxy) Methane	ug/L	5	U	10	R	10	U
2,4-Dichlorophenol	ug/L	5	U	10	R	10	U
Benzoic acid	ug/L	2	J	2	R	50	U
Naphthalene	ug/L	5	U	10	R	10	U
4-Chloroaniline	ug/L	5	U	10	R	10	U
Hexachlorobutadiene	ug/L	5	U	10	R	10	U
4-Chloro-3-methylphenol	ug/L	5	U	10	R	10	U
2-Methylnaphthalene	ug/L	5	U	10	R	10	U
Hexachlorocyclopentadiene	ug/L	5	U	10	R	10	U
2,4,6-Trichlorophenol	ug/L	5	U	10	R	10	U
2,4,5-Trichlorophenol	ug/L	5	U	10	R	50	U
2-Chloronaphthalene	ug/L	5	U	10	R	10	U
2-Nitroaniline	ug/L	5	U	10	R	50	U

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00202		024GW00203		024GW00204	
	DateCollected	10/29/1998		1/28/1999		6/9/1999	
	DateExtracted	10/30/1998		1/31/1999		6/15/1999	
	DateAnalyzed	11/4/1998		2/12/1999		6/20/1999	
	SDGNumber	36149		37280		EN017	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	10	U	6	U
4-Methylphenol (p-Cresol)	ug/L	10	U	10	U	6	U
N-Nitrosodiphenylamine	ug/L	10	U	10	U	6	U
Phenol	ug/L	10	U	10	U	6	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	10	U	6	U
2-Chlorophenol	ug/L	10	U	10	U	6	U
1,3-Dichlorobenzene	ug/L	10	U	10	U	6	U
1,4-Dichlorobenzene	ug/L	10	U	10	U	6	U
Benzyl alcohol	ug/L	10	U	10	U	6	U
1,2-Dichlorobenzene	ug/L	10	U	10	U	6	U
2-Methylphenol (o-Cresol)	ug/L	10	U	10	U	6	U
N-Nitrosodi-n-propylamine	ug/L	10	U	10	U	6	U
Hexachloroethane	ug/L	10	U	10	U	6	U
Nitrobenzene	ug/L	10	U	10	U	6	U
Isophorone	ug/L	10	U	10	U	6	U
2-Nitrophenol	ug/L	10	U	10	U	6	U
2,4-Dimethylphenol	ug/L	10	U	10	U	6	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	10	U	6	U
2,4-Dichlorophenol	ug/L	10	U	10	U	6	U
Benzoic acid	ug/L	50	U	10	U	1	J
Naphthalene	ug/L	10	U	10	U	6	U
4-Chloroaniline	ug/L	10	U	10	U	6	U
Hexachlorobutadiene	ug/L	10	U	10	U	6	U
4-Chloro-3-methylphenol	ug/L	10	U	10	U	6	U
2-Methylnaphthalene	ug/L	10	U	10	U	6	U
Hexachlorocyclopentadiene	ug/L	10	U	10	U	6	U
2,4,6-Trichlorophenol	ug/L	10	U	10	U	6	U
2,4,5-Trichlorophenol	ug/L	50	U	50	U	6	U
2-Chloronaphthalene	ug/L	10	U	10	U	6	U
2-Nitroaniline	ug/L	50	U	50	U	6	U

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00303	
	DateCollected	4/20/1998		10/29/1998		1/28/1999	
	DateExtracted	4/27/1998		10/30/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/4/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	10	U	10	U
4-Methylphenol (p-Cresol)	ug/L	10	U	10	U	10	U
N-Nitrosodiphenylamine	ug/L	10	U	10	U	10	U
Phenol	ug/L	10	U	10	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	10	U	10	U
2-Chlorophenol	ug/L	10	U	10	U	10	U
1,3-Dichlorobenzene	ug/L	10	U	10	U	10	U
1,4-Dichlorobenzene	ug/L	10	U	10	U	10	U
Benzyl alcohol	ug/L	10	U	10	U	10	U
1,2-Dichlorobenzene	ug/L	10	U	10	U	10	U
2-Methylphenol (o-Cresol)	ug/L	10	U	10	U	10	U
N-Nitrosodi-n-propylamine	ug/L	10	U	10	U	10	U
Hexachloroethane	ug/L	10	U	10	U	10	U
Nitrobenzene	ug/L	10	U	10	U	10	U
Isophorone	ug/L	10	U	10	U	10	U
2-Nitrophenol	ug/L	10	U	10	U	10	U
2,4-Dimethylphenol	ug/L	10	U	10	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	10	U	10	U
2,4-Dichlorophenol	ug/L	10	U	10	U	10	U
Benzoic acid	ug/L	50	U	50	U	10	U
Naphthalene	ug/L	10	U	10	U	10	U
4-Chloroaniline	ug/L	10	U	10	U	10	U
Hexachlorobutadiene	ug/L	10	U	10	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	10	U	10	U
2-Methylnaphthalene	ug/L	10	U	10	U	10	U
Hexachlorocyclopentadiene	ug/L	10	U	10	U	10	U
2,4,6-Trichlorophenol	ug/L	10	U	10	U	10	U
2,4,5-Trichlorophenol	ug/L	50	U	50	U	50	U
2-Chloronaphthalene	ug/L	10	U	10	U	10	U
2-Nitroaniline	ug/L	50	U	50	U	50	U

	StationID	G024GW003		G024GW004		G024GW004	
	SampleID	024GW00304		024GW00401		024GW00402	
	DateCollected	6/10/1999		4/24/1998		10/29/1998	
	DateExtracted	6/15/1999		4/29/1998		10/30/1998	
	DateAnalyzed	6/20/1999		5/19/1998		11/4/1998	
	SDGNumber	EN017		ECZG03		36149	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	6	U	10	U	10	U
4-Methylphenol (p-Cresol)	ug/L	6	U	10	U	10	U
N-Nitrosodiphenylamine	ug/L	6	U	10	U	10	U
Phenol	ug/L	6	U	10	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	6	U	10	U	10	U
2-Chlorophenol	ug/L	6	U	10	U	10	U
1,3-Dichlorobenzene	ug/L	6	U	10	U	10	U
1,4-Dichlorobenzene	ug/L	6	U	10	U	10	U
Benzyl alcohol	ug/L	6	U	10	U	10	U
1,2-Dichlorobenzene	ug/L	6	U	10	U	10	U
2-Methylphenol (o-Cresol)	ug/L	6	U	10	U	10	U
N-Nitrosodi-n-propylamine	ug/L	6	U	10	U	10	U
Hexachloroethane	ug/L	6	U	10	U	10	U
Nitrobenzene	ug/L	6	U	10	U	10	U
Isophorone	ug/L	6	U	10	U	10	U
2-Nitrophenol	ug/L	6	U	10	U	10	U
2,4-Dimethylphenol	ug/L	6	U	10	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	6	U	10	U	10	U
2,4-Dichlorophenol	ug/L	6	U	10	U	10	U
Benzoic acid	ug/L	1	J	50	U	50	U
Naphthalene	ug/L	6	U	10	U	10	U
4-Chloroaniline	ug/L	6	U	10	U	10	U
Hexachlorobutadiene	ug/L	6	U	10	U	10	U
4-Chloro-3-methylphenol	ug/L	6	U	10	U	10	U
2-Methylnaphthalene	ug/L	6	U	10	U	10	U
Hexachlorocyclopentadiene	ug/L	6	U	10	U	10	U
2,4,6-Trichlorophenol	ug/L	6	U	10	U	10	U
2,4,5-Trichlorophenol	ug/L	6	U	50	U	50	U
2-Chloronaphthalene	ug/L	6	U	10	U	10	U
2-Nitroaniline	ug/L	6	U	50	U	50	U

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00403		024GW00404		024HW00401	
	DateCollected	1/29/1999		6/10/1999		4/24/1998	
	DateExtracted	1/31/1999		6/15/1999		4/29/1998	
	DateAnalyzed	2/16/1999		6/21/1999		5/19/1998	
	SDGNumber	37296		EN017		ECZG03	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	6	U	10	U
4-Methylphenol (p-Cresol)	ug/L	10	U	6	U	10	U
N-Nitrosodiphenylamine	ug/L	10	U	6	U	10	U
Phenol	ug/L	10	U	6	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	6	U	10	U
2-Chlorophenol	ug/L	10	U	6	U	10	U
1,3-Dichlorobenzene	ug/L	10	U	6	U	10	U
1,4-Dichlorobenzene	ug/L	10	U	6	U	10	U
Benzyl alcohol	ug/L	10	U	1	J	10	U
1,2-Dichlorobenzene	ug/L	10	U	6	U	10	U
2-Methylphenol (o-Cresol)	ug/L	10	U	6	U	10	U
N-Nitrosodi-n-propylamine	ug/L	10	U	6	U	10	U
Hexachloroethane	ug/L	10	U	6	U	10	U
Nitrobenzene	ug/L	10	U	6	U	10	U
Isophorone	ug/L	10	U	6	U	10	U
2-Nitrophenol	ug/L	10	U	6	U	10	U
2,4-Dimethylphenol	ug/L	10	U	6	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	6	U	10	U
2,4-Dichlorophenol	ug/L	10	U	6	U	10	U
Benzoic acid	ug/L	1	J	1	J	50	U
Naphthalene	ug/L	10	U	6	U	10	U
4-Chloroaniline	ug/L	10	U	6	U	10	U
Hexachlorobutadiene	ug/L	10	U	6	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	6	U	10	U
2-Methylnaphthalene	ug/L	10	U	6	U	10	U
Hexachlorocyclopentadiene	ug/L	10	U	6	U	10	U
2,4,6-Trichlorophenol	ug/L	10	U	6	U	10	U
2,4,5-Trichlorophenol	ug/L	50	U	6	U	50	U
2-Chloronaphthalene	ug/L	10	U	6	U	10	U
2-Nitroaniline	ug/L	50	U	6	U	50	U

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00102		024GW00103	
	DateCollected	4/22/1998		10/28/1998		1/28/1999	
	DateExtracted	4/27/1998		10/29/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/5/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
3-Nitroaniline	ug/L	50	U	56	U	50	U
Dimethyl Phthalate	ug/L	10	U	11	U	10	U
2,6-Dinitrotoluene	ug/L	10	U	11	U	10	U
Acenaphthylene	ug/L	10	U	11	U	10	U
Acenaphthene	ug/L	10	U	11	U	10	U
2,4-Dinitrophenol	ug/L	50	UJ	56	U	50	U
Dibenzofuran	ug/L	10	U	11	U	10	U
2,4-Dinitrotoluene	ug/L	10	U	11	U	10	U
Diethyl Phthalate	ug/L	10	U	11	U	10	U
4-Nitrophenol	ug/L	50	U	56	U	50	U
Fluorene	ug/L	10	U	11	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	11	U	10	U
4,6-Dinitro-2-methylphenol	ug/L	50	UJ	56	U	50	U
4-Nitroaniline	ug/L	50	U	56	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	11	U	10	U
Hexachlorobenzene	ug/L	10	U	11	U	10	U
Pentachlorophenol	ug/L	50	U	56	U	50	U
Phenanthrene	ug/L	10	U	11	U	10	U
Anthracene	ug/L	10	U	11	U	10	U
Di-n-butyl Phthalate	ug/L	10	U	11	U	10	U
Flouranthene	ug/L	10	U	11	U	10	U
Pyrene	ug/L	10	U	11	U	10	U
Benzyl Butyl Phthalate	ug/L	10	U	11	U	10	U
Benzo(a)Anthracene	ug/L	10	U	11	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	22	U	20	U
Chrysene	ug/L	10	U	11	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	10	U	11	U	2	J
Di-n-octylphthalate	ug/L	10	U	11	U	10	U
Benzo(b)Fluoranthene	ug/L	10	U	11	U	10	U
Benzo(k)Fluoranthene	ug/L	10	U	11	U	10	U

	StationID	G024GW001		G024GW001		G024GW002	
	SampleID	024GW00104		024GW00104DL		024GW00201	
	DateCollected	6/10/1999		6/10/1999		4/20/1998	
	DateExtracted	6/15/1999		6/15/1999		4/27/1998	
	DateAnalyzed	6/20/1999		6/21/1999		5/9/1998	
	SDGNumber	EN017		EN017		ECZG02	
Parameter	**Units**						
3-Nitroaniline	ug/L	5	U	10	R	50	U
Dimethyl Phthalate	ug/L	5	U	10	R	10	U
2,6-Dinitrotoluene	ug/L	5	U	10	R	10	U
Acenaphthylene	ug/L	5	U	10	R	10	U
Acenaphthene	ug/L	5	U	10	R	10	U
2,4-Dinitrophenol	ug/L	10	U	20	R	50	UJ
Dibenzofuran	ug/L	5	U	10	R	10	U
2,4-Dinitrotoluene	ug/L	5	U	10	R	10	U
Diethyl Phthalate	ug/L	5	U	10	R	10	U
4-Nitrophenol	ug/L	10	U	20	R	50	U
Fluorene	ug/L	5	U	10	R	10	U
4-Chlorophenyl Phenyl Ether	ug/L	5	U	10	R	10	U
4,6-Dinitro-2-methylphenol	ug/L	10	U	20	R	50	UJ
4-Nitroaniline	ug/L	5	U	10	R	50	U
4-Bromophenyl Phenyl Ether	ug/L	5	U	10	R	10	U
Hexachlorobenzene	ug/L	5	U	10	R	10	U
Pentachlorophenol	ug/L	10	U	20	R	50	U
Phenanthrene	ug/L	5	U	10	R	10	U
Anthracene	ug/L	5	U	10	R	10	U
Di-n-butyl Phthalate	ug/L	5	U	10	R	10	U
Flouranthene	ug/L	5	U	10	R	10	U
Pyrene	ug/L	5	U	10	R	10	U
Benzyl Butyl Phthalate	ug/L	5	U	10	R	10	U
Benzo(a)Anthracene	ug/L	5	U	10	R	10	U
3,3'-Dichlorobenzidine	ug/L	10	U	20	R	20	U
Chrysene	ug/L	5	U	10	R	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	5	U	10	R	10	U
Di-n-octylphthalate	ug/L	5	UJ	10	R	10	U
Benzo(b)Fluoranthene	ug/L	5	UJ	10	R	10	U
Benzo(k)Fluoranthene	ug/L	5	UJ	10	R	10	U

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00202		024GW00203		024GW00204	
	DateCollected	10/29/1998		1/28/1999		6/9/1999	
	DateExtracted	10/30/1998		1/31/1999		6/15/1999	
	DateAnalyzed	11/4/1998		2/12/1999		6/20/1999	
	SDGNumber	36149		37280		EN017	
Parameter	**Units**						
3-Nitroaniline	ug/L	50	U	50	U	6	U
Dimethyl Phthalate	ug/L	10	U	10	U	6	U
2,6-Dinitrotoluene	ug/L	10	U	10	U	6	U
Acenaphthylene	ug/L	10	U	10	U	6	U
Acenaphthene	ug/L	10	U	10	U	6	U
2,4-Dinitrophenol	ug/L	50	U	50	U	11	U
Dibenzofuran	ug/L	10	U	10	U	6	U
2,4-Dinitrotoluene	ug/L	10	U	10	U	6	U
Diethyl Phthalate	ug/L	10	U	10	U	6	U
4-Nitrophenol	ug/L	50	U	50	U	11	U
Fluorene	ug/L	10	U	10	U	6	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	10	U	6	U
4,6-Dinitro-2-methylphenol	ug/L	50	U	50	U	11	U
4-Nitroaniline	ug/L	50	U	50	U	6	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	10	U	6	U
Hexachlorobenzene	ug/L	10	U	10	U	6	U
Pentachlorophenol	ug/L	50	U	50	U	11	U
Phenanthrene	ug/L	10	U	10	U	6	U
Anthracene	ug/L	10	U	10	U	6	U
Di-n-butyl Phthalate	ug/L	10	U	0.5	J	6	U
Flouranthene	ug/L	10	U	10	U	6	U
Pyrene	ug/L	10	U	10	U	6	U
Benzyl Butyl Phthalate	ug/L	10	U	10	U	6	U
Benzo(a)Anthracene	ug/L	10	U	10	U	6	U
3,3'-Dichlorobenzidine	ug/L	20	U	20	U	11	U
Chrysene	ug/L	10	U	10	U	6	U
bis(2-Ethylhexyl) Phthalate	ug/L	2	J	10	U	6	U
Di-n-octylphthalate	ug/L	10	U	10	U	6	U
Benzo(b)Fluoranthene	ug/L	10	U	10	U	6	U
Benzo(k)Fluoranthene	ug/L	10	U	10	U	6	U

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00303	
	DateCollected	4/20/1998		10/29/1998		1/28/1999	
	DateExtracted	4/27/1998		10/30/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/4/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
3-Nitroaniline	ug/L	50	U	50	U	50	U
Dimethyl Phthalate	ug/L	10	U	10	U	10	U
2,6-Dinitrotoluene	ug/L	10	U	10	U	10	U
Acenaphthylene	ug/L	10	U	10	U	10	U
Acenaphthene	ug/L	10	U	10	U	10	U
2,4-Dinitrophenol	ug/L	50	UJ	50	U	50	U
Dibenzofuran	ug/L	10	U	10	U	10	U
2,4-Dinitrotoluene	ug/L	10	U	10	U	10	U
Diethyl Phthalate	ug/L	10	U	10	U	10	U
4-Nitrophenol	ug/L	50	U	50	U	50	U
Fluorene	ug/L	10	U	10	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	10	U	10	U
4,6-Dinitro-2-methylphenol	ug/L	50	UJ	50	U	50	U
4-Nitroaniline	ug/L	50	U	50	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	10	U	10	U
Hexachlorobenzene	ug/L	10	U	10	U	10	U
Pentachlorophenol	ug/L	50	U	50	U	50	U
Phenanthrene	ug/L	10	U	10	U	10	U
Anthracene	ug/L	10	U	10	U	10	U
Di-n-butyl Phthalate	ug/L	10	U	10	U	10	U
Flouranthene	ug/L	10	U	10	U	10	U
Pyrene	ug/L	10	U	10	U	10	U
Benzyl Butyl Phthalate	ug/L	10	U	10	U	10	U
Benzo(a)Anthracene	ug/L	10	U	10	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	20	U	20	U
Chrysene	ug/L	10	U	10	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	10	U	10	U	1	J
Di-n-octylphthalate	ug/L	10	U	10	U	10	U
Benzo(b)Fluoranthene	ug/L	10	U	10	U	10	U
Benzo(k)Fluoranthene	ug/L	10	U	10	U	10	U

	StationID	G024GW003		G024GW004		G024GW004	
	SampleID	024GW00304		024GW00401		024GW00402	
	DateCollected	6/10/1999		4/24/1998		10/29/1998	
	DateExtracted	6/15/1999		4/29/1998		10/30/1998	
	DateAnalyzed	6/20/1999		5/19/1998		11/4/1998	
	SDGNumber	EN017		ECZG03		36149	
Parameter	**Units**						
3-Nitroaniline	ug/L	6	U	50	U	50	U
Dimethyl Phthalate	ug/L	6	U	10	U	10	U
2,6-Dinitrotoluene	ug/L	6	U	10	U	10	U
Acenaphthylene	ug/L	6	U	10	U	10	U
Acenaphthene	ug/L	6	U	10	U	10	U
2,4-Dinitrophenol	ug/L	12	U	50	U	50	U
Dibenzofuran	ug/L	6	U	10	U	10	U
2,4-Dinitrotoluene	ug/L	6	U	10	U	10	U
Diethyl Phthalate	ug/L	6	U	10	U	10	U
4-Nitrophenol	ug/L	12	U	50	U	50	U
Fluorene	ug/L	6	U	10	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	6	U	10	U	10	U
4,6-Dinitro-2-methylphenol	ug/L	12	U	50	U	50	U
4-Nitroaniline	ug/L	6	U	50	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	6	U	10	U	10	U
Hexachlorobenzene	ug/L	6	U	10	U	10	U
Pentachlorophenol	ug/L	12	U	50	U	50	U
Phenanthrene	ug/L	6	U	10	U	10	U
Anthracene	ug/L	6	U	10	U	10	U
Di-n-butyl Phthalate	ug/L	1	J	10	U	10	U
Flouranthene	ug/L	6	U	10	U	10	U
Pyrene	ug/L	6	U	10	U	10	U
Benzyl Butyl Phthalate	ug/L	6	U	10	U	10	U
Benzo(a)Anthracene	ug/L	6	U	10	U	10	U
3,3'-Dichlorobenzidine	ug/L	12	U	20	U	20	U
Chrysene	ug/L	6	U	10	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	6	U	10	U	10	U
Di-n-octylphthalate	ug/L	6	U	10	U	10	U
Benzo(b)Fluoranthene	ug/L	6	U	10	U	10	U
Benzo(k)Fluoranthene	ug/L	6	U	10	U	10	U

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00403		024GW00404		024HW00401	
	DateCollected	1/29/1999		6/10/1999		4/24/1998	
	DateExtracted	1/31/1999		6/15/1999		4/29/1998	
	DateAnalyzed	2/16/1999		6/21/1999		5/19/1998	
	SDGNumber	37296		EN017		ECZG03	
Parameter	**Units**						
3-Nitroaniline	ug/L	50	U	6	U	50	U
Dimethyl Phthalate	ug/L	10	U	6	U	10	U
2,6-Dinitrotoluene	ug/L	10	U	6	U	10	U
Acenaphthylene	ug/L	10	U	6	U	10	U
Acenaphthene	ug/L	10	U	6	U	10	U
2,4-Dinitrophenol	ug/L	50	U	11	U	50	U
Dibenzofuran	ug/L	10	U	6	U	10	U
2,4-Dinitrotoluene	ug/L	10	U	6	U	10	U
Diethyl Phthalate	ug/L	10	U	6	U	10	U
4-Nitrophenol	ug/L	4	J	11	U	50	U
Fluorene	ug/L	10	U	6	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	6	U	10	U
4,6-Dinitro-2-methylphenol	ug/L	50	U	11	U	50	U
4-Nitroaniline	ug/L	50	U	6	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	6	U	10	U
Hexachlorobenzene	ug/L	10	U	6	U	10	U
Pentachlorophenol	ug/L	50	U	11	U	50	U
Phenanthrene	ug/L	10	U	6	U	10	U
Anthracene	ug/L	10	U	6	U	10	U
Di-n-butyl Phthalate	ug/L	10	U	6	U	10	U
Flouranthene	ug/L	10	U	6	U	10	U
Pyrene	ug/L	10	U	6	U	10	U
Benzyl Butyl Phthalate	ug/L	10	U	6	U	10	U
Benzo(a)Anthracene	ug/L	10	U	6	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	11	U	20	U
Chrysene	ug/L	10	U	6	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	1	J	6	U	10	U
Di-n-octylphthalate	ug/L	10	U	6	U	10	U
Benzo(b)Fluoranthene	ug/L	10	U	6	U	10	U
Benzo(k)Fluoranthene	ug/L	10	U	6	U	10	U

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00102		024GW00103	
	DateCollected	4/22/1998		10/28/1998		1/28/1999	
	DateExtracted	4/27/1998		10/29/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/5/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	11	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	11	U	10	U
Dibenz(a,h)anthracene	ug/L	10	U	11	U	10	U
Benzo(g,h,i)Perylene	ug/L	10	U	11	U	10	U

	StationID	G024GW001		G024GW001		G024GW002	
	SampleID	024GW00104		024GW00104DL		024GW00201	
	DateCollected	6/10/1999		6/10/1999		4/20/1998	
	DateExtracted	6/15/1999		6/15/1999		4/27/1998	
	DateAnalyzed	6/20/1999		6/21/1999		5/9/1998	
	SDGNumber	EN017		EN017		ECZG02	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	5	UJ	10	R	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	UJ	10	R	10	U
Dibenz(a,h)anthracene	ug/L	5	UJ	10	R	10	U
Benzo(g,h,i)Perylene	ug/L	5	UJ	10	R	10	U

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00202		024GW00203		024GW00204	
	DateCollected	10/29/1998		1/28/1999		6/9/1999	
	DateExtracted	10/30/1998		1/31/1999		6/15/1999	
	DateAnalyzed	11/4/1998		2/12/1999		6/20/1999	
	SDGNumber	36149		37280		EN017	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	10	U	6	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	10	U	6	U
Dibenz(a,h)anthracene	ug/L	10	U	10	U	6	U
Benzo(g,h,i)Perylene	ug/L	10	U	10	U	6	U

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00303	
	DateCollected	4/20/1998		10/29/1998		1/28/1999	
	DateExtracted	4/27/1998		10/30/1998		1/31/1999	
	DateAnalyzed	5/9/1998		11/4/1998		2/12/1999	
	SDGNumber	ECZG02		36149		37280	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	10	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	10	U	10	U
Dibenz(a,h)anthracene	ug/L	10	U	10	U	10	U
Benzo(g,h,i)Perylene	ug/L	10	U	10	U	10	U

	StationID	G024GW003		G024GW004		G024GW004	
	SampleID	024GW00304		024GW00401		024GW00402	
	DateCollected	6/10/1999		4/24/1998		10/29/1998	
	DateExtracted	6/15/1999		4/29/1998		10/30/1998	
	DateAnalyzed	6/20/1999		5/19/1998		11/4/1998	
	SDGNumber	EN017		ECZG03		36149	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	6	U	10	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	6	U	10	U	10	U
Dibenz(a,h)anthracene	ug/L	6	U	10	U	10	U
Benzo(g,h,i)Perylene	ug/L	6	U	10	U	10	U

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00403		024GW00404		024HW00401	
	DateCollected	1/29/1999		6/10/1999		4/24/1998	
	DateExtracted	1/31/1999		6/15/1999		4/29/1998	
	DateAnalyzed	2/16/1999		6/21/1999		5/19/1998	
	SDGNumber	37296		EN017		ECZG03	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	6	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	6	U	10	U
Dibenz(a,h)anthracene	ug/L	10	U	6	U	10	U
Benzo(g,h,i)Perylene	ug/L	10	U	6	U	10	U

	StationID	G024GW001		G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00102		024GW00103		024GW00104	
	DateCollected	4/22/1998		10/28/1998		1/28/1999		6/10/1999	
	DateExtracted	4/29/1998		11/6/1998		2/3/1999		6/15/1999	
	DateAnalyzed	5/14/1998		11/10/1998		2/3/1999		6/16/1999	
	SDGNumber	ECZG02		36149		37280		EN017	
Parameter	**Units**								
Aluminum	ug/L	429	=	235	=	1620	J	25	UJ
Antimony	ug/L	5	U	4.5	U	3.4	J	14	U
Arsenic	ug/L	47.2	=	86.1	=	74.8	=	67.2	=
Barium	ug/L	26.6	=	26.9	=	27.5	=	23	J
Beryllium	ug/L	0.33	U	0.1	UJ	0.1	U	0.3	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	1.8	U
Calcium	ug/L	21300	=	19000	=	18800	=	20300	=
Chromium, Total	ug/L	0.99	U	0.7	U	2.4	J	4.8	U
Cobalt	ug/L	2.2	J	3.9	J	2.6	J	3.6	UJ
Copper	ug/L	0.67	U	0.8	U	2.8	J	4.3	U
Iron	ug/L	4340	=	5770	=	7930	=	6470	=
Lead	ug/L	1.7	U	1.5	U	1.5	J	1.3	U
Magnesium	ug/L	15100	=	14900	=	15100	=	15800	=
Manganese	ug/L	203	=	208	=	192	=	212	=
Mercury	ug/L	0.1	U	0.36	U	0.1	U	0.2	U
Nickel	ug/L	1.1	U	2	J	1.2	J	2.7	U
Potassium	ug/L	13700	=	11300	=	12400	=	10800	=
Selenium	ug/L	4.1	U	3.1	U	3.1	U	1	U
Silver	ug/L	1.1	UJ	1.4	UJ	1.4	U	2.9	UJ
Sodium	ug/L	344000	=	340000	=	336000	=	354000	=
Thallium	ug/L	5.5	U	3.1	U	3.1	U	1.3	U
Tin (Sn)	ug/L	3.4	U	4.7	U	4.7	U	1000	U
Vanadium	ug/L	2.5	U	0.8	U	4.2	J	2.3	U
Zinc	ug/L	7.9	U	16.1	U	29.9	U	2.8	U

	StationID	G024GW002		G024GW002		G024GW002		G024GW002	
	SampleID	024GW00201		024GW00202		024GW00203		024GW00204	
	DateCollected	4/20/1998		10/29/1998		1/28/1999		6/9/1999	
	DateExtracted	4/29/1998		11/6/1998		2/3/1999		6/15/1999	
	DateAnalyzed	5/14/1998		11/10/1998		2/3/1999		6/16/1999	
	SDGNumber	ECZG02		36149		37280		EN017	
Parameter	**Units**								
Aluminum	ug/L	123	J	107	J	81.8	J	25	UJ
Antimony	ug/L	5	U	2.7	U	3.2	J	14.4	J
Arsenic	ug/L	6.5	J	5.6	J	4	J	2.4	J
Barium	ug/L	10.7	=	9.2	J	11.9	J	16.6	J
Beryllium	ug/L	0.31	U	0.1	UJ	0.1	U	0.4	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	1.8	U
Calcium	ug/L	3150	=	3020	=	3980	=	3370	J
Chromium, Total	ug/L	0.7	U	0.78	J	0.7	U	4.8	U
Cobalt	ug/L	2.2	J	1.6	J	2.2	J	3.6	UJ
Copper	ug/L	0.6	U	0.8	U	0.8	U	4.3	U
Iron	ug/L	2100	=	1640	=	2340	=	1710	=
Lead	ug/L	1.7	U	1.5	U	1.5	U	1.3	U
Magnesium	ug/L	1530	=	1300	=	1910	=	1580	J
Manganese	ug/L	70.5	=	59.8	=	64	=	68.6	=
Mercury	ug/L	0.1	U	0.19	U	0.1	U	0.2	U
Nickel	ug/L	1.1	U	1.4	J	1	U	3.7	J
Potassium	ug/L	611	J	495	U	663	J	580	J
Selenium	ug/L	4.1	U	3.1	U	3.1	U	1	U
Silver	ug/L	1.1	UJ	1.4	UJ	1.4	U	2.9	UJ
Sodium	ug/L	27300	=	25100	=	27400	=	34400	=
Thallium	ug/L	5.5	U	3.3	U	3.1	U	1.3	U
Tin (Sn)	ug/L	3.4	U	4.7	U	4.7	U	1000	U
Vanadium	ug/L	0.79	U	0.8	U	0.8	U	2.3	U
Zinc	ug/L	1.6	U	11.3	U	36	=	2.4	U

	StationID	G024GW003		G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00303		024GW00304	
	DateCollected	4/20/1998		10/29/1998		1/28/1999		6/10/1999	
	DateExtracted	4/29/1998		11/6/1998		2/3/1999		6/15/1999	
	DateAnalyzed	5/14/1998		11/10/1998		2/3/1999		6/16/1999	
	SDGNumber	ECZG02		36149		37280		EN017	
Parameter	**Units**								
Aluminum	ug/L	14.3	J	119	J	167	J	25	UJ
Antimony	ug/L	5	U	2.7	U	2.7	U	14	U
Arsenic	ug/L	10.5	=	16.4	=	11.8	=	17.8	=
Barium	ug/L	39	=	28.1	=	35.3	=	14.4	J
Beryllium	ug/L	0.25	U	0.1	UJ	0.1	U	0.3	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	1.8	U
Calcium	ug/L	37700	=	19800	=	40200	=	8170	=
Chromium, Total	ug/L	0.7	U	0.7	U	0.7	U	4.8	U
Cobalt	ug/L	0.9	U	1	U	1	U	3.6	UJ
Copper	ug/L	0.6	U	0.8	U	0.8	U	4.3	U
Iron	ug/L	3710	=	1460	=	1540	=	1230	=
Lead	ug/L	1.7	U	1.5	U	1.5	U	1.3	U
Magnesium	ug/L	8180	=	4040	=	5600	=	2110	J
Manganese	ug/L	114	=	50.2	=	25.6	=	41.9	=
Mercury	ug/L	0.1	U	0.21	U	0.1	U	0.2	U
Nickel	ug/L	1.1	U	1	U	1	U	2.7	U
Potassium	ug/L	3600	=	1990	J	2610	=	1260	J
Selenium	ug/L	4.1	U	3.1	U	5.1	=	1	U
Silver	ug/L	1.1	UJ	1.4	UJ	1.4	U	2.9	UJ
Sodium	ug/L	46600	=	76600	=	55500	=	89500	=
Thallium	ug/L	5.5	U	5.2	U	3.1	U	1.3	U
Tin (Sn)	ug/L	3.4	U	4.7	U	4.7	U	1000	U
Vanadium	ug/L	0.7	U	0.97	J	1.5	J	2.3	U
Zinc	ug/L	1.5	U	7.9	U	7	U	2.3	U

	StationID	G024GW004		G024GW004		G024GW004		G024GW004	
	SampleID	024GW00401		024GW00402		024GW00403		024GW00404	
	DateCollected	4/24/1998		10/29/1998		1/29/1999		6/10/1999	
	DateExtracted	5/6/1998		11/6/1998		2/5/1999		6/15/1999	
	DateAnalyzed	5/14/1998		11/10/1998		2/5/1999		6/16/1999	
	SDGNumber	ECZG03		36149		37296		EN017	
Parameter	**Units**								
Aluminum	ug/L	191	J	57.2	J	46.9	U	42.4	J
Antimony	ug/L	5	U	2.8	U	3	J	14	U
Arsenic	ug/L	3.3	U	8.9	J	2.9	U	6.6	J
Barium	ug/L	57.2	=	46.1	=	42.7	=	33.3	J
Beryllium	ug/L	0.27	U	0.1	UJ	0.1	U	0.3	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	1.8	U
Calcium	ug/L	34600	=	23100	=	62000	=	23100	=
Chromium, Total	ug/L	1.3	U	0.7	U	0.7	U	4.8	U
Cobalt	ug/L	0.91	J	1.3	J	1	U	3.6	UJ
Copper	ug/L	0.6	U	0.8	U	0.8	U	4.3	U
Iron	ug/L	1740	=	2870	=	222	=	2980	=
Lead	ug/L	1.7	U	1.5	U	1.5	U	1.3	U
Magnesium	ug/L	37500	=	31500	=	23700	=	28800	=
Manganese	ug/L	198	=	183	=	57.3	=	181	=
Mercury	ug/L	0.1	U	0.22	U	0.1	U	0.2	U
Nickel	ug/L	1.1	UJ	1	U	1	U	2.7	U
Potassium	ug/L	22600	=	21500	=	13000	=	17600	=
Selenium	ug/L	5	J	3.1	U	9	J	1	U
Silver	ug/L	1.1	U	1.4	UJ	1.4	U	2.9	UJ
Sodium	ug/L	82200	=	76000	=	86800	=	87600	=
Thallium	ug/L	5.5	U	3.1	U	3.1	U	1.3	U
Tin (Sn)	ug/L	3.4	U	4.7	U	4.7	U	1000	U
Vanadium	ug/L	1.3	J	0.8	U	2.8	J	2.3	U
Zinc	ug/L	0.4	UJ	6.2	U	2.7	U	4.8	U

	StationID	G024GW004	
	SampleID	024HW00401	
	DateCollected	4/24/1998	
	DateExtracted	5/6/1998	
	DateAnalyzed	5/14/1998	
	SDGNumber	ECZG03	
Parameter	**Units**		
Aluminum	ug/L	199	J
Antimony	ug/L	5	U
Arsenic	ug/L	3.3	U
Barium	ug/L	56.9	=
Beryllium	ug/L	0.27	U
Cadmium	ug/L	0.3	U
Calcium	ug/L	33800	=
Chromium, Total	ug/L	0.7	U
Cobalt	ug/L	0.9	U
Copper	ug/L	0.6	U
Iron	ug/L	1760	=
Lead	ug/L	1.7	U
Magnesium	ug/L	36400	=
Manganese	ug/L	191	=
Mercury	ug/L	0.1	U
Nickel	ug/L	1.1	UJ
Potassium	ug/L	22200	=
Selenium	ug/L	4.1	U
Silver	ug/L	1.1	U
Sodium	ug/L	80100	=
Thallium	ug/L	5.5	U
Tin (Sn)	ug/L	3.4	U
Vanadium	ug/L	1	J
Zinc	ug/L	0.4	UJ

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00101		024GW00102	
	DateCollected	4/22/1998		4/22/1998		10/28/1998	
	DateExtracted			4/27/1998			
	DateAnalyzed	4/27/1998		5/9/1998		10/30/1998	
	SDGNumber	ECZG02		ECZG02		36149	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			10	U		
Chloromethane	ug/L	1	U			5	U
Vinyl chloride	ug/L	1	U			5	U
Bromomethane	ug/L	1	U			5	U
Chloroethane	ug/L	1	U			5	U
1,1-Dichloroethene	ug/L	1	U			5	U
Acetone	ug/L	10	U			5	R
Carbon Disulfide	ug/L	1	UJ			5	U
Methylene Chloride	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	1	U			5	U
Vinyl acetate	ug/L	2	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			5	U
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L	1	U			5	U
Chloroform	ug/L	1	U			5	U
1,1,1-Trichloroethane	ug/L	1	U			5	U
Carbon Tetrachloride	ug/L	1	U			5	U
1,2-Dichloroethane	ug/L	1	U			5	U
Benzene	ug/L	1	U			5	U
Trichloroethylene (TCE)	ug/L	1	U			5	U
1,2-Dichloropropane	ug/L	1	U			5	U
Bromodichloromethane	ug/L	1	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			5	UJ
cis-1,3-Dichloropropene	ug/L	1	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			5	U
Toluene	ug/L	1	U			5	U
trans-1,3-Dichloropropene	ug/L	1	U			5	U
1,1,2-Trichloroethane	ug/L	1	U			5	U
2-Hexanone	ug/L	10	U			5	U
Tetrachloroethylene (PCE)	ug/L	0.87	J			5	U

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00102		024GW00103		024GW00103	
	DateCollected	10/28/1998		1/28/1999		1/28/1999	
	DateExtracted	10/29/1998				1/31/1999	
	DateAnalyzed	11/5/1998		2/2/1999		2/12/1999	
	SDGNumber	36149		37280		37280	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L	11	U			10	U
Chloromethane	ug/L			5	U		
Vinyl chloride	ug/L			5	U		
Bromomethane	ug/L			5	U		
Chloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
Acetone	ug/L			5	R		
Carbon Disulfide	ug/L			5	U		
Methylene Chloride	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
Vinyl acetate	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L			5	U		
Chloroform	ug/L			5	U		
1,1,1-Trichloroethane	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
1,2-Dichloroethane	ug/L			5	U		
Benzene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			5	R		
cis-1,3-Dichloropropene	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Toluene	ug/L			5	U		
trans-1,3-Dichloropropene	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
2-Hexanone	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00104		024GW00104		024GW00104DL	
	DateCollected	6/10/1999		6/10/1999		6/10/1999	
	DateExtracted	6/15/1999		6/15/1999		6/15/1999	
	DateAnalyzed	6/15/1999		6/20/1999		6/21/1999	
	SDGNumber	EN017		EN017		EN017	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			5	U	10	R
Chloromethane	ug/L	3	U				
Vinyl chloride	ug/L	3	U				
Bromomethane	ug/L	3	UJ				
Chloroethane	ug/L	3	U				
1,1-Dichloroethene	ug/L	3	U				
Acetone	ug/L	5	R				
Carbon Disulfide	ug/L	3	U				
Methylene Chloride	ug/L	3	U				
1,1-Dichloroethane	ug/L	3	U				
Vinyl acetate	ug/L	3	U				
Methyl ethyl ketone (2-Butanone)	ug/L	5	U				
cis-1,2-Dichloroethylene	ug/L	3	U				
1,2-Dichloroethene (total)	ug/L	3	U				
Chloroform	ug/L	3	U				
1,1,1-Trichloroethane	ug/L	3	U				
Carbon Tetrachloride	ug/L	3	U				
1,2-Dichloroethane	ug/L	3	U				
Benzene	ug/L	3	U				
Trichloroethylene (TCE)	ug/L	3	U				
1,2-Dichloropropane	ug/L	3	U				
Bromodichloromethane	ug/L	3	U				
2-Chloroethyl vinyl ether	ug/L	3	R				
cis-1,3-Dichloropropene	ug/L	3	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U				
Toluene	ug/L	3	U				
trans-1,3-Dichloropropene	ug/L	3	U				
1,1,2-Trichloroethane	ug/L	3	U				
2-Hexanone	ug/L	5	U				
Tetrachloroethylene (PCE)	ug/L	3	U				

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00201		024GW00201		024GW00202	
	DateCollected	4/20/1998		4/20/1998		10/29/1998	
	DateExtracted			4/27/1998			
	DateAnalyzed	4/27/1998		5/9/1998		11/3/1998	
	SDGNumber	ECZG02		ECZG02		36149	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			10	U		
Chloromethane	ug/L	1	U			5	U
Vinyl chloride	ug/L	1	U			5	U
Bromomethane	ug/L	1	UJ			5	U
Chloroethane	ug/L	1	U			5	U
1,1-Dichloroethene	ug/L	1	U			5	U
Acetone	ug/L	10	U			5	U
Carbon Disulfide	ug/L	1	U			5	U
Methylene Chloride	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	1	U			5	U
Vinyl acetate	ug/L	2	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			5	U
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L	1	U			5	U
Chloroform	ug/L	1	U			5	U
1,1,1-Trichloroethane	ug/L	1	U			5	U
Carbon Tetrachloride	ug/L	1	U			5	U
1,2-Dichloroethane	ug/L	1	U			5	U
Benzene	ug/L	1	U			5	U
Trichloroethylene (TCE)	ug/L	1	U			5	U
1,2-Dichloropropane	ug/L	1	U			5	U
Bromodichloromethane	ug/L	1	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			5	R
cis-1,3-Dichloropropene	ug/L	1	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			5	U
Toluene	ug/L	1	U			5	U
trans-1,3-Dichloropropene	ug/L	1	U			5	U
1,1,2-Trichloroethane	ug/L	1	U			5	U
2-Hexanone	ug/L	10	U			5	UJ
Tetrachloroethylene (PCE)	ug/L	1	U			5	U

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00202		024GW00203		024GW00203	
	DateCollected	10/29/1998		1/28/1999		1/28/1999	
	DateExtracted	10/30/1998				1/31/1999	
	DateAnalyzed	11/4/1998		2/2/1999		2/12/1999	
	SDGNumber	36149		37280		37280	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L	10	U			10	U
Chloromethane	ug/L			5	U		
Vinyl chloride	ug/L			5	U		
Bromomethane	ug/L			5	U		
Chloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
Acetone	ug/L			5	R		
Carbon Disulfide	ug/L			5	U		
Methylene Chloride	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
Vinyl acetate	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L			5	U		
Chloroform	ug/L			5	U		
1,1,1-Trichloroethane	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
1,2-Dichloroethane	ug/L			5	U		
Benzene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			5	R		
cis-1,3-Dichloropropene	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Toluene	ug/L			5	U		
trans-1,3-Dichloropropene	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
2-Hexanone	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	G024GW002		G024GW002		G024GW003	
	SampleID	024GW00204		024GW00204		024GW00301	
	DateCollected	6/9/1999		6/9/1999		4/20/1998	
	DateExtracted	6/15/1999		6/15/1999			
	DateAnalyzed	6/15/1999		6/20/1999		4/27/1998	
	SDGNumber	EN017		EN017		ECZG02	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			6	U		
Chloromethane	ug/L	3	U			1	U
Vinyl chloride	ug/L	3	U			1	U
Bromomethane	ug/L	3	UJ			1	UJ
Chloroethane	ug/L	3	U			1	U
1,1-Dichloroethene	ug/L	3	U			1	U
Acetone	ug/L	5	R			10	U
Carbon Disulfide	ug/L	3	U			1	U
Methylene Chloride	ug/L	3	U			5	U
1,1-Dichloroethane	ug/L	3	U			1	U
Vinyl acetate	ug/L	3	U			2	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			10	U
cis-1,2-Dichloroethylene	ug/L	3	U				
1,2-Dichloroethene (total)	ug/L	3	U			1	U
Chloroform	ug/L	3	U			1	U
1,1,1-Trichloroethane	ug/L	3	U			1	U
Carbon Tetrachloride	ug/L	3	U			1	U
1,2-Dichloroethane	ug/L	3	U			1	U
Benzene	ug/L	3	U			1	U
Trichloroethylene (TCE)	ug/L	3	U			1	U
1,2-Dichloropropane	ug/L	3	U			1	U
Bromodichloromethane	ug/L	3	U			1	U
2-Chloroethyl vinyl ether	ug/L	3	R			10	U
cis-1,3-Dichloropropene	ug/L	3	U			1	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			10	U
Toluene	ug/L	3	U			1	U
trans-1,3-Dichloropropene	ug/L	3	U			1	U
1,1,2-Trichloroethane	ug/L	3	U			1	U
2-Hexanone	ug/L	5	U			10	U
Tetrachloroethylene (PCE)	ug/L	3	U			1	U

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00302	
	DateCollected	4/20/1998		10/29/1998		10/29/1998	
	DateExtracted	4/27/1998				10/30/1998	
	DateAnalyzed	5/9/1998		11/3/1998		11/4/1998	
	SDGNumber	ECZG02		36149		36149	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L	10	U			10	U
Chloromethane	ug/L			5	U		
Vinyl chloride	ug/L			5	U		
Bromomethane	ug/L			5	U		
Chloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
Acetone	ug/L			5	U		
Carbon Disulfide	ug/L			5	U		
Methylene Chloride	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
Vinyl acetate	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L			5	U		
Chloroform	ug/L			5	U		
1,1,1-Trichloroethane	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
1,2-Dichloroethane	ug/L			5	U		
Benzene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			5	R		
cis-1,3-Dichloropropene	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Toluene	ug/L			5	U		
trans-1,3-Dichloropropene	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
2-Hexanone	ug/L			5	UJ		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00303		024GW00303		024GW00304	
	DateCollected	1/28/1999		1/28/1999		6/10/1999	
	DateExtracted			1/31/1999		6/15/1999	
	DateAnalyzed	2/2/1999		2/12/1999		6/15/1999	
	SDGNumber	37280		37280		EN017	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			10	U		
Chloromethane	ug/L	5	U			3	U
Vinyl chloride	ug/L	5	U			3	U
Bromomethane	ug/L	5	U			3	UJ
Chloroethane	ug/L	5	U			3	U
1,1-Dichloroethene	ug/L	5	U			3	U
Acetone	ug/L	5	R			5	R
Carbon Disulfide	ug/L	5	U			3	U
Methylene Chloride	ug/L	5	U			3	U
1,1-Dichloroethane	ug/L	5	U			3	U
Vinyl acetate	ug/L	5	U			3	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
cis-1,2-Dichloroethylene	ug/L					3	U
1,2-Dichloroethene (total)	ug/L	5	U			3	U
Chloroform	ug/L	5	U			3	U
1,1,1-Trichloroethane	ug/L	5	U			3	U
Carbon Tetrachloride	ug/L	5	U			3	U
1,2-Dichloroethane	ug/L	5	U			3	U
Benzene	ug/L	5	U			3	U
Trichloroethylene (TCE)	ug/L	5	U			3	U
1,2-Dichloropropane	ug/L	5	U			3	U
Bromodichloromethane	ug/L	5	U			3	U
2-Chloroethyl vinyl ether	ug/L	5	R			3	R
cis-1,3-Dichloropropene	ug/L	5	U			3	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Toluene	ug/L	5	U			3	U
trans-1,3-Dichloropropene	ug/L	5	U			3	U
1,1,2-Trichloroethane	ug/L	5	U			3	U
2-Hexanone	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			3	U

	StationID	G024GW003		G024GW004		G024GW004	
	SampleID	024GW00304		024GW00401		024GW00401	
	DateCollected	6/10/1999		4/24/1998		4/24/1998	
	DateExtracted	6/15/1999				4/29/1998	
	DateAnalyzed	6/20/1999		4/28/1998		5/19/1998	
	SDGNumber	EN017		ECZG03		ECZG03	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L	6	U			10	U
Chloromethane	ug/L			1	U		
Vinyl chloride	ug/L			1	U		
Bromomethane	ug/L			1	U		
Chloroethane	ug/L			1	U		
1,1-Dichloroethene	ug/L			1	U		
Acetone	ug/L			10	U		
Carbon Disulfide	ug/L			1	R		
Methylene Chloride	ug/L			5	U		
1,1-Dichloroethane	ug/L			1	U		
Vinyl acetate	ug/L			2	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L			1	U		
Chloroform	ug/L			1	U		
1,1,1-Trichloroethane	ug/L			1	U		
Carbon Tetrachloride	ug/L			1	U		
1,2-Dichloroethane	ug/L			1	U		
Benzene	ug/L			1	U		
Trichloroethylene (TCE)	ug/L			1	U		
1,2-Dichloropropane	ug/L			1	U		
Bromodichloromethane	ug/L			1	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
cis-1,3-Dichloropropene	ug/L			1	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Toluene	ug/L			1	U		
trans-1,3-Dichloropropene	ug/L			1	U		
1,1,2-Trichloroethane	ug/L			1	U		
2-Hexanone	ug/L			10	U		
Tetrachloroethylene (PCE)	ug/L			1	U		

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00402		024GW00402		024GW00403	
	DateCollected	10/29/1998		10/29/1998		1/29/1999	
	DateExtracted			10/30/1998			
	DateAnalyzed	11/3/1998		11/4/1998		2/2/1999	
	SDGNumber	36149		36149		37296	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L			10	U		
Chloromethane	ug/L	5	U			5	U
Vinyl chloride	ug/L	5	U			5	U
Bromomethane	ug/L	5	U			5	U
Chloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
Acetone	ug/L	5	U			5	R
Carbon Disulfide	ug/L	5	U			5	U
Methylene Chloride	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
Vinyl acetate	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
cis-1,2-Dichloroethylene	ug/L						
1,2-Dichloroethene (total)	ug/L	5	U			5	U
Chloroform	ug/L	5	U			5	U
1,1,1-Trichloroethane	ug/L	5	U			5	U
Carbon Tetrachloride	ug/L	5	U			5	U
1,2-Dichloroethane	ug/L	5	U			5	U
Benzene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
1,2-Dichloropropane	ug/L	5	U			5	U
Bromodichloromethane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	5	R			5	R
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Toluene	ug/L	5	U			5	U
trans-1,3-Dichloropropene	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
2-Hexanone	ug/L	5	UJ			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00403		024GW00404		024GW00404	
	DateCollected	1/29/1999		6/10/1999		6/10/1999	
	DateExtracted	1/31/1999		6/15/1999		6/15/1999	
	DateAnalyzed	2/16/1999		6/15/1999		6/21/1999	
	SDGNumber	37296		EN017		EN017	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/L	10	U			6	U
Chloromethane	ug/L			3	U		
Vinyl chloride	ug/L			3	U		
Bromomethane	ug/L			3	UJ		
Chloroethane	ug/L			3	U		
1,1-Dichloroethene	ug/L			3	U		
Acetone	ug/L			5	R		
Carbon Disulfide	ug/L			3	U		
Methylene Chloride	ug/L			3	U		
1,1-Dichloroethane	ug/L			3	U		
Vinyl acetate	ug/L			3	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L			3	U		
1,2-Dichloroethene (total)	ug/L			3	U		
Chloroform	ug/L			3	U		
1,1,1-Trichloroethane	ug/L			3	U		
Carbon Tetrachloride	ug/L			3	U		
1,2-Dichloroethane	ug/L			3	U		
Benzene	ug/L			3	U		
Trichloroethylene (TCE)	ug/L			3	U		
1,2-Dichloropropane	ug/L			3	U		
Bromodichloromethane	ug/L			3	U		
2-Chloroethyl vinyl ether	ug/L			3	R		
cis-1,3-Dichloropropene	ug/L			3	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Toluene	ug/L			3	U		
trans-1,3-Dichloropropene	ug/L			3	U		
1,1,2-Trichloroethane	ug/L			3	U		
2-Hexanone	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			3	U		

	StationID	G024GW004		G024GW004	
	SampleID	024HW00401		024HW00401	
	DateCollected	4/24/1998		4/24/1998	
	DateExtracted			4/29/1998	
	DateAnalyzed	4/28/1998		5/19/1998	
	SDGNumber	ECZG03		ECZG03	
Parameter	**Units**				
1,2,4--Trichlorobenzene	ug/L			10	U
Chloromethane	ug/L	1	U		
Vinyl chloride	ug/L	1	U		
Bromomethane	ug/L	1	U		
Chloroethane	ug/L	1	U		
1,1-Dichloroethene	ug/L	1	U		
Acetone	ug/L	10	U		
Carbon Disulfide	ug/L	1	R		
Methylene Chloride	ug/L	5	U		
1,1-Dichloroethane	ug/L	1	U		
Vinyl acetate	ug/L	2	U		
Methyl ethyl ketone (2-Butanone)	ug/L	10	U		
cis-1,2-Dichloroethylene	ug/L				
1,2-Dichloroethene (total)	ug/L	1	U		
Chloroform	ug/L	1	U		
1,1,1-Trichloroethane	ug/L	1	U		
Carbon Tetrachloride	ug/L	1	U		
1,2-Dichloroethane	ug/L	1	U		
Benzene	ug/L	1	U		
Trichloroethylene (TCE)	ug/L	1	U		
1,2-Dichloropropane	ug/L	1	U		
Bromodichloromethane	ug/L	1	U		
2-Chloroethyl vinyl ether	ug/L	10	U		
cis-1,3-Dichloropropene	ug/L	1	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U		
Toluene	ug/L	1	U		
trans-1,3-Dichloropropene	ug/L	1	U		
1,1,2-Trichloroethane	ug/L	1	U		
2-Hexanone	ug/L	10	U		
Tetrachloroethylene (PCE)	ug/L	1	U		

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00101		024GW00101		024GW00102	
	DateCollected	4/22/1998		4/22/1998		10/28/1998	
	DateExtracted			4/27/1998			
	DateAnalyzed	4/27/1998		5/9/1998		10/30/1998	
	SDGNumber	ECZG02		ECZG02		36149	
Parameter	**Units**						
Dibromochloromethane	ug/L	1	U			5	U
Chlorobenzene	ug/L	1	U			5	U
Ethylbenzene	ug/L	1	U			5	U
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L	2	U			5	U
Styrene	ug/L	1	U			5	U
Bromoform	ug/L	1	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	1	U			5	U

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00102		024GW00103		024GW00103	
	DateCollected	10/28/1998		1/28/1999		1/28/1999	
	DateExtracted	10/29/1998				1/31/1999	
	DateAnalyzed	11/5/1998		2/2/1999		2/12/1999	
	SDGNumber	36149		37280		37280	
Parameter	**Units**						
Dibromochloromethane	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L			5	U		
Styrene	ug/L			5	U		
Bromoform	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		

	StationID	G024GW001		G024GW001		G024GW001	
	SampleID	024GW00104		024GW00104		024GW00104DL	
	DateCollected	6/10/1999		6/10/1999		6/10/1999	
	DateExtracted	6/15/1999		6/15/1999		6/15/1999	
	DateAnalyzed	6/15/1999		6/20/1999		6/21/1999	
	SDGNumber	EN017		EN017		EN017	
Parameter	**Units**						
Dibromochloromethane	ug/L	3	U				
Chlorobenzene	ug/L	3	U				
Ethylbenzene	ug/L	3	U				
m+p Xylene	ug/L	3	U				
o-Xylene	ug/L	3	U				
Xylenes, Total	ug/L						
Styrene	ug/L	3	U				
Bromoform	ug/L	3	U				
1,1,2,2-Tetrachloroethane	ug/L	3	U				

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00201		024GW00201		024GW00202	
	DateCollected	4/20/1998		4/20/1998		10/29/1998	
	DateExtracted			4/27/1998			
	DateAnalyzed	4/27/1998		5/9/1998		11/3/1998	
	SDGNumber	ECZG02		ECZG02		36149	
Parameter	**Units**						
Dibromochloromethane	ug/L	1	U			5	U
Chlorobenzene	ug/L	1	U			5	U
Ethylbenzene	ug/L	1	U			5	U
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L	2	U			5	U
Styrene	ug/L	1	U			5	U
Bromoform	ug/L	1	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	1	U			5	U

	StationID	G024GW002		G024GW002		G024GW002	
	SampleID	024GW00202		024GW00203		024GW00203	
	DateCollected	10/29/1998		1/28/1999		1/28/1999	
	DateExtracted	10/30/1998				1/31/1999	
	DateAnalyzed	11/4/1998		2/2/1999		2/12/1999	
	SDGNumber	36149		37280		37280	
Parameter	**Units**						
Dibromochloromethane	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L			5	U		
Styrene	ug/L			5	U		
Bromoform	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		

	StationID	G024GW002		G024GW002		G024GW003	
	SampleID	024GW00204		024GW00204		024GW00301	
	DateCollected	6/9/1999		6/9/1999		4/20/1998	
	DateExtracted	6/15/1999		6/15/1999			
	DateAnalyzed	6/15/1999		6/20/1999		4/27/1998	
	SDGNumber	EN017		EN017		ECZG02	
Parameter	**Units**						
Dibromochloromethane	ug/L	3	U			1	U
Chlorobenzene	ug/L	3	U			1	U
Ethylbenzene	ug/L	3	U			1	U
m+p Xylene	ug/L	3	U				
o-Xylene	ug/L	3	U				
Xylenes, Total	ug/L					2	U
Styrene	ug/L	3	U			1	U
Bromoform	ug/L	3	U			1	U
1,1,2,2-Tetrachloroethane	ug/L	3	U			1	U

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00301		024GW00302		024GW00302	
	DateCollected	4/20/1998		10/29/1998		10/29/1998	
	DateExtracted	4/27/1998				10/30/1998	
	DateAnalyzed	5/9/1998		11/3/1998		11/4/1998	
	SDGNumber	ECZG02		36149		36149	
Parameter	**Units**						
Dibromochloromethane	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L			5	U		
Styrene	ug/L			5	U		
Bromoform	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		

	StationID	G024GW003		G024GW003		G024GW003	
	SampleID	024GW00303		024GW00303		024GW00304	
	DateCollected	1/28/1999		1/28/1999		6/10/1999	
	DateExtracted			1/31/1999		6/15/1999	
	DateAnalyzed	2/2/1999		2/12/1999		6/15/1999	
	SDGNumber	37280		37280		EN017	
Parameter	**Units**						
Dibromochloromethane	ug/L	5	U			3	U
Chlorobenzene	ug/L	5	U			3	U
Ethylbenzene	ug/L	5	U			3	U
m+p Xylene	ug/L					3	U
o-Xylene	ug/L					3	U
Xylenes, Total	ug/L	5	U				
Styrene	ug/L	5	U			3	U
Bromoform	ug/L	5	U			3	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			3	U

	StationID	G024GW003		G024GW004		G024GW004	
	SampleID	024GW00304		024GW00401		024GW00401	
	DateCollected	6/10/1999		4/24/1998		4/24/1998	
	DateExtracted	6/15/1999				4/29/1998	
	DateAnalyzed	6/20/1999		4/28/1998		5/19/1998	
	SDGNumber	EN017		ECZG03		ECZG03	
Parameter	**Units**						
Dibromochloromethane	ug/L			1	U		
Chlorobenzene	ug/L			1	U		
Ethylbenzene	ug/L			1	U		
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L			2	U		
Styrene	ug/L			1	U		
Bromoform	ug/L			1	U		
1,1,2,2-Tetrachloroethane	ug/L			1	U		

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00402		024GW00402		024GW00403	
	DateCollected	10/29/1998		10/29/1998		1/29/1999	
	DateExtracted			10/30/1998			
	DateAnalyzed	11/3/1998		11/4/1998		2/2/1999	
	SDGNumber	36149		36149		37296	
Parameter	**Units**						
Dibromochloromethane	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
m+p Xylene	ug/L						
o-Xylene	ug/L						
Xylenes, Total	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U

	StationID	G024GW004		G024GW004		G024GW004	
	SampleID	024GW00403		024GW00404		024GW00404	
	DateCollected	1/29/1999		6/10/1999		6/10/1999	
	DateExtracted	1/31/1999		6/15/1999		6/15/1999	
	DateAnalyzed	2/16/1999		6/15/1999		6/21/1999	
	SDGNumber	37296		EN017		EN017	
Parameter	**Units**						
Dibromochloromethane	ug/L			3	U		
Chlorobenzene	ug/L			3	U		
Ethylbenzene	ug/L			3	U		
m+p Xylene	ug/L			3	U		
o-Xylene	ug/L			3	U		
Xylenes, Total	ug/L						
Styrene	ug/L			3	U		
Bromoform	ug/L			3	U		
1,1,2,2-Tetrachloroethane	ug/L			3	U		

	StationID	G024GW004		G024GW004	
	SampleID	024HW00401		024HW00401	
	DateCollected	4/24/1998		4/24/1998	
	DateExtracted			4/29/1998	
	DateAnalyzed	4/28/1998		5/19/1998	
	SDGNumber	ECZG03		ECZG03	
Parameter	**Units**				
Dibromochloromethane	ug/L	1	U		
Chlorobenzene	ug/L	1	U		
Ethylbenzene	ug/L	1	U		
m+p Xylene	ug/L				
o-Xylene	ug/L				
Xylenes, Total	ug/L	2	U		
Styrene	ug/L	1	U		
Bromoform	ug/L	1	U		
1,1,2,2-Tetrachloroethane	ug/L	1	U		

	StationID	G024SB001		G024SB001		G024SB002	
	SampleID	024SB00101 (0-1ft)		024SB00102 (3-5ft)		024SB00201 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	350	U	380	U	370	U
4-Methylphenol (p-Cresol)	ug/Kg	350	U	380	U	370	U
N-Nitrosodiphenylamine	ug/Kg	350	U	380	U	370	U
Phenol	ug/Kg	350	U	380	U	370	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	350	U	380	U	370	U
2-Chlorophenol	ug/Kg	350	U	380	U	370	U
1,3-Dichlorobenzene	ug/Kg	350	U	380	U	370	U
1,4-Dichlorobenzene	ug/Kg	350	U	380	U	370	U
Benzyl alcohol	ug/Kg	350	U	380	U	370	U
1,2-Dichlorobenzene	ug/Kg	350	U	380	U	370	U
2-Methylphenol (o-Cresol)	ug/Kg	350	U	380	U	370	U
N-Nitrosodi-n-propylamine	ug/Kg	350	U	380	U	370	U
Hexachloroethane	ug/Kg	350	U	380	U	370	U
Nitrobenzene	ug/Kg	350	U	380	U	370	U
Isophorone	ug/Kg	350	U	380	U	370	U
2-Nitrophenol	ug/Kg	350	U	380	U	370	U
2,4-Dimethylphenol	ug/Kg	350	U	380	U	370	U
bis(2-Chloroethoxy) Methane	ug/Kg	350	U	380	U	370	U
2,4-Dichlorophenol	ug/Kg	350	U	380	U	370	U
Benzoic acid	ug/Kg	29	J	380	U	29	J
Naphthalene	ug/Kg	350	U	380	U	370	U
4-Chloroaniline	ug/Kg	350	U	380	U	370	U
Hexachlorobutadiene	ug/Kg	350	U	380	U	370	U
4-Chloro-3-methylphenol	ug/Kg	350	U	380	U	370	U
2-Methylnaphthalene	ug/Kg	350	U	380	U	370	U
Hexachlorocyclopentadiene	ug/Kg	350	U	380	U	370	U
2,4,6-Trichlorophenol	ug/Kg	350	U	380	U	370	U
2,4,5-Trichlorophenol	ug/Kg	870	U	950	U	920	U
2-Chloronaphthalene	ug/Kg	350	U	380	U	370	U
2-Nitroaniline	ug/Kg	870	U	950	U	920	U

	StationID	G024SB002		G024SB003		G024SB003	
	SampleID	024SB00202 (3-5ft)		024SB00301 (0-1ft)		024SB00302 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	430	U	400	U	390	U
4-Methylphenol (p-Cresol)	ug/Kg	430	U	400	U	390	U
N-Nitrosodiphenylamine	ug/Kg	430	U	400	U	390	U
Phenol	ug/Kg	430	U	400	U	390	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	430	U	400	U	390	U
2-Chlorophenol	ug/Kg	430	U	400	U	390	U
1,3-Dichlorobenzene	ug/Kg	430	U	400	U	390	U
1,4-Dichlorobenzene	ug/Kg	430	U	400	U	390	U
Benzyl alcohol	ug/Kg	430	U	400	U	390	U
1,2-Dichlorobenzene	ug/Kg	430	U	400	U	390	U
2-Methylphenol (o-Cresol)	ug/Kg	430	U	400	U	390	U
N-Nitrosodi-n-propylamine	ug/Kg	430	U	400	U	390	U
Hexachloroethane	ug/Kg	430	U	400	U	390	U
Nitrobenzene	ug/Kg	430	U	400	U	390	U
Isophorone	ug/Kg	430	U	400	U	390	U
2-Nitrophenol	ug/Kg	430	U	400	U	390	U
2,4-Dimethylphenol	ug/Kg	430	U	400	U	390	U
bis(2-Chloroethoxy) Methane	ug/Kg	430	U	400	U	390	U
2,4-Dichlorophenol	ug/Kg	430	U	400	U	390	U
Benzoic acid	ug/Kg	42	J	50	J	67	J
Naphthalene	ug/Kg	430	U	400	U	390	U
4-Chloroaniline	ug/Kg	430	U	400	U	390	U
Hexachlorobutadiene	ug/Kg	430	U	400	U	390	U
4-Chloro-3-methylphenol	ug/Kg	430	U	400	U	390	U
2-Methylnaphthalene	ug/Kg	430	U	400	U	390	U
Hexachlorocyclopentadiene	ug/Kg	430	U	400	U	390	U
2,4,6-Trichlorophenol	ug/Kg	430	U	400	U	390	U
2,4,5-Trichlorophenol	ug/Kg	1100	U	1000	U	980	U
2-Chloronaphthalene	ug/Kg	430	U	400	U	390	U
2-Nitroaniline	ug/Kg	1100	U	1000	U	980	U

	StationID	G024SB004		G024SB004		G024SB005	
	SampleID	024SB00401 (0-1ft)		024SB00402 (3-5ft)		024SB00501 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		12/15/1999	
	DateExtracted	1/29/2000		1/29/2000		12/20/1999	
	DateAnalyzed	2/2/2000		2/2/2000		12/23/1999	
	SDGNumber	41899		41899		EN033	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	420	U	520	U	360	U
4-Methylphenol (p-Cresol)	ug/Kg	420	U	520	U	360	U
N-Nitrosodiphenylamine	ug/Kg	420	U	520	U	360	U
Phenol	ug/Kg	420	U	520	U	360	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	420	U	520	U	360	U
2-Chlorophenol	ug/Kg	420	U	520	U	360	U
1,3-Dichlorobenzene	ug/Kg	420	U	520	U	360	U
1,4-Dichlorobenzene	ug/Kg	420	U	34	J	360	U
Benzyl alcohol	ug/Kg	420	U	520	U	360	U
1,2-Dichlorobenzene	ug/Kg	420	U	520	U	360	U
2-Methylphenol (o-Cresol)	ug/Kg	420	U	520	U	360	U
N-Nitrosodi-n-propylamine	ug/Kg	420	U	520	U	360	U
Hexachloroethane	ug/Kg	420	U	520	U	360	U
Nitrobenzene	ug/Kg	420	U	520	U	360	U
Isophorone	ug/Kg	420	U	520	U	360	U
2-Nitrophenol	ug/Kg	420	U	520	U	360	U
2,4-Dimethylphenol	ug/Kg	420	U	520	U	360	U
bis(2-Chloroethoxy) Methane	ug/Kg	420	U	520	U	360	U
2,4-Dichlorophenol	ug/Kg	420	U	520	U	360	U
Benzoic acid	ug/Kg	40	J	74	J	1800	U
Naphthalene	ug/Kg	420	U	520	U	360	U
4-Chloroaniline	ug/Kg	420	U	520	U	360	U
Hexachlorobutadiene	ug/Kg	420	U	520	U	360	U
4-Chloro-3-methylphenol	ug/Kg	420	U	520	U	360	U
2-Methylnaphthalene	ug/Kg	420	U	57	J	340	J
Hexachlorocyclopentadiene	ug/Kg	420	U	520	U	360	U
2,4,6-Trichlorophenol	ug/Kg	420	U	520	U	360	U
2,4,5-Trichlorophenol	ug/Kg	1000	U	1300	U	360	U
2-Chloronaphthalene	ug/Kg	420	U	520	U	360	U
2-Nitroaniline	ug/Kg	1000	U	1300	U	360	U

	StationID	G024SB005		G024SB005		G024SB006	
	SampleID	024SB00502 (3-5ft)		024SB00502DL (3-5ft)		024CB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	400	U	800	R	390	U
4-Methylphenol (p-Cresol)	ug/Kg	400	U	800	R	390	U
N-Nitrosodiphenylamine	ug/Kg	890	=	950	R	260	J
Phenol	ug/Kg	400	U	800	R	390	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	400	U	800	R	390	U
2-Chlorophenol	ug/Kg	400	U	800	R	390	U
1,3-Dichlorobenzene	ug/Kg	400	U	800	R	390	U
1,4-Dichlorobenzene	ug/Kg	400	U	800	R	390	U
Benzyl alcohol	ug/Kg	400	U	800	R	390	U
1,2-Dichlorobenzene	ug/Kg	400	U	800	R	390	U
2-Methylphenol (o-Cresol)	ug/Kg	400	U	800	R	390	U
N-Nitrosodi-n-propylamine	ug/Kg	400	U	800	R	390	U
Hexachloroethane	ug/Kg	400	U	800	R	390	U
Nitrobenzene	ug/Kg	400	U	800	R	390	U
Isophorone	ug/Kg	370	J	440	R	390	U
2-Nitrophenol	ug/Kg	400	U	800	R	390	U
2,4-Dimethylphenol	ug/Kg	400	U	800	R	390	U
bis(2-Chloroethoxy) Methane	ug/Kg	400	U	800	R	390	U
2,4-Dichlorophenol	ug/Kg	400	U	800	R	390	U
Benzoic acid	ug/Kg	2000	U	4000	R	2000	U
Naphthalene	ug/Kg	400	U	800	R	130	J
4-Chloroaniline	ug/Kg	400	U	800	R	390	U
Hexachlorobutadiene	ug/Kg	400	U	800	R	390	U
4-Chloro-3-methylphenol	ug/Kg	400	U	800	R	390	U
2-Methylnaphthalene	ug/Kg	8900	=	8900	R	110	J
Hexachlorocyclopentadiene	ug/Kg	400	U	800	R	390	U
2,4,6-Trichlorophenol	ug/Kg	400	U	800	R	390	U
2,4,5-Trichlorophenol	ug/Kg	400	U	800	R	390	U
2-Chloronaphthalene	ug/Kg	400	U	800	R	390	U
2-Nitroaniline	ug/Kg	400	U	800	R	390	U

	StationID	G024SB006		G024SB006		G024SB006	
	SampleID	024CB00602 (3-5ft)		024CB00602DL (3-5ft)		024SB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	380	U	3800	R	390	U
4-Methylphenol (p-Cresol)	ug/Kg	380	U	3800	R	390	U
N-Nitrosodiphenylamine	ug/Kg	380	UJ	3800	R	640	J
Phenol	ug/Kg	380	U	3800	R	390	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	380	U	3800	R	390	U
2-Chlorophenol	ug/Kg	380	U	3800	R	390	U
1,3-Dichlorobenzene	ug/Kg	380	U	3800	R	390	U
1,4-Dichlorobenzene	ug/Kg	380	U	3800	R	390	U
Benzyl alcohol	ug/Kg	380	U	3800	R	390	U
1,2-Dichlorobenzene	ug/Kg	380	U	3800	R	390	U
2-Methylphenol (o-Cresol)	ug/Kg	380	U	3800	R	390	U
N-Nitrosodi-n-propylamine	ug/Kg	380	U	3800	R	390	U
Hexachloroethane	ug/Kg	380	U	3800	R	390	U
Nitrobenzene	ug/Kg	420	J	3800	R	390	U
Isophorone	ug/Kg	1900	J	3800	R	390	U
2-Nitrophenol	ug/Kg	380	U	3800	R	390	U
2,4-Dimethylphenol	ug/Kg	380	U	3800	R	390	U
bis(2-Chloroethoxy) Methane	ug/Kg	380	U	3800	R	390	U
2,4-Dichlorophenol	ug/Kg	380	U	3800	R	390	U
Benzoic acid	ug/Kg	1900	U	19000	R	2000	U
Naphthalene	ug/Kg	8400	=	8400	R	390	U
4-Chloroaniline	ug/Kg	380	U	3800	R	390	U
Hexachlorobutadiene	ug/Kg	380	U	3800	R	390	U
4-Chloro-3-methylphenol	ug/Kg	380	U	3800	R	390	U
2-Methylnaphthalene	ug/Kg	35000	=	35000	R	390	U
Hexachlorocyclopentadiene	ug/Kg	380	U	3800	R	390	U
2,4,6-Trichlorophenol	ug/Kg	380	U	3800	R	390	U
2,4,5-Trichlorophenol	ug/Kg	380	U	3800	R	390	U
2-Chloronaphthalene	ug/Kg	380	U	3800	R	390	U
2-Nitroaniline	ug/Kg	380	U	3800	R	390	U

	StationID	G024SB006		G024SB006		G024SB007	
	SampleID	024SB00602 (3-5ft)		024SB00602DL (3-5ft)		024SB00701 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	Units						
2,2'-Oxybis(1-chloro)propane	ug/Kg	390	U	3900	R	390	U
4-Methylphenol (p-Cresol)	ug/Kg	390	U	3900	R	390	U
N-Nitrosodiphenylamine	ug/Kg	3900	J	3100	R	390	U
Phenol	ug/Kg	390	U	3900	R	390	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	390	U	3900	R	390	U
2-Chlorophenol	ug/Kg	390	U	3900	R	390	U
1,3-Dichlorobenzene	ug/Kg	390	U	3900	R	390	U
1,4-Dichlorobenzene	ug/Kg	390	U	3900	R	390	U
Benzyl alcohol	ug/Kg	390	U	3900	R	390	U
1,2-Dichlorobenzene	ug/Kg	390	U	3900	R	390	U
2-Methylphenol (o-Cresol)	ug/Kg	390	U	3900	R	390	U
N-Nitrosodi-n-propylamine	ug/Kg	390	U	3900	R	390	U
Hexachloroethane	ug/Kg	390	U	3900	R	390	U
Nitrobenzene	ug/Kg	390	UJ	3900	R	390	U
Isophorone	ug/Kg	390	UJ	3900	R	390	U
2-Nitrophenol	ug/Kg	390	U	3900	R	390	U
2,4-Dimethylphenol	ug/Kg	390	U	3900	R	390	U
bis(2-Chloroethoxy) Methane	ug/Kg	390	U	3900	R	390	U
2,4-Dichlorophenol	ug/Kg	390	U	3900	R	390	U
Benzoic acid	ug/Kg	1900	U	19000	R	1900	U
Naphthalene	ug/Kg	10000	=	10000	R	390	U
4-Chloroaniline	ug/Kg	390	U	3900	R	390	U
Hexachlorobutadiene	ug/Kg	390	U	3900	R	390	U
4-Chloro-3-methylphenol	ug/Kg	390	U	3900	R	390	U
2-Methylnaphthalene	ug/Kg	42000	=	42000	R	390	U
Hexachlorocyclopentadiene	ug/Kg	390	U	3900	R	390	U
2,4,6-Trichlorophenol	ug/Kg	390	U	3900	R	390	U
2,4,5-Trichlorophenol	ug/Kg	390	U	3900	R	390	U
2-Chloronaphthalene	ug/Kg	390	U	3900	R	390	U
2-Nitroaniline	ug/Kg	390	U	3900	R	390	U

	StationID	G024SB007		G024SB007		G024SB009	
	SampleID	024SB00702 (3-5ft)		024SB00702DL (3-5ft)		024SB00901 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		1/28/2000	
	DateExtracted	12/20/1999		12/20/1999		1/29/2000	
	DateAnalyzed	12/23/1999		12/27/1999		2/2/2000	
	SDGNumber	EN033		EN033		41899	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	410	U	820	R	410	U
4-Methylphenol (p-Cresol)	ug/Kg	410	U	820	R	410	U
N-Nitrosodiphenylamine	ug/Kg	410	U	820	R	410	U
Phenol	ug/Kg	410	U	820	R	410	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	410	U	820	R	410	U
2-Chlorophenol	ug/Kg	410	U	820	R	410	U
1,3-Dichlorobenzene	ug/Kg	410	U	820	R	410	U
1,4-Dichlorobenzene	ug/Kg	410	U	820	R	410	U
Benzyl alcohol	ug/Kg	410	U	820	R	410	U
1,2-Dichlorobenzene	ug/Kg	410	U	820	R	410	U
2-Methylphenol (o-Cresol)	ug/Kg	410	U	820	R	410	U
N-Nitrosodi-n-propylamine	ug/Kg	410	U	820	R	410	U
Hexachloroethane	ug/Kg	410	U	820	R	410	U
Nitrobenzene	ug/Kg	410	U	820	R	410	U
Isophorone	ug/Kg	700	=	760	R	410	U
2-Nitrophenol	ug/Kg	410	U	820	R	410	U
2,4-Dimethylphenol	ug/Kg	410	U	820	R	410	U
bis(2-Chloroethoxy) Methane	ug/Kg	410	U	820	R	410	U
2,4-Dichlorophenol	ug/Kg	410	U	820	R	410	U
Benzoic acid	ug/Kg	2100	U	4100	R	50	J
Naphthalene	ug/Kg	4200	=	4700	R	410	U
4-Chloroaniline	ug/Kg	410	U	820	R	410	U
Hexachlorobutadiene	ug/Kg	410	U	820	R	410	U
4-Chloro-3-methylphenol	ug/Kg	410	U	820	R	410	U
2-Methylnaphthalene	ug/Kg	11000	=	11000	R	410	U
Hexachlorocyclopentadiene	ug/Kg	410	U	820	R	410	U
2,4,6-Trichlorophenol	ug/Kg	410	U	820	R	410	U
2,4,5-Trichlorophenol	ug/Kg	410	U	820	R	1000	U
2-Chloronaphthalene	ug/Kg	410	U	820	R	410	U
2-Nitroaniline	ug/Kg	410	U	820	R	1000	U

	StationID	G024SB009		G024SB010		G024SB010	
	SampleID	024SB00902 (3-5ft)		024SB01001 (0-1ft)		024SB01002 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	640	U	400	U	400	U
4-Methylphenol (p-Cresol)	ug/Kg	640	U	400	U	400	U
N-Nitrosodiphenylamine	ug/Kg	640	U	400	U	400	U
Phenol	ug/Kg	640	U	400	U	400	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	640	U	400	U	400	U
2-Chlorophenol	ug/Kg	640	U	400	U	400	U
1,3-Dichlorobenzene	ug/Kg	640	U	400	U	400	U
1,4-Dichlorobenzene	ug/Kg	640	U	400	U	400	U
Benzyl alcohol	ug/Kg	640	U	400	U	400	U
1,2-Dichlorobenzene	ug/Kg	640	U	400	U	400	U
2-Methylphenol (o-Cresol)	ug/Kg	640	U	400	U	400	U
N-Nitrosodi-n-propylamine	ug/Kg	640	U	400	U	400	U
Hexachloroethane	ug/Kg	640	U	400	U	400	U
Nitrobenzene	ug/Kg	640	U	400	U	400	U
Isophorone	ug/Kg	640	U	400	U	400	U
2-Nitrophenol	ug/Kg	640	U	400	U	400	U
2,4-Dimethylphenol	ug/Kg	640	U	400	U	400	U
bis(2-Chloroethoxy) Methane	ug/Kg	640	U	400	U	400	U
2,4-Dichlorophenol	ug/Kg	640	U	400	U	400	U
Benzoic acid	ug/Kg	80	J	36	J	51	J
Naphthalene	ug/Kg	640	U	400	U	400	U
4-Chloroaniline	ug/Kg	640	U	400	U	400	U
Hexachlorobutadiene	ug/Kg	640	U	400	U	400	U
4-Chloro-3-methylphenol	ug/Kg	640	U	400	U	400	U
2-Methylnaphthalene	ug/Kg	640	U	400	U	400	U
Hexachlorocyclopentadiene	ug/Kg	640	U	400	U	400	U
2,4,6-Trichlorophenol	ug/Kg	640	U	400	U	400	U
2,4,5-Trichlorophenol	ug/Kg	1600	U	1000	U	1000	U
2-Chloronaphthalene	ug/Kg	640	U	400	U	400	U
2-Nitroaniline	ug/Kg	1600	U	1000	U	1000	U

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)		FDSSH02802 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/18/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	360	U	3600	R	370	U
4-Methylphenol (p-Cresol)	ug/Kg	360	U	3600	R	370	U
N-Nitrosodiphenylamine	ug/Kg	360	U	3600	R	370	U
Phenol	ug/Kg	360	U	3600	R	370	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	360	U	3600	R	370	U
2-Chlorophenol	ug/Kg	360	U	3600	R	370	U
1,3-Dichlorobenzene	ug/Kg	360	U	3600	R	370	U
1,4-Dichlorobenzene	ug/Kg	360	U	3600	R	370	U
Benzyl alcohol	ug/Kg	360	U	3600	R	370	U
1,2-Dichlorobenzene	ug/Kg	360	U	3600	R	370	U
2-Methylphenol (o-Cresol)	ug/Kg	360	U	3600	R	370	U
N-Nitrosodi-n-propylamine	ug/Kg	360	U	3600	R	370	U
Hexachloroethane	ug/Kg	360	U	3600	R	370	U
Nitrobenzene	ug/Kg	360	U	3600	R	370	U
Isophorone	ug/Kg	360	U	3600	R	370	U
2-Nitrophenol	ug/Kg	360	U	3600	R	370	U
2,4-Dimethylphenol	ug/Kg	360	U	3600	R	370	U
bis(2-Chloroethoxy) Methane	ug/Kg	360	U	3600	R	370	U
2,4-Dichlorophenol	ug/Kg	360	U	3600	R	370	U
Benzoic acid	ug/Kg	360	U	3600	R	370	U
Naphthalene	ug/Kg	3600	=	3600	R	1300	=
4-Chloroaniline	ug/Kg	360	U	3600	R	370	U
Hexachlorobutadiene	ug/Kg	360	U	3600	R	370	U
4-Chloro-3-methylphenol	ug/Kg	360	U	3600	R	370	U
2-Methylnaphthalene	ug/Kg	16000	=	16000	R	27000	=
Hexachlorocyclopentadiene	ug/Kg	360	U	3600	R	370	U
2,4,6-Trichlorophenol	ug/Kg	360	U	3600	R	370	U
2,4,5-Trichlorophenol	ug/Kg	890	U	8900	R	930	U
2-Chloronaphthalene	ug/Kg	360	U	3600	R	370	U
2-Nitroaniline	ug/Kg	890	U	8900	R	930	U

	StationID	GFDSSH028		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02802DL (3-5ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/13/1999		8/19/1999	
	SDGNumber	39715		39715		39715	
Parameter	Units						
2,2'-Oxybis(1-chloro)propane	ug/Kg	3700	R	410	U	1600	R
4-Methylphenol (p-Cresol)	ug/Kg	3700	R	410	U	1600	R
N-Nitrosodiphenylamine	ug/Kg	3700	R	410	U	1600	R
Phenol	ug/Kg	3700	R	410	U	1600	R
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	3700	R	410	U	1600	R
2-Chlorophenol	ug/Kg	3700	R	410	U	1600	R
1,3-Dichlorobenzene	ug/Kg	3700	R	410	U	1600	R
1,4-Dichlorobenzene	ug/Kg	3700	R	410	U	1600	R
Benzyl alcohol	ug/Kg	3700	R	410	U	1600	R
1,2-Dichlorobenzene	ug/Kg	3700	R	410	U	1600	R
2-Methylphenol (o-Cresol)	ug/Kg	3700	R	410	U	1600	R
N-Nitrosodi-n-propylamine	ug/Kg	3700	R	410	U	1600	R
Hexachloroethane	ug/Kg	3700	R	410	U	1600	R
Nitrobenzene	ug/Kg	3700	R	410	U	1600	R
Isophorone	ug/Kg	3700	R	410	U	1600	R
2-Nitrophenol	ug/Kg	3700	R	410	U	1600	R
2,4-Dimethylphenol	ug/Kg	3700	R	410	U	1600	R
bis(2-Chloroethoxy) Methane	ug/Kg	3700	R	410	U	1600	R
2,4-Dichlorophenol	ug/Kg	3700	R	410	U	1600	R
Benzoic acid	ug/Kg	3700	R	410	U	1600	R
Naphthalene	ug/Kg	1500	R	410	U	1600	R
4-Chloroaniline	ug/Kg	3700	R	410	U	1600	R
Hexachlorobutadiene	ug/Kg	3700	R	410	U	1600	R
4-Chloro-3-methylphenol	ug/Kg	3700	R	410	U	1600	R
2-Methylnaphthalene	ug/Kg	27000	R	410	U	1600	R
Hexachlorocyclopentadiene	ug/Kg	3700	R	410	U	1600	R
2,4,6-Trichlorophenol	ug/Kg	3700	R	410	U	1600	R
2,4,5-Trichlorophenol	ug/Kg	9300	R	1000	U	4100	R
2-Chloronaphthalene	ug/Kg	3700	R	410	U	1600	R
2-Nitroaniline	ug/Kg	9300	R	1000	U	4100	R

	StationID	GFDSSH029		GFDSSH030		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)	
	DateCollected	7/29/1999		7/28/1999		7/28/1999	
	DateExtracted	8/2/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	420	U	390	U	780	R
4-Methylphenol (p-Cresol)	ug/Kg	420	U	390	U	780	R
N-Nitrosodiphenylamine	ug/Kg	420	U	390	U	780	R
Phenol	ug/Kg	420	U	390	U	780	R
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	420	U	390	U	780	R
2-Chlorophenol	ug/Kg	420	U	390	U	780	R
1,3-Dichlorobenzene	ug/Kg	420	U	390	U	780	R
1,4-Dichlorobenzene	ug/Kg	420	U	390	U	780	R
Benzyl alcohol	ug/Kg	420	U	390	U	780	R
1,2-Dichlorobenzene	ug/Kg	420	U	390	U	780	R
2-Methylphenol (o-Cresol)	ug/Kg	420	U	390	U	780	R
N-Nitrosodi-n-propylamine	ug/Kg	420	U	390	U	780	R
Hexachloroethane	ug/Kg	420	U	390	U	780	R
Nitrobenzene	ug/Kg	420	U	390	U	780	R
Isophorone	ug/Kg	420	U	390	U	780	R
2-Nitrophenol	ug/Kg	420	U	390	U	780	R
2,4-Dimethylphenol	ug/Kg	420	U	390	U	780	R
bis(2-Chloroethoxy) Methane	ug/Kg	420	U	390	U	780	R
2,4-Dichlorophenol	ug/Kg	420	U	390	U	780	R
Benzoic acid	ug/Kg	420	U	390	U	780	R
Naphthalene	ug/Kg	420	U	390	U	120	R
4-Chloroaniline	ug/Kg	420	U	390	U	780	R
Hexachlorobutadiene	ug/Kg	420	U	390	U	780	R
4-Chloro-3-methylphenol	ug/Kg	420	U	390	U	780	R
2-Methylnaphthalene	ug/Kg	420	U	390	U	780	R
Hexachlorocyclopentadiene	ug/Kg	420	U	390	U	780	R
2,4,6-Trichlorophenol	ug/Kg	420	U	390	U	780	R
2,4,5-Trichlorophenol	ug/Kg	1000	U	970	U	1900	R
2-Chloronaphthalene	ug/Kg	420	U	390	U	780	R
2-Nitroaniline	ug/Kg	1000	U	970	U	1900	R

	StationID	GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
2,2'-Oxybis(1-chloro)propane	ug/Kg	370	U	340	U	380	U
4-Methylphenol (p-Cresol)	ug/Kg	370	U	340	U	380	U
N-Nitrosodiphenylamine	ug/Kg	370	U	340	U	380	U
Phenol	ug/Kg	370	U	340	U	380	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	370	U	340	U	380	U
2-Chlorophenol	ug/Kg	370	U	340	U	380	U
1,3-Dichlorobenzene	ug/Kg	370	U	340	U	380	U
1,4-Dichlorobenzene	ug/Kg	370	U	340	U	380	U
Benzyl alcohol	ug/Kg	370	U	340	U	380	U
1,2-Dichlorobenzene	ug/Kg	370	U	340	U	380	U
2-Methylphenol (o-Cresol)	ug/Kg	370	U	340	U	380	U
N-Nitrosodi-n-propylamine	ug/Kg	370	U	340	U	380	U
Hexachloroethane	ug/Kg	370	U	340	U	380	U
Nitrobenzene	ug/Kg	370	U	340	U	380	U
Isophorone	ug/Kg	370	U	340	U	380	U
2-Nitrophenol	ug/Kg	370	U	340	U	380	U
2,4-Dimethylphenol	ug/Kg	370	U	340	U	380	U
bis(2-Chloroethoxy) Methane	ug/Kg	370	U	340	U	380	U
2,4-Dichlorophenol	ug/Kg	370	U	340	U	380	U
Benzoic acid	ug/Kg	370	U	340	U	380	U
Naphthalene	ug/Kg	370	U	340	U	380	U
4-Chloroaniline	ug/Kg	370	U	340	U	380	U
Hexachlorobutadiene	ug/Kg	370	U	340	U	380	U
4-Chloro-3-methylphenol	ug/Kg	370	U	340	U	380	U
2-Methylnaphthalene	ug/Kg	370	U	340	U	380	U
Hexachlorocyclopentadiene	ug/Kg	370	U	340	U	380	U
2,4,6-Trichlorophenol	ug/Kg	370	U	340	U	380	U
2,4,5-Trichlorophenol	ug/Kg	930	U	850	U	960	U
2-Chloronaphthalene	ug/Kg	370	U	340	U	380	U
2-Nitroaniline	ug/Kg	930	U	850	U	960	U

	StationID	G024SB001		G024SB001		G024SB002	
	SampleID	024SB00101 (0-1ft)		024SB00102 (3-5ft)		024SB00201 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	870	U	950	U	920	U
Dimethyl Phthalate	ug/Kg	350	U	380	U	370	U
2,6-Dinitrotoluene	ug/Kg	350	U	380	U	370	U
Acenaphthylene	ug/Kg	350	U	380	U	370	U
Acenaphthene	ug/Kg	350	U	380	U	370	U
2,4-Dinitrophenol	ug/Kg	870	U	950	U	920	U
Dibenzofuran	ug/Kg	350	U	380	U	370	U
2,4-Dinitrotoluene	ug/Kg	350	U	380	U	370	U
Diethyl Phthalate	ug/Kg	350	U	380	U	370	U
4-Nitrophenol	ug/Kg	870	U	950	U	920	U
Fluorene	ug/Kg	350	U	380	U	370	U
4-Chlorophenyl Phenyl Ether	ug/Kg	350	U	380	U	370	U
4,6-Dinitro-2-methylphenol	ug/Kg	870	U	950	U	920	U
4-Nitroaniline	ug/Kg	870	U	950	U	920	U
4-Bromophenyl Phenyl Ether	ug/Kg	350	U	380	U	370	U
Hexachlorobenzene	ug/Kg	350	U	380	U	370	U
Pentachlorophenol	ug/Kg	870	U	950	U	920	U
Phenanthrene	ug/Kg	350	U	380	U	26	J
Anthracene	ug/Kg	350	U	380	U	370	U
Di-n-butyl Phthalate	ug/Kg	20	J	380	U	370	U
Flouranthene	ug/Kg	36	J	22	J	52	J
Pyrene	ug/Kg	27	J	380	U	46	J
Benzyl Butyl Phthalate	ug/Kg	350	U	380	U	370	U
Benzo(a)Anthracene	ug/Kg	20	J	380	U	31	J
3,3'-Dichlorobenzidine	ug/Kg	350	U	380	U	370	U
Chrysene	ug/Kg	350	U	380	U	44	J
bis(2-Ethylhexyl) Phthalate	ug/Kg	350	U	380	U	370	U
Di-n-octylphthalate	ug/Kg	350	U	380	U	370	U
Benzo(b)Fluoranthene	ug/Kg	350	U	380	U	39	J
Benzo(k)Fluoranthene	ug/Kg	350	U	380	U	28	J

	StationID	G024SB002		G024SB003		G024SB003	
	SampleID	024SB00202 (3-5ft)		024SB00301 (0-1ft)		024SB00302 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	1100	U	1000	U	980	U
Dimethyl Phthalate	ug/Kg	430	U	400	U	390	U
2,6-Dinitrotoluene	ug/Kg	430	U	400	U	390	U
Acenaphthylene	ug/Kg	430	U	400	U	390	U
Acenaphthene	ug/Kg	430	U	400	U	390	U
2,4-Dinitrophenol	ug/Kg	1100	U	1000	U	980	U
Dibenzofuran	ug/Kg	430	U	400	U	390	U
2,4-Dinitrotoluene	ug/Kg	430	U	400	U	390	U
Diethyl Phthalate	ug/Kg	430	U	400	U	390	U
4-Nitrophenol	ug/Kg	1100	U	1000	U	980	U
Fluorene	ug/Kg	430	U	400	U	390	U
4-Chlorophenyl Phenyl Ether	ug/Kg	430	U	400	U	390	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	1000	U	980	U
4-Nitroaniline	ug/Kg	1100	U	1000	U	980	U
4-Bromophenyl Phenyl Ether	ug/Kg	430	U	400	U	390	U
Hexachlorobenzene	ug/Kg	430	U	400	U	390	U
Pentachlorophenol	ug/Kg	1100	U	1000	U	980	U
Phenanthrene	ug/Kg	430	U	56	J	390	U
Anthracene	ug/Kg	430	U	400	U	390	U
Di-n-butyl Phthalate	ug/Kg	430	U	400	U	390	U
Flouranthene	ug/Kg	430	U	110	J	390	U
Pyrene	ug/Kg	430	U	85	J	390	U
Benzyl Butyl Phthalate	ug/Kg	430	U	400	U	390	U
Benzo(a)Anthracene	ug/Kg	430	U	69	J	390	U
3,3'-Dichlorobenzidine	ug/Kg	430	U	400	U	390	U
Chrysene	ug/Kg	430	U	72	J	390	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	430	U	400	U	390	U
Di-n-octylphthalate	ug/Kg	430	U	400	U	390	U
Benzo(b)Fluoranthene	ug/Kg	430	U	85	J	390	U
Benzo(k)Fluoranthene	ug/Kg	430	U	77	J	390	U

	StationID	G024SB004		G024SB004		G024SB005	
	SampleID	024SB00401 (0-1ft)		024SB00402 (3-5ft)		024SB00501 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		12/15/1999	
	DateExtracted	1/29/2000		1/29/2000		12/20/1999	
	DateAnalyzed	2/2/2000		2/2/2000		12/23/1999	
	SDGNumber	41899		41899		EN033	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	1000	U	1300	U	360	U
Dimethyl Phthalate	ug/Kg	420	U	520	U	360	U
2,6-Dinitrotoluene	ug/Kg	420	U	520	U	360	U
Acenaphthylene	ug/Kg	21	J	38	J	360	U
Acenaphthene	ug/Kg	420	U	520	U	360	U
2,4-Dinitrophenol	ug/Kg	1000	U	1300	U	720	U
Dibenzofuran	ug/Kg	420	U	27	J	360	U
2,4-Dinitrotoluene	ug/Kg	420	U	520	U	360	U
Diethyl Phthalate	ug/Kg	420	U	520	U	360	U
4-Nitrophenol	ug/Kg	1000	U	1300	U	720	U
Fluorene	ug/Kg	420	U	520	U	360	U
4-Chlorophenyl Phenyl Ether	ug/Kg	420	U	520	U	360	U
4,6-Dinitro-2-methylphenol	ug/Kg	1000	U	1300	U	720	U
4-Nitroaniline	ug/Kg	1000	U	1300	U	360	U
4-Bromophenyl Phenyl Ether	ug/Kg	420	U	520	U	360	U
Hexachlorobenzene	ug/Kg	420	U	520	U	360	U
Pentachlorophenol	ug/Kg	1000	U	1300	U	720	U
Phenanthrene	ug/Kg	130	J	520	U	360	U
Anthracene	ug/Kg	420	U	520	U	360	U
Di-n-butyl Phthalate	ug/Kg	29	J	36	J	360	U
Flouranthene	ug/Kg	160	J	78	J	360	U
Pyrene	ug/Kg	130	J	79	J	360	U
Benzyl Butyl Phthalate	ug/Kg	420	U	520	U	360	U
Benzo(a)Anthracene	ug/Kg	71	J	75	J	360	U
3,3'-Dichlorobenzidine	ug/Kg	420	U	520	U	720	U
Chrysene	ug/Kg	110	J	86	J	360	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	420	U	520	U	360	U
Di-n-octylphthalate	ug/Kg	420	U	520	U	360	U
Benzo(b)Fluoranthene	ug/Kg	100	J	95	J	360	U
Benzo(k)Fluoranthene	ug/Kg	94	J	75	J	360	U

	StationID	G024SB005		G024SB005		G024SB006	
	SampleID	024SB00502 (3-5ft)		024SB00502DL (3-5ft)		024CB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	400	U	800	R	390	U
Dimethyl Phthalate	ug/Kg	400	U	800	R	390	U
2,6-Dinitrotoluene	ug/Kg	400	U	800	R	390	U
Acenaphthylene	ug/Kg	400	U	800	R	390	U
Acenaphthene	ug/Kg	400	U	800	R	370	J
2,4-Dinitrophenol	ug/Kg	800	U	1600	R	780	U
Dibenzofuran	ug/Kg	460	=	410	R	360	J
2,4-Dinitrotoluene	ug/Kg	400	U	800	R	390	U
Diethyl Phthalate	ug/Kg	400	U	800	R	390	U
4-Nitrophenol	ug/Kg	800	U	1600	R	780	U
Fluorene	ug/Kg	400	U	800	R	660	J
4-Chlorophenyl Phenyl Ether	ug/Kg	400	U	800	R	390	U
4,6-Dinitro-2-methylphenol	ug/Kg	800	U	1600	R	780	U
4-Nitroaniline	ug/Kg	400	U	800	R	390	U
4-Bromophenyl Phenyl Ether	ug/Kg	400	U	800	R	390	U
Hexachlorobenzene	ug/Kg	400	U	800	R	390	U
Pentachlorophenol	ug/Kg	800	U	1600	R	780	U
Phenanthrene	ug/Kg	2000	=	2000	R	3000	J
Anthracene	ug/Kg	120	J	800	R	720	J
Di-n-butyl Phthalate	ug/Kg	400	U	800	R	390	U
Flouranthene	ug/Kg	400	U	800	R	2500	J
Pyrene	ug/Kg	90	J	800	R	1800	J
Benzyl Butyl Phthalate	ug/Kg	400	U	800	R	390	U
Benzo(a)Anthracene	ug/Kg	400	U	800	R	960	J
3,3'-Dichlorobenzidine	ug/Kg	800	U	1600	R	780	U
Chrysene	ug/Kg	400	U	800	R	970	J
bis(2-Ethylhexyl) Phthalate	ug/Kg	400	U	800	R	200	J
Di-n-octylphthalate	ug/Kg	400	U	800	R	390	U
Benzo(b)Fluoranthene	ug/Kg	400	U	800	R	470	J
Benzo(k)Fluoranthene	ug/Kg	400	U	800	R	750	J

	StationID	G024SB006		G024SB006		G024SB006	
	SampleID	024CB00602 (3-5ft)		024CB00602DL (3-5ft)		024SB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	380	U	3800	R	390	U
Dimethyl Phthalate	ug/Kg	380	U	3800	R	390	U
2,6-Dinitrotoluene	ug/Kg	380	U	3800	R	390	U
Acenaphthylene	ug/Kg	380	U	3800	R	390	U
Acenaphthene	ug/Kg	380	U	3800	R	210	J
2,4-Dinitrophenol	ug/Kg	770	U	7700	R	780	U
Dibenzofuran	ug/Kg	1100	=	1100	R	290	J
2,4-Dinitrotoluene	ug/Kg	380	U	3800	R	390	U
Diethyl Phthalate	ug/Kg	380	U	3800	R	390	U
4-Nitrophenol	ug/Kg	770	U	7700	R	780	U
Fluorene	ug/Kg	2000	=	2700	R	390	UJ
4-Chlorophenyl Phenyl Ether	ug/Kg	380	U	3800	R	390	U
4,6-Dinitro-2-methylphenol	ug/Kg	770	U	7700	R	780	U
4-Nitroaniline	ug/Kg	380	U	3800	R	390	U
4-Bromophenyl Phenyl Ether	ug/Kg	380	U	3800	R	390	U
Hexachlorobenzene	ug/Kg	380	U	3800	R	390	U
Pentachlorophenol	ug/Kg	770	U	7700	R	780	U
Phenanthrene	ug/Kg	4600	=	4400	R	1100	J
Anthracene	ug/Kg	260	J	3800	R	79	J
Di-n-butyl Phthalate	ug/Kg	380	U	3800	R	390	U
Flouranthene	ug/Kg	380	U	3800	R	390	UJ
Pyrene	ug/Kg	230	J	3800	R	390	UJ
Benzyl Butyl Phthalate	ug/Kg	380	U	3800	R	390	U
Benzo(a)Anthracene	ug/Kg	380	U	3800	R	390	UJ
3,3'-Dichlorobenzidine	ug/Kg	770	U	7700	R	780	U
Chrysene	ug/Kg	380	U	3800	R	390	UJ
bis(2-Ethylhexyl) Phthalate	ug/Kg	380	U	3800	R	390	U
Di-n-octylphthalate	ug/Kg	380	U	3800	R	390	U
Benzo(b)Fluoranthene	ug/Kg	380	U	3800	R	390	UJ
Benzo(k)Fluoranthene	ug/Kg	380	U	3800	R	390	UJ

	StationID	G024SB006		G024SB006		G024SB007	
	SampleID	024SB00602 (3-5ft)		024SB00602DL (3-5ft)		024SB00701 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	390	U	3900	R	390	U
Dimethyl Phthalate	ug/Kg	390	U	3900	R	390	U
2,6-Dinitrotoluene	ug/Kg	390	U	3900	R	390	U
Acenaphthylene	ug/Kg	390	U	3900	R	390	U
Acenaphthene	ug/Kg	390	U	3900	R	390	U
2,4-Dinitrophenol	ug/Kg	780	U	7800	R	780	U
Dibenzofuran	ug/Kg	1400	=	1200	R	390	U
2,4-Dinitrotoluene	ug/Kg	390	U	3900	R	390	U
Diethyl Phthalate	ug/Kg	390	U	3900	R	390	U
4-Nitrophenol	ug/Kg	780	U	7800	R	780	U
Fluorene	ug/Kg	2400	=	3400	R	390	U
4-Chlorophenyl Phenyl Ether	ug/Kg	390	U	3900	R	390	U
4,6-Dinitro-2-methylphenol	ug/Kg	780	U	7800	R	780	U
4-Nitroaniline	ug/Kg	390	U	3900	R	390	U
4-Bromophenyl Phenyl Ether	ug/Kg	390	U	3900	R	390	U
Hexachlorobenzene	ug/Kg	390	U	3900	R	390	U
Pentachlorophenol	ug/Kg	780	U	7800	R	780	U
Phenanthrene	ug/Kg	5500	=	5500	R	390	U
Anthracene	ug/Kg	270	J	3900	R	390	U
Di-n-butyl Phthalate	ug/Kg	390	U	3900	R	390	U
Flouranthene	ug/Kg	390	U	3900	R	390	U
Pyrene	ug/Kg	250	J	3900	R	120	J
Benzyl Butyl Phthalate	ug/Kg	390	U	3900	R	390	U
Benzo(a)Anthracene	ug/Kg	390	U	3900	R	100	J
3,3'-Dichlorobenzidine	ug/Kg	780	U	7800	R	780	U
Chrysene	ug/Kg	390	U	3900	R	200	J
bis(2-Ethylhexyl) Phthalate	ug/Kg	390	U	3900	R	390	U
Di-n-octylphthalate	ug/Kg	390	U	3900	R	390	U
Benzo(b)Fluoranthene	ug/Kg	390	U	3900	R	260	J
Benzo(k)Fluoranthene	ug/Kg	390	U	3900	R	270	J

	StationID	G024SB007		G024SB007		G024SB009	
	SampleID	024SB00702 (3-5ft)		024SB00702DL (3-5ft)		024SB00901 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		1/28/2000	
	DateExtracted	12/20/1999		12/20/1999		1/29/2000	
	DateAnalyzed	12/23/1999		12/27/1999		2/2/2000	
	SDGNumber	EN033		EN033		41899	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	410	U	820	R	1000	U
Dimethyl Phthalate	ug/Kg	410	U	820	R	440	=
2,6-Dinitrotoluene	ug/Kg	410	U	820	R	410	U
Acenaphthylene	ug/Kg	410	U	820	R	410	U
Acenaphthene	ug/Kg	410	U	820	R	410	U
2,4-Dinitrophenol	ug/Kg	820	U	1600	R	1000	U
Dibenzofuran	ug/Kg	380	J	410	R	410	U
2,4-Dinitrotoluene	ug/Kg	410	U	820	R	410	U
Diethyl Phthalate	ug/Kg	410	U	820	R	410	U
4-Nitrophenol	ug/Kg	820	U	1600	R	1000	U
Fluorene	ug/Kg	510	=	610	R	410	U
4-Chlorophenyl Phenyl Ether	ug/Kg	410	U	820	R	410	U
4,6-Dinitro-2-methylphenol	ug/Kg	820	U	1600	R	1000	U
4-Nitroaniline	ug/Kg	410	U	820	R	1000	U
4-Bromophenyl Phenyl Ether	ug/Kg	410	U	820	R	410	U
Hexachlorobenzene	ug/Kg	410	U	820	R	410	U
Pentachlorophenol	ug/Kg	820	U	1600	R	1000	U
Phenanthrene	ug/Kg	890	=	960	R	38	J
Anthracene	ug/Kg	410	U	820	R	410	U
Di-n-butyl Phthalate	ug/Kg	410	U	820	R	32	J
Flouranthene	ug/Kg	410	U	820	R	88	J
Pyrene	ug/Kg	110	J	820	R	74	J
Benzyl Butyl Phthalate	ug/Kg	410	U	820	R	410	U
Benzo(a)Anthracene	ug/Kg	410	U	820	R	50	J
3,3'-Dichlorobenzidine	ug/Kg	820	U	1600	R	410	U
Chrysene	ug/Kg	410	U	820	R	61	J
bis(2-Ethylhexyl) Phthalate	ug/Kg	410	U	820	R	410	U
Di-n-octylphthalate	ug/Kg	410	U	820	R	410	U
Benzo(b)Fluoranthene	ug/Kg	410	UJ	820	R	51	J
Benzo(k)Fluoranthene	ug/Kg	410	UJ	820	R	58	J

	StationID	G024SB009		G024SB010		G024SB010	
	SampleID	024SB00902 (3-5ft)		024SB01001 (0-1ft)		024SB01002 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	1600	U	1000	U	1000	U
Dimethyl Phthalate	ug/Kg	640	U	400	U	400	U
2,6-Dinitrotoluene	ug/Kg	640	U	400	U	400	U
Acenaphthylene	ug/Kg	640	U	400	U	400	U
Acenaphthene	ug/Kg	640	U	400	U	400	U
2,4-Dinitrophenol	ug/Kg	1600	U	1000	U	1000	U
Dibenzofuran	ug/Kg	640	U	400	U	400	U
2,4-Dinitrotoluene	ug/Kg	640	U	400	U	400	U
Diethyl Phthalate	ug/Kg	640	U	400	U	400	U
4-Nitrophenol	ug/Kg	1600	U	1000	U	1000	U
Fluorene	ug/Kg	640	U	400	U	400	U
4-Chlorophenyl Phenyl Ether	ug/Kg	640	U	400	U	400	U
4,6-Dinitro-2-methylphenol	ug/Kg	1600	U	1000	U	1000	U
4-Nitroaniline	ug/Kg	1600	U	1000	U	1000	U
4-Bromophenyl Phenyl Ether	ug/Kg	640	U	400	U	400	U
Hexachlorobenzene	ug/Kg	640	U	400	U	400	U
Pentachlorophenol	ug/Kg	1600	U	1000	U	1000	U
Phenanthrene	ug/Kg	33	J	21	J	400	U
Anthracene	ug/Kg	640	U	400	U	400	U
Di-n-butyl Phthalate	ug/Kg	50	J	23	J	400	U
Flouranthene	ug/Kg	150	J	57	J	400	U
Pyrene	ug/Kg	130	J	43	J	400	U
Benzyl Butyl Phthalate	ug/Kg	640	U	400	U	400	U
Benzo(a)Anthracene	ug/Kg	90	J	36	J	400	U
3,3'-Dichlorobenzidine	ug/Kg	640	U	400	U	400	U
Chrysene	ug/Kg	83	J	38	J	400	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	640	U	400	U	400	U
Di-n-octylphthalate	ug/Kg	640	U	400	U	400	U
Benzo(b)Fluoranthene	ug/Kg	82	J	35	J	400	U
Benzo(k)Fluoranthene	ug/Kg	68	J	30	J	400	U

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)		FDSSH02802 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/18/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	890	U	8900	R	930	U
Dimethyl Phthalate	ug/Kg	360	U	3600	R	370	U
2,6-Dinitrotoluene	ug/Kg	360	U	3600	R	370	U
Acenaphthylene	ug/Kg	360	U	3600	R	370	U
Acenaphthene	ug/Kg	360	U	640	R	980	=
2,4-Dinitrophenol	ug/Kg	890	U	8900	R	930	U
Dibenzofuran	ug/Kg	360	U	620	R	370	U
2,4-Dinitrotoluene	ug/Kg	360	U	3600	R	370	U
Diethyl Phthalate	ug/Kg	360	U	3600	R	370	U
4-Nitrophenol	ug/Kg	890	U	8900	R	930	U
Fluorene	ug/Kg	950	=	1200	R	2000	=
4-Chlorophenyl Phenyl Ether	ug/Kg	360	U	3600	R	370	U
4,6-Dinitro-2-methylphenol	ug/Kg	890	U	8900	R	930	U
4-Nitroaniline	ug/Kg	890	U	8900	R	930	U
4-Bromophenyl Phenyl Ether	ug/Kg	360	U	3600	R	370	U
Hexachlorobenzene	ug/Kg	360	U	3600	R	370	U
Pentachlorophenol	ug/Kg	890	U	8900	R	930	U
Phenanthrene	ug/Kg	1800	=	2100	R	4400	=
Anthracene	ug/Kg	360	U	3600	R	370	U
Di-n-butyl Phthalate	ug/Kg	360	U	3600	R	370	U
Flouranthene	ug/Kg	120	J	3600	R	370	U
Pyrene	ug/Kg	130	J	190	R	210	J
Benzyl Butyl Phthalate	ug/Kg	360	U	3600	R	370	U
Benzo(a)Anthracene	ug/Kg	35	J	3600	R	24	J
3,3'-Dichlorobenzidine	ug/Kg	360	U	3600	R	370	U
Chrysene	ug/Kg	75	J	3600	R	47	J
bis(2-Ethylhexyl) Phthalate	ug/Kg	140	J	3600	R	24	J
Di-n-octylphthalate	ug/Kg	360	U	3600	R	370	U
Benzo(b)Fluoranthene	ug/Kg	26	J	3600	R	370	U
Benzo(k)Fluoranthene	ug/Kg	360	U	3600	R	370	U

	StationID	GFDSSH028		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02802DL (3-5ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/13/1999		8/19/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
3-Nitroaniline	ug/Kg	9300	R	1000	U	4100	R
Dimethyl Phthalate	ug/Kg	3700	R	410	U	1600	R
2,6-Dinitrotoluene	ug/Kg	3700	R	410	U	1600	R
Acenaphthylene	ug/Kg	3700	R	410	U	1600	R
Acenaphthene	ug/Kg	1300	R	190	J	150	R
2,4-Dinitrophenol	ug/Kg	9300	R	1000	U	4100	R
Dibenzofuran	ug/Kg	770	R	64	J	1600	R
2,4-Dinitrotoluene	ug/Kg	3700	R	410	U	1600	R
Diethyl Phthalate	ug/Kg	3700	R	410	U	1600	R
4-Nitrophenol	ug/Kg	9300	R	1000	U	4100	R
Fluorene	ug/Kg	2400	R	130	J	84	R
4-Chlorophenyl Phenyl Ether	ug/Kg	3700	R	410	U	1600	R
4,6-Dinitro-2-methylphenol	ug/Kg	9300	R	1000	U	4100	R
4-Nitroaniline	ug/Kg	9300	R	1000	U	4100	R
4-Bromophenyl Phenyl Ether	ug/Kg	3700	R	410	U	1600	R
Hexachlorobenzene	ug/Kg	3700	R	410	U	1600	R
Pentachlorophenol	ug/Kg	9300	R	1000	U	4100	R
Phenanthrene	ug/Kg	4400	R	3000	=	2500	R
Anthracene	ug/Kg	3700	R	920	=	560	R
Di-n-butyl Phthalate	ug/Kg	3700	R	410	U	1600	R
Flouranthene	ug/Kg	3700	R	5700	=	5700	R
Pyrene	ug/Kg	250	R	5400	=	5400	R
Benzyl Butyl Phthalate	ug/Kg	3700	R	410	U	1600	R
Benzo(a)Anthracene	ug/Kg	3700	R	2900	=	2900	R
3,3'-Dichlorobenzidine	ug/Kg	3700	R	410	U	1600	R
Chrysene	ug/Kg	3700	R	2700	=	2700	R
bis(2-Ethylhexyl) Phthalate	ug/Kg	3700	R	410	U	170	R
Di-n-octylphthalate	ug/Kg	3700	R	410	U	1600	R
Benzo(b)Fluoranthene	ug/Kg	3700	R	2200	=	2200	R
Benzo(k)Fluoranthene	ug/Kg	3700	R	2000	=	2000	R

	StationID	GFDSSH029		GFDSSH030		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)	
	DateCollected	7/29/1999		7/28/1999		7/28/1999	
	DateExtracted	8/2/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	Units						
3-Nitroaniline	ug/Kg	1000	U	970	U	1900	R
Dimethyl Phthalate	ug/Kg	420	U	390	U	780	R
2,6-Dinitrotoluene	ug/Kg	420	U	390	U	780	R
Acenaphthylene	ug/Kg	420	U	390	U	130	R
Acenaphthene	ug/Kg	420	U	390	U	170	R
2,4-Dinitrophenol	ug/Kg	1000	U	970	U	1900	R
Dibenzofuran	ug/Kg	420	U	390	U	780	R
2,4-Dinitrotoluene	ug/Kg	420	U	390	U	780	R
Diethyl Phthalate	ug/Kg	420	U	390	U	780	R
4-Nitrophenol	ug/Kg	1000	U	970	U	1900	R
Fluorene	ug/Kg	420	U	190	J	210	R
4-Chlorophenyl Phenyl Ether	ug/Kg	420	U	390	U	780	R
4,6-Dinitro-2-methylphenol	ug/Kg	1000	U	970	U	1900	R
4-Nitroaniline	ug/Kg	1000	U	970	U	1900	R
4-Bromophenyl Phenyl Ether	ug/Kg	420	U	390	U	780	R
Hexachlorobenzene	ug/Kg	420	U	390	U	780	R
Pentachlorophenol	ug/Kg	1000	U	970	U	1900	R
Phenanthrene	ug/Kg	420	U	1200	=	1400	R
Anthracene	ug/Kg	420	U	600	=	630	R
Di-n-butyl Phthalate	ug/Kg	420	U	390	U	780	R
Flouranthene	ug/Kg	37	J	4200	=	4200	R
Pyrene	ug/Kg	29	J	3100	=	3100	R
Benzyl Butyl Phthalate	ug/Kg	420	U	390	U	780	R
Benzo(a)Anthracene	ug/Kg	22	J	2200	=	2200	R
3,3'-Dichlorobenzidine	ug/Kg	420	U	390	U	780	R
Chrysene	ug/Kg	23	J	2200	=	2100	R
bis(2-Ethylhexyl) Phthalate	ug/Kg	420	U	44	J	780	R
Di-n-octylphthalate	ug/Kg	420	U	390	U	780	R
Benzo(b)Fluoranthene	ug/Kg	35	J	1900	=	1900	R
Benzo(k)Fluoranthene	ug/Kg	420	U	1600	=	2100	R

	StationID	GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	Units						
3-Nitroaniline	ug/Kg	930	U	850	U	960	U
Dimethyl Phthalate	ug/Kg	370	U	340	U	380	U
2,6-Dinitrotoluene	ug/Kg	370	U	340	U	380	U
Acenaphthylene	ug/Kg	370	U	340	U	380	U
Acenaphthene	ug/Kg	370	U	340	U	380	U
2,4-Dinitrophenol	ug/Kg	930	U	850	U	960	U
Dibenzofuran	ug/Kg	370	U	340	U	380	U
2,4-Dinitrotoluene	ug/Kg	370	U	340	U	380	U
Diethyl Phthalate	ug/Kg	370	U	340	U	380	U
4-Nitrophenol	ug/Kg	930	U	850	U	960	U
Fluorene	ug/Kg	500	=	340	U	380	U
4-Chlorophenyl Phenyl Ether	ug/Kg	370	U	340	U	380	U
4,6-Dinitro-2-methylphenol	ug/Kg	930	U	850	U	960	U
4-Nitroaniline	ug/Kg	930	U	850	U	960	U
4-Bromophenyl Phenyl Ether	ug/Kg	370	U	340	U	380	U
Hexachlorobenzene	ug/Kg	370	U	340	U	380	U
Pentachlorophenol	ug/Kg	930	U	850	U	960	U
Phenanthrene	ug/Kg	290	J	340	U	380	U
Anthracene	ug/Kg	370	U	340	U	380	U
Di-n-butyl Phthalate	ug/Kg	370	U	17	J	380	U
Flouranthene	ug/Kg	76	J	99	J	380	U
Pyrene	ug/Kg	79	J	94	J	380	U
Benzyl Butyl Phthalate	ug/Kg	370	U	340	U	380	U
Benzo(a)Anthracene	ug/Kg	23	J	82	J	380	U
3,3'-Dichlorobenzidine	ug/Kg	370	U	340	U	380	U
Chrysene	ug/Kg	26	J	110	J	380	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	30	J	340	U	380	U
Di-n-octylphthalate	ug/Kg	370	U	340	U	380	U
Benzo(b)Fluoranthene	ug/Kg	370	U	140	J	380	U
Benzo(k)Fluoranthene	ug/Kg	370	U	73	J	380	U

	StationID	G024SB001		G024SB001		G024SB002	
	SampleID	024SB00101 (0-1ft)		024SB00102 (3-5ft)		024SB00201 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	350	U	380	U	35	J
Indeno(1,2,3-c,d)pyrene	ug/Kg	350	U	380	U	21	J
Dibenz(a,h)anthracene	ug/Kg	350	U	380	U	370	U
Benzo(g,h,i)Perylene	ug/Kg	350	U	380	U	22	J

	StationID	G024SB002		G024SB003		G024SB003	
	SampleID	024SB00202 (3-5ft)		024SB00301 (0-1ft)		024SB00302 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	430	U	87	J	390	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	430	U	55	J	390	U
Dibenz(a,h)anthracene	ug/Kg	430	U	400	U	390	U
Benzo(g,h,i)Perylene	ug/Kg	430	U	64	J	390	U

	StationID	G024SB004		G024SB004		G024SB005	
	SampleID	024SB00401 (0-1ft)		024SB00402 (3-5ft)		024SB00501 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		12/15/1999	
	DateExtracted	1/29/2000		1/29/2000		12/20/1999	
	DateAnalyzed	2/2/2000		2/2/2000		12/23/1999	
	SDGNumber	41899		41899		EN033	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	110	J	140	J	360	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	76	J	68	J	360	U
Dibenz(a,h)anthracene	ug/Kg	29	J	30	J	360	U
Benzo(g,h,i)Perylene	ug/Kg	87	J	150	J	360	U

	StationID	G024SB005		G024SB005		G024SB006	
	SampleID	024SB00502 (3-5ft)		024SB00502DL (3-5ft)		024CB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	400	U	800	R	680	J
Indeno(1,2,3-c,d)pyrene	ug/Kg	400	U	800	R	330	J
Dibenz(a,h)anthracene	ug/Kg	400	U	800	R	190	J
Benzo(g,h,i)Perylene	ug/Kg	400	U	800	R	310	J

	StationID	G024SB006		G024SB006		G024SB006	
	SampleID	024CB00602 (3-5ft)		024CB00602DL (3-5ft)		024SB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	380	U	3800	R	390	UJ
Indeno(1,2,3-c,d)pyrene	ug/Kg	380	U	3800	R	390	U
Dibenz(a,h)anthracene	ug/Kg	380	U	3800	R	390	U
Benzo(g,h,i)Perylene	ug/Kg	380	U	3800	R	390	U

	StationID	G024SB006		G024SB006		G024SB007	
	SampleID	024SB00602 (3-5ft)		024SB00602DL (3-5ft)		024SB00701 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	390	U	3900	R	190	J
Indeno(1,2,3-c,d)pyrene	ug/Kg	390	U	3900	R	110	J
Dibenz(a,h)anthracene	ug/Kg	390	U	3900	R	390	U
Benzo(g,h,i)Perylene	ug/Kg	390	U	3900	R	120	J

	StationID	G024SB007		G024SB007		G024SB009	
	SampleID	024SB00702 (3-5ft)		024SB00702DL (3-5ft)		024SB00901 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		1/28/2000	
	DateExtracted	12/20/1999		12/20/1999		1/29/2000	
	DateAnalyzed	12/23/1999		12/27/1999		2/2/2000	
	SDGNumber	EN033		EN033		41899	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	410	UJ	820	R	63	J
Indeno(1,2,3-c,d)pyrene	ug/Kg	410	UJ	820	R	38	J
Dibenz(a,h)anthracene	ug/Kg	410	UJ	820	R	30	J
Benzo(g,h,i)Perylene	ug/Kg	410	UJ	820	R	56	J

	StationID	G024SB009		G024SB010		G024SB010	
	SampleID	024SB00902 (3-5ft)		024SB01001 (0-1ft)		024SB01002 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	87	J	41	J	400	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	48	J	29	J	400	U
Dibenz(a,h)anthracene	ug/Kg	48	J	400	U	400	U
Benzo(g,h,i)Perylene	ug/Kg	78	J	28	J	400	U

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)		FDSSH02802 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/18/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	23	J	3600	R	370	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	360	U	3600	R	370	U
Dibenz(a,h)anthracene	ug/Kg	360	U	3600	R	370	U
Benzo(g,h,i)Perylene	ug/Kg	18	J	3600	R	370	U

	StationID	GFDSSH028		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02802DL (3-5ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/13/1999		8/19/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	3700	R	2600	=	1900	R
Indeno(1,2,3-c,d)pyrene	ug/Kg	3700	R	1300	=	780	R
Dibenz(a,h)anthracene	ug/Kg	3700	R	690	=	340	R
Benzo(g,h,i)Perylene	ug/Kg	3700	R	1400	=	830	R

	StationID	GFDSSH029		GFDSSH030		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)	
	DateCollected	7/29/1999		7/28/1999		7/28/1999	
	DateExtracted	8/2/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	420	U	2000	=	2300	R
Indeno(1,2,3-c,d)pyrene	ug/Kg	420	U	1200	=	1200	R
Dibenz(a,h)anthracene	ug/Kg	420	U	600	=	700	R
Benzo(g,h,i)Perylene	ug/Kg	420	U	1200	=	1300	R

	StationID	GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/13/1999		8/13/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	370	U	94	J	380	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	370	U	39	J	380	U
Dibenz(a,h)anthracene	ug/Kg	370	U	340	U	380	U
Benzo(g,h,i)Perylene	ug/Kg	370	U	39	J	380	U

	StationID	G024SB001		G024SB001		G024SB002	
	SampleID	024SB00101 (0-1ft)		024SB00102 (3-5ft)		024SB00201 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	350	U	380	U	370	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB002		G024SB003		G024SB003	
	SampleID	024SB00202 (3-5ft)		024SB00301 (0-1ft)		024SB00302 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	430	U	400	U	390	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB004		G024SB004		G024SB005	
	SampleID	024SB00401 (0-1ft)		024SB00402 (3-5ft)		024SB00501 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		12/15/1999	
	DateExtracted	1/29/2000		1/29/2000		12/20/1999	
	DateAnalyzed	2/2/2000		2/2/2000		12/23/1999	
	SDGNumber	41899		41899		EN033	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	420	U	520	U	360	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB005		G024SB005		G024SB006	
	SampleID	024SB00502 (3-5ft)		024SB00502DL (3-5ft)		024CB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	400	U	800	R	390	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB006		G024SB006		G024SB006	
	SampleID	024CB00602 (3-5ft)		024CB00602DL (3-5ft)		024SB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	380	U	3800	R	390	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB006		G024SB006		G024SB007	
	SampleID	024SB00602 (3-5ft)		024SB00602DL (3-5ft)		024SB00701 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	390	U	3900	R	390	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB007		G024SB007		G024SB009	
	SampleID	024SB00702 (3-5ft)		024SB00702DL (3-5ft)		024SB00901 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		1/28/2000	
	DateExtracted	12/20/1999		12/20/1999		1/29/2000	
	DateAnalyzed	12/23/1999		12/27/1999		2/2/2000	
	SDGNumber	EN033		EN033		41899	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	410	U	820	R	410	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	G024SB009		G024SB010		G024SB010	
	SampleID	024SB00902 (3-5ft)		024SB01001 (0-1ft)		024SB01002 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	640	U	400	U	400	U
Chloromethane	ug/Kg						
Vinyl chloride	ug/Kg						
Bromomethane	ug/Kg						
Chloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
Acetone	ug/Kg						
Carbon Disulfide	ug/Kg						
Methylene Chloride	ug/Kg						
1,1-Dichloroethane	ug/Kg						
Vinyl acetate	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
Chloroform	ug/Kg						
1,1,1-Trichloroethane	ug/Kg						
Carbon Tetrachloride	ug/Kg						
1,2-Dichloroethane	ug/Kg						
Benzene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
Bromodichloromethane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Toluene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
2-Hexanone	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Dibromochloromethane	ug/Kg						

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted			7/30/1999		7/30/1999	
	DateAnalyzed	8/4/1999		8/13/1999		8/18/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg			360	U	3600	R
Chloromethane	ug/Kg	6	UJ				
Vinyl chloride	ug/Kg	6	U				
Bromomethane	ug/Kg	6	UJ				
Chloroethane	ug/Kg	6	UJ				
1,1-Dichloroethene	ug/Kg	6	U				
Acetone	ug/Kg	80	=				
Carbon Disulfide	ug/Kg	6	U				
Methylene Chloride	ug/Kg	6	U				
1,1-Dichloroethane	ug/Kg	6	U				
Vinyl acetate	ug/Kg	6	U				
Methyl ethyl ketone (2-Butanone)	ug/Kg	6	U				
1,2-Dichloroethene (total)	ug/Kg	6	U				
Chloroform	ug/Kg	6	U				
1,1,1-Trichloroethane	ug/Kg	6	U				
Carbon Tetrachloride	ug/Kg	6	U				
1,2-Dichloroethane	ug/Kg	6	U				
Benzene	ug/Kg	6	U				
Trichloroethylene (TCE)	ug/Kg	6	U				
1,2-Dichloropropane	ug/Kg	6	U				
Bromodichloromethane	ug/Kg	6	U				
2-Chloroethyl vinyl ether	ug/Kg	6	U				
cis-1,3-Dichloropropene	ug/Kg	6	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	6	U				
Toluene	ug/Kg	6	U				
trans-1,3-Dichloropropene	ug/Kg	6	U				
1,1,2-Trichloroethane	ug/Kg	6	U				
2-Hexanone	ug/Kg	6	U				
Tetrachloroethylene (PCE)	ug/Kg	6	U				
Dibromochloromethane	ug/Kg	6	U				

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02802 (3-5ft)		FDSSH02802 (3-5ft)		FDSSH02802DL (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted			7/30/1999		7/30/1999	
	DateAnalyzed	8/5/1999		8/13/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg			370	U	3700	R
Chloromethane	ug/Kg	7	U				
Vinyl chloride	ug/Kg	7	U				
Bromomethane	ug/Kg	7	U				
Chloroethane	ug/Kg	7	U				
1,1-Dichloroethene	ug/Kg	7	U				
Acetone	ug/Kg	7	U				
Carbon Disulfide	ug/Kg	7	U				
Methylene Chloride	ug/Kg	7	U				
1,1-Dichloroethane	ug/Kg	7	U				
Vinyl acetate	ug/Kg	7	U				
Methyl ethyl ketone (2-Butanone)	ug/Kg	7	U				
1,2-Dichloroethene (total)	ug/Kg	7	U				
Chloroform	ug/Kg	7	U				
1,1,1-Trichloroethane	ug/Kg	7	U				
Carbon Tetrachloride	ug/Kg	7	U				
1,2-Dichloroethane	ug/Kg	7	U				
Benzene	ug/Kg	7	U				
Trichloroethylene (TCE)	ug/Kg	7	U				
1,2-Dichloropropane	ug/Kg	7	U				
Bromodichloromethane	ug/Kg	7	U				
2-Chloroethyl vinyl ether	ug/Kg	7	U				
cis-1,3-Dichloropropene	ug/Kg	7	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	7	U				
Toluene	ug/Kg	7	U				
trans-1,3-Dichloropropene	ug/Kg	7	U				
1,1,2-Trichloroethane	ug/Kg	7	U				
2-Hexanone	ug/Kg	7	U				
Tetrachloroethylene (PCE)	ug/Kg	7	U				
Dibromochloromethane	ug/Kg	7	U				

	StationID	GFDSSH029		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02901 (0-1ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/29/1999		7/29/1999		7/29/1999	
	DateExtracted			8/2/1999		8/2/1999	
	DateAnalyzed	8/3/1999		8/13/1999		8/19/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg			410	U	1600	R
Chloromethane	ug/Kg	5	U				
Vinyl chloride	ug/Kg	5	U				
Bromomethane	ug/Kg	5	U				
Chloroethane	ug/Kg	5	U				
1,1-Dichloroethene	ug/Kg	5	U				
Acetone	ug/Kg	5	U				
Carbon Disulfide	ug/Kg	5	U				
Methylene Chloride	ug/Kg	5	U				
1,1-Dichloroethane	ug/Kg	5	U				
Vinyl acetate	ug/Kg	5	U				
Methyl ethyl ketone (2-Butanone)	ug/Kg	5	U				
1,2-Dichloroethene (total)	ug/Kg	5	U				
Chloroform	ug/Kg	5	U				
1,1,1-Trichloroethane	ug/Kg	5	U				
Carbon Tetrachloride	ug/Kg	5	U				
1,2-Dichloroethane	ug/Kg	5	U				
Benzene	ug/Kg	5	U				
Trichloroethylene (TCE)	ug/Kg	5	U				
1,2-Dichloropropane	ug/Kg	5	U				
Bromodichloromethane	ug/Kg	5	U				
2-Chloroethyl vinyl ether	ug/Kg	5	U				
cis-1,3-Dichloropropene	ug/Kg	5	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	5	U				
Toluene	ug/Kg	5	U				
trans-1,3-Dichloropropene	ug/Kg	5	U				
1,1,2-Trichloroethane	ug/Kg	5	U				
2-Hexanone	ug/Kg	5	U				
Tetrachloroethylene (PCE)	ug/Kg	5	U				
Dibromochloromethane	ug/Kg	5	U				

	StationID	GFDSSH029		GFDSSH029		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH02902 (3-5ft)		FDSSH03001 (0-1ft)	
	DateCollected	7/29/1999		7/29/1999		7/28/1999	
	DateExtracted			8/2/1999			
	DateAnalyzed	8/4/1999		8/13/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg			420	U		
Chloromethane	ug/Kg	5	UJ			5	U
Vinyl chloride	ug/Kg	5	U			5	U
Bromomethane	ug/Kg	5	UJ			5	U
Chloroethane	ug/Kg	5	UJ			5	U
1,1-Dichloroethene	ug/Kg	5	U			5	U
Acetone	ug/Kg	5	U			5	U
Carbon Disulfide	ug/Kg	5	U			5	U
Methylene Chloride	ug/Kg	5	U			5	U
1,1-Dichloroethane	ug/Kg	5	U			5	U
Vinyl acetate	ug/Kg	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/Kg	5	U			5	U
1,2-Dichloroethene (total)	ug/Kg	5	U			5	U
Chloroform	ug/Kg	5	U			5	U
1,1,1-Trichloroethane	ug/Kg	5	U			5	U
Carbon Tetrachloride	ug/Kg	5	U			5	U
1,2-Dichloroethane	ug/Kg	5	U			5	U
Benzene	ug/Kg	5	U			5	U
Trichloroethylene (TCE)	ug/Kg	5	U			5	U
1,2-Dichloropropane	ug/Kg	5	U			5	U
Bromodichloromethane	ug/Kg	5	U			5	U
2-Chloroethyl vinyl ether	ug/Kg	5	U			5	U
cis-1,3-Dichloropropene	ug/Kg	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	5	U			5	U
Toluene	ug/Kg	5	U			5	U
trans-1,3-Dichloropropene	ug/Kg	5	U			5	U
1,1,2-Trichloroethane	ug/Kg	5	U			5	U
2-Hexanone	ug/Kg	5	U			5	U
Tetrachloroethylene (PCE)	ug/Kg	5	U			5	U
Dibromochloromethane	ug/Kg	5	U			5	U

	StationID	GFDSSH030		GFDSSH030		GFDSSH030	
	SampleID	FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)		FDSSH03002 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999			
	DateAnalyzed	8/13/1999		8/17/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
1,2,4--Trichlorobenzene	ug/Kg	390	U	780	R		
Chloromethane	ug/Kg					7	U
Vinyl chloride	ug/Kg					7	U
Bromomethane	ug/Kg					7	U
Chloroethane	ug/Kg					7	U
1,1-Dichloroethene	ug/Kg					7	U
Acetone	ug/Kg					60	=
Carbon Disulfide	ug/Kg					7	U
Methylene Chloride	ug/Kg					7	U
1,1-Dichloroethane	ug/Kg					7	U
Vinyl acetate	ug/Kg					7	U
Methyl ethyl ketone (2-Butanone)	ug/Kg					7	U
1,2-Dichloroethene (total)	ug/Kg					7	U
Chloroform	ug/Kg					7	U
1,1,1-Trichloroethane	ug/Kg					7	U
Carbon Tetrachloride	ug/Kg					7	U
1,2-Dichloroethane	ug/Kg					7	U
Benzene	ug/Kg					7	U
Trichloroethylene (TCE)	ug/Kg					7	U
1,2-Dichloropropane	ug/Kg					7	U
Bromodichloromethane	ug/Kg					7	U
2-Chloroethyl vinyl ether	ug/Kg					7	U
cis-1,3-Dichloropropene	ug/Kg					7	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg					7	U
Toluene	ug/Kg					7	U
trans-1,3-Dichloropropene	ug/Kg					7	U
1,1,2-Trichloroethane	ug/Kg					7	U
2-Hexanone	ug/Kg					7	U
Tetrachloroethylene (PCE)	ug/Kg					7	U
Dibromochloromethane	ug/Kg					7	U

	StationID	GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03101 (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999				8/2/1999	
	DateAnalyzed	8/13/1999		8/3/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	Units						
1,2,4--Trichlorobenzene	ug/Kg	370	U			340	U
Chloromethane	ug/Kg			5	UJ		
Vinyl chloride	ug/Kg			5	U		
Bromomethane	ug/Kg			5	UJ		
Chloroethane	ug/Kg			5	UJ		
1,1-Dichloroethene	ug/Kg			5	U		
Acetone	ug/Kg			5	U		
Carbon Disulfide	ug/Kg			5	U		
Methylene Chloride	ug/Kg			5	U		
1,1-Dichloroethane	ug/Kg			5	U		
Vinyl acetate	ug/Kg			5	U		
Methyl ethyl ketone (2-Butanone)	ug/Kg			5	U		
1,2-Dichloroethene (total)	ug/Kg			5	U		
Chloroform	ug/Kg			5	U		
1,1,1-Trichloroethane	ug/Kg			5	U		
Carbon Tetrachloride	ug/Kg			5	U		
1,2-Dichloroethane	ug/Kg			5	U		
Benzene	ug/Kg			5	U		
Trichloroethylene (TCE)	ug/Kg			5	U		
1,2-Dichloropropane	ug/Kg			5	U		
Bromodichloromethane	ug/Kg			5	U		
2-Chloroethyl vinyl ether	ug/Kg			5	U		
cis-1,3-Dichloropropene	ug/Kg			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg			5	U		
Toluene	ug/Kg			5	U		
trans-1,3-Dichloropropene	ug/Kg			5	U		
1,1,2-Trichloroethane	ug/Kg			5	U		
2-Hexanone	ug/Kg			5	U		
Tetrachloroethylene (PCE)	ug/Kg			5	U		
Dibromochloromethane	ug/Kg			5	U		

	StationID	GFDSSH031		GFDSSH031	
	SampleID	FDSSH03102 (3-5ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/29/1999		7/29/1999	
	DateExtracted			8/2/1999	
	DateAnalyzed	8/3/1999		8/13/1999	
	SDGNumber	39715		39715	
Parameter	**Units**				
1,2,4--Trichlorobenzene	ug/Kg			380	U
Chloromethane	ug/Kg	5	U		
Vinyl chloride	ug/Kg	5	U		
Bromomethane	ug/Kg	5	U		
Chloroethane	ug/Kg	5	U		
1,1-Dichloroethene	ug/Kg	5	U		
Acetone	ug/Kg	5	U		
Carbon Disulfide	ug/Kg	1	J		
Methylene Chloride	ug/Kg	5	U		
1,1-Dichloroethane	ug/Kg	5	U		
Vinyl acetate	ug/Kg	5	U		
Methyl ethyl ketone (2-Butanone)	ug/Kg	5	U		
1,2-Dichloroethene (total)	ug/Kg	5	U		
Chloroform	ug/Kg	5	U		
1,1,1-Trichloroethane	ug/Kg	5	U		
Carbon Tetrachloride	ug/Kg	5	U		
1,2-Dichloroethane	ug/Kg	5	U		
Benzene	ug/Kg	5	U		
Trichloroethylene (TCE)	ug/Kg	5	U		
1,2-Dichloropropane	ug/Kg	5	U		
Bromodichloromethane	ug/Kg	5	U		
2-Chloroethyl vinyl ether	ug/Kg	5	U		
cis-1,3-Dichloropropene	ug/Kg	5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	5	U		
Toluene	ug/Kg	5	U		
trans-1,3-Dichloropropene	ug/Kg	5	U		
1,1,2-Trichloroethane	ug/Kg	5	U		
2-Hexanone	ug/Kg	5	U		
Tetrachloroethylene (PCE)	ug/Kg	5	U		
Dibromochloromethane	ug/Kg	5	U		

	StationID	G024SB001		G024SB001		G024SB002	
	SampleID	024SB00101 (0-1ft)		024SB00102 (3-5ft)		024SB00201 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB002		G024SB003		G024SB003	
	SampleID	024SB00202 (3-5ft)		024SB00301 (0-1ft)		024SB00302 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB004		G024SB004		G024SB005	
	SampleID	024SB00401 (0-1ft)		024SB00402 (3-5ft)		024SB00501 (0-1ft)	
	DateCollected	1/28/2000		1/28/2000		12/15/1999	
	DateExtracted	1/29/2000		1/29/2000		12/20/1999	
	DateAnalyzed	2/2/2000		2/2/2000		12/23/1999	
	SDGNumber	41899		41899		EN033	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB005		G024SB005		G024SB006	
	SampleID	024SB00502 (3-5ft)		024SB00502DL (3-5ft)		024CB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB006		G024SB006		G024SB006	
	SampleID	024CB00602 (3-5ft)		024CB00602DL (3-5ft)		024SB00601 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB006		G024SB006		G024SB007	
	SampleID	024SB00602 (3-5ft)		024SB00602DL (3-5ft)		024SB00701 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/20/1999		12/20/1999		12/20/1999	
	DateAnalyzed	12/23/1999		12/27/1999		12/23/1999	
	SDGNumber	EN033		EN033		EN033	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB007		G024SB007		G024SB009	
	SampleID	024SB00702 (3-5ft)		024SB00702DL (3-5ft)		024SB00901 (0-1ft)	
	DateCollected	12/15/1999		12/15/1999		1/28/2000	
	DateExtracted	12/20/1999		12/20/1999		1/29/2000	
	DateAnalyzed	12/23/1999		12/27/1999		2/2/2000	
	SDGNumber	EN033		EN033		41899	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	G024SB009		G024SB010		G024SB010	
	SampleID	024SB00902 (3-5ft)		024SB01001 (0-1ft)		024SB01002 (3-5ft)	
	DateCollected	1/28/2000		1/28/2000		1/28/2000	
	DateExtracted	1/29/2000		1/29/2000		1/29/2000	
	DateAnalyzed	2/2/2000		2/2/2000		2/2/2000	
	SDGNumber	41899		41899		41899	
Parameter	**Units**						
Chlorobenzene	ug/Kg						
Ethylbenzene	ug/Kg						
Xylenes, Total	ug/Kg						
Styrene	ug/Kg						
Bromoform	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted			7/30/1999		7/30/1999	
	DateAnalyzed	8/4/1999		8/13/1999		8/18/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg	6	U				
Ethylbenzene	ug/Kg	6	J				
Xylenes, Total	ug/Kg	6	U				
Styrene	ug/Kg	6	U				
Bromoform	ug/Kg	6	U				
1,1,2,2-Tetrachloroethane	ug/Kg	6	U				

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02802 (3-5ft)		FDSSH02802 (3-5ft)		FDSSH02802DL (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted			7/30/1999		7/30/1999	
	DateAnalyzed	8/5/1999		8/13/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg	7	U				
Ethylbenzene	ug/Kg	7	U				
Xylenes, Total	ug/Kg	7	U				
Styrene	ug/Kg	7	U				
Bromoform	ug/Kg	7	U				
1,1,2,2-Tetrachloroethane	ug/Kg	7	U				

	StationID	GFDSSH029		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02901 (0-1ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/29/1999		7/29/1999		7/29/1999	
	DateExtracted			8/2/1999		8/2/1999	
	DateAnalyzed	8/3/1999		8/13/1999		8/19/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg	5	U				
Ethylbenzene	ug/Kg	5	U				
Xylenes, Total	ug/Kg	5	U				
Styrene	ug/Kg	5	U				
Bromoform	ug/Kg	5	U				
1,1,2,2-Tetrachloroethane	ug/Kg	5	U				

	StationID	GFDSSH029		GFDSSH029		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH02902 (3-5ft)		FDSSH03001 (0-1ft)	
	DateCollected	7/29/1999		7/29/1999		7/28/1999	
	DateExtracted			8/2/1999			
	DateAnalyzed	8/4/1999		8/13/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg	5	U			5	U
Ethylbenzene	ug/Kg	5	U			5	U
Xylenes, Total	ug/Kg	5	U			5	U
Styrene	ug/Kg	5	U			5	U
Bromoform	ug/Kg	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/Kg	5	U			5	U

	StationID	GFDSSH030		GFDSSH030		GFDSSH030	
	SampleID	FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)		FDSSH03002 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999			
	DateAnalyzed	8/13/1999		8/17/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg					7	U
Ethylbenzene	ug/Kg					7	U
Xylenes, Total	ug/Kg					7	U
Styrene	ug/Kg					7	U
Bromoform	ug/Kg					7	U
1,1,2,2-Tetrachloroethane	ug/Kg					7	U

	StationID	GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03101 (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999				8/2/1999	
	DateAnalyzed	8/13/1999		8/3/1999		8/13/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Chlorobenzene	ug/Kg			5	U		
Ethylbenzene	ug/Kg			5	U		
Xylenes, Total	ug/Kg			5	U		
Styrene	ug/Kg			5	U		
Bromoform	ug/Kg			5	U		
1,1,2,2-Tetrachloroethane	ug/Kg			5	U		

Analytical Data Summary

	StationID	GFDSSH031		GFDSSH031	
	SampleID	FDSSH03102 (3-5ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/29/1999		7/29/1999	
	DateExtracted			8/2/1999	
	DateAnalyzed	8/3/1999		8/13/1999	
	SDGNumber	39715		39715	
Parameter	**Units**				
Chlorobenzene	ug/Kg	5	U		
Ethylbenzene	ug/Kg	5	U		
Xylenes, Total	ug/Kg	5	U		
Styrene	ug/Kg	5	U		
Bromoform	ug/Kg	5	U		
1,1,2,2-Tetrachloroethane	ug/Kg	5	U		

	StationID	GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)		FDSSH02802 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/5/1999		8/24/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Aldrin	ug/Kg	1.5	U	15	R	1.5	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	1.5	U	15	R	1.5	U
Alpha-chlordane	ug/Kg	1.5	U	15	R	1.5	U
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	1.5	U	15	R	1.5	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	1.5	U	15	R	1.5	U
Dieldrin	ug/Kg	2.8	U	28	R	2.9	U
Endosulfan I	ug/Kg	1.5	U	15	R	1.5	U
Endosulfan II	ug/Kg	2.8	U	28	R	2.9	U
Endosulfan Sulfate	ug/Kg	2.8	U	28	R	2.9	U
Endrin Aldehyde	ug/Kg	8.8	=	28	R	2.9	U
Endrin Ketone	ug/Kg	3	U	28	R	3	U
Endrin	ug/Kg	2.8	U	28	R	2.9	U
Gamma BHC (Lindane)	ug/Kg	1.5	U	15	R	1.5	U
Gamma-chlordane	ug/Kg	2.5	=	15	R	1.5	U
Heptachlor Epoxide	ug/Kg	1.5	U	15	R	1.5	U
Heptachlor	ug/Kg	1.5	U	15	R	1.5	U
Methoxychlor	ug/Kg	15	U	150	R	15	U
p,p'-DDD	ug/Kg	29	J	28	R	10	=
p,p'-DDE	ug/Kg	4.9	U	28	R	2.9	U
p,p'-DDT	ug/Kg	23	U	28	R	2.9	U
Toxaphene	ug/Kg	94	U	940	R	96	U

	StationID	GFDSSH028		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02802DL (3-5ft)		FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)	
	DateCollected	7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	7/30/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/12/1999		8/17/1999		8/18/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Aldrin	ug/Kg	15	R	1.6	U	16	R
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	15	R	1.6	U	16	R
Alpha-chlordane	ug/Kg	15	R	1.6	U	16	R
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	15	R	1.6	U	16	R
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	15	R	1.6	U	16	R
Dieldrin	ug/Kg	29	R	3.1	U	31	R
Endosulfan I	ug/Kg	15	R	1.6	U	16	R
Endosulfan II	ug/Kg	29	R	3.1	U	31	R
Endosulfan Sulfate	ug/Kg	29	R	3.1	U	31	R
Endrin Aldehyde	ug/Kg	29	R	56	J	86	R
Endrin Ketone	ug/Kg	29	R	3	U	31	R
Endrin	ug/Kg	29	R	3.1	U	30	R
Gamma BHC (Lindane)	ug/Kg	15	R	1.6	U	16	R
Gamma-chlordane	ug/Kg	15	R	1.6	U	16	R
Heptachlor Epoxide	ug/Kg	15	R	1.6	U	16	R
Heptachlor	ug/Kg	15	R	1.6	U	16	R
Methoxychlor	ug/Kg	150	R	16	U	160	R
p,p'-DDD	ug/Kg	29	R	3.1	U	31	R
p,p'-DDE	ug/Kg	29	R	28.1	U	31	R
p,p'-DDT	ug/Kg	29	R	52	J	52	R
Toxaphene	ug/Kg	960	R	100	U	1000	R

	StationID	GFDSSH029		GFDSSH029		GFDSSH030	
	SampleID	FDSSH02902 (3-5ft)		FDSSH02902DL (3-5ft)		FDSSH03001 (0-1ft)	
	DateCollected	7/29/1999		7/29/1999		7/28/1999	
	DateExtracted	8/2/1999		8/2/1999		7/30/1999	
	DateAnalyzed	8/17/1999		8/18/1999		8/5/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Aldrin	ug/Kg	1.6	U	16	R	1.5	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	1.6	U	16	R	1.5	U
Alpha-chlordane	ug/Kg	1.6	U	16	R	1.5	U
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	1.6	U	16	R	1.5	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	1.6	U	16	R	1.5	U
Dieldrin	ug/Kg	3.1	U	31	R	2.8	UJ
Endosulfan I	ug/Kg	1.6	U	16	R	1.5	U
Endosulfan II	ug/Kg	3.1	U	31	R	2.8	U
Endosulfan Sulfate	ug/Kg	3.1	U	31	R	2.8	U
Endrin Aldehyde	ug/Kg	3.1	U	31	R	2.8	U
Endrin Ketone	ug/Kg	3	U	31	R	3	U
Endrin	ug/Kg	3.1	U	31	R	2.8	U
Gamma BHC (Lindane)	ug/Kg	1.6	U	16	R	1.5	U
Gamma-chlordane	ug/Kg	1.6	U	16	R	2.3	U
Heptachlor Epoxide	ug/Kg	1.6	U	16	R	1.5	U
Heptachlor	ug/Kg	1.6	U	16	R	1.5	U
Methoxychlor	ug/Kg	16	U	160	R	15	U
p,p'-DDD	ug/Kg	3.1	U	31	R	2.8	UJ
p,p'-DDE	ug/Kg	3.1	U	31	R	2.8	U
p,p'-DDT	ug/Kg	3.1	U	31	R	23	U
Toxaphene	ug/Kg	100	U	1000	R	94	U

	StationID	GFDSSH030		GFDSSH030		GFDSSH030	
	SampleID	FDSSH03001DL (0-1ft)		FDSSH03002 (3-5ft)		FDSSH03002DL (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/24/1999		8/5/1999		8/24/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Aldrin	ug/Kg	15	R	1.5	U	15	R
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	15	R	1.5	U	15	R
Alpha-chlordane	ug/Kg	15	R	1.5	U	15	R
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	15	R	1.5	U	15	R
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	15	R	1.5	U	15	R
Dieldrin	ug/Kg	28	R	2.9	U	29	R
Endosulfan I	ug/Kg	15	R	1.5	U	15	R
Endosulfan II	ug/Kg	28	R	2.9	U	29	R
Endosulfan Sulfate	ug/Kg	28	R	2.9	U	29	R
Endrin Aldehyde	ug/Kg	28	R	2.9	U	29	R
Endrin Ketone	ug/Kg	28	R	3	U	29	R
Endrin	ug/Kg	28	R	2.9	U	29	R
Gamma BHC (Lindane)	ug/Kg	15	R	1.5	U	15	R
Gamma-chlordane	ug/Kg	15	R	1.5	U	15	R
Heptachlor Epoxide	ug/Kg	15	R	1.5	U	15	R
Heptachlor	ug/Kg	15	R	1.5	U	15	R
Methoxychlor	ug/Kg	150	R	15	U	150	R
p,p'-DDD	ug/Kg	28	R	2.9	U	29	R
p,p'-DDE	ug/Kg	28	R	2.9	U	29	R
p,p'-DDT	ug/Kg	28	R	2.9	U	29	R
Toxaphene	ug/Kg	940	R	96	U	960	R

	StationID	GFDSSH031		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03101 (0-1ft)		FDSSH03101DL (0-1ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/29/1999		7/29/1999		7/29/1999	
	DateExtracted	8/2/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/18/1999		8/17/1999	
	SDGNumber	39715		39715		39715	
Parameter	**Units**						
Aldrin	ug/Kg	1.4	U	270	R	1.5	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	1.4	U	270	R	1.5	U
Alpha-chlordane	ug/Kg	2400	J	2400	R	310	=
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	1.4	U	270	R	1.5	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	1.4	U	270	R	1.5	U
Dieldrin	ug/Kg	2.6	U	520	R	3	U
Endosulfan I	ug/Kg	1.4	U	270	R	1.5	U
Endosulfan II	ug/Kg	2.6	U	520	R	3	U
Endosulfan Sulfate	ug/Kg	12.4	U	520	R	3	U
Endrin Aldehyde	ug/Kg	2.6	U	520	R	3	U
Endrin Ketone	ug/Kg	3	U	520	R	3	U
Endrin	ug/Kg	2.6	U	520	R	3	U
Gamma BHC (Lindane)	ug/Kg	1.4	U	270	R	1.5	U
Gamma-chlordane	ug/Kg	2700	J	2700	R	330	=
Heptachlor Epoxide	ug/Kg	270	J	270	R	29	J
Heptachlor	ug/Kg	110	J	270	R	18	=
Methoxychlor	ug/Kg	59	J	2700	R	15	U
p,p'-DDD	ug/Kg	2.6	U	520	R	3	U
p,p'-DDE	ug/Kg	2.6	U	520	R	6.8	U
p,p'-DDT	ug/Kg	54	J	520	R	3	U
Toxaphene	ug/Kg	87	U	17000	R	99	U

Analytical Data Summary

	StationID	GFDSSH031	
	SampleID	FDSSH03102DL (3-5ft)	
	DateCollected	7/29/1999	
	DateExtracted	8/2/1999	
	DateAnalyzed	8/18/1999	
	SDGNumber	39715	
Parameter	**Units**		
Aldrin	ug/Kg	31	R
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	31	R
Alpha-chlordane	ug/Kg	310	R
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	31	R
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	31	R
Dieldrin	ug/Kg	60	R
Endosulfan I	ug/Kg	31	R
Endosulfan II	ug/Kg	60	R
Endosulfan Sulfate	ug/Kg	60	R
Endrin Aldehyde	ug/Kg	60	R
Endrin Ketone	ug/Kg	60	R
Endrin	ug/Kg	60	R
Gamma BHC (Lindane)	ug/Kg	31	R
Gamma-chlordane	ug/Kg	330	R
Heptachlor Epoxide	ug/Kg	31	R
Heptachlor	ug/Kg	31	R
Methoxychlor	ug/Kg	310	R
p,p'-DDD	ug/Kg	60	R
p,p'-DDE	ug/Kg	60	R
p,p'-DDT	ug/Kg	60	R
Toxaphene	ug/Kg	2000	R

	StationID	GFDSSH028		GFDSSH028		GFDSSH028		GFDSSH028	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02801DL (0-1ft)		FDSSH02802 (3-5ft)		FDSSH02802DL (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/5/1999		8/24/1999		8/5/1999		8/12/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1221 (Arochlor 1221)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1232 (Arochlor 1232)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1242 (Arochlor 1242)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1248 (Arochlor 1248)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1254 (Arochlor 1254)	ug/Kg	37	U	37	R	38	U	38	R
PCB-1260 (Arochlor 1260)	ug/Kg	37	U	37	R	38	U	38	R

	StationID	GFDSSH029		GFDSSH029		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02901 (0-1ft)		FDSSH02901DL (0-1ft)		FDSSH02902 (3-5ft)		FDSSH02902DL (3-5ft)	
	DateCollected	7/29/1999		7/29/1999		7/29/1999		7/29/1999	
	DateExtracted	8/2/1999		8/2/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/18/1999		8/17/1999		8/18/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1221 (Arochlor 1221)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1232 (Arochlor 1232)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1242 (Arochlor 1242)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1248 (Arochlor 1248)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1254 (Arochlor 1254)	ug/Kg	38	U	38	R	40	U	40	R
PCB-1260 (Arochlor 1260)	ug/Kg	38	U	38	R	40	U	40	R

	StationID	GFDSSH030		GFDSSH030		GFDSSH030		GFDSSH030	
	SampleID	FDSSH03001 (0-1ft)		FDSSH03001DL (0-1ft)		FDSSH03002 (3-5ft)		FDSSH03002DL (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/28/1999		7/28/1999	
	DateExtracted	7/30/1999		7/30/1999		7/30/1999		7/30/1999	
	DateAnalyzed	8/5/1999		8/24/1999		8/5/1999		8/24/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1221 (Arochlor 1221)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1232 (Arochlor 1232)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1242 (Arochlor 1242)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1248 (Arochlor 1248)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1254 (Arochlor 1254)	ug/Kg	42	U	42	R	35	U	35	R
PCB-1260 (Arochlor 1260)	ug/Kg	42	U	42	R	35	U	35	R

	StationID	GFDSSH031		GFDSSH031		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03101 (0-1ft)		FDSSH03101DL (0-1ft)		FDSSH03102 (3-5ft)		FDSSH03102DL (3-5ft)	
	DateCollected	7/29/1999		7/29/1999		7/29/1999		7/29/1999	
	DateExtracted	8/2/1999		8/2/1999		8/2/1999		8/2/1999	
	DateAnalyzed	8/17/1999		8/18/1999		8/17/1999		8/18/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1221 (Arochlor 1221)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1232 (Arochlor 1232)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1242 (Arochlor 1242)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1248 (Arochlor 1248)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1254 (Arochlor 1254)	ug/Kg	35	U	35	R	38	U	38	R
PCB-1260 (Arochlor 1260)	ug/Kg	35	U	35	R	38	U	38	R

	StationID	G024SB005		G024SB005		G024SB006		G024SB006	
	SampleID	024SB00501 (0-1ft)		024SB00502 (3-5ft)		024CB00601 (0-1ft)		024CB00602 (3-5ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/29/1999		12/29/1999		12/29/1999		12/29/1999	
	DateAnalyzed	1/13/2000		1/3/2000		1/3/2000		1/3/2000	
	SDGNumber	EN033		EN033		EN033		EN033	
Parameter	**Units**								
Aluminum	mg/Kg	7030	=	7600	=	8840	=	5650	=
Antimony	mg/Kg	0.46	J	0.53	J	0.54	J	0.23	J
Arsenic	mg/Kg	2.5	=	8.1	=	5.3	=	1.5	=
Barium	mg/Kg	31.2	=	16.6	J	16	J	18.7	=
Beryllium	mg/Kg	0.46	U	0.33	U	0.28	U	0.18	U
Cadmium	mg/Kg	0.02	U	0.14	U	0.14	U	0.03	U
Calcium	mg/Kg	1960	=	481	=	2460	=	101	J
Chromium, Total	mg/Kg	9.6	J	22.6	J	29.7	J	7.5	J
Cobalt	mg/Kg	2.2	J	1.4	J	1.8	J	1.1	J
Copper	mg/Kg	3	J	0.86	J	1.2	J	0.74	J
Iron	mg/Kg	4920	=	19100	=	21600	=	6200	=
Lead	mg/Kg	110	J	6.6	J	40.7	J	4.9	J
Magnesium	mg/Kg	418	J	634	J	517	J	389	J
Manganese	mg/Kg	23.2	=	54.5	=	36.1	=	25.8	=
Mercury	mg/Kg	0.05	U	0.04	=	0.05	=	0.05	U
Nickel	mg/Kg	3.4	=	2.2	J	2.8	J	1.7	J
Potassium	mg/Kg	206	J	365	J	281	J	215	J
Selenium	mg/Kg	0.45	J	2.2	=	1.7	=	0.62	J
Silver	mg/Kg	0.04	U	0.05	U	0.05	U	0.04	U
Sodium	mg/Kg	90.1	J	99.4	J	115	J	68.5	J
Thallium	mg/Kg	0.2	UJ	0.23	UJ	0.22	UJ	0.2	UJ
Tin (Sn)	mg/Kg	2.7	U	2.9	U	3.2	U	3	U
Vanadium	mg/Kg	13.8	=	43.9	=	39.8	=	11.5	=
Zinc	mg/Kg	38.5	J	8.7	J	23.5	J	5.6	J

	StationID	G024SB006		G024SB006		G024SB007		G024SB007	
	SampleID	024SB00601 (0-1ft)		024SB00602 (3-5ft)		024SB00701 (0-1ft)		024SB00702 (3-5ft)	
	DateCollected	12/15/1999		12/15/1999		12/15/1999		12/15/1999	
	DateExtracted	12/29/1999		12/29/1999		12/29/1999		12/29/1999	
	DateAnalyzed	1/3/2000		1/3/2000		1/3/2000		1/3/2000	
	SDGNumber	EN033		EN033		EN033		EN033	
Parameter	**Units**								
Aluminum	mg/Kg	8490	=	5700	=	5650	=	4650	=
Antimony	mg/Kg	0.41	J	0.27	J	0.37	J	0.25	UJ
Arsenic	mg/Kg	5.7	=	1.6	=	8.1	=	2.8	=
Barium	mg/Kg	15.8	J	22.4	=	19.9	=	8.5	J
Beryllium	mg/Kg	0.23	U	0.17	U	0.31	U	0.11	U
Cadmium	mg/Kg	0.14	U	0.03	U	0.03	U	0.03	U
Calcium	mg/Kg	3060	=	267	J	16600	=	253	J
Chromium, Total	mg/Kg	25.9	J	8	J	15.4	J	10.8	J
Cobalt	mg/Kg	1.3	J	0.92	J	1.6	J	0.76	J
Copper	mg/Kg	1.1	J	0.75	J	10.4	J	0.39	J
Iron	mg/Kg	19900	=	6670	=	5880	=	9870	=
Lead	mg/Kg	58.9	J	16	J	62.1	J	3.3	J
Magnesium	mg/Kg	489	J	389	J	898	J	262	J
Manganese	mg/Kg	37	=	25.5	=	74.8	=	16.9	=
Mercury	mg/Kg	0.04	=	0.05	U	0.06	=	0.06	=
Nickel	mg/Kg	2.7	J	1.7	J	5.4	=	1.4	J
Potassium	mg/Kg	263	J	214	J	302	J	102	J
Selenium	mg/Kg	1.5	=	0.76	J	0.72	J	1.1	=
Silver	mg/Kg	0.05	U	0.05	U	0.05	U	0.05	U
Sodium	mg/Kg	103	J	77.2	J	169	J	39.5	U
Thallium	mg/Kg	0.22	UJ	0.22	UJ	0.23	UJ	0.25	UJ
Tin (Sn)	mg/Kg	3	U	3.3	U	3.5	U	1.5	U
Vanadium	mg/Kg	34.4	=	12.6	=	16.6	=	18.2	=
Zinc	mg/Kg	11.7	J	5.9	J	47.2	J	4.7	J

	StationID	GFDSSH028		GFDSSH028		GFDSSH029		GFDSSH029	
	SampleID	FDSSH02801 (0-1ft)		FDSSH02802 (3-5ft)		FDSSH02901 (0-1ft)		FDSSH02902 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	8/17/1999		8/17/1999		8/17/1999		8/17/1999	
	DateAnalyzed	8/18/1999		8/18/1999		8/18/1999		8/18/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
Aluminum	mg/Kg	4350	=	15500	=	11700	=	17700	=
Antimony	mg/Kg	0.31	UJ	0.31	UJ	0.34	UJ	0.32	UJ
Arsenic	mg/Kg	1.4	=	9.3	=	10.9	=	7.8	=
Barium	mg/Kg	16.3	=	31.7	=	28.9	=	24.6	=
Beryllium	mg/Kg	0.25	J	0.52	J	0.33	J	0.34	J
Cadmium	mg/Kg	0.04	J	0.03	U	0.04	U	0.04	U
Calcium	mg/Kg	886	=	647	=	3680	=	1420	=
Chromium, Total	mg/Kg	4.9	=	25.6	=	19.9	=	31.6	=
Cobalt	mg/Kg	1.5	J	3.1	=	2	J	3	J
Copper	mg/Kg	1.8	U	1.2	U	8	=	2.4	J
Iron	mg/Kg	2280	=	19800	=	15300	=	24600	=
Lead	mg/Kg	63.4	=	9.6	=	41	=	12.9	=
Magnesium	mg/Kg	194	=	964	=	944	=	2320	=
Manganese	mg/Kg	15.4	=	72.6	=	47.1	=	78.1	=
Mercury	mg/Kg	0.04	=	0.13	=	0.09	=	0.06	=
Nickel	mg/Kg	2.2	J	5.1	=	5.2	=	5.8	=
Potassium	mg/Kg	89.6	J	409	=	325	=	666	=
Selenium	mg/Kg	0.37	U	0.47	J	0.55	J	0.39	U
Silver	mg/Kg	0.14	U	0.14	U	0.15	U	0.14	U
Sodium	mg/Kg	232	J	335	J	209	J	185	J
Thallium	mg/Kg	0.38	U	0.39	U	0.42	U	0.41	U
Tin (Sn)	mg/Kg	3	U	3.2	U	3.7	U	4.5	U
Vanadium	mg/Kg	5.8	=	42.2	=	25.8	=	37.9	=
Zinc	mg/Kg	16	=	18.5	=	67.5	=	34.2	=

	StationID	GFDSSH030		GFDSSH030		GFDSSH031		GFDSSH031	
	SampleID	FDSSH03001 (0-1ft)		FDSSH03002 (3-5ft)		FDSSH03101 (0-1ft)		FDSSH03102 (3-5ft)	
	DateCollected	7/28/1999		7/28/1999		7/29/1999		7/29/1999	
	DateExtracted	8/17/1999		8/17/1999		8/17/1999		8/17/1999	
	DateAnalyzed	8/18/1999		8/18/1999		8/18/1999		8/18/1999	
	SDGNumber	39715		39715		39715		39715	
Parameter	**Units**								
Aluminum	mg/Kg	7820	=	7860	=	8820	=	15300	=
Antimony	mg/Kg	0.34	UJ	0.31	UJ	0.31	UJ	0.32	UJ
Arsenic	mg/Kg	4.8	=	2.4	=	3.9	=	8.3	=
Barium	mg/Kg	23.4	=	13.6	=	22.6	=	23.7	=
Beryllium	mg/Kg	0.37	J	0.17	J	0.36	J	0.38	J
Cadmium	mg/Kg	0.28	J	0.03	U	0.03	U	0.04	U
Calcium	mg/Kg	101000	=	1170	=	853	=	693	=
Chromium, Total	mg/Kg	17	=	14.8	=	17.6	=	38.3	=
Cobalt	mg/Kg	5.3	=	1	J	2.2	J	2.1	J
Copper	mg/Kg	5.1	J	0.69	U	2	J	1.4	U
Iron	mg/Kg	12000	=	11200	=	12500	=	28900	=
Lead	mg/Kg	179	=	22.2	=	8.4	=	9.6	=
Magnesium	mg/Kg	1630	=	627	=	845	=	963	=
Manganese	mg/Kg	117	=	22	=	36.5	=	18.8	=
Mercury	mg/Kg	0.39	=	0.04	J	0.05	=	0.26	=
Nickel	mg/Kg	7.6	=	1.8	J	3.4	J	4.1	J
Potassium	mg/Kg	422	=	302	=	394	=	486	=
Selenium	mg/Kg	0.42	U	0.38	U	0.38	U	1.7	=
Silver	mg/Kg	0.15	U	0.14	U	0.14	U	0.14	U
Sodium	mg/Kg	421	=	320	J	240	J	278	J
Thallium	mg/Kg	0.43	U	0.39	U	0.39	U	0.62	J
Tin (Sn)	mg/Kg	3.6	U	4.2	U	4.2	U	3.6	U
Vanadium	mg/Kg	21.8	=	23.1	=	22.2	=	48.4	=
Zinc	mg/Kg	47.8	=	18.3	=	18.3	=	16.8	=

Appendix C

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	37280
Date:	March 23, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone G
Date Sampled:	January 28, 1999
Number of Samples:	4 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searson — 3-24-99

Paul B. Humburg, President — Date

4127 Plaza 94 South • St. Charles, MO 63304
(314) 936-1332 • Fax (314) 936-1335

SDG# 37280

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		MET	
024GW00103	WATER	X		X		X	
024TW00103	WATER	X					
024GW00203	WATER	X		X		X	
024GW00303	WATER	X		X		X	
Total Billable Samples (Water/Soil)		4	0	3	0	3	0

VOA= Volatiles
SVOA= Semivolatiles
MET= Metals

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8260; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 37280

A validation was performed on the Volatile Data from SDG 37280. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
* Blanks
* Surrogate Recoveries
  Matrix Spike/Matrix Spike Duplicates
* Laboratory Control Samples
* Field Duplicates
* Compound Identification /Quantitation

* - All criteria were met for this parameter

Initial Calibration

The initial calibration analyzed on 01-21-99, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

All samples	acetone (0.024) 2-chloroethyl vinyl ether (0.015)

Continuing Calibration

The continuing calibration, UL8001.D, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

All samples	acetone (0.023) 2-chloroethyl vinyl ether (0.009)

Matrix Spike/Matrix Spike Duplicate

The matrix spike and matrix spike duplicate pair associated with sample 024-G-W001-03 did not exhibit results for spiked compound 2-chloroethyl vinyl ether (0%/0%). Qualify the non detect results in sample 024-G-W001-03 as rejected (UR).

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All samples	acetone 2-chloroethyl vinyl ether	+/-	J/UR
All Samples	acetone 2-chloroethyl vinyl ether	+/-	J/UR
024-G-W001-03	2-chloroethyl vinyl ether	-	UR

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 37280

A validation was performed on the Semivolatile Data from SDG 37280. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
* Calibrations
* Internal Standard Performance
  Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Field Duplicates
* Compound Identification /Quantitation

* - All criteria were met for this parameter

Blank

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Method Blank

Associated blank	Compound	Concentration	Action Level
SBLK01	benzoic acid	5Jug/L	25ug/L

Samples	Compound	Qualification
024-G-W001-03	benzoic acid	CRQL
024-G-W002-03		
024-G-W003-03		

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
024-G-W001-03	benzoic acid	+	CRQL
024-G-W002-03			
024-G-W003-03			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # 37280

A validation was performed on the Metals Data from SDG 37280. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The calibration and preparation blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Sodium	69.7 ug/l	no impact
Zinc	6.26 ug/l	all water samples below 31.3 ug/l
Barium	0.6 ug/l	no impact
Magnesium	50.4 ug/l	no impact
Sodium	98.5 ug/l	no impact

The USEPA requires that all sample values below five times the preparation, field or calibration blank contamination be qualified as non-detect, "U".

Matrix Spike results

The Matrix Spike recovery for waters for Aluminum (69.7%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" and "UJ".

Matrix Duplicate results

The RPD for waters for Aluminum (32%) was greater than 20%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 31.3 ug/l	Zn.	+	U
all water samples	Al.	+/U	J/UJ
all water samples	Al.	+	J
all "B" results	all analytes	B	J

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8260B; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # EN017

A validation was performed on the Volatile Data from SDG EN017. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
* Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike/Matrix Spike duplicate
* Field Duplicates
* Compound Identification/Quantitation

* - All criteria were met for this parameter

Initial Calibration

The initial calibration, analyzed on 05/19/99, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

All Samples	acetone (0.040)

Continuing Calibration

The continuing calibration, U0615004.D, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

All Samples	acetone (0.046) 2-chloroethyl vinyl ether (0.007)

The continuing calibration, U0615004.D, contained compounds with %Ds greater than 50% and less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as estimated (UJ).

All Samples	bromomethane (54.0%)

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All Samples	acetone	+/-	J/UR
All Samples	acetone 2-chloroethyl vinyl ether	+/-	J/UR
All Samples	bromomethane	+/-	J/UJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270C; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # EN017

A validation was performed on the Semivolatile Data from SDG EN017. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
* Calibrations
  Internal Standard Performance
  Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike/Matrix Spike duplicate
* Field Duplicates
  Compound Identification/Quantitation

* - All criteria were met for this parameter

Internal Standards

Sample 024GW00104 exhibited low internal standard results for perylene-d12. Qualify all associated results as estimated (J/UJ).

Blank

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Method Blank

Associated blank	Compound	Concentration	Action Level
SBLK1	bis(2-ethylhexyl)phthalate	1J ug/L	10 ug/L

Samples	Compound	Qualification
024GW00204 024GW00304 024GW00104 024GW00404	bis(2-ethylhexyl)phthalate	CRQL

Compound Identification/Quantitation

Do not use sample 024GW00104DL, the dilution was not necessary.

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
	All Associated Compounds	+/-	J/UJ
024GW00104	perylene-d12		
024GW00204 024GW00304 024GW00104 024GW00404	bis(2-ethylhexyl)phthalate	+	CRQL
024GW00104DL	all results	+/-	do not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
Metals

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods for Appendix IX metals; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN017

A validation was performed on the metals Data from SDG EN017. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * Calibrations
- Blanks
- * Interferences
- * Matrix Spike Recovery
- * Matrix Duplicates
- * Field Duplicates
- * Laboratory Control Samples
- * Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Iron	37.7 ug/l	no impact
Manganese	1.6 ug/l	no impact
Sodium	58.9 ug/l	no impact
Zinc	7.4 ug/l	all water samples below 37.0 ug/l
Barium	1.5 ug/l	no impact
Beryllium	0.3 ug/l	all water samples below 1.5 ug/l

Iron	3.5 ug/l	no impact
Selenium	1.0 ug/l	no impact

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-74.3 ug/l	all water samples below 743 ug/l
Calcium	-39.9 ug/l	no impact
Cobalt	-4.8 ug/l	all water samples below 48.o ug/l
Magnesium	-37.7 ug/l	no impact
Silver	-4.3 ug/l	all water samples below 43.0 ug/l

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 37.0 ug/l	Zn.	+	U
all water samples below 1.5 ug/l	Be.		
all water samples below 743 ug/l	Al.	+/U	J/UJ
all water samples below 48.0 ug/l	Co.		
all water samples below 43.0 ug/l	Ag.		
all "B" results	all analytes	B	J

ENSAFE

800-588-7962
MEMPHIS, TENNESSEE
CHARLESTON, SC; CINCINNATI, OH; DALLAS, TX; JACKSON, TN; KNOXVILLE, TN; LANCASTER, PA; NASHVILLE, TN; NORFOLK, VA; PADUCAH, KY; PENSACOLA, FL; RALEIGH, NC; COLOGNE, GERMANY

9906276

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT/JOB NO: ~~2908-001-09-014-00~~ ~~2907-001-08-4403~~ JGTI

COC NO:

PO NO: 1840

REL NO: 30

LAB NAME: Laucks

CLIENT: Naval Base Charleston

PROJECT MANAGER: Charlie Vernoy

LOCATION: Zone G

TELE/FAX NO. 843 884 0029/856 0107

SAMPLERS: (SIGNATURE)

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA 8260 SW-846	SVOA 8270 SW-846+PAH	Metals 6010/7000's							REMARKS
NBCG\024GW00304	6-10-99	1120	W	1L Amber, 1L Poly 40mL Vial	4°C	VOA=HCL Met=HNO3	6	X	X	X							14 Day Final Fixed Results 28 Day Hardcopy + EDD's
NBCG\024GW00104	↓	1335	W	↓	↓	↓	6	X	X	X							↓
NBCG\024GW00404	↓	1615	W	↓	↓	↓	6	X	X	X							↓
NBCG\024TW00404	↓	—	W	40mL Vial	↓	↓	3	X									↓

6-10-99

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:	DATE
PRINTED: Todd B. Temple	6/10/99	PRINTED: JAS	6/11/99	PRINTED:		PRINTED:	
COMPANY: ENSAFE	TIME 1800	COMPANY: JOSIE A SMITH Laucks	TIME 8:00	COMPANY:	TIME	COMPANY:	TIME

METHOD OF SHIPMENT: FedEx

SHIPMENT NO. 809609674321

SEND RESULTS

COMMENTS: 14 Day Faxed Results, 28 day Hardcopy + EDD's

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN033
Date:	January 24, 2000
Client Name:	Ensafe
Project/Site Name:	Charleston Zone G
Date Sampled:	December 15, 1999
Number of Samples:	16 Non-Aqueous Sample(s) with 0 MS/MSD(s) 6 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Semivolatiles, Metals, SPLP Metals and Total Organic Carbon

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Serfoss — 1-31-00.

for Paul B. Humburg, President — Date

SDG# EN033

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	SVOA		MET		SPLP-MET		TOC	
024SB00501	SOIL		X		X				
024SB00502	SOIL		X		X				
024SB00601	SOIL		X		X				
024CB00601	SOIL		X		X				
024SB00602	SOIL		X		X				
024CB00602	SOIL		X		X				
024SB00701	SOIL		X		X				
024SB00702	SOIL		X		X				
638SB00501	SOIL		X		X				X
638CB00501	SOIL		X		X				X
638SB00502	SOIL		X		X				X
638CB00502	SOIL		X		X				X
638SB00601	SOIL		X						
638SB00602	SOIL		X						
638SB00701	SOIL				X				X
638SB00702	SOIL				X				X
638SB00501	WATER					X			
638CB00501	WATER					X			
638SB00502	WATER					X			
638CB00502	WATER					X			
638SB00701	WATER					X			
638SB00702	WATER					X			
Total Billable Samples (Water/Soil)		0	14	0	14	6	0	0	6

SVOA= Semivolatiles
MET= Metals
SPLP-MET= SPLP Metals
TOC= Total Organic Carbon

DATA ASSESSMENT NARRATIVES

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # EN033

A validation was performed on the Semivolatile Data from SDG EN033. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
  Internal Standard Performance
* Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike/Matrix Spike duplicate
  Field Duplicates
  Compound Identification/Quantitation

* - All criteria were met for this parameter

Initial Calibration

The initial calibration, analyzed on 11-19-99, contained compounds with %Ds greater than 15% and less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

638SB00502	di-n-butylphthalate (23.2%)
638CB00501 638SB00602 638SB00502 638SB00601	benzo(b)fluoranthene (16.1%)
638CB00501 638SB00602	benzo(g,h,i)perylene (16.1%)

The initial calibration, analyzed on 11-08-99, contained compounds with %Ds greater than 15% and less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

024CB00601	benzo(b)fluoranthene (20.0%)
024SB00701 638SB00501	benzo(k)fluoranthene (16.3%)

Internal Standards

The following samples exhibited low internal standard area recoveries for perylene-d12. Qualify all associated compound results as estimated (J/UJ).

638SB00602
024SB00702

Field Duplicate

Sample 024SB00601 and duplicate sample 024CB00601 exhibited non comparable results, with RPDs greater than 50%, for the compounds listed below. Qualify all results for these compounds as estimated (J/UJ).

fluorene (200%)
n-nitrosodiphenylamine (84%)
phenanthrene (93%)
anthracene (146%)
fluoranthene (200%)
pyrene (200%)
benzo(a)anthracene (200%)
chrysene (200%)
benzo(b)fluoranthene (200%)
benzo(k)fluoranthene (200%)
benzo(a)pyrene (200%)

Sample 024SB00602 and duplicate sample 024CB00602 exhibited non comparable results, with RPDs greater than 50%, for the compounds listed below. Qualify all results for these compounds as estimated (J/UJ).

n-nitrosodiphenylamine (200%)
nitrobenzene (200%)
isophorone (200%)

Compound Identification/Quantitation

Do not use the E-flagged compound results for the samples listed below, in favor of the D-flagged compound results in the dilutions.

024SB00502
024SB00602
024CB00602
024SB00702

Do not use sample 638SB00602DL due to unnecessary analysis.

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
638SB00502	di-n-butylphthalate	+	J
638CB00501 638SB00602 638SB00502 638SB00601	benzo(b)fluoranthene	+	J
638CB00501 638SB00602	benzo(g,h,i)perylene	+	J
024CB00601 024SB00701 638SB00501	benzo(b)fluoranthene benzo(k)fluoranthene	+	J
638SB00602 024SB00702	*All Associated compounds* perylene-d12	+/-	J/UJ
024SB00601 024CB00601	fluorene n-nitrosodiphenylamine phenanthrene anthracene fluoranthene pyrene benzo(a)anthracene chrysene benzo(b)fluoranthene benzo(k)fluoranthene benzo(a)pyrene	+/-	J/UJ
024SB00602 024CB00602	n-nitrosodiphenylamine nitrobenzene isophorone	+/-	J/UJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
024SB00502 024SB00602 024CB00602 024SB00702	all E-flagged compounds	+	do not use
024SB00502DL 024SB00602DL 024CB00602DL 024SB00702DL	all results except D-flagged compounds	+/-	do not use
638SB00602DL	all results	+/-	do not use

*

DL denotes the Form I qualifier supplied by the laboratory

QL denotes the qualifier used by the data validation firm

+ in the DL column denotes a positive result

- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS (SOILS AND SPLP) AND TOC

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN033

A validation was performed on the Metals for soils and SPLP and TOC Data from SDG EN033. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
	●	Matrix Duplicates
	●	Field Duplicates
*	●	Laboratory Control Samples
	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Barium	0.05 mg/kg	no impact
Beryllium	0.15 mg/kg	all soil samples below 0.75 mg/kg
Cadmium	0.03 mg/kg	all soil samples below 0.15 mg/kg
Calcium	13.6 mg/kg	no impact
Iron	2.92 mg/kg	no impact
Lead	0.43 mg/kg	no impact
Manganese	0.05 mg/kg	no impact

Zinc	0.31 mg/kg	no impact
Tin	3.17 mg/kg	all soil samples below 15.9 mg/kg
Zinc	2.0 ug/l	no impact

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-6.10 mg/kg	no impact
Cobalt	-0.08 mg/kg	all soil samples below 0.8 mg/kg
Thallium	-0.60 mg/kg	all soil samples below 6.0 mg/kg

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Matrix Spike Recovery results

The matrix spike recoveries for soils for Antimony (51%) and Lead (34%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

The matrix spike recocveries for soils for Chromium (130%), Copper (129%) and Manganese (172%) were above the upper control limits (>125%). All positive results are qualified as estimated, "J".

Matrix Duplicate results

The matrix duplicate RPD results for SPLP samples for Copper (>CRDL) was greater than one times the CRDL and the RPD gfor soils for Lead (59%) was greater than 35%.. All positive results are qualified as estimated, "J". The difference for soils for Aluminum (24%), Chromium (25%), Lead (24%) and Zinc (29%) were not greater than 35% and will not be qualified for soils.

Field Duplicate RPD results

The RPD for field duplicate samples 638SB00501 and 638CB00501(soils only) for Lead (81%) was greater than 50%. The RPD for field duplicate samples 638SB00501 and 638CB00501 (SPLP samples only) for Aluminum (100%) and Iron (98%) were greater than 35%. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Serial Dilution recovery results

The serial dilution results for SPLP samples for Magnesium and for soils for Copper, Magnesium, Zinc and Potassium were greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 0.75 mg/kg	Be.	+	U
all soil samples below 0.15 mg/kg	Cd.		
all soil samples below 15.9 mg/kg	Sn.		
all soil samples below 0.8 mg/kg	Co.	+/U	J/UJ
all soil samples below 6.0 mg/kg	Tl.		
all soil samples	Sb and Pb.	+/U	J/UJ
all soil samples	Cr, Cu and Mn.	+	J
all SPLP samples	Cu.	+	J
all soil samples	Pb.		
all SPLP samples	Mg	+	J
all soil samples	Cu, Mg, Zn and K.		
638SB00501/638CB00501	Pb.	+/U	J/UJ
638SB00501/638CB00501	Al and Fe.		
all "B" results	all analytes	B	J

EnSafe

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MEMPHIS, TENNESSEE
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CHAIN OF C

CLIENT Navy Clean CNC PROJECT MANAGER T. Ho

LOCATION Zone G / AOC 638 TELE/FAX NO. (843) 88

SAMPLERS: (SIGNATURE) William Hornick

	FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER
12/9	NBCG/638SB00501	12/15/99	1120	S	Glass 8 oz
12/10	NBCG/638 ~~SB00503~~ CB00503	"	1120	S	"
12/11	NBCG/638SB00502	"	1130	S	"
12/12	NBCG/638 ~~SB00504~~ CB00504	"	1130	S	"
13	NBCG/638SB00601	"	1205	S	"
14	NBCG/638SB00602	"	1215	S	"
12/15	NBCG/638SB00701	"	1500	S	"
12/16	NBCG/638SB00702	"	1510	S	"

RELINQUISHER:	DATE	RECEIVER:	12
PRINTED: Fred Erdmann	TIME	PRINTED: Mike Baxter	T
COMPANY: EnSafe		COMPANY: Lauck's Lab	9

METHOD OF SHIPMENT: Fed Exp.
SHIPMENT NO. 814795922636
SEND RESULTS TO: Charles Verney

COMMENTS:

ENSAFE

800-588-7962
MEMPHIS, TENNESSEE
CHARLESTON, SC; CINCINNATI, OH; DALLAS, TX; JACKSON, TN; KNOXVILLE, TN; LANCASTER, PA; NASHVILLE, TN; NORFOLK, VA; PADUCAH, KY; PENSACOLA, FL; RALEIGH, NC; COLOGNE, GERMANY

#9912364 EN033

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1
PROJECT/JOB NO: 2907 0 084
COC NO:
PO NO: 1840
REL NO: 38
LAB NAME: Lauchs

CLIENT: Navy Clean CNC
PROJECT MANAGER: T. Havekost
LOCATION: Zone G / AOC 63F
TELE/FAX NO. (843) 884-0029
SAMPLERS: (SIGNATURE) William Hornick

ANALYSIS REQUIRED

	FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	SVOCs	Metals	SPLP Metals	TOC							REMA
9	NBCG/638SB00501	12/15/99	1120	S	Glass 8 oz	Ice	None	4	✓	✓	✓	✓							
10	NBCG/638 ~~SB00503~~ CB00501	"	1120	S	"	"	"	4	✓	✓	✓	✓							Dup for
11	NBCG/638SB00502	"	1130	S	"	"	"	4	✓	✓	✓	✓							
12	NBCG/638 ~~SB00504~~ CB00502	"	1130	S	"	"	"	4	✓	✓	✓	✓							Dup for
13	NBCG/638SB00601	"	1205	S	"	"	"	1	✓										
14	NBCG/638SB00602	"	1215	S	"	"	"	1	✓										
15	NBCG/638SB00701	"	1500	S	"	"	"	3		✓	✓	✓							offsite to
16	NBCG/638SB00702	"	1510	S	"	"	"	3		✓	✓	✓							

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:
PRINTED: Fred Erdmann	TIME	PRINTED: Mike Baxter	TIME 9:15	PRINTED:	TIME	PRINTED:
COMPANY: EnSafe		COMPANY: Lauch's Lab		COMPANY:		COMPANY:

METHOD OF SHIPMENT: Fed Exp.
SHIPMENT NO. 814795422636
SEND RESULTS TO: Charles Verney

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

ENSAFE

800-588-7962
MEMPHIS, TENNESSEE
CHARLESTON, SC; CINCINNATI, OH; DALLAS, TX; JACKSON, TN; KNOXVILLE, TN; LANCASTER, PA; NASHVILLE, TN; NORFOLK, VA; PADUCAH, KY; PENSACOLA, FL; RALEIGH, NC; COLOGNE, GERMANY

#9911A367

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT/JOB NO: 2901 0843
COC NO:
PO NO: 1840
REL NO: 38
LAB NAME: Laucks

CLIENT: Navy Clean CNC
PROJECT MANAGER: T. Haverkost
LOCATION: Zone G/SWMU 24
TELE/FAX NO.: (843) 884-0029
SAMPLERS: (SIGNATURE) William Horsch

ANALYSIS REQUIRED

	FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	SVOCs	METALS									REMAR
1	NBCG/0245B00501	12/15/99	0940	S	Glass 8 oz	Ice	None	1	✓	✓									Petrol. Od
2	NBCG/0245B00502	"	0945	S	"	"	"	1	✓	✓									"
3	NBCG/0245B00601	"	1005	S	Glass 8 oz	"	"	1	✓	✓									"
4	NBCG/~~0245B00603~~ 0245B00601	"	1005	S	"	"	"	1	✓	✓									Dup of 0
5	NBCG/0245B00602	"	1010	S	"	"	"	1	✓	✓									Petrol. Od
6	NBCG/~~0245B00604~~ 0245B00602	"	1010	S	"	"	"	1	✓	✓									Dup of 0
7	NBCG/0245B00701	"	1025	S	"	"	"	1	✓	✓									Petrol. Od
8	NBCG/0245B00702	"	1033	S	"	"	"	1	✓	✓									"

RELINQUISHER	DATE	RECEIVER	DATE	RELINQUISHER	DATE	RECEIVER
PRINTED: Fred Erdmann	TIME	PRINTED: Mike Burter	TIME 9:15	PRINTED:	TIME	PRINTED:
COMPANY: EnSafe		COMPANY: Laucks Labs		COMPANY:		COMPANY:

METHOD OF SHIPMENT: Fed Exp.
SHIPMENT NO. 8147959226 36
SEND RESULTS TO: Charles Vernoy

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	39715
Date:	October 15, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone G
Date Sampled:	July 28 & 29, 1999
Number of Samples:	22 Non-Aqueous Sample(s) with 0 MS/MSD(s) 1 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma, Inc.
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Pesticides, PCBs, SPLP Pesticides, SPLP PCBs, Metals, SPLP Metals and Total Organic Carbons

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searson
for Paul B. Humburg, President

10-18-99.
Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# 39715

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		PEST		PCB		SP-PEST		SP-PCB		MET		SP-MET		TOC	
FDSTB03101	WATER	X																	
FDSSH02801	SOIL		X		X		X								X				
FDSSH02802	SOIL		X		X		X								X				
FDSSH02901	SOIL		X		X		X								X				
FDSSH02902	SOIL		X		X		X								X				
FDSSH03001	SOIL		X		X		X								X				
FDSCH03001	SOIL		X		X		X								X				
FDSSH03002	SOIL		X		X		X								X				
FDSSH03101	SOIL		X		X		X								X				
FDSCH03101	SOIL		X		X		X								X				
FDSSH03102	SOIL		X		X		X								X				
003SB01101	SOIL						X												
003SB01102	SOIL						X												
003SB01201	SOIL						X												
003CB01201	SOIL						X												
003SB01202	SOIL						X												
003SB01402	SOIL						X				X								X
633SB01101	SOIL						X												
633CB01101	SOIL						X												
633SB01102	SOIL						X												
633SB01202	SOIL								X				X						X
643SB01302	SOIL						X				X				X		X		X
642SB01102	SOIL														X		X		X
Total Billable Samples (Water/Soil)		1	10	0	10	0	20	0	1	0	2	0	1	0	12	0	2	0	4

VOA= Volatiles
SVOA= Semivolatiles
PEST= Pesticides
PCB= PCBs
SP-PEST= SPLP Pesticides
SP-PCB= SPLP PCBs
MET= Metals
SP-MET= SPLP Metals
TOC= Total Organic Carbons

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8260B; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 39715

A validation was performed on the Volatile Data from SDG 39715. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
* Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike / Matrix Spike Duplicate
* Field Duplicates
* Compound Identification / Quantitation

* - All criteria were met for this parameter

Continuing Calibration

The continuing calibration, R34039, contained compounds with %Ds greater than 50% and less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as estimated (UJ).

FDSSH02801	chloromethane (54.3%)
FDSCH03101	bromomethane (77.9%)
FDSSH02902	chloroethane (70.6%)

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSSH02801	chloromethane	+/-	J/UJ
FDSCH03101	bromomethane		
FDSSH02902	chloroethane		

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270C; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 39715

A validation was performed on the Semivolatile Data from SDG 39715. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
* Calibrations
* Internal Standard Performance
  Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike / Matrix Spike Duplicate
  Field Duplicates
  Compound Identification / Quantitation

* - All criteria were met for this parameter

Blank

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Method Blank

Associated blank	Compound	Concentration	Action Level
SBLK2	bis(2-ethylhexyl)phthalate	28 J ug/Kg	280 ug/Kg

Samples	Compound	Qualification
FDSSH03101	bis(2-ethylhexyl)phthalate	CRQL
FDSCH03101		
FDSSH03102		
FDSSH02901		
FDSSH02902		

Field Duplicate

Sample FDSSH03001 and duplicate sample FDSCH03001 did not exhibit comparable results for the compounds listed below. Qualify these compounds as estimated (J).

anthracene (38%)
fluoranthene (85%)
pyrene (76%)
benzo(a)anthracene (96%)
chrysene (94%)
benzo(b)fluoranthene (81%)
benzo(k)fluoranthene (114%)
benzo(a)pyrene (114%)
indeno(1,2,3-cd)pyrene (96%)
dibenz(a,h)anthracene (89%)
benzo(g,h,i)perylene (74%)

Compound Identification / Quantitation

Do not use the E-flagged compounds in the samples listed below, in favor of the D-flagged compound results in the dilution.

FDSSH02901
FDSSH02802
FDSSH02801
FDSSH03001

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSSH03101 FDSCH03101 FDSSH03102 FDSSH02901 FDSSH02902	bis(2-ethylhexyl)phthalate	+	CRQL
FDSSH03001 FDSCH03001	anthracene fluoranthene pyrene benzo(a)anthracene chrysene benzo(b)fluoranthene benzo(k)fluoranthene benzo(a)pyrene indeno(1,2,3-cd)pyrene dibenz(a,h)anthracene benzo(g,h,i)perylene	+	J
FDSSH02901 FDSSH02802 FDSSH02801 FDSSH03001	all E-flagged compounds	+	do not use
FDSSH02901DL FDSSH02802DL FDSSH02801DL FDSSH03001DL	all results except D-flagged compounds	+/-	do not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDES/PCBs

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Methods 8081/8082; the National Functional Guidelines for Organic Data Validation, 2/93, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 39715

A validation was performed on the Pesticide/PCB Data from SDG 39715. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
	•	Field Duplicates
	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The continuing calibration standards INDAL34O, 8/24/99, 0847, on both columns, exhibited %Ds greater than 15% but less than 50% for which qualifications were required. For the following samples and compound, the reported positive results are qualified as estimated, J.

003SB01102	4,4'-DDT (30.7%/20.2%)
FDSSH02801	
FDSSH02901	
FDSSH02902	

Calibrations (continued)

The continuing calibration standards INDBL315Z, 8/17/99, 1410, exhibited a %D greater than 15% but less than 50% for which qualifications were required. For the following samples and compound, the reported positive results are qualified as estimated, J.

FDSSH03101	endosulfan sulfate (35.6%)
FDSCH03101	

The continuing calibration standard INDBL315U, 8/11/99,1722, on both columns, exhibited %Ds greater than 15% but less than 50% for which qualifications were required. For the following samples and compound, the reported positive results are qualified as estimated, J.

003SB01201	4,4'-DDE (16.9%/19.5%)
003CB01201	
003SB01202	

Surrogate Recoveries

The following samples exhibited non-compliant surrogate recoveries above the QC limits. All reported positive results are qualified as estimated, J.

Sample	Surrogate	%R	Compounds
FDSCH03101	DCB	185%	pesticides
FDSSH02901	DCB	2618%/2081%	pesticides

Field Duplicates

The field duplicate pair of the following samples exhibited non-compliant RPDs for the noted compounds. The reported positive and non-detect results are qualified as estimated, J/UJ.

FDSSH03001	dieldrin (200%)
FDCSH03001	4,4'-DDD (200%)

Field Duplicates (continued)

The field duplicate pair of the following samples exhibited non-compliant RPDs for the noted compounds. The reported positive and non-detect results are qualified as estimated, J/UJ.

FDSSH03101	heptachlor (67%)
FDCSH03101	heptachlor epoxide (200%)
	4,4'-DDT (76%)
	Methoxychlor (101%)
	Alpha-chlordane (98%)
	Gamma-chlordane (98%)

Compound Identification

Several samples exhibited column quantitation %Ds greater than 40%. The following guidelines were used to qualify the data:

1. No qualifications are required for positive sample results which exhibited column quantitation differences <40%. The "P" flag is removed from the result.

2. The positive sample result which exhibited a column quantitation difference >40%, but ≤100% is qualified as estimated, J.

3. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and is <10X the respective compound CRQL, is qualified as non-detect, U. (All multi-component results are exempt from this rule.)

4. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and >10X the respective compound CRQL, is qualified as presumptively present at an estimated concentration, NJ. (All multi-component results are exempt from this rule.)

5. The positive multi-component pesticide sample result which exhibited a column quantitation difference >100% and <10X the respective multi-component CRQL is qualified as presumptively present at an estimated concentration, NJ.

Compound Identification, Continued

The following samples and compounds have been qualified for high column quantitation %Ds.

Sample ID	Compound	%D	Lab Qual.	HESI Qual.	Ref. #
003SB01101DL	4,4'-DDT	56.9%	P	J	2
003SB01201DL	4,4'-DDD	190%	P	NJ	4
003CB01201	4,4'-DDD	54.0%	P	J	2
	Gamma-chlordane	324%	P	U	3
003SB01202DL	4,4'-DDD	197%	P	NJ	4
003SB01402	gamma-chlordane	999.9%	P	U	3
643SB01302	4,4'-DDT	34.9%	P		1
	Gamma-chlordane	30.4%	P		1
FDSSH02801	4,4'-DDE	492%	P	U	3
	4,4'-DDD	78.4%	P	J	2
	4,4'-DDT	101%	P	U	3
	Endrin aldehyde	37.5%	P		1
	Gamma-chlordane	28.0%	P		1
FDSSH02901	4,4'-DDE	320%	P	U	3
	4,4'-DDT	41.6%	P	J	2
	Endrin aldehyde	55.1%	P	J	2
FDSSH03001	4,4'-DDT	153%	P	U	3
	Gamma-chlordane	148%	P	U	3
FDSCH03001	4,4'-DDT	186%	P	U	3
	Endrin aldehyde	75%	P	J	2
	Gamma-chlordane	44.8%	P	J	2
FDSSH03101	heptachlor epoxide	99.6%	P	J	2
	Endosulfan sulfate	356%	P	U	3

Compound Identification, Continued

The following samples and compounds have been qualified for high column quantitation %Ds.

Sample ID	Compound	%D	Lab Qual.	HESI Qual.	Ref. #
FDSCH03101	endosulfan sulfate	304%	P	NJ	4
FDSSH03102	heptachlor epoxide	123%	P	NJ	4
	4,4'-DDE	268%	P	U	3

Compound Quantitation

For the following samples, the E flagged results (with corresponding D flagged results) are not used in favor of the corresponding D flagged results reported from the dilution analyses. All other results reported in the dilution analyses are not used in favor of the results reported from the undiluted or lessor dilution analyses.

003SB01101
003SB01201
003CB01201
003SB01202
643SB01302
FDSSH03101
FDSCH03101
FDSSH03102

For the following samples, the reported results are not used in favor fo the results reported from the undiluted analyses. The dilutions were not required because there were no compounds reported in the samples that were above the calibration curve range.

003SB01102DL
633SB01101DL
633CB01101DL
633SB01102DL
FDSSH02801DL
FDSSH02802DL
FDSSH03001DL
FDSCH03001DL
FDSSH03002DL

Compound Identification (continued)

For the following samples and noted compounds, the laboratory reported the greater quantitated result rather than the lesser quantitated result. The reviewer has amended the sample results to reflect the lessor quantitated result based on the results reported on the Form 10.

FDSSH02901	4,4'-DDE
FDSSH02801	4,4'-DDE 4,4'-DDT
FDSSH03101	endosulfan sulfate
FDSCH03101	endosulfan sulfate

For the following samples, the reported E flagged results for the compounds noted below are qualified as estimated, J, because they are above the calibration range of the instrument, but were diluted out of the corresponding dilution analysis of the sample.

003SB01201 003CB01201 003SB01202	4,4'-DDE
003CB01201	4,4'-DDD
FDSSH03101 FDSCH03101	4,4'-DDT

For the following samples, the reported E flagged results for the compounds noted below are qualified as estimated, J, because they are above the calibration range of the instrument, but were diluted out of the corresponding dilution analysis of the sample.

FDSSH03101 FDSCH03101	4,4'-DDT heptachlor endosulfan sulfate
FDSSH03101 FDSSH03102	heptachlor epoxide

System Performance and Overall Assessment

The data, as reported, did require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
003SB01102 FDSSH02801 FDSSH02901 FDSSH02902	4,4'-DDT (30.7%/20.2%)	+	J
FDSSH03101 FDSCH03101	endosulfan sulfate (35.6%)	+	J
003SB01201 003CB01201 003SB01202	4,4'-DDE (16.9%/19.5%)	+	J
FDSCH03101 FDSSH02901	pesticides	+	J
FDSSH03001 FDCSH03001	dieldrin (200%) 4,4'-DDD (200%)	+/-	J/UJ
FDSSH03101 FDCSH03101	heptachlor (67%) heptachlor epoxide (200%) 4,4'-DDT (76%) Methoxychlor (101%) Alpha-chlordane (98%) Gamma-chlordane (98%)	+/-	J/UJ
ALL	All P < 40%	+	
ALL	All P > 40% But ≤ 100%	+	J
ALL	single component pests All P > 100% And < 10X CRQL	+	U

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
ALL	single component pests All P > 100% And > 10X CRQL	+	NJ
ALL	multi-component pests All P> 100% And < 10X CRQL	+	NJ
003SB01101 003SB01201 003CB01201 003SB01202 643SB01302 FDSSH03101 FDSCH03101 FDSSH03102	E flagged results with corresponding D flagged results present	+E	Do Not Use
003SB01101DL 003SB01201DL 003CB01201DL 003SB01202DL 643SB01302DL FDSSH03101DL FDSCH03101DL FDSSH03102DL	All except corresponding D flagged results	+/-	Do Not Use
003SB01102DL 633SB01101DL 633CB01101DL 633SB01102DL FDSSH02801DL FDSSH02802DL FDSSH03001DL FDSCH03001DL FDSSH03002DL	All Compounds	+/-	Do Not Use

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSSH02901	4,4'-DDE	+120E	+ 28.1
FDSSH02801	4,4'-DDE	+29	+4.9P
	4,4'-DDT	+46	+23P
FDSSH03101	endosulfan sulfate	+56E	+12.4P
FDSCH03101	endosulfan sulfate	+170E	+42P
003SB01201 003CB01201 003SB01202	4,4'-DDE	+E	J
003CB01201	4,4'-DDD	+E	J
FDSSH03101 FDSCH03101	4,4'-DDT	+E	J
FDSSH03101 FDSCH03101	4,4'-DDT heptachlor endosulfan sulfate	+E	J
FDSSH03101 FDSSH03102	heptachlor epoxide	+E	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SPLP PESTICIDES/PCBs

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Methods 8081/8082; the National Functional Guidelines for Organic Data Validation, 2/93, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 39715A

A validation was performed on the Pesticide/PCB Data from SDG 39715A. The data was evaluated based on the following parameters:

*	•	Data Completeness
	•	Holding Times
*	•	GC Performance
	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Holding Times

The following samples were extracted thirty-one (31) to thirty-two (32) days outside the extraction holding time. The reported non-detect results are rejected, UR.

003SB01402
633SB01202
643SB01302

Calibrations

The continuing calibration standard INDAL314L exhibited a %D greater than 50% but less than 90%. For the following samples and compound, the reported positive and non-detect results are qualified as estimated, J/UJ.

All Samples Endrin (80.1%)

Surrogate Recoveries

The following samples exhibited non-compliant surrogate recoveries below the QC limits. All reported positive and non-detect results are qualified as estimated, J/UJ.

Sample	Surrogate	%R	Compounds
643SB01302	DCB	26%/29%	pesticides
003SB01402	DCB	42%/45%	pesticides
643SB01302	DCB	38%	PCBs
003SB01402	DCB	26%	PCBs

System Performance and Overall Assessment

The data, as reported, did require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
003SB01402 633SB01202 643SB01302	All Compounds	-	UR
All Samples	Endrin (80.1%)	+/-	J/UJ
643SB01302 003SB01402 643SB01302 003SB01402	pesticides pesticides PCBs PCBs	+/-	J/UJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # 39726

A validation was performed on the Metals Data from SDG 39726. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Copper	0.36 mg/kg	all soil samples below 1.8 mg/kg
Zinc	1.47 mg/kg	no impact
Tin	2.66 mg/kg	all soil samples below 13.5 mg/kg
Calcium	394 ug/l	no impact
Copper	1.0 ug/l	no impact
Thallium	2.6 ug/l	no impact
Zinc	34.3 ug/l	all water samples below 172 ug/l

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

Matrix Spike Recovery results

The matrix spike recovery for soils for Antiminy (55%) was below the lower control limits (>30% but <75%). All positvie and non-detect results are qualified as estimated, "J" or "UJ".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 1.8 mg/kg	Cu.	+	U
all soil samples below 13.5 mg/kg	Sn.		
all water samples below 172 ug/l	Zn.		
all soil samples	Sb.	+	J
all "B" results	all analytes	B	J

Appendix D

SWMU 24 Comments

This document presents CH2M-Jones' response to specific comments related to SWMU 24 made by the South Carolina Department of Health and Environmental Control (SCDHEC) on the basis of its review of the *Zone G RCRA Facility Investigation (RFI) Report, Revision 0* (EnSafe, 1998).

Comments Made by Stacey French

Comment:

1. Section 10.15 SWMU 24 Waste Oil Reclamation Facility, Page 10.15.1

   This section states that SWMU 24 was originally investigated under the petroleum program, however, there is no discussion of the results of that investigation. Please revise this section to include a discussion of the findings of previous investigations. In addition to revising this section, please include any sample data collected in previous investigations in the RFI Report. This section should include any discussion about investigations of any piping associated with the tanks.

Response:

The results of the petroleum investigation are presented in Tables 10.15.1 through 10.15.8 and discussed in Sections 10.15.2 through 10.15.4 in the *Zone G RFI Report, Revision 0* [EnSafe, Inc. (EnSafe) 1998]. In addition, the results of the original RFI investigation including the petroleum investigation are presented in Section 2.0 of this RFI Report Addendum.

Comment:

2. Figure 10.15-1 Soil and Groundwater Sampling Locations SWMU 24

   This figure shows the locations of samples taken during the RFI at SWMU 24. This figure should be modified to include any samples taken in previous investigations handled under the petroleum program. Section 10.15 indicates that this area includes SWMU 3. Please revise the figure to include the location of SWMU 3. This figure should also include the location of any piping associated with the tanks.

Response:

The soil sample locations from the original RFI (i.e., GFDSSH024 through GFDSSH027, GFDSSC069, GFDSSC072 through GFDSSC075, and GFDSSC085 through GFDSSC089) and the soil sample locations from the additional RFI sampling investigation (i.e., G024SB001 through G024SB007, G024SB009, G024SB010, and GFDSSH028 through GFDSSH031) are depicted on Figure 4-1 which is provided in this RFI Report Addendum.

Figure 2-3 in this RFI Report Addendum provides the locations of the five DPT borings (i.e., LF699GP044 through LF699GP046, LF699GP048, and LF037GP052) advanced within SWMU 24 to investigate potential impacts from the sanitary sewer system which is identified as SWMU 37 and the storm sewer system identified as AOC 699. This figure also presents the locations of the four site monitoring wells (i.e., G024GW001 through G240GW004).

SWMU 3 was investigated separately and the RCRA RFI Addendum for this site will be submitted under separate cover. Figure 1-2 provided in this RFI Report Addendum depicts the layout of SWMU 24 including the location of SWMU 3.

Comment:

3. Section 10.15.3 Soil Sampling and Analysis, Page 10.15.5, Lines 15 & 16

   This sentence states that ten CPT and four hand auger soil samples were collected during the screening investigation. Figure 10.15.-1 shows the location of 11 CPT and 3 hand auger soil samples. Please revise this section and Figure 10.15-1 to clarify this discrepancy.

   The location of the soil samples shown on Figure 10.15-1 indicates that all sides of tank 39-D were sampled during the RFI. If the sample locations provided are correct only two sides of tank 39-A appear to be adequately sampled. The rationale for not sampling every side of tank 39-A is unclear. The Department's position is that this area should have been investigated, and that there was not sufficient delineation at the site. Please revise section 10.11.12 to clearly indicate the rationale.

Response:

Hand auger soil sample FDSSH02401 was inadvertently identified on Figure 10.15-1 [*Zone G RFI Report, Revision 0* (EnSafe, 1998)] as a CPT boring. Figure 2-2 provided in this RFI Report Addendum depicts the 10 CPT points as soil borings and the four hand auger soil samples as surface soil samples.

Surface and subsurface soil samples were collected in locations surrounding tank 39-A during the additional RFI sampling investigations completed in July and December 1999 and January 2000. The results of the soil sampling events are discussed in Section 4-1 of this RFI Report Addendum. Soil sample locations are presented on Figure 4-1 of this RFI Report Addendum.

Comment:

4. Table 11.1 Site Conclusions and Zone G Preliminary Recommendations

   The Department does not agree with the recommendation presented for this site. See comment number 3. Additional investigation is needed prior to selection of a remedy for this site. This should be discussed in section 11.14.

Response:

Thirteen additional surface and subsurface soil samples were collected at SWMU 24 during the additional RFI sampling investigations completed subsequent to the *Zone G RFI Report, Revision 0* (EnSafe, 1998). In addition, additional groundwater samples were collected from the four monitoring wells at SWMU 24 during two additional events conducted in 1999. The results of the additional RFI sampling investigations are provided in Section 4 of this RFI Report Addendum. As a result, of the additional RFI sampling investigations, SWMU 24 is recommended for no further action.

Comments Made by Susan Byrd

Comment:

1. Section 10.15.3. Other Organic Compounds in Soil, Page 10.15.22

   The text states that VOC and SVOC analytical results will be used to evaluate TPH since no RBC is available for TPH. Supplemental Guidance to RAGS, Human Health Bulletin No. 2 states that a surrogate compound such as hexane can be used to obtain toxicity values. Therefore, the TPH detected at SWMU 24 should not be eliminated as a COPC, and should be evaluated in the Human Health Risk Assessment.

Response:

TPH was not considered a COPC because its analytical results from the original RFI sampling investigation were used as a screening evaluation for the presence of petroleum hydrocarbons in the sampled media. In addition, there is no specific screening criteria available for TPH. Analytical results were used to evaluate the scope for additional soil sample collection events including analyses which included volatile organic compounds (VOCs) (namely, benzene, ethylbenzene, toluene, and xylenes) and semi-volatile organic compounds (SVOCs) which includes polycyclic aromatic hydrocarbons (PAHs). Because TPH is comprised of numerous organic compounds its toxicity was evaluated by review of the VOC and SVOC analytical results. The results of the additional RFI sampling investigations are provided in Section 4 of this RFI Report Addendum.