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CAPE ROMANZOF LRRS
ALASKA

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 137

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137

FINAL

Volume I

A003 – Technical Report
A004 – Digital Imaging

Issued 01 August, 2001

Landfill 2 (LF03), SS 13 and SS15
Long Term Monitoring
Cape Romanzof LRRS, Alaska

Conducted in September 2000

Contract: #F41624-00-C-8050

United States Air Force
611th CES
Elmendorf AFB, Alaska

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ACRONYMS AND ABBREVIATIONS

AC&W .....Aircraft Control and Warning
ADEC .....State of Alaska, Department of Environmental Conservation
AFCEE .....Air Force Center for Environmental Excellence
BNCI .....BNC International, Inc.
BTEX .....Benzene, Toluene, Ethylbenzene, Xylene
CYD .....Cubic Yards
DO .....Dissolved Oxygen
DRO .....Diesel Range Organics
GRO .....Gasoline Range Organics
GW .....Groundwater
ICP .....Inductive Coupled Plasma
IRP .....Interim Remedial Action
LCS .....Laboratory Control Sample
LRRS .....Long Range Radar Site
LTM .....Long Term Monitoring
MAR .....Minimally Attended Radar Station
MCL .....Maximum Contaminant Levels
MDL .....Method Detection Limits
mg/L .....Milligrams per Liter
mg/Kg .....Milligrams per Kilograms
mS/cm .....Millisiemens per Centimeter
mv .....Millivolt
MW .....Monitoring Wells
NA .....Not Analyzed
ND .....Not Detected above method report limit / practical quantitation limit
NL .....No Limit established by ADEC
NS .....Not Sampled
NTU .....Nephelometric Turbidity Units
PA .....Preliminary Assessment
PCB .....Polychlorinated Biphenyl
PMC .....Piquniq Management Corporation
PQL .....Practical Quantitative Limits
QA/QC .....Quality Assurance/Quality Control
RA .....Remedial Assessment
RI/FS .....Remedial Investigation/Feasibility Study
ROCC .....Regional Operations Control Center
RRO .....Residual Range Organics
SD .....Sediment
SOW .....Scope of Work
SS .....Near Surface Soil
SVOC .....Semi-Volatile Organic Compounds
SW .....Surface Water
TPH .....Total Petroleum Hydrocarbons
USAF .....United States Air Force

UST.....Underground Storage Tank
VOC.....Volatile Organic Compounds
WACS.....White Alice Communications System
WC.....Woodward Clyde

1.0 Introduction and Project Summary

This report outlines the activities conducted during the Landfill 2 (LF03), SS13, and SS15 Long Term Monitoring at Cape Romanzof LRRS, Alaska in September 2000. Project activities included collection and analysis of soil, sediment and water samples. These activities were conducted in accordance with contract specifications #F41624-00-C-8050.

1.1 Scope of Work

The scope of work and objectives for this project included the following (listed by site):

Site SS13

- Collect groundwater samples from 2 monitoring wells (MW1, MW2)
- Collect field parameter measurements - temperature, pH, conductivity, dissolved oxygen, reduction/oxidation potential, and turbidity at each monitoring well
- Analyze groundwater samples for Diesel Range Organics (DRO), Gasoline Range Organics (GRO), Residual Range Organics (RRO), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Semi-Volatiles (SVOC), Alkalinity, Total Iron, Sulfate and Nitrate
- Collect three surface water samples (SW-01, SW-02, SW-03)
- Analyze surface water samples for DRO, GRO, RRO, BTEX, SVOC, Sulfate, and Nitrate
- Collect two sediment samples (SS01, SS06)
- Collect three near surface soil samples (LB-03, LB-07, LB-08)
- Analyze soil / sediment samples for DRO, GRO, RRO, BTEX, and SVOC

Site SS15

- Collect groundwater samples at 3 monitoring wells (WW02, WW07, WW08)
- Analyze groundwater samples for DRO, GRO, RRO, BTEX, SVOC, Alkalinity, Total Iron, Sulfate, and Nitrate
- Collect field parameter measurements - temperature, pH, conductivity, dissolved oxygen, reduction/oxidation potential, and turbidity at each monitoring well

Site LF03

- Collect groundwater samples from 8 monitoring wells (MW-1, CMW-1 to CMW-7)
- Collect field parameter measurements - temperature, pH, conductivity, dissolved oxygen, reduction/oxidation potential, and turbidity at each monitoring well
- Collect three surface water samples (SD/SW-1, SD/SW-2, SD/SW-3)
- Collect three sediment samples (SD/SW-1, SD/SW-2, SD/SW-3)
- Analyze surface and ground water for DRO, GRO, SVOC, Volatiles (VOC), PCB, Inductive Coupled Plasma (ICP) Metals, and Alkalinity
- Analyze sediment samples for DRO, GRO, SVOC, VOC, PCB, and ICP metals
- Visually inspect and document the current effectiveness of the landfill cap
- Recommend repair activities for the landfill cap, if needed

1.2 Project Objectives

The objectives of this project included the following:

1) Landfill Cap Inspection – Conduct a visual inspection of the landfill cap to determine cap integrity and any deficiencies due to wind or water erosion.

2) Groundwater, Surface Water, Soil and Sediment Sampling – Collect and analyze representative water, soil and sediment samples to produce valid analytical data to evaluate whether contamination is migrating from these source areas and to monitor effectiveness of intrinsic remediation of contaminants in soil, sediments and groundwater.

1.3 Technical Report Organization

This report documents field activities conducted in accordance with the project contract specifications. The report includes the following sections:

Table 1-1
Technical Report Organization

	Contents
Section 1	Report introduction, scope of work, project objectives, site background and summary of previous findings.
Section 2	Field and laboratory analytical methods and QA/QC procedures.
Section 3	Methods used for data evaluation.
Section 4	Presentation and discussion of hydrocarbon sampling analytical results.
Section 5	Presentation and discussion of field parameter measurements and inorganic/metals sampling analytical results and evaluation of intrinsic remediation.
Section 6	Presentation and discussion of landfill cap inspection findings and corrective action activities.
Section 7	Conclusions and recommendations from inspection and sampling.
Section 8	Lists references.
Appendices	Appendix A – Additional Photographs Appendix B - Daily Status Reports Appendix C – Field Notes Appendix D – Groundwater Sampling Log Sheets Appendix E - ADEC Soil & Water MCLs and Sample Holding Times Appendix F – QA/QC Summary Report Appendix G – Analytical Data with Chain-of-Custody Forms

1.4 Site Background

Cape Romanzof, Alaska, is approximately 540 air miles west of Anchorage, Alaska. The Cape Romanzof Long Range Radar Site (LRRS) consists of 4,900 acres of land within the Yukon Delta National Wildlife Refuge. In 1953, the United States Air Force (USAF) constructed a LRRS as part of the Aircraft Control and Warning (AC&W) at Cape Romanzof. This site was one of the ten original AC&W's built in Alaska. In 1958, a White Alice Communications System (WACS) replaced this system. Since 1977, GE Government Services has operated this site. The current operations and maintenance contractor is ARCTEC. Alascom replaced this system with satellite communications in 1979. In the mid-1980s, the station was converted to a Minimally Attended Radar Site (MAR). Radar transmission and beacon data are transmitted to Elmendorf Region Operations Control Center (ROCC) by satellite. In 1984, a new industrial and living facility was built. The Upper Camp (elevation 2,250') contains the radar equipment.

The three sampling sites are SS13, SS15, and LF03. Site SS13 is located 800 feet south of the Lower Camp and 200 feet north of the pump house. Site SS15 is located 200 feet south of the Lower Camp and just south of the waste accumulation area 1. LF03 is situated approximately one-half mile NW of the Lower Camp. LF03 is south of the access road, which runs from the Lower Camp to the runway. All three sites are accessible by the road system.

LF03 was in operation from the 1950's to 1970's. During this time garbage, construction material, shop waste and incineration ash were deposited into the landfill. Since 1978, the wastes have been transported to off base landfills or incinerator sites. In 1994, LF03 was capped. In 1992, Woodward Clyde (WC) conducted a Remedial Investigation/Feasibility Study (RI/FS) at LF03. In 1995, the Air Force conducted a Remedial Assessment (RA) on SS15 and LF03. In 1996, Harding Lawson conducted a RA on LF03. Total Petroleum Hydrocarbons (TPH) and Polychlorinated Biphenyl (PCB) were detected in surface water and TPH was detected in sediment and soil. PCB and Diesel Range Organics (DRO) were detected in sediment samples. Monitoring well, surface water and sediment sampling was also conducted in 1997.

Site SS13 was the result of a 14,000-gallon diesel fuel spill that occurred in 1979. Well 1 is located south of the Lower Camp and east of site SS13. Wells A & B located on the site were plugged in 1990. A RI/FS was conducted in 1992 by WC, which resulted in a Long-Term Monitoring (LTM) plan. TPH was detected in soils and groundwater sampled from the wells. A remediation investigation, with the objective of delineating the nature and extent of soil, surface water and groundwater contamination, was conducted in 1997. Additional objectives of the 1998 investigation included determination of aquifer characteristics and establishing levels of natural attenuation parameters in soil, sediment and groundwater.

Site SS15 was the result of a diesel fuel spill from two underground storage tanks (USTs), (5,000 gallon and 15,000 gallon). In 1991, both USTs and 900 CYD of contaminated soil were removed from the site. In 1991, ENSR Corporation conducted a preliminary assessment (PA), and in 1993 a RI/FS. Neither report delineated the extent of the soil contamination. In 1995, the Air Force conducted a RA. Additional objectives of the 1998 investigation included

determination of aquifer characteristics and establishing levels of natural attenuation parameters in soil, sediment and groundwater.

Long Term Monitoring at site SS13, SS15 and LF03 and landfill cap inspection at LF03 was conducted in October 1999 by BNCI. Sampling data and landfill inspection findings were documented and submitted to the Air Force as a Technical Report in November 2000. A brief summary of the November report is provided in the following section.

1.5 Summary of Previous Findings

SS13

Groundwater samples collected in 1999 from MW1 showed an overall decrease in hydrocarbon constituents from 1997 levels excluding DRO (Tables 4-3 and Table 4-4). All hydrocarbon constituents at MW2 were reduced from 1997 levels, except for DRO, to non-detect or well below MCLs in 1999. Review of field parameter and hydrocarbon data indicates that intrinsic remediation processes are active and hydrocarbon levels are decreasing over time.

Results for surface water analytical data shows that hydrocarbons constituents were non-detect or not analyzed for all surface water sites in 1999 (Table 4-8).

Sediment sampling was conducted in 1999 at SS01 and SS06. Data from SS01 indicates that DRO level (55,800 mg/Kg) greatly exceeded MCLs. All other hydrocarbon constituents were non-detected or less than MCLs at this location. Data from SS06 indicates that all hydrocarbon constituents were non-detected or less than MCLs at this location (Table 4-14).

Near surface soil samples were collected in 1999 from locations LB-03, LB-07, and LB-08. GRO, BTEX and SVOC were not detected at any of these locations. RRO levels were detected at all three locations but less than the MCL. DRO levels at all three locations have decreased from 1997; however, all three 1999 levels exceed MCLs (Tables 4-19 and 4-20).

SS15

In 1999, groundwater samples were collected from wells WW02, WW07 and WW08. DRO was reduced at WW02 but still exceeds the MCL. The hydrocarbon levels in 1999 at WW07 were all non-detect showing a reduction from 1997 levels. WW08 DRO levels in 1999 increased compared to 1997 but are below MCL (Tables 4-25 and 4-26).

LF03

In 1999, groundwater samples were collected from wells CMW-1, CMW-3, CMW-4, CMW-5, CMW-6, and CMW-7. All hydrocarbon constituents at all locations were either not detected or less than MCLs. In general, all groundwater hydrocarbon levels were lower in 1999 than in 1997 samples.

No hydrocarbon constituents were detected at any LF03 surface water locations in 1999. (See Table 4-35)

Sediment samples at LF-03 were collected at locations SD/SW-1, SD/SW-2 and SD/SW-3. GRO, BTEX, SVOC and PCB were non-detected at all three areas in 1999. DRO was detected at all three locations, but at levels below the MCL. (See Table 4-41)

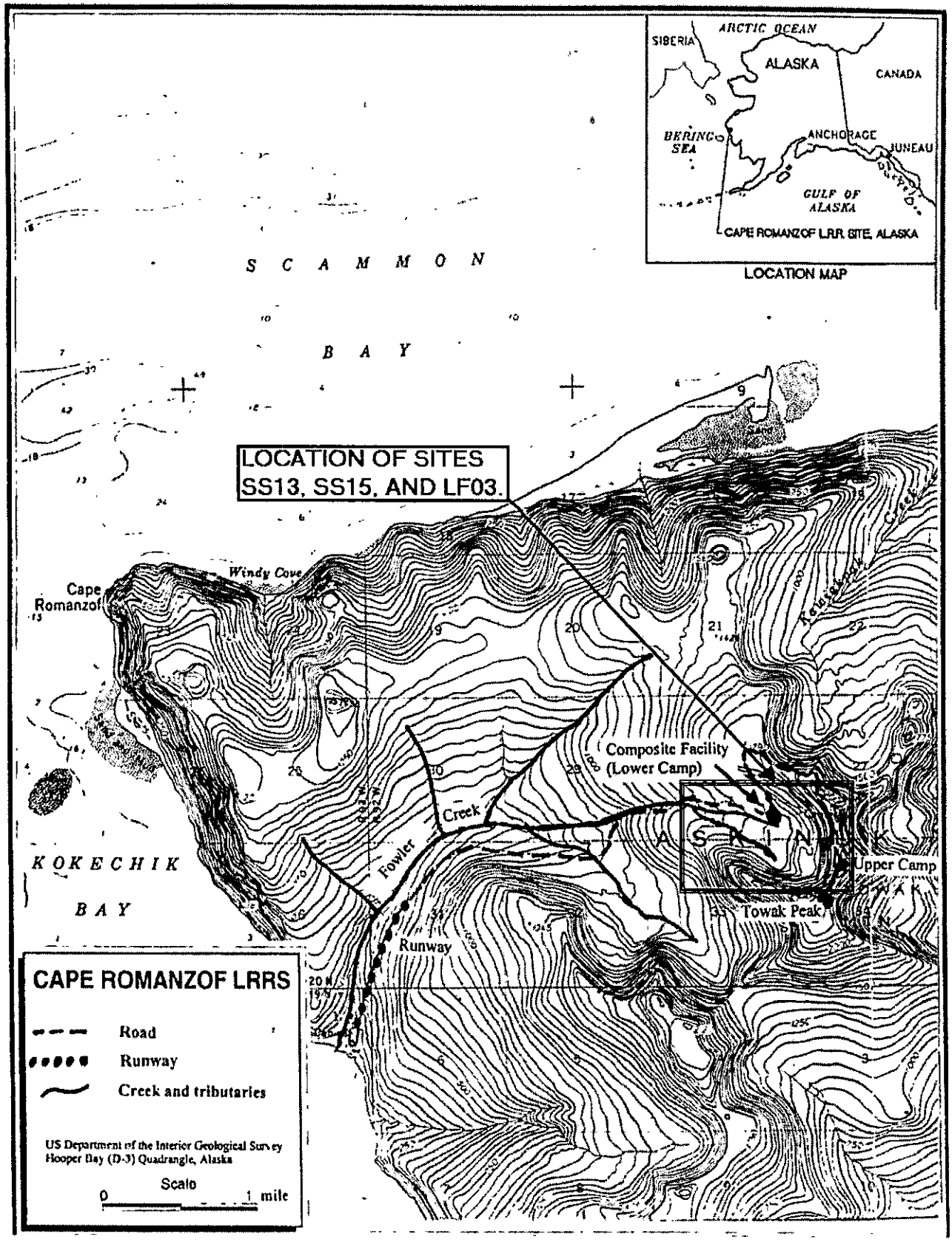


Figure 1: TOPOGRAPHIC MAP OF CAPE ROMANZOF LRRS, ALASKA

E 98,000

N 104,000

N 102,000

N 100,000

E 100,000

LF03

COMPOSITE FACILITY (LOWER CAMP)

SS13

SS15

LOWER TRAM TERMINAL

WATER RESERVOIR

UPPER CAMP

TOWAK PEAK

Fowler Creek

North

Approximate Site Boundaries

Scale
0 500 1000
Feet

SiteOverROM00.dwg

SITE OVERVIEW
CAPE ROMANZOF LRRS
Figure 2 **Page 7**

Modified original drawings from 'Final SS15 (&SS13)Technical Report, July 1998'.

2.0 Analytical Methods and QA/QC Procedures

This section identifies the methods used for field parameter measurement and for laboratory analyses of groundwater, surface water, sediment and soil samples.

2.1 Field Parameters

Field parameter measurement data was collected for temperature, pH, conductivity, dissolved oxygen, reduction/oxidation potential, and turbidity from monitoring wells at sites LF03, SS13 and SS15. Table 2-1 presents groundwater sampling locations for field parameter measurements, analytical methods and instrument range.

Table 2-1
Field Parameters Measurement Methods

Location (Well #)	Parameter	Method	Range
LF03 (CMW-1 to CMW-7, MW-1) **SS13** (MW1, MW2) **SS15** (WW02, WW07, WW08)	Temperature pH Conductivity Dissolved Oxygen ReDox potential Turbidity	E170.1 E150.1 E120.1 E360.1 ASTM D1498 E180.1	0-50°C 0 – 14 units 0 – 100mS/cm 0-19.9 mg/L +/- 999mv 0-999 NTU

2.2 Laboratory Analytical Methods – Groundwater and Surface Water Samples

Table 2-2 summarizes the analytical methods, practical quantitation limits (PQL) and method detection limits (MDL) for laboratory sample analysis of Cape Romanzof groundwater and surface water samples.

Table 2-2
Laboratory Analytical Methods for Groundwater / Surface Water Samples

Location	Analyte	Analytical Method	PQL [mg/L]	MDL [mg/L]
LF03	DRO	AK102	0.8	0.08
SS13, SS15	DRO/RRO	AK102/AK103	0.25	0.05
LF03, SS13, SS15	GRO	AK101	0.1	0.01
SS13, SS15	BTEX	EPA 8021B	0.005	0.0007
LF03, SS13, SS15	SVOC	SW8270C	0.01	0.001
LF03	Volatiles	SW8260B	0.008	0.0008
LF03	PCB	EPA 8082	0.005	0.001
LF03	Metals	ICP	*	*
LF03, SS15	Alkalinity	EP310.1	4.0	4.0

Table 2-2 continued

Location	Analyte	Analytical Method	PQL [mg/L]	MDL [mg/L]
LF03, SS15	Total Iron	EP200.7	0.1	0.1
SS13, SS15	Sulfate	EP300	0.2	0.2
SS13, SS15	Nitrate	EP300	0.04	0.04
* See Table 5-14 for list of ICP metals				

2.3 Laboratory Analytical Methods – Soil / Near Surface Soil / Sediment Samples

Table 2-3 summarizes the analytical methods, practical quantitation limits (PQL) and method detection limits (MDL) for analysis of Cape Romanzof soil and sediment samples.

Table 2-3
Laboratory Analytical Methods and Detection Limits for Soil / Sediment Samples

Location	Analyte	Analytical Method	PQL [mg/Kg]	MDL [mg/Kg]
LF03	DRO	AK102	20	2.0
SS13	DRO/RRO	AK102/AK103	100	10
LF03, SS13	GRO	AK101	20	2.0
SS13	BTEX	EPA 8021	0.05	0.007
LF03, SS13	SVOC	SW8270	1.0	0.1
LF03	Volatiles	SW8260	0.08	0.008
LF03	PCB	SW8082	0.05	0.01
LF03	Metals	ICP	*	*
* See Table 5-22 for list of ICP metals MDL = Method Detection Limit PQL = Practical Quantitation Limit				

2.4 QA/QC Measures

QA/QC measures included procedures for sample handling and management. Table 2-4 summarizes requirements for sample containers and holding times.

Table 2-4
Laboratory Sample Containers and Holding Times

MATRIX	CONTAMINANT	CONTAINER	HOLDING TIMES
Soil & Sediment	ICP Metals	8 oz. amber jar	6 months at 4°C ± 2°C
	DRO/RRO, SVOC, PCB	4 oz. amber jar	4°C ± 2°C/ 14 days to extract / analyze in less than 40 days
	GRO, BTEX	4 oz. septa jar	28 days to extract and analyze
	Volatiles	4 oz. septa jar	4°C ± 2°C/ 14 days to extract / analyze in less than 40 days
Ground & Surface water	DRO, SVOC	1 l amber bottle	4°C ± 2°C/ 7 days to extract / analyze in less than 40 days
	RRO, PCB	1 l amber bottle	4°C ± 2°C/ 7 days to extract / analyze in less than 40 days
	Total Iron, ICP Metals	500 ml poly bottle	6 months maximum holding time
	Alkalinity	250 ml poly bottle	Analyze as soon as possible
	Sulfate, Nitrate	250 ml poly bottle	28 days to analyze
	GRO, BTEX	Duplicate 40 ml vials	4°C ± 2°C/ 14 days to extract and analyze
	VOC	Duplicate 40 ml vials	4°C ± 2°C/ 14 days to extract / analyze in less than 40 days
Holding Times per ADEC Underground Storage Tanks Procedures Manual Table 1, Part A and B (presented in Appendix E).			

Additional QA/QC procedures include data quality assessment and data validation information, which is located in Appendix E: QA/QC Summary Report. The QA/QC Summary Report was prepared by Validata Chemical Services, Inc. The QA/QC review contains an assessment of sampling data for completeness, sample handling and management, data verification and an assessment of the accuracy, precision and representativeness of the data.

3.0 Data Evaluation

This section outlines how the data was evaluated and presented. Table 3-1 summarizes each general sampling activity, sampling objective and data evaluation standard with recommended actions. Specific data evaluation of each sample location is presented in Section 4 for hydrocarbon data and in Section 5 for field parameters and inorganic/metals data.

Table 3-1
Data Evaluation Procedures

Activity / Objective	Data Evaluation / Action
Groundwater – Surface Water – Sediment – Near Surface Soil Sampling	
Collect groundwater sample data from monitoring wells to assess the nature, degree and extent of contaminant plumes.	Compare data to ADEC MCLs 18 AAC 75.345 Table C. Compare data to previous sample data. Assess status of intrinsic remediation.
Collect surface water samples to assess degree and extent of contaminant. Evaluate and assess the effects of surface runoff on surface water quality.	Compare data to ADEC MCLs 18 AAC 75.345 Table C. Compare data to previous sample data. Assess status of intrinsic remediation.
Collect sediment samples to assess the nature of the contamination and to define the lateral extent of contamination.	Compare data to ADEC MCLs 18 AAC 75.341 Table B-2 (<40", Migration to GW). Compare data to previous sample data. Assess status of intrinsic remediation.
Collect near surface soil samples to assess the nature of the contamination and to define the lateral extent of contamination.	Compare data to ADEC MCLs 18 AAC 75.341 Table B-1 (<40", Migration to GW). Compare data to previous sample data. Assess status of intrinsic remediation.
Landfill Cap Inspection	
Inspect landfill cap for effectiveness, integrity and erosion. Assess condition and necessary repairs.	Assess cap integrity based on inspection findings.

3.1 Groundwater and Surface Water Analytical Results

Groundwater and surface water sample data are evaluated by comparing to ADEC groundwater cleanup standards 18 AAC 75.345 Table C: Groundwater Cleanup Standards. These standards are presented in Appendix E.

3.2 Soil / Sediment Analytical Results

Soil and sediment sample data are evaluated by comparing to ADEC soil cleanup standards 18 AAC 75.341 Table B-1 Method 2 - less than 40 inches – migration to groundwater. These standards are presented in Appendix E.

3.3 Evaluation of Intrinsic Remediation

Biodegradation of fuel constituents by microbial processes is directly affected by various inorganic and geochemical factors including dissolved oxygen, iron, pH, nitrate, sulfate, and alkalinity. Additional factors that affect or may be indicators of remediation activity include conductivity, reduction-oxidation potential (ReDox), temperature, and alkalinity.

Biodegradation of fuels occurs either aerobically or anaerobically. In many subsurface environments, both aerobic and anaerobic biodegradation can occur simultaneously. Both of these processes require an electron acceptor to complete the degradation reaction.

Aerobic degradation is the dominant process using oxygen as the electron acceptor. Aerobic degradation requires dissolved oxygen to function. If oxygen is limited, the process will proceed under anaerobic conditions using nitrate, iron and sulfate (in respective order) as electron acceptors.

The following table, developed in accordance with Air Force Center for Environmental Excellence (AFCEE) publication "Technical Protocol for Implementing Intrinsic Remediation with Long-Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater", presents a brief description of field parameters measurements and inorganic constituents and how they will be used to evaluate the intrinsic remediation activity.

Table 3-2
Summary of Evaluation Factors for Intrinsic Remediation

PARAMETER	EVALUATION FACTORS
pH	Generally pH will range from 6 – 8 for optimal biodegradation
Temperature	Bioremediation is known to occur from 0 – 75 °Celsius. Slower rates at lower temperature. Activity generally slower if <5 °C. Directly affects solubility of dissolved oxygen; dissolved oxygen is more soluble in cold water.
Alkalinity	Helps buffer pH. Hydrocarbon bioremediation will increase alkalinity relative to background.
ReDox potential	Measure of electron activity
Conductivity	Can be used to identify similar or different water sources.
Nitrate/Sulfate	Acts as electron acceptor when oxygen is depleted.
Iron (II)	Acts an electron acceptor during anaerobic fuel degradation.
Dissolved Oxygen (DO)	Most important factor for aerobic biodegradation. DO > 1.0 mg/L will limit anaerobic activity.

4.0 Sample Results with Data Evaluation and Comparison of Data- Hydrocarbon Related Contaminants

This section presents sample results for hydrocarbon related contaminants including GRO, DRO, RRO, BTEX, PCB, Volatiles and Semi-Volatile compounds. For each sampling site – SS13, SS15 and LF03 – sample information is provided with a summary of past and current analytical results with a comparison of sample results to maximum contaminant levels (MCL). See Appendix E.

4.1 Site SS13 – Hydrocarbon Related Contaminants

This section presents hydrocarbon analytical data for sampling at site SS13. Inorganic analytical data and field parameter measurements for this site are presented in Section 5.1. Sample locations are shown on Figure 3: Site SS13 Sample Locations and Analytical Results. Samples at this site included the following:

Table 4-1
Site SS13 Sampling Locations by Matrix

SS13 Sampling Locations	Matrix
MW1, MW2	Groundwater - GW
SW-01, SW-02, SW-03	Surface Water - SW
SS01, SS06	Sediment - SD
LB-03, LB-07, LB-08	Near Surface Soil - SS

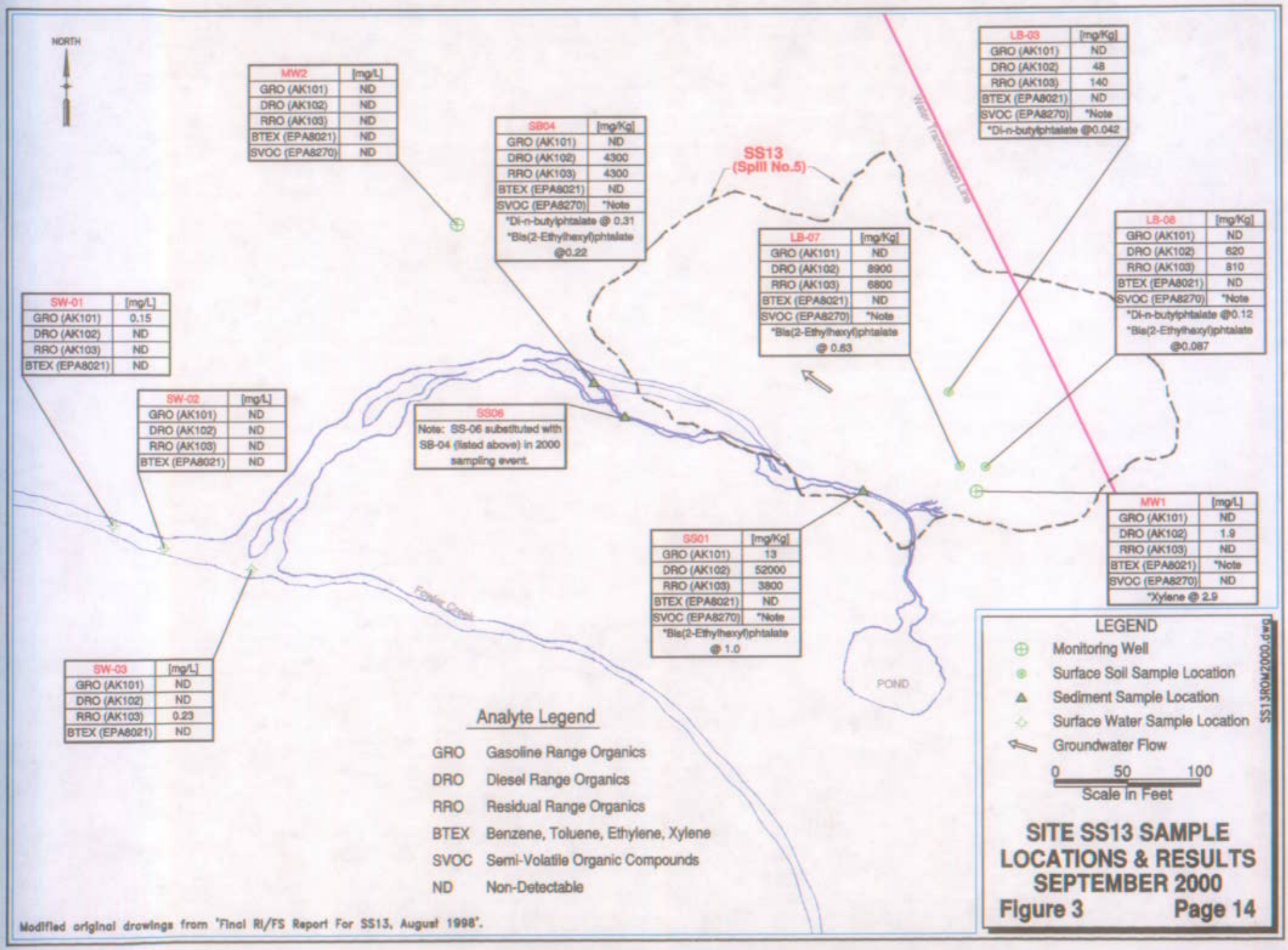
4.1.1 Site SS13 - Groundwater – Hydrocarbon Data

Groundwater sampling at SS13 consisted of the collection of one water sample from monitoring well MW1 and one from monitoring well MW2.

Table 4-2
Site SS13 Groundwater Hydrocarbon Levels – September 2000

SS13-Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
MW1	ND	1.9	ND	ND	ND	ND	2.9	ND
MW2	ND	ND	ND	ND	ND	ND	ND	ND

All results in mg/L.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit


NORTH
MW2 [mg/L]
GRO (AK101) ND
DRO (AK102) ND
RRO (AK103) ND
BTEX (EPA8021) ND
SVOC (EPA8270) ND
SB04 [mg/Kg]
GRO (AK101) ND
DRO (AK102) 4300
RRO (AK103) 4300
BTEX (EPA8021) ND
SVOC (EPA8270) *Note
*Di-n-butylphtalate @ 0.31
*Bis(2-Ethylhexyl)phtalate @0.22
SS13 (Spill No.5)
Water Transmission Line
LB-03 [mg/Kg]
GRO (AK101) ND
DRO (AK102) 48
RRO (AK103) 140
BTEX (EPA8021) ND
SVOC (EPA8270) *Note
*Di-n-butylphtalate @0.042
LB-07 [mg/Kg]
GRO (AK101) ND
DRO (AK102) 8900
RRO (AK103) 6800
BTEX (EPA8021) ND
SVOC (EPA8270) *Note
*Bis(2-Ethylhexyl)phtalate @ 0.83
LB-08 [mg/Kg]
GRO (AK101) ND
DRO (AK102) 620
RRO (AK103) 810
BTEX (EPA8021) ND
SVOC (EPA8270) *Note
*Di-n-butylphtalate @0.12
*Bis(2-Ethylhexyl)phtalate @0.087
SW-01 [mg/L]
GRO (AK101) 0.15
DRO (AK102) ND
RRO (AK103) ND
BTEX (EPA8021) ND
SW-02 [mg/L]
GRO (AK101) ND
DRO (AK102) ND
RRO (AK103) ND
BTEX (EPA8021) ND
SS06
Note: SS-06 substituted with SB-04 (listed above) in 2000 sampling event.
SS01 [mg/Kg]
GRO (AK101) 13
DRO (AK102) 52000
RRO (AK103) 3800
BTEX (EPA8021) ND
SVOC (EPA8270) *Note
*Bis(2-Ethylhexyl)phtalate @ 1.0
MW1 [mg/L]
GRO (AK101) ND
DRO (AK102) 1.9
RRO (AK103) ND
BTEX (EPA8021) *Note
SVOC (EPA8270) ND
*Xylene @ 2.9
SW-03 [mg/L]
GRO (AK101) ND
DRO (AK102) ND
RRO (AK103) 0.23
BTEX (EPA8021) ND
Fowler Creek
POND
Analyte Legend
GRO Gasoline Range Organics
DRO Diesel Range Organics
RRO Residual Range Organics
BTEX Benzene, Toluene, Ethylene, Xylene
SVOC Semi-Volatile Organic Compounds
ND Non-Detectable
LEGEND
Monitoring Well
Surface Soil Sample Location
Sediment Sample Location
Surface Water Sample Location
Groundwater Flow
0 50 100
Scale in Feet
SS13ROW2000.dwg
SITE SS13 SAMPLE LOCATIONS & RESULTS SEPTEMBER 2000
Figure 3 Page 14
Modified original drawings from 'Final RI/FS Report For SS13, August 1998'.

MW1 2000

As shown in Table 4-2, GRO, RRO, and SVOC constituents were non-detected at MW1 in 2000. Xylene was detected in MW1 but below the MCL. The DRO level of 1.9 mg/L in MW1 exceeds the MCL of 1.5 mg/L.

MW2 2000

As shown in Table 4-2, all constituents were non-detected at MW2 in 2000.

Table 4-3
Site SS13 Groundwater Hydrocarbon Levels – October 1999

SS13-Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
MW1	ND	2.7	0.5	ND	ND	ND	ND	NA
MW2	ND	0.385	ND	ND	ND	ND	ND	NA

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

MW1 1999

As shown above in Table 4-3, GRO and BTEX constituents were non-detected at MW1 in 1999. RRO was detected in MW1 but below the MCL. The DRO level of 2.7 mg/L in MW1 exceeded the MCL of 1.5 mg/L.

MW2 1999

As shown above in Table 4-3, all constituents, except for DRO, were non-detected at MW2 in 1999. DRO was detected at MW2 but below the MCL.

Table 4-4
SS13 Groundwater Hydrocarbon Levels – September 1997

SS13-Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
MW1	0.091	2.47	0.628	0.0003	0.003	0.0005	0.004	Table 4-4a
MW2	ND	0.213	0.202	0.0002	ND	0.0003	ND	ND

All results in **mg/L.** ND = Not Detected above method reporting limit / practical quantitation limit

Table 4-4a
Site SS13 Groundwater SVOC – September 1997

Location	SVOC Detected above MDL*	RESULT	MCL**
MW1	2-Methylnaphthalene	0.0087	--
	4-Methylphenol	0.0004	--
	Di-n-octyl phthalate	0.0002	0.7
	Fluorene	0.0002	1.46
	Naphthalene	0.0073	1.46
	Phenanthrene	0.0001	--

* Method detection limit. ** Maximum contaminant level. All results in **mg/L.**

MW1 1997

As shown in Tables 4-4 and 4-4a, 1997 GRO, BTEX, RRO and SVOC constituents were detectable at MW1 but no samples exceeded the MCLs. 1997 MW1 DRO level of 2.47 mg/L exceeded the MCL of 1.5 mg/L.

MW2 1997

As shown in Table 4-4, GRO, Ethylbenzene, Xylene and SVOC's were not detected in MW2. RRO, Benzene, Toluene and DRO were detected in MW2 but below the MCLs. No constituents at MW2 exceeded the MCLs in 1997.

4.1.2 Comparison of Site SS13 Groundwater Sampling Data 1997-2000

MW1

As shown in Table 4-5 below, hydrocarbon levels (excluding Xylene) have decreased since 1997. No constituents that were detected at MW1 in 1997, 1999, or 2000 sampling events, exceeded MCLs (excluding DRO). DRO levels decreased slightly from 2.7 mg/L in 1999 to 1.9 mg/L in 2000 but still exceed the MCL of 1.5 mg/L.

Table 4-5
SS13 Comparison of MW1 Hydrocarbon Levels 1997-2000

MW1 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	1.9	ND	ND	ND	ND	2.9	ND
1999	ND	2.7	0.5	ND	ND	ND	ND	NA
1997	0.091	2.47	0.628	0.0003	0.003	0.0005	0.004	Table 4-4a

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

MW2

As shown on Table 4-6 below, hydrocarbon levels have decreased to non-detected levels in 2000. No hydrocarbon constituents exceeding MCLs were detected at MW2 in either 1997 or 1999 sampling events.

Table 4-6
SS13 Comparison of MW2 Hydrocarbon Levels 1997-2000

MW2 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	ND	ND	ND	ND	ND	ND	ND
1999	ND	0.385	ND	ND	ND	ND	ND	NA
1997	ND	0.213	0.202	0.0002	ND	0.0003	ND	ND

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

4.1.3 SS13 - Surface Water – Hydrocarbon Levels

Surface Water sampling at SS13 included the collection of one water sample from SW-01, one water sample from SW-02 and one water sample from SW-03. A duplicate sample was collected from location SW-03. The following tables present surface water hydrocarbon data for site SS13.

Table 4-7
SS13 Surface Water Hydrocarbon Levels – September 2000

AREA (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
SW-01	0.15	ND	ND	ND	ND	ND	ND	ND
SW-02	ND	ND	ND	ND	ND	ND	ND	ND
SW-03	ND	ND	0.23	ND	ND	ND	ND	ND
SW-03*	ND	ND	0.22	ND	ND	ND	ND	ND

All results in **mg/L.**
ND = Not Detected above method reporting limit / practical quantitation limit.
* Duplicate Sample Information

SW-01, SW-02, and SW-03 2000

Table 4-7 above shows that DRO, BTEX, and SVOC compounds were non-detected for all 2000 analyses. GRO was detected in SW-01 but below the MCL. RRO was detected in SW-03 but below the MCL.

Table 4-8
SS13 Surface Water Hydrocarbon Levels – October 1999

AREA (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
SW-01	ND	ND	ND	ND	ND	ND	ND	NA
SW-02	ND	ND	ND	ND	ND	ND	ND	NA
SW-03	ND	ND	ND	ND	ND	ND	ND	NA

NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

SW-01, SW-02, and SW-03 1999

Table 4-8 shows that hydrocarbon levels were non-detected or were not analyzed for all 1999 analyses. No constituents were detected at any surface water sites in 1999.

Table 4-9
SS13 Surface Water Hydrocarbon Levels – August 1997

AREA (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
SW-01	ND	ND	ND	ND	ND	ND	ND	ND
SW-02	ND	ND	ND	ND	ND	ND	ND	ND
SW-03	ND	ND	ND	ND	ND	ND	ND	ND

All results in **mg/L.**
ND = Not Detected above method reporting limit / practical quantitation limit.

SW-01, SW-02, and SW-03 1997

Table 4-9 shows that hydrocarbon levels were non-detected for all 1997 analyses.

4.1.3a Comparison of Site SS13 Surface Water Hydrocarbon Levels 1997-2000

Tables 4-10, 4-11 and 4-12 show hydrocarbon levels for DRO, BTEX and SVOC were non-detected or were not analyzed for all three surface water areas (SW-01, SW-02, SW-03) for 1997 through 2000 sampling events. In 2000, GRO was detected in SW-01 and RRO was detected in SW-03 but both were below the MCLs. No constituents at SW-01, SW-02, or SW-03 were detected in 1997 and 1999.

Table 4-10
SS13 Comparison of SW-01 Hydrocarbon Levels 1997-2000

SW-01 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	0.15	ND	ND	ND	ND	ND	ND	ND
1999	ND	ND	ND	ND	ND	ND	ND	NA
1997	ND	ND	ND	ND	ND	ND	ND	ND

All results in **mg/L**.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-11
SS13 Comparison of SW-02 Hydrocarbon Levels 1997-2000

SW-02 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	ND	ND	ND	ND	ND	ND	ND
1999	ND	ND	ND	ND	ND	ND	ND	NA
1997	ND	ND	ND	ND	ND	ND	ND	ND

All results in **mg/L**.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-12
SS13 Comparison of SW-03 Hydrocarbon Levels 1997-2000

SW-03 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	ND	ND	ND	ND	ND	ND	ND
1999	ND	ND	ND	ND	ND	ND	ND	NA
1997	ND	ND	0.23	ND	ND	ND	ND	ND

All results in **mg/L**.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

4.1.4 Site SS13 – Sediment – Hydrocarbon Related Compounds

Sediment sampling at SS13 included the collection of one sediment sample from area SS01 and one sediment sample from area SS06. No sample could be collected at SS06 in September 2000 due to the lack of surface water at this location. The sediment sample was collected instead at the nearby SB04 location, which was identified by a reference stake.

Table 4-13
SS13 Sediment Hydrocarbon Levels – September 2000

Area (MCL)	GRO (300)	DRO (250)	RRO (11000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
SS01	13	52,000	3,800	ND	ND	ND	ND	Table 4-13a
SB04	ND	4,300	4,300	ND	ND	ND	ND	Table 4-13a

All results in **mg/Kg.**
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-13a
Site SS13 Sediment SVOC 2000

LOCATION	SVOC Detected above MDL*	[mg/Kg]	MCL**
SS01	Bis (2-Ethylhexyl) phthalate	1.0 D	1200
SB04	Di-n-butylphthalate	0.31 D	1700
SB04	Bis (2-Ethylhexyl) phthalate	0.22 D	1200

* Method detection limit – not listed. ** Maximum contaminant level.
D = Analyte was diluted to bring within instrument calibration range or to remove matrix interference.

SS01 2000

As shown above in Table 4-13, BTEX constituents were non-detected at SS01 in 2000. GRO and RRO were detected in SS01 but below the MCLs. The DRO level of 52,000 mg/Kg at SS01 greatly exceeded the MCL of 250 mg/Kg. As shown above in Table 4-13a, the SVOC compound detected is well below the MCL.

SB04 2000

As shown in Table 4-13, GRO and BTEX constituents were non-detected at SB04 in 2000. DRO and RRO were detected in SB04. The RRO level was below the MCL but the DRO level of 4,300 mg/Kg exceeded the MCL of 250 mg/Kg. As shown in Table 4-13a, the SVOC compounds detected are well below the MCL.

Table 4-14
SS13 Sediment Hydrocarbon Levels – October 1999

Area (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
SS01	16.4	55,800	7,250	ND	ND	ND	ND	ND
SS06	ND	154	421	ND	ND	ND	ND	ND

All results in **mg/Kg.**
ND = Not Detected above method reporting limit / practical quantitation limit.

SS01 1999
As shown in Table 4-14, 1999 BTEX and SVOC constituents were non-detected at SS01. GRO and RRO were detected in SS01 but below the MCLs. October 1999 DRO level of 55,800 mg/Kg at SS01 exceeded the MCL of 250 mg/Kg.

SS06 1999
As shown in Table 4-14, 1999 GRO, BTEX and SVOC constituents were non-detected at SS06. DRO and RRO were detected in SS06 but below the MCLs. No constituents exceeded the MCLs at SS06 in 1999 sampling event.

Table 4-15
SS13 Sediment Hydrocarbon Levels – August 1997

Area (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
SS01	9	416	83	ND	0.02	ND	0.08	ND
SS06	ND	1,710	1,230	ND	ND	ND	ND	ND

All results in **mg/Kg.**
ND = Not Detected above method reporting limit / practical quantitation limit.

SS01 1997
As shown in Table 4-15, 1997 BTEX and SVOC constituents were non-detected or well below MCLs at SS01. GRO and RRO were detected in SS01 but below the MCLs. DRO level of 416 mg/Kg at SS01 exceeded the MCL of 250 mg/Kg.

SS06 1997
As shown in Table 4-15, 1997 GRO, BTEX and SVOC constituents were non-detected at SS06. RRO was detected in SS06 but below the MCL. August 1997 DRO level of 1,710 mg/Kg at SS06 exceeded the MCL of 250 mg/Kg.

4.1.4a Comparison of Site SS13 Sediment Hydrocarbon Levels 1997-2000

Table 4-16
SS13 SS01 Sediment Hydrocarbon Levels 1997-2000

SS01 (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
2000	13	52,000	3,800	ND	ND	ND	ND	Table 4-13a
1999	16.4	55,800	7,250	ND	ND	ND	ND	ND
1997	9	416	83	ND	0.02	ND	0.08	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

SS01
As shown in Table 4-16, 1999 and 2000 BTEX constituents were non-detected or well below MCLs at SS01, compared to very slight detections in 1997. GRO and RRO levels decreased from 1999 to 2000 and the levels remain below the MCLs. September 2000 DRO levels were slightly decreased from 1999; however, the consistently high DRO levels at this location indicate that the area is impacted.

Table 4-17
SS13 SS06 Sediment Hydrocarbon Levels 1997-2000

SS06 (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
2000*	ND	4,300	4,300	ND	ND	ND	ND	Table 4-13a
1999	ND	154	421	ND	ND	ND	ND	ND
1997	ND	1,710	1,230	ND	ND	ND	ND	ND

All results in **mg/Kg.**
ND = Not Detected above method reporting limit / practical quantitation limit.
* Sample collected at different location – SB04.

SS06
In 2000, SB04 was substituted for SS06. SB04 is located in the close vicinity of SS06 and is representative of site SS13. As shown above in Table 4-17, GRO and BTEX were non-detected in all three years at the sampled sites. The notable differences between DRO levels from 1997 through 2000 may be attributed to non-uniform distribution of the contaminant; however, all these levels in addition to the RRO levels indicate a significant impact from hydrocarbons throughout the general area.

4.1.5 Site SS13 - Near Surface Soil – Hydrocarbon Compounds

Near surface soil sampling at SS13 included the collection of one near surface soil sample from area LB-03, one near surface soil sample from area LB-07 and one near surface soil sample from area LB-08. One duplicate sample was collected from LB-07.

Table 4-18
SS13 Near Surface Soil Hydrocarbon Levels – September 2000

Location (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
LB-03	ND	48	140	ND	ND	ND	ND	Table 4-18a
LB-07	ND	8,900	6,800	ND	ND	ND	ND	Table 4-18a
LB-07*	ND	12,000	6,000	ND	ND	ND	ND	Table 4-18a
LB-08	ND	620	810	ND	ND	ND	ND	Table 4-18a

All results in **mg/Kg.**
ND = Not Detected above method reporting limit / practical quantitation limit.
* Duplicate Sample Information

Table 4-18a
Site SS13 Near Surface Soil SVOC 2000

LOCATION	SVOC Detected above MDL*	[mg/Kg]	MCL**
LB-03	Di-n-butylphthalate	0.042 J	1,700
LB-07	Bis (2-Ethylhexyl) phthalate	0.63 DJ	1,200
LB-07***	Bis (2-Ethylhexyl) phthalate	1.5 DJ	1,200
LB-08	Di-n-butylphthalate	0.12 J	1,700
LB-08	Bis (2-Ethylhexyl) phthalate	0.087 J	1,200

* Method detection limit – not listed. ** Maximum contaminant level.
*** Duplicate Sample Information
D = analyte was diluted to bring within instrument calibration range or to remove matrix interference
J = analyte was detected above the instrument detection limit but below the analytical reporting limit

LB-03 2000
As shown in Table 4-18, 2000 GRO and BTEX constituents were non-detected at LB-03. DRO and RRO were detected but below the MCLs. An SVOC was detected but below the MCL.

LB-07 2000
As shown in Table 4-18, 2000 GRO and BTEX constituents were non-detected at LB-07. RRO was detected but below the MCL. DRO level of 8,900 mg/Kg at LB-07 exceeded the MCL of 250 mg/Kg. An SVOC was detected but below the MCL.

LB-08 2000
As shown in Table 4-18, 2000 GRO and BTEX constituents were non-detected at LB-08. RRO was detected but below the MCL. DRO level of 620 mg/Kg at LB-08 exceeded the MCL of 250 mg/Kg. SVOC were detected but below the MCL.

Table 4-19
SS13 Near Surface Soil Hydrocarbon Levels – October 1999

Location (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
LB-03	ND	466	469	ND	ND	ND	ND	ND
LB-07	ND	5,870	3,440	ND	ND	ND	ND	ND
LB-08	ND	2,680	1,880	ND	ND	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

LB-03 1999
As shown in Table 4-19, 1999 GRO, BTEX and SVOC constituents were non-detected at LB-03. RRO was detected but below the MCL. DRO level of 466 mg/Kg at LB-03 exceeded the MCL of 250 mg/Kg.

LB-07 1999
As shown in Table 4-19, 1999 GRO, BTEX and SVOC constituents were non-detected at LB-07. RRO was detected but below the MCL. DRO level of 5,870 mg/Kg at LB-07 exceeded the MCL of 250 mg/Kg.

LB-08 1999

As shown in Table 4-19, 1999 GRO, BTEX and SVOC constituents were non detectable at LB-08. RRO was detected but below the MCL. DRO level of 2,860 mg/Kg at LB-08 exceeded the MCL of 250 mg/Kg.

Table 4-20
SS13 Near Surface Soil Hydrocarbon Levels – September 1997

Location (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
LB-03	119	16,800	1,610	ND	0.46	ND	1.14	ND
LB-07	ND	7050	2,560	ND	ND	ND	ND	ND
LB-08	13	110,000	35,000	ND	0.03	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

LB-03 1997

As shown in Table 4-20, 1997 GRO, RRO and BTEX constituents were detected but below the MCLs at LB-03 and SVOC were non-detected. DRO level of 16,800 mg/Kg at LB-03 exceeded the MCL of 250 mg/Kg.

LB-07 1997

As shown in Table 4-20, 1997 GRO, BTEX and SVOC constituents were non-detected at LB-07. RRO was detected but below the MCL. DRO level of 7,050 mg/Kg at LB-07 exceeded the MCL of 250 mg/Kg.

LB-08 1997

As shown in Table 4-20, 1997 GRO, BTEX and SVOC constituents were non-detected at LB-08. RRO level of 35,000 mg/Kg at LB-08 exceeded the MCL of 11,000 mg/Kg. DRO level of 110,000 mg/Kg at LB-08 drastically exceeded the MCL of 250 mg/Kg.

4.1.5a Comparison of Site SS13 – Near Surface Soil- Hydrocarbon Levels 1997-2000

Table 4-21
SS13 LB-03 Near Surface Soil Hydrocarbon Levels 1997-2000

LB-03 (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
2000	ND	48	140	ND	ND	ND	ND	Table 4-18 a
1999	ND	466	469	ND	ND	ND	ND	ND
1997	119	16,800	1,610	ND	0.46	ND	1.14	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

LB-03

As shown in Table 4-21, both 1999 and 2000 BTEX and GRO constituents were non-detected with significant reduction in GRO from 1997. Ethylbenzene, and Xylene levels when compared to 1997 were reduced. In 1997, 1999, and 2000, RRO was detected in

LB-03 well below the MCL, with levels decreasing each year. The DRO levels steadily decreased from the 1997 level of 16,800 mg/Kg to 466 mg/Kg in 1999 to 48 mg/Kg in 2000, which is well below the MCL. One SVOC compound was detected but below the MCL.

Table 4-22
SS13 LB-07 Near Surface Soil Hydrocarbon Levels 1997-2000

LB-07 (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
2000	ND	8,900	6,800	ND	ND	ND	ND	Table 4-18a
1999	ND	5,870	3,440	ND	ND	ND	ND	ND
1997	ND	7,050	2,560	ND	ND	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

LB-07

As shown in Table 4-22, GRO and BTEX constituents were non-detected at LB-07 in 1997, 1999, and 2000. RRO was detected in all three years but below the MCL. DRO levels exceed the MCL of 250 mg/Kg each year. The differences between DRO levels from 1997 through 2000 may be attributed to non-uniform distribution of the contaminant; however, all these levels in addition to the RRO levels indicate a significant impact from hydrocarbons throughout the general area. One SVOC compound was detected but below the MCL.

Table 4-23
SS13 LB-08 Near Surface Soil Hydrocarbon Levels 1997-2000

LB-08 (MCL)	GRO (300)	DRO (250)	RRO (11,000)	Benzene (0.02)	EthylB (5.0)	Toluene (6.0)	Xylene (78)	SVOC
2000	ND	620	810	ND	ND	ND	ND	Table 4-18a
1999	ND	2,680	1,880	ND	ND	ND	ND	ND
1997	13	110,000	35,000	ND	0.03	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

LB-08

As shown in Table 4-23, DRO and RRO levels have been steadily decreasing at this location from 1997 to 2000. The 2000 DRO level of 620 mg/Kg exceeds the MCL. GRO and BTEX levels have decreased to non-detected levels since 1997. Two SVOC compounds were detected but below the MCL.

4.2 Site SS15 – Hydrocarbon Related Contaminants

This section presents hydrocarbon analytical data for sampling activities at site SS15. See Figure 4: Site SS15 Sample Locations and Analytical Results. Inorganic analytical data and field parameter measurements for this site are presented in Section 5.2.

Only groundwater samples were obtained at this site. Groundwater sampling at SS15 included the collection of one water sample from monitoring well WW02, one water sample from monitoring well WW07 and one from monitoring well WW08.

4.2.1. SS15 -Groundwater Data

The results for the groundwater samples from monitoring wells WW02, WW07, and WW08 are presented in the following table:

Table 4-24
Site SS15 Groundwater Hydrocarbon Levels – September 2000

Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
WW02	4.4	3.2	ND	0.7	0.14	0.17	0.37	Table 4-24a
WW07	ND	0.46	0.69	0.0013	ND	0.0011	0.0033	ND
WW08	ND	0.16	0.23	ND	ND	ND	0.002	ND

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-24a
Site SS15 Groundwater SVOC 2000

LOCATION	SVOC Detected above MDL*	[mg/L]	MCL**
WW02	Naphthalene	0.04	1.46
WW02	2-Methylnaphthalene	0.011	--

* Method detection limit – not listed. ** Maximum contaminant level.

WW02 2000

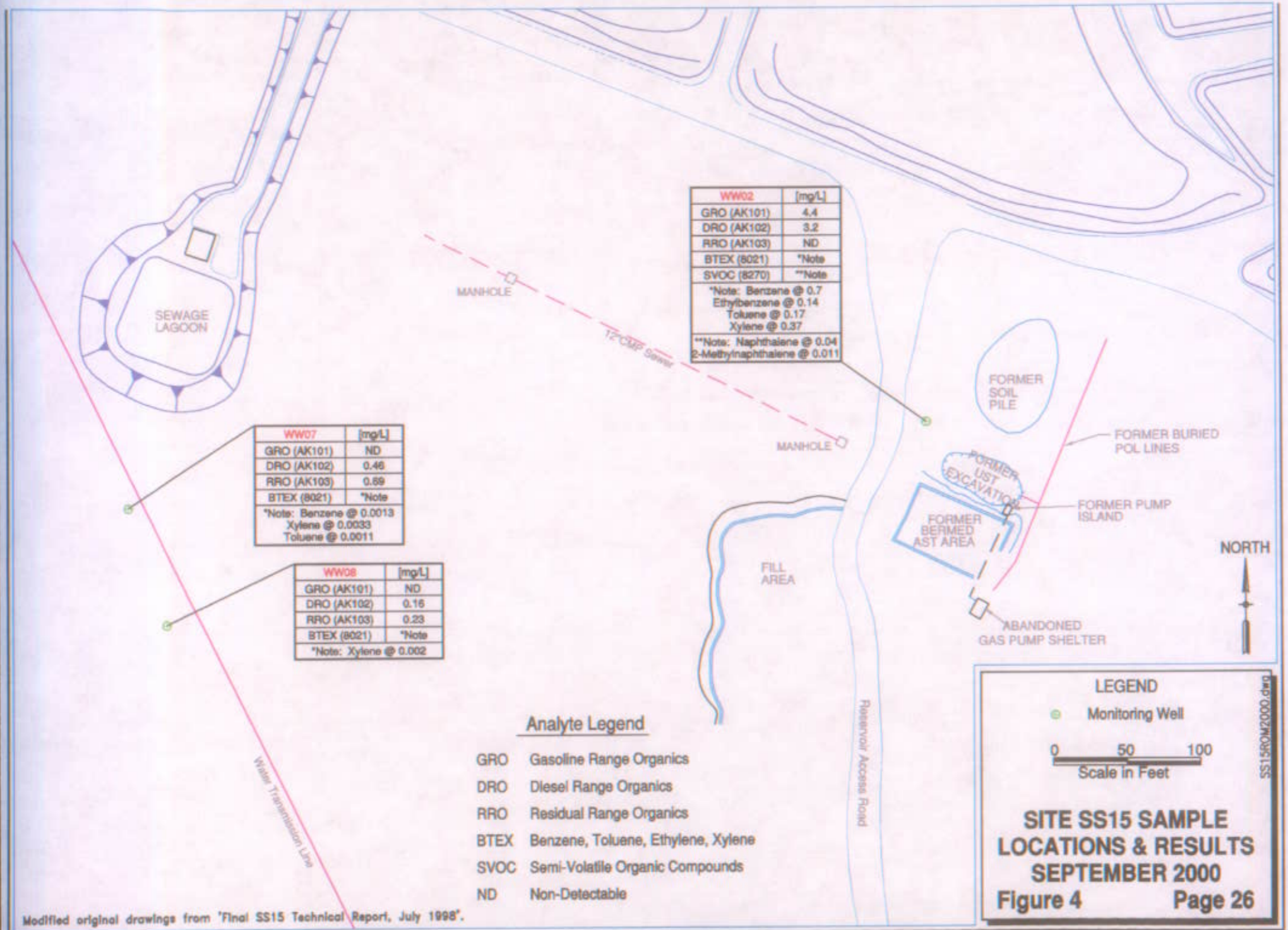
As shown in Table 4-24, all constituents (except for RRO) were detected at WW02 in 2000. GRO, DRO, Benzene and Ethylbenzene exceeded MCLs. RRO was non-detected at WW02. SVOC compounds were less than MCL for 2000 samples as shown in Table 4-24a.

WW07 2000

As shown in Table 4-24, DRO, RRO, Benzene, Toluene, and Xylene were detected but below the MCLs. GRO and Ethylbenzene were non-detected at WW07.

WW08 2000

As shown in Table 4-24, DRO, RRO and Xylene were detected above the detection limit but below the MCL. All other constituents were non detectable. No constituents at WW08 exceeded MCLs for 2000 sampling.



Modified original drawings from 'Final SS15 Technical Report, July 1998'.

Table 4-25
Site SS15 Groundwater Hydrocarbon Levels – October 1999

Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
WW02	NA	7.23	ND	NA	NA	NA	NA	Table 4-25a
WW07	ND	ND	ND	ND	ND	ND	ND	NA
WW08	ND	0.363	ND	ND	ND	ND	ND	NA

All results in **mg/L**.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-25a
Site SS15 Groundwater SVOC 1999

LOCATION	SVOC Detected above MDL*	[mg/L]	MCL**
WW02	2-Methylnaphthalene	0.05	--
WW02	Naphthalene	0.08	1.46

* Method detection limit – not listed. ** Maximum contaminant level.

WW02 1999

As shown in Tables 4-25 and 4-25a, GRO and BTEX constituents were not analyzed in 1999 due to laboratory oversight. SVOC were less than MCL for 1999 samples. RRO was non-detect at WW02. DRO levels of 7.23 mg/L at WW02 exceeded MCL of 1.5 mg/L.

WW07 1999

As shown in Table 4-25, all constituents were non-detected at WW07 in 1999. No constituents at WW07 exceeded MCLs for 1999 sampling.

WW08 1999

As shown in Table 4-25, all constituents, except DRO, were non-detected or not analyzed at WW08 in 1999. DRO was detected but below the MCL. All other constituents were non detectable. No constituents at WW08 exceeded MCLs for 1999 sampling.

Table 4-26
Site SS15 Groundwater Hydrocarbon Levels – September 1997

Well (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.0005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
WW02	7.95	400	1.38	1.11	0.31	0.15	0.553	Table 4-26a
WW07	ND	0.063	ND	ND	ND	0.0004	0.0002	Table 4-26a
WW08	ND	0.165	0.275	ND	ND	ND	ND	Table 4-26a

All results in **mg/L**
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-26a
Site SS15 Groundwater SVOC 1997

LOCATION	SVOC Detected above MDL*	[mg/L]	MCL**
WW02	Acenaphthene	0.006	2.2
	Benzo (a)-anthracene	0.0002	0.001
	Benzo (a) pyrene	0.0002	0.0002
	Benzo (a) fluoranthene	0.0003	0.001
	Benzo (k) fluoranthene	0.0001	0.01
	Benzoic Acid	0.020	146.0
	Bis 2(ethylhexyl) phthalate	0.005	0.006
	di-n-octyl phthalate	0.0005	0.7
	Fluoranthene	0.0008	1.46
	fluorene	0.001	1.46
	2-Methylnaphthalene	0.530	--
	Naphthalene	0.450	1.46
	Phenanthrene	0.005	--
	Phenol	0.014	22.0
	Pyrene	0.0009	1.1
	Naphthalene	0.0073	1.46
WW07	N-Nitrosodi-n-propylamine	0.0002	1.46
WW08	4-Methylphenol	0.0003	--

* Method detection limit – not listed. ** Maximum contaminant level

WW02 1997

As shown in Tables 4-26 and 4-26a, all constituents were detected at WW07 in 1997. GRO, DRO, RRO and Benzene exceeded MCLs in 1997. SVOC were equal to or less than MCL for 1997 samples.

WW07 1997

As shown in Tables 4-26 and 4-26a, GRO, RRO, Benzene, and EthylBenzene were non-detected at WW07 in 1997. DRO, Toluene and Xylene were detected but well below MCLs. One SVOC compound was detected at less than MCL. No constituents at WW07 exceeded MCLs for 1997 sampling.

WW08 1997

As shown in Tables 4-26 and 4-26a, all constituents, DRO, RRO and one SVOC compound were detected but below the MCLs. All other constituents were non-detected. No constituents at WW08 exceeded MCLs for 1997 sampling.

4.2.1.a Comparison of Site SS15 –Groundwater Hydrocarbon Levels 1997-2000

In general, September 2000 hydrocarbon levels have decreased from 1997-1999 levels at location WW02 and WW08. Analytical data indicates that September 2000 hydrocarbon levels at location WW07 have increased compared to 1997-1999 levels.

Table 4-27
SS15 Comparison of WW02 Hydrocarbon Levels 1997-2000

WW02 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	4.4	3.2	ND	0.7	0.14	0.17	0.37	Table 4-24a
1999	NA	7.23	ND	NA	NA	NA	NA	Table 4-25a
1997	7.95	400	1.38	1.11	0.31	0.15	0.553	Table 4-26a

All results in **mg/L.**
NA = Not Analyzed.
ND = Not Detected above method reporting limit / practical quantitation limit.

WW02

As shown in Table 4-27, GRO, DRO and Benzene levels have decreased but levels are above the MCLs. The remaining constituent levels were less than the MCLs. SVOC were less than MCL for 2000 samples as shown in Table 4-24a.

Table 4-28
SS15 Comparison of WW07 Hydrocarbon Levels 1997-2000

WW07 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	0.46	0.69	0.0013	ND	0.0011	0.0033	ND
1999	ND	ND	ND	ND	ND	ND	ND	NA
1997	ND	0.063	ND	ND	ND	0.0004	0.0002	Table 4-26a

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

WW07

As shown in Table 4-28, GRO, Ethylbenzene and SVOC constituents were non-detected showing no change from 1999 levels. DRO, RRO, Benzene, Toluene and Xylene have increased compared to 1997 – 1999 levels. All of these hydrocarbon levels were less than the MCLs.

Table 4-29
SS15 Comparison of WW08 Hydrocarbon Levels 1997-2000

WW08 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	Benzene (0.005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	SVOC
2000	ND	0.16	0.23	ND	ND	ND	0.002	ND
1999	ND	0.363	ND	ND	ND	ND	ND	NA
1997	ND	0.165	0.275	ND	ND	ND	ND	Table 4-26a

All results in **mg/L.**
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.

WW08

As shown in Table 4-29, GRO, Benzene, Ethylbenzene and Toluene constituents were non-detected showing no change from 1997 - 2000 levels. DRO levels have decreased compared to 1999 levels and remain below the MCL. RRO and Xylene have increased compared to 1999 levels, but levels were less than the MCLs. September 2000 SVOC levels were non-detected showing a decrease compared to 1997 levels. SVOC's were not analyzed in 1999 sampling event.

4.3 Site LF03 – Hydrocarbon Related Contaminants

This section presents hydrocarbon analytical data for sampling activities at site LF03. See Figure 5: Site LF03 Sample Locations and Results September 2000. Inorganic analytical data and field parameter measurements for this site are presented in Section 5.3.

4.3.1 LF03 Groundwater – Hydrocarbon Data

Groundwater sampling at LF03 included the collection of one water sample from monitoring well MW-1 and one water sample each from monitoring wells CMW-1 through monitoring well CMW-7. CMW-2 was dry and no sampling was conducted. Hydrocarbon analyses at LF03 in 2000 included GRO, DRO, Volatiles (including BTEX constituents), Semi-Volatiles, and PCB. In July 1996, no sampling for PCB compounds was conducted.

The following tables and sections present 2000 sampling data and compare that data to MCLs and to data from sampling in 1996, 1997, and 1999. Each table lists the sample results for each well that was sampled. MCLs for hydrocarbon constituents are shown in parentheses below the name of each analyte.

Table 4-30
Site LF03 Groundwater Hydrocarbon Levels – September 2000

Well (MCL)	GRO (1.3)	DRO (1.5)	VOC	SVOC	PCB (0.0005)
MW-1	ND	ND	ND	ND	ND
CMW-1	ND	ND	ND	ND	ND
CMW-2	NA	NA	NA	NA	NA
CMW-3	ND	ND	ND	ND	ND
CMW-4	ND	ND	ND	ND	ND
CMW-5	ND	ND	ND	ND	ND
CMW-5*	ND	ND	ND	ND	ND
CMW-6	ND	ND	ND	ND	ND
CMW-7	ND	ND	ND	ND	ND

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.
NA = Not Analyzed.
* Duplicate Sample Information

MW-1, CMW-1 through CMW-7 2000

As shown in Table 4-30, no hydrocarbon constituents have been detected in any of the wells at LF03 in 2000.

Table 4-31
Site LF03 Groundwater Hydrocarbon Levels – October 1999

Well (MCL)	GRO (1.3)	DRO (1.5)	VOC	SVOC	PCB (0.0005)
MW-1	NS	NS	NS	NS	NS
CMW-1	ND	ND	ND	ND	ND
CMW-3	ND	ND	ND	ND	ND
CMW-4	ND	0.79	ND	ND	ND
CMW-5	ND	0.41	ND	ND	ND
CMW-6	ND	ND	ND	ND	ND
CMW-7	ND	ND	ND	ND	ND

All results in **mg/L.**
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled

CMW-1, CMW-3, CMW-6 and CMW-7 1999

Sample results for these wells were non-detected for all hydrocarbon constituents in 1999.

CMW-4 and CMW-5 1999

GRO was non-detected for both wells in 1999. DRO levels were above detection limits but below the MCLs.

Table 4-32
Site LF03 Groundwater Hydrocarbon Levels – June 1997

Well (MCL)	GRO (1.3)	DRO (1.5)	VOC	SVOC
CMW-1	ND	0.179	ND	ND
CMW-4	ND	2.13	ND	ND
CMW-5	ND	0.399	ND	ND
CMW-6	ND	ND	ND	ND
CMW-7	ND	0.25	ND	ND

All results in **mg/L.**
ND = Not Detected above method reporting limit / practical quantitation limit.

CMW-1, CMW-4, CMW-5, CMW-6 and CMW-7 1997

As shown in Table 4-32, GRO, VOC, and SVOC levels were non-detected for all wells in 1997. PCB samples were not collected in 1997. DRO levels were non-detected at CMW-6. DRO levels were detected above the detection limit for CMW-1, CMW-5 and CMW-7 but below the MCLs. DRO level of 2.13 mg/L at CMW-4 exceeded the MCL of 1.5 mg/L.

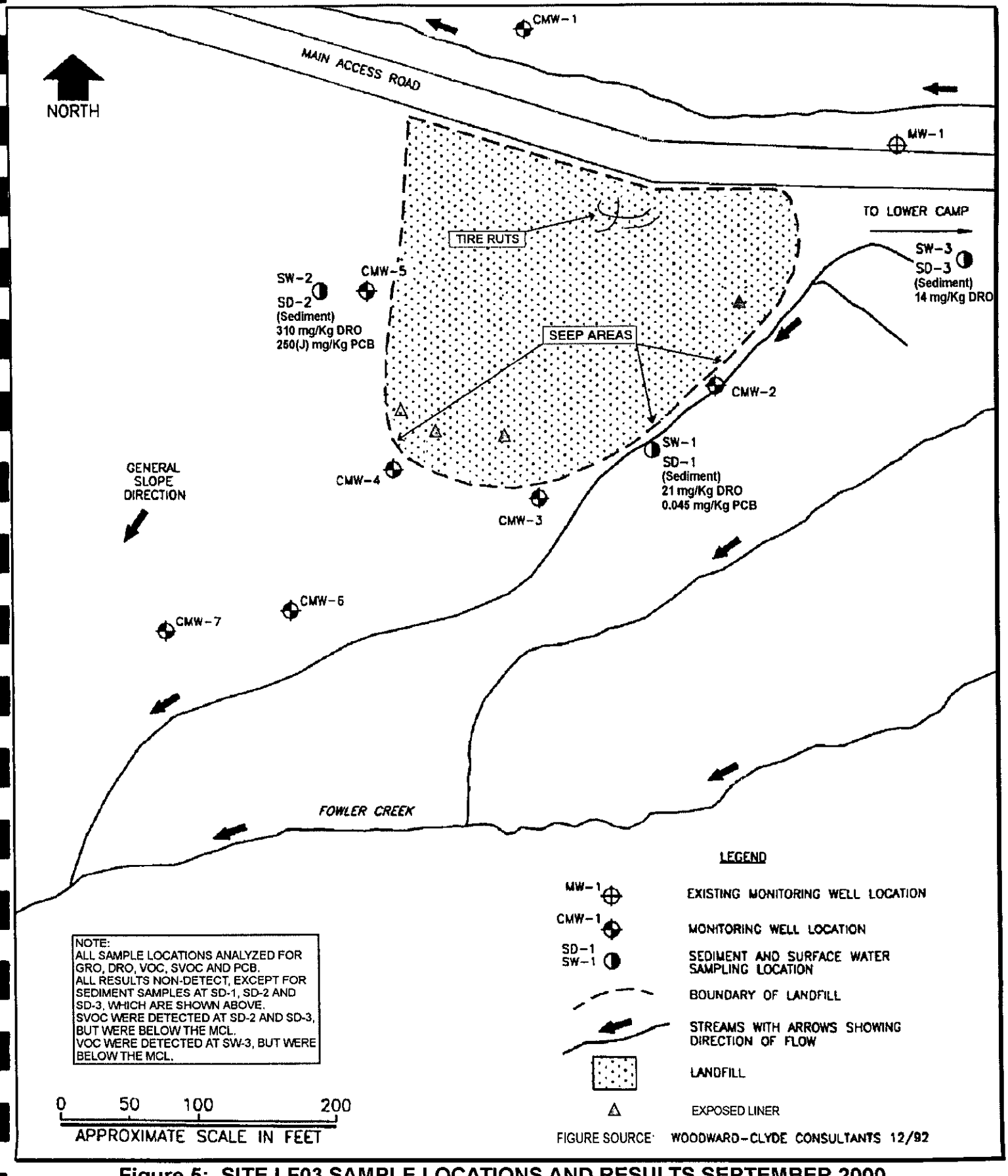


Figure 5: SITE LF03 SAMPLE LOCATIONS AND RESULTS SEPTEMBER 2000

Table 4-33
Site LF03 Groundwater Hydrocarbon Levels – July 1996

Well (MCL)	GRO (1.3)	DRO (1.5)	Benzene (0.0005)	EthylB (0.7)	Toluene (1.0)	Xylene (10)	VOC	SVOC
CMW-1	0.113	0.89	0.017	ND	ND	ND	ND	ND
CMW-2	ND	1.34	ND	ND	ND	ND	ND	ND
CMW-3	ND	0.092	ND	ND	ND	ND	ND	ND
CMW-4	0.033	1.62	ND	ND	ND	ND	ND	Table 4–33a
CMW-5	ND	0.31	ND	ND	ND	ND	ND	ND
CMW-6	ND	ND	ND	ND	ND	ND	ND	ND
CMW-7	0.074	1.21	0.007	ND	ND	ND	ND	ND

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-33a
Site SS15 Groundwater SVOC – July 1996

LOCATION	SVOC Detected above MDL*	[mg/L]	MCL**
CMW-4	Benzoic acid	0.0125	146

* Method detection limit – not listed ** Maximum contaminant level

CMW-1 through CMW-5, and CMW-7 1996

Tables 4-33 and 4-33a show that Ethylbenzene, Toluene, Xylene and VOC levels were non-detected at all wells in 1996. One SVOC compound was detected at CMW-4 but the level was below the MCL. 1996 Benzene levels exceeded the MCL of 0.0005 mg/L at CMW-1 with 0.017 mg/L and at CMW-7 with 0.007 mg/L.

CMW-6 1996

All constituents were non-detected at CMW-6 in 1996.

4.3.1a Summary of LF03 Groundwater Data 1996-2000

No hydrocarbon constituents were detected in any of the LF03 monitoring wells sampled in September 2000. In 1999 sampling, the only hydrocarbons detected were at monitoring wells CMW-4 and CMW-5, where DRO was detected below the MCL.

In 1997, DRO constituents were detected at four of five wells sampled but were below the MCLs at all wells except CMW-4. GRO constituents were non-detected at all of the sampled wells. In 1996, DRO constituents were detected at six of the wells and GRO constituents were detected at three of seven wells sampled.

PCBs were not detected in any wells in 1999 or in 2000 samples. Samples collected in 1996 and 1997 were not analyzed for PCB.

4.3.2 LF03 Surface Water – Hydrocarbon Data

Surface water sampling at LF03 included the collection of one water sample from area SD/SW-1 and one water sample from area SD/SW-3. A duplicate sample was collected from SD/SW-1. No water sample could be collected from area SD/SW-2 due to the lack of surface water at this site.

Table 4-34
Site LF03 Surface Water Hydrocarbon Levels – September 2000

AREA (MCL)	GRO (1.3)	DRO (1.5)	VOC	SVOC	PCB (0.0005)
SD/SW-1	ND	ND	ND	ND	ND
SD/SW-1*	ND	ND	ND	ND	ND
SD/SW-2	NS	NS	NS	NS	NS
SD/SW-3	ND	ND	Table 4-34a	ND	ND

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled
* Duplicate Sample Information

Table 4-34a
Site LF03 Surface Water VOC 2000

Location	VOC Detected above MDL*	mg/L	MCL**
SD/SW-3	1,2,3-Trichlorobenzene	0.004	0.07
	Naphthalene	0.009	1.46
	1,2,4-Trichlorobenzene	0.0072	0.07

* Method detection limit – not listed. ** Maximum contaminant level

SD/SW-1, SD/SW-2 and SD/SW-3 2000

As shown in Table 4-34, no constituents were detected at SD/SW-1 in 2000. GRO, DRO, SVOC and PCB constituents were non-detected at SD/SW-3. Table 4-34a shows that VOC compounds were detected in SD/SW-3 but below the MCLs. No water sample could be collected from area SD/SW-2 due to the lack of surface water at this site.

Table 4-35
Site LF03 Surface Water Hydrocarbon Levels – October 1999

AREA (MCL)	GRO (1.3)	DRO (1.5)	VOC	SVOC	PCB (0.0005)
SD/SW-1	ND	ND	ND	ND	ND
SD/SW-2	ND	ND	ND	ND	ND
SD/SW-3	ND	ND	ND	ND	ND

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-1, SD/SW-2 and SD/SW-3 1999

As shown in Table 4-35, no hydrocarbon constituents were detected at any surface water areas in 1999.

Table 4-36
Site LF03 Surface Water Hydrocarbon Levels – June 1997

AREA (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	VOC	SVOC	PCB (0.0005)
SD/SW-1	ND	ND	ND	ND	ND	ND
SD/SW-2	ND	0.205	ND	ND	ND	0.046
SD/SW-3	ND	ND	ND	ND	ND	ND

All results in mg/L.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-1, SD/SW-3 1997
As shown in Table 4-36, all constituents were non-detected at SD/SW-1 and SD/SW-3 in 1997.

SD/SW-2 1997
As shown in Table 4-36, GRO, RRO, VOC and SVOC were not detected. PCB levels exceeded MCLs at SD/SW-2 in 1997.

4.3.2.a Comparison of Site LF03 – Surface Water Hydrocarbon Levels 1997-2000

Hydrocarbon levels were non-detected at all LF03 surface water locations in 1999 and in 2000, except for VOC compounds detected at SD/SW-3 in 2000. The VOC compounds detected were below the MCLs. In 1997 all hydrocarbon levels were non-detected at LF03 surface water locations except for DRO at SD/SW-2, which was below the MCL and PCB level at SD/SW-2, which was above the MCL. RRO was not sampled in 1999 and 2000 per the SOW.

Table 4-37
LF03 Comparison of SD/SW-1 Hydrocarbon Levels 1997-2000

SD/SW-1 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	VOC	SVOC	PCB (0.0005)
2000	ND	ND	NS	ND	ND	ND
1999	ND	ND	NS	ND	ND	ND
1997	ND	ND	ND	ND	ND	ND

All results in mg/L.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled

SD/SW-1
As shown in Table 4-37, all constituents were non-detect or not sampled at SD/SW-1 in 1997, 1999 and 2000.

Table 4-38
LF03 Comparison of SD/SW-2 Hydrocarbon Levels 1997-2000

SD/SW-2 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	VOC	SVOC	PCB (0.0005)
2000	NS	NS	NS	NS	NS	NS
1999	ND	ND	NS	ND	ND	ND
1997	ND	0.205	ND	ND	ND	0.046

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled

SD/SW-2

As shown in Table 4-38, no surface water sample was collected at SD/SW-2 in 2000 due to the lack of water. In 1999, all constituents were non-detected at SD/SW-2. 1997 samples had DRO levels below the MCL and PCB levels exceeding the MCL.

Table 4-39
LF03 Comparison of SD/SW-3 Hydrocarbon Levels 1997-2000

SD/SW-3 (MCL)	GRO (1.3)	DRO (1.5)	RRO (1.1)	VOC	SVOC	PCB
2000	ND	ND	NS	Table 4-34a	ND	ND
1999	ND	ND	NS	ND	ND	ND
1997	ND	ND	ND	ND	ND	ND

All results in **mg/L**.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled

SD/SW-3

As shown above in Table 4-39, all constituents were non-detect or not sampled at SD/SW-3 in 1997, 1999, and 2000, except for VOC compounds in 2000. As shown in Table 4-34a, Naphthalene, 1,2,3-Trichlorobenzene, and 1,2,4-Trichlorobenzene were detected but below the MCLs.

4.3.3 Site LF03 –Sediment Samples – Hydrocarbon Compounds

Sampling at LF03 included the collection of one sediment sample from area SD/SW-1, one sediment sample from area SD/SW-2, and one sediment sample from area SD/SW-3. One duplicate sample was collected from SD/SW-3. The following tables and sections present 2000 sediment data with a comparison of that data to MCLs and to previous sediment data from 1997 and 1999 sampling. Sediment samples were collected as close as possible to previous sampling sites.

Table 4-40
Site LF03 Sediment Hydrocarbon Levels – September 2000

Area (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
SD/SW-1	ND	21	ND	ND	0.045
SD/SW-2	ND	310	ND	Table 4-40a	250 J
SD/SW-3	ND	14	ND	Table 4-40a	ND
SD/SW-3*	ND	18	ND	Table 4-40a	ND

All results in **mg/Kg**.
J = The associated numerical value is an estimated quantity.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled
* Duplicate Sample Information

Table 4-40a
Site LF03 Sediment SVOC 2000

Location	SVOC Detected above MDL*	mg/Kg	MCL**
SD/SW-2	Bis (2-Ethylhexyl) phthalate	0.84	1,200
SD/SW-3	Di-n-butylphthalate	0.57	1,700
SD/SW-3***	Di-n-butylphthalate	0.88	1,700

* Method detection limit – not listed. ** Maximum contaminant level.
*** Duplicate Sample Information

SD/SW-1 2000

As shown in Table 4-40, GRO, VOC, and SVOC constituents were not detected at SD/SW-1. The DRO level was above detection limit but below the MCL. The PCB level of 0.045 mg/Kg is below the MCL of 10 mg/Kg.

SD/SW-2 2000

As shown in Table 4-40, GRO and VOC were not detected. DRO was detected above the MCL. PCB levels exceeded the MCL at SD/SW-2 in 2000 (Please see Appendix F – QA/QC Summary Report for explanation of the J qualifier). As shown in Table 4-40a, an SVOC compound was detected above the detection limit but below the MCL.

SD/SW-3 2000

As shown in Table 4-40, GRO, VOC, and PCB constituents were not detected. The DRO level was above detection limits but below the MCL. As shown in Table 4-40a, an SVOC compound was detected above the detection limit but below the MCL.

Table 4-41
Site LF03 Sediment Hydrocarbon Levels – October 1999

Area (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
SD/SW-1	ND	98.3	ND	ND	ND
SD/SW-2	ND	112	ND	ND	ND
SD/SW-3	ND	109	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-1, SD/SW-2 and SD/SW-3 1999

As shown on Table 4-41, GRO, VOC, SVOC, and PCB were not detected at any of the locations in 1999 sampling. DRO levels are above the method-reporting limit but less than MCLs for all three areas. No constituents exceeded MCLs at these sites in 1999.

Table 4-42
Site LF03 Sediment Hydrocarbon Levels – June 1997

Area (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
SD/SW-1	ND	34.7	ND	ND	ND
SD/SW-2	ND	181	ND	Table 4-42a	69.1
SD/SW-3	ND	13.1	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

Table 4-42a
Site LF03 Sediment SVOC 1997

Location	SVOC Detected above MDL*	mg/Kg	MCL**
SD/SW-2	Di-n-Octylphthalate	0.331	810,000

* Method detection limit – not listed. ** Maximum contaminant level

SD/SW-1 and SD/SW-3 1997

GRO, VOC, SVOC and PCB were not detected at these areas in 1997. DRO levels are above the method-reporting limit but less than MCLs. No constituents exceeded MCLs at these sites in 1997.

SD/SW-2 1997

GRO, VOC, SVOC and PCB were not detected at this area in 1997. An SVOC phthalate compound was detected above the method-reporting limit but less than MCLs. The PCB level exceeded the MCL at SD/SW-2. DRO levels are above the method-reporting limit but less than MCLs.

4.3.3a Comparison of LF03 Sediment Hydrocarbon Data 1997-2000

Table 4-43
Site LF03 SD/SW-1 Sediment Hydrocarbon Levels 1997-2000

SD/SW-1 (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
2000	ND	21	ND	ND	0.045
1999	ND	98.3	ND	ND	ND
1997	ND	34.7	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-1
GRO, VOC, and SVOC were not detected in 1997, 1999 or 2000 samples. DRO constituents were detected in 1997, 1999 or 2000 samples, but at levels below the MCL. PCB were not detected in 1997 or 1999 samples, but were detected in the 2000 sample below the MCL.

Table 4-44
Site LF03 SD/SW-2 Sediment Hydrocarbon Levels 1997- 2000

SD/SW-2 (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
2000	ND	310	ND	Table 4-40a	250 J
1999	ND	112	ND	ND	ND
1997	ND	181	ND	Table 4-42a	69.1

All results in **mg/Kg**.
J = The associated numerical value is an estimated quantity.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-2
GRO and VOC were not detected in 1997, 1999 or 2000 samples. SVOC were detected in 1997 and in 2000 (below the MCL), but have been non-detected in 1999. DRO constituents were detected in 1997, 1999 or 2000 samples. The 2000 DRO level exceeds the MCL. PCB were non-detected in 1999 but were detected above the MCL in 1997 and again in 2000. Variations in PCB detections may be due to non-uniform distribution of PCB throughout the area.

Table 4-45
Site LF03 SD/SW-3 Sediment Hydrocarbon Levels 1997- 2000

SD/SW-3 (MCL)	GRO (300)	DRO (250)	VOC	SVOC	PCB (10)
2000	ND	14	ND	Table4-40a	ND
1999	ND	109	ND	ND	ND
1997	ND	13.1	ND	ND	ND

All results in **mg/Kg**.
ND = Not Detected above method reporting limit / practical quantitation limit.

SD/SW-3

GRO, VOC, and PCB were not detected in 1997, 1999 or 2000 samples. SVOC were not detected in either 1999 or 1997. SVOC were detected in the 2000 sample but below the MCL. DRO constituents were detected in 1997, 1999 and 2000 samples, but at levels below the MCL.

5.0 Field Parameters, Inorganics and Metals Data Evaluation

Field parameter measurements, nitrate, iron, sulfate and ICP metals analyses were conducted to characterize site water and soil chemistry and to provide data for evaluation of intrinsic remediation.

Field parameter measurements – temperature, pH, conductivity, dissolved oxygen, ReDox potential, and turbidity - were collected at each monitoring well as part of the groundwater sampling procedure. Alkalinity, nitrate, sulfate and total iron determinations were made at all groundwater sampling locations at SS13 and SS15. Nitrate and sulfate samples were collected at all surface water sampling locations at SS13. Alkalinity samples were collected at all groundwater and surface water sampling locations at LF03. In addition, groundwater, surface water and sediment samples from the landfill site LF03 were analyzed for various ICP metals.

The following table summarizes field parameter and associated inorganics/metals sampling requirements for Cape Romanzof sites SS13, SS15, and LF03. The sections following will present field parameter and inorganic constituent sample data from the September 2000 sampling event and compare that data to sample data from previous sampling events. The data for each sampling location will be reviewed to evaluate site conditions and intrinsic remediation.

Table 5-1
Field Parameters and Inorganic Constituents Sample Locations

Analytes / Measurements	Site	Matrix	Wells / Areas
Temperature pH Conductivity Dissolved Oxygen ReDox potential Turbidity	SS13	GW	MW1, MW2
	SS15		WW02, WW07, WW08
	LF03		MW-1, CMW-1 to CMW-7
Alkalinity Total Iron Sulfate Nitrate	SS13	GW	MW1, MW2
	SS15	GW	WW02, WW07, WW08
Sulfate Nitrate	SS13	SW	SW-01, SW-02, SW-03
ICP Metals Alkalinity	LF03	GW	MW-1, CMW-1 to CMW-7
		SW	SD/SW-1, SD/SW-2, SD/SW-3
ICP Metals	LF03	SD	SD/SW-1, SD/SW-2, SD/SW-3

5.1 Site SS13 - Field Parameters, Inorganics and Metals

Sampling requirements for 2000 surface water sampling and groundwater sampling at SS13 are listed in Table 5-2. See Section 4.1 for hydrocarbon data and sample locations at site SS13.

Table 5-2
Summary of SS13 Field Parameters and Sample Locations

SS13 Sampling Locations	Matrix	Field Parameters, Inorganics and Metals
MW1, MW2	GW	Temp, pH, Conductivity, Dissolved Oxygen, ReDox, Turbidity, Alkalinity, Total Iron, Sulfate and Nitrate
SW-01, SW-02, SW-03	SW	Sulfate and Nitrate

5.1.1 Site SS13 – Groundwater - Field Parameters, Inorganics and Metals

SS13 field parameters and inorganic analyses were conducted on samples collected from groundwater at wells MW1 and MW2.

Table 5-3
Site SS13-Groundwater–Field Parameter, Inorganic and Metal Data–September 2000

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
MW1	1.7	5.30	16.0	9.70	87	132	42	20	4.4	ND
MW2	0.92	5.55	4.6	13.1	190	561	10	39	1.5	0.18

* Conductivity ** Dissolved Oxygen + Alkalinity NS = Not Sampled

Table 5-4
Site SS13-Groundwater–Field Parameter, Inorganic and Metal Data–October 1999

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
MW1	2.0	8.7	0.10	6.9	69	42	37.6	13.6	2.73	0.667
MW2	1.0	8.5	0.03	11.9	142	NS	12	116	1.47	0.70

* Conductivity ** Dissolved Oxygen + Alkalinity NS = Not Sampled

Table 5-5
Site SS13-Groundwater–Field Parameter, Inorganic and Metal Data–September 1997

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	ReDox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
MW1	2.25	5.66	0.085	7.1	157	1000	120	7.8	28	39.1
MW2	2.4	5.7	0.034	10.4	116	312	60	2.4	NS	33.7

* Conductivity ** Dissolved Oxygen + Alkalinity NS = Not Sampled

Evaluation of Groundwater Data for Site SS13

As shown in the tables above, 2000 field parameter, inorganic and metal data indicate that conditions for intrinsic remediation exist at MW1 and MW2. Consistent differences in conductivity and alkalinity between MW1 and MW2 over three years of sampling indicate that MW1 and MW2 may not be part of the same groundwater system.

High DO levels for both wells indicate that aerobic activity is occurring and that parameters for anaerobic processes such as nitrate, sulfate, and total iron are not directly relevant to the intrinsic remediation process at this location.

Hydrocarbon data from 1997 indicates that GRO, BTEX and DRO levels were higher than 1999 samples. In 1997, High DO, and Alkalinity with pH near or optimal range, and slightly higher temperatures indicated that intrinsic remediation was occurring and effective (Tables 4-5 and 4-6).

5.1.2 Site SS13 – Surface Water - Inorganics and Metals

SS13 inorganic parameters were measured on samples collected from surface water samples at locations SW-01, SW-02, and SW-03.

The objective of sampling the surface water was to collect water chemistry data and to assess potential effects from runoff.

Table 5-6
Site SS13-Surface Water–Inorganic and Metal Data–September 2000

Location	Alkalinity	Total Iron	Sulfate	Nitrate
SW-01	NS	NS	1.2	0.11
SW-02	NS	NS	1.2	ND
SW-03	NS	NS	1.2	ND

All results in mg/L.
ND = Not Detected above method reporting limit / practical quantitation limit.
NS = Not Sampled

Table 5-7
Site SS13-Surface Water–Inorganic and Metal Data–October 1999

Location	Alkalinity	Total Iron	Sulfate	Nitrate
SW-01	120	7.8	1.42	0.70
SW-02	60	2.4	1.31	0.70
SW-03	NA	NA	1.37	0.76

All results in mg/L.
NA = Not Analyzed

Table 5-8
Site SS13-Surface Water–Inorganic and Metal Data–September 1997

Location	Alkalinity	Total Iron	Sulfate	Nitrate
SW-01	20	0.2	0	17.22
SW-02	20	0.2	0	15.1
SW-03	20	0.2	0	15.9

All results in mg/L.

Evaluation of Surface Water Data for Site SS13

As shown in Table 5-6, in September 2000 only sulfate and nitrate were sampled per scope of work. 2000 sulfate and nitrate levels had slightly decreased from 1999. The surface water at this location is cold, fast flowing and directly exposed to the atmosphere. These conditions indicate that any intrinsic remediation processes occurring are aerobic and that sulfate and nitrate levels are irrelevant as they are only factors in anaerobic processes.

Hydrocarbon constituents have been non-detected at these surface water sampling locations in previous yeas, but one sample showed detectable levels of hydrocarbons in 2000 (Tables 4-10, 4-11 and 4-12). Although hydrocarbon levels of samples were below the MCLs, their detection indicates a possible contamination from surface runoff or upstream sites.

5.2 Site SS15 - Field Parameters, Inorganics and Metals

Sampling requirements for 2000 monitoring well sampling at SS15 included analyses for field parameters, total iron, alkalinity, sulfate and nitrate. Table 5-9 below summarizes field parameters, inorganics sampling and analytical requirements for site SS15. See Section 4.2 for hydrocarbon data and sample locations at site SS15.

Table 5-9
Summary of SS15 Field Parameters and Sample Locations

SS15 Sampling Locations	Matrix	Field Parameters, Inorganics and Metals
WW02, WW07, WW08	GW	Temp, pH Conductivity, Dissolved Oxygen, ReDox, Turbidity, Alkalinity, Total Iron, Sulfate and Nitrate

5.2.1 Site SS15 – Groundwater - Field Parameters, Inorganics and Metals

SS15 Field parameters and inorganic analyses were conducted on samples collected from groundwater at wells WW02, WW07 and WW08.

Table 5-10
Site SS15–Groundwater–Field Parameter, Inorganic and Metal Data–September 2000

Well ID	Temp [°C]	pH units	Cond* [ms/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
WW02	1.93	5.57	34.6	9.85	235	199	110	10	42	ND
WW07	1.92	5.63	7.0	11.98	239	1000	22	110	3.1	0.99
WW08	1.19	5.63	7.5	12.13	235	265	26	28	1.9	1.0

* Conductivity ** Dissolved Oxygen + Alkalinity ND = Non-detected

Table 5-11
Site SS15–Groundwater–Field Parameter, Inorganic and Metal Data–October 1999

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
WW02	2.0	8.4	0.20	3.2	40	42	104	8.52	54.3	0.62
WW07	3.2	11.1	0.08	12.9	234	1000	NA	62.3	NA	NA
WW08	1.0	7.6	0.06	11.0	108	1000	NA	43.9	NA	NA

* Conductivity ** Dissolved Oxygen + Alkalinity NA = Not Analyzed

Table 5-12
Site SS15–Groundwater–Field Parameter, Inorganic and Metal Data–Sept. 1997

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]	Sulfate [mg/L]	Nitrate [mg/L]
WW02	2.53	6.37	0.51	2.36	330	149	260	10	55	99.8
WW07	3.52	5.92	0.063	13.5	247	240	60	7.4	NS	89.2
WW08	2.57	5.87	0.057	13.9	244	490	40	2.2	6.0	88.1

* Conductivity ** Dissolved Oxygen + Alkalinity NS = Not Sampled

Evaluation of Groundwater Data for Site SS15

As shown in the tables above, 2000 field parameter, inorganic and metal data indicate that conditions for intrinsic remediation are within acceptable ranges at WW02, WW07, and WW08. Consistent differences in conductivity and alkalinity between WW02 and WW07/WW08 over three years of sampling indicate that WW02 belongs to a different groundwater system than WW07 and WW08.

DO levels (>1.0mg/L) for all three wells indicate that aerobic activity may be occurring and that parameters for anaerobic processes such as nitrate, sulfate, and total iron are not directly relevant to the intrinsic remediation process at this location.

Lower DO and higher alkalinity values at WW02 are indicative of aerobic degradation activity. Conditions and field parameter levels are within acceptable ranges for intrinsic remediation. September 2000 hydrocarbon data shows a general decrease in hydrocarbon levels at WW02 when compared to 1997. WW07 hydrocarbon levels in September 2000 showed increases when compared to 1997 and 1999 levels. September 2000 DRO levels at WW08 have decreased while RRO and Xylene levels have increased when compared to 1999 levels (Tables 4-27, 4-28 and 4-29).

5.3 Site LF03 – Field Parameters, Inorganics and Metals

Analytical requirements for 2000 surface water sampling and monitoring well sampling at LF03 included analyses for ICP metals and alkalinity. Collection of field parameters was not required at LF03 surface water areas. Previous Closure Monitoring Reports for LF03 – August 1998 (samples collected Sept. 1997) and April 1997 (samples collected June 1996) conducted analyses

for selected metals but did not include analyses for total iron or alkalinity. See Section 4.3 for hydrocarbon data and sample locations at site LF03.

Table 5-13
Summary of LF03 Field Parameters and Sample Locations

LF03 Sampling Locations	Matrix	
MW-1, CMW-1 to CMW-7	GW	Temp, pH, Conductivity, Dissolved Oxygen, ReDox, Turbidity, Alkalinity, Sulfate and Nitrate, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Nickel, Vanadium, and Zinc
SD/SW-1, SD/SW-2, SD/SW-3	SW	Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Nickel, Vanadium, and Zinc.
SD/SW-1, SD/SW-2, SD/SW-3	SD	Arsenic, Barium, Beryllium, Cadmium, Zinc.

5.3.1 LF03 – Surface Water –Inorganics and Metals

Inorganic/metals sampling at LF03 included the collection of samples from surface water sampling areas, SD/SW-1, SD/SW-2, and SD/SW-3.

In 1997, no iron or alkalinity sampling was conducted.

Table 5-13a
LF03 Surface Water Field Parameters and Sample Locations

LF03 Surface Water Locations	Matrix	Metals with an ADEC MCL*
SD/SW-1, SD/SW-2, SD/SW-3	SW	Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc.
* MCL per 18 AAC 75.345 Table C		

Field parameter and inorganic constituent sampling at this site was limited to metals analysis. Hydrocarbon sample data from these surface water locations collected in 2000 and 1999 indicate that fuel constituents were non-detected at all three locations. The 1997 data from SD/SW-2 detected DRO levels at less than the MCL and PCB levels above the MCL. Both constituents were non-detected in 1999 data. See Tables 4-37, 4-38 and 4-39 for hydrocarbon data. The following table summarizes metals testing at Site LF03 surface water locations for 1997, 1999 and 2000 sampling events. MCLs are listed for analytes that have an established MCL.

Table 5-14
Site LF03 Surface Water Metals Data 1997, 1999, and 2000

Analyte	SD/SW-1			SD/SW-2			SD/SW-3			MCL
	1997	1999	2000	1997	1999	2000	1997	1999	2000	
Aluminum	NA	ND	0.36	NA	NA	NA	NA	ND	ND	NL
Antimony	NA	ND	ND	NA	NA	NA	NA	ND	ND	NL
Arsenic	ND	ND	ND	0.01	NA	NA	ND	ND	ND	0.05
Barium	ND	ND	0.014	0.232	NA	NA	0.021	ND	0.009	2.0
Beryllium	NA	ND	ND	NA	NA	NA	NA	ND	ND	0.004
Boron	NA	ND	NA	NA	NA	NA	NA	ND	NA	NL
Cadmium	ND	ND	ND	0.001	NA	NA	ND	ND	ND	0.005
Calcium	NA	1.5	1.5	NA	NA	NA	NA	2.23	1.5	NL
Chromium	ND	ND	ND	0.024	NA	NA	ND	ND	ND	0.1
Cobalt	NA	ND	ND	NA	NA	NA	NA	ND	ND	NL
Copper	ND	ND	ND	0.02	NA	NA	ND	ND	ND	1.3
Iron	NA	ND	0.30	NA	NA	NA	NA	ND	ND	NL
Lead	ND	ND	ND	0.023	NA	NA	ND	ND	ND	0.015
Magnesium	NA	0.437	0.53	NA	NA	NA	NA	ND	0.45	NL
Manganese	NA	ND	ND	NA	NA	NA	NA	ND	ND	NL
Molybdenum	NA	ND	ND	NA	NA	NA	NA	ND	ND	NL
Nickel	NA	ND	ND	NA	NA	NA	NA	ND	ND	0.1
Potassium	NA	ND	ND	NA	NA	NA	NA	5.29	ND	NL
Selenium	NA	ND	ND	NA	NA	NA	NA	ND	ND	0.05
Silicon	NA	2.64	NA	NA	NA	NA	NA	ND	NA	NL
Silver	NA	ND	ND	NA	NA	NA	NA	ND	ND	0.18
Sodium	NA	3.02	3.0	NA	NA	NA	NA	2.89	ND	NL
Strontium	NA	ND	NA	NA	NA	NA	NA	ND	NA	NL
Thallium	NA	NA	ND	NA	NA	NA	NA	NA	ND	0.002
Vanadium	ND	ND	ND	0.041	NA	NA	ND	ND	ND	0.26
Zinc	ND	ND	0.018	0.203	NA	NA	ND	ND	ND	11.0
Zirconium	NA	ND	NA	NA	NA	NA	NA	ND	NA	NL

All results in mg/L.
NA = Not Analyzed
ND = Not Detected above method reporting limit / practical quantitation limit.
NL = No Limit established by ADEC.

5.3.2 LF03 - Groundwater- Field Parameters, Inorganics and Metals

Monitoring wells at this site included eight (8) wells designated as MW-1, CMW-1, CMW-2, CMW-3, CMW-4, CMW-5, CMW-6, and CMW-7. Well numbers MW-1 and CMW-2 were dry and not sampled in 1999. Well CMW-2 was not sampled in 2000 due to the lack of water. See Figure 5 for sample locations.

Table 5-15
LF03 Groundwater Field Parameters and Sample Locations

LF03 Groundwater Sampling Locations	Matrix	Field Parameters, Inorganics and Metals
MW-1, CMW-1 to CMW-7	GW	Temp, pH, Conductivity, Dissolved Oxygen, ReDox, Turbidity, Alkalinity, Total Iron, ICP Metals

Table 5-16
Site LF03-Monitoring Wells - Field Parameter, Inorganics, Metals Data– September 2000

Well ID	Temp [°C]	pH units	Cond* [ms/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]
MW-1	2.63	5.66	3.2	12.75	241	999	ND	110
CMW-1	2.74	5.69	2.6	12.8	263	999	6	33
CMW-3	4.93	5.61	4.7	10.94	249	999	12	120
CMW-4	3.55	5.90	13.6	9.61	96	399	50	77
CMW-5	3.2	5.66	6.2	8.45	145	137	20	7.3
CMW-6	1.13	5.57	4.3	12.66	279	571	10	18
CMW-7	1.34	5.78	5.9	10.85	272	566	18	24
* Conductivity			** Dissolved Oxygen		+ Alkalinity		ND=Non Detected	

Table 5-17
Site LF03-Monitoring Wells - Field Parameter, Inorganics, Metals Data– October 1999

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]
CMW-1	3.0	10.1	0.02	12.7	87	99	7.42	60.1
CMW-3	3.0	8.2	0.04	9.9	77	99	10.4	38.5
CMW-4	3.0	7.1	0.15	7.3	65	99	69.3	25.8
CMW-5	3.0	8.3	0.07	12.0	51	15	25.7	12.2
CMW-6	2.0	8.7	0.03	11.9	52	99	10.9	25.9
CMW-7	2.0	10.1	0.06	11.4	94	99	19.8	43
* Conductivity			** Dissolved Oxygen		+ Alkalinity			

Table 5-18
Site LF03-Monitoring Wells Field Parameter, Inorganics, Metals Data– July 1997

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	Redox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]
CMW-1	1.4	6.3	0.09	9.65	85	1000	NS	NS
CMW-3	NS	NS	NS	NS	NS	NS	NS	NS
CMW-4	1.0	6.67	0.46	7.99	132	1000	NS	NS
CMW-5	2.2	6.2	0.036	3.24	-117	340	NS	NS
CMW-6	0.8	6.40	0.027	11.9	- 128	1000	NS	NS
CMW-7	0.3	6.15	0.125	7.6	109	708	NS	NS
* Conductivity			** Dissolved Oxygen		+ Alkalinity		NS=Not Sampled	

Table 5-19
Site LF03-Monitoring Wells Field Parameter, Inorganics, Metals Data– June 1996

Well ID	Temp [°C]	pH units	Cond* [mS/cm]	DO** [mg/L]	ReDox [mv]	Turbidity [NTU]	Alk+ [mg/L]	Total Iron [mg/L]
CMW-1	5.0	6.3	0.024	4.1	- 81	1000	NS	NS
CMW-2	7.0	6.6	0.22	7.4	134	1000	NS	NS
CMW-3	8.0	6.1	0.05	5.8	165	1000	NS	NS
CMW-4	4.0	6.1	0.18	5.2	-33	1000	NS	NS
CMW-5	5.0	5.7	0.08	3.2	106	478	NS	NS
CMW-6	2.0	6.6	0.03	7.1	142	78	NS	NS
CMW-7	3.0	6.1	0.82	5.0	-49	1000	NS	NS
* Conductivity		** Dissolved Oxygen		+ Alkalinity		NS=Not Sampled		

Evaluation of Groundwater Data for Site LF03

Hydrocarbon data indicates that fuel constituents have decreased steadily since 1996 sampling. GRO, DRO, Benzene and some SVOC compounds were detected in 1996. Data from 1997 sampling showed GRO, VOC and SVOC compounds were non-detected. DRO was detected in several of the wells. Data from 1999 samples indicates that the only hydrocarbons detected were DRO at CMW-4 and CMW-5 with levels below the MCL.

September 2000 field parameter and inorganic data are within acceptable ranges to support intrinsic remediation. Hydrocarbon levels were non-detected for all samples in 2000 indicating that intrinsic remediation may have been occurring successfully.

5.3.3 LF03 –Groundwater - Metals

Table 5-20 summarizes metals data from LF03 monitoring wells that were sampled in 1996-2000.

As shown in Table 5-20 on the following pages, no metals exceeded MCLs at CMW-1 and at CMW-5 through CMW-7 in 2000. Nickel and Beryllium at CMW-3 slightly exceeded the MCLs. Lead and Cadmium exceeded the MCLs at CMW-4. CMW-3 and CMW-4 are located directly down gradient from the landfill. Elevated levels of metals at these wells may be associated with migration from the landfill.

Table 5-20
LF03–Groundwater-Metals

Analyte Metal	CMW-1			CMW-3			CMW-4			MCL
	1997	1999	2000	1997	1999	2000	1997	1999	2000	
Aluminum	NA	57.1	31	NA	29.2	87	NA	29.2	49	NL
Antimony	NA	0.1	ND	NA	0.1	ND	NA	0.1	ND	0.006
Arsenic	0.05	0.05	ND	0.05	0.05	ND	0.05	0.05	ND	0.05
Barium	1.08	1.08	0.70	0.338	0.338	1.1	0.338	0.338	0.61	2
Beryllium	0.00305	0.00305	0.0021	0.001	0.001	0.0041	0.001	0.001	0.0021	0.004
Boron	0.00305	0.05	NA	0.001	0.05	NA	0.001	0.05	NA	NL
Calcium	0.01	15.8	8.7	0.01	6.73	19	0.01	6.73	24	NL
Cadmium	0.01	0.01	ND	0.01	0.01	ND	0.01	0.01	0.0078	0.005
Chromium	0.0798	0.0798	0.051	0.0505	0.0505	0.16	0.0505	0.0505	0.12	0.1
Cobalt	0.0601	0.0601	0.040	0.0208	0.0208	0.066	0.0208	0.0208	0.037	NL
Copper	0.0552	0.0552	0.035	0.0246	0.0246	0.089	0.0246	0.0246	0.12	1.3
Iron	0.0552	60.1	33	0.0246	38.5	120	0.0246	38.5	77	NL
Lead	0.0926	0.0926	ND	0.05	0.05	ND	0.05	0.05	0.38	0.015
Magnesium	0.0926	15.4	8.4	0.05	8.45	28	0.05	8.45	19	NL
Manganese	0.0926	1.26	0.66	0.05	0.644	2.2	0.05	0.644	3.1	NL
Molybdenum	0.0926	0.025	ND	0.05	0.025	ND	0.05	0.025	ND	NL
Nickel	0.0488	0.0488	ND	0.0317	0.0317	0.11	0.0317	0.0317	0.069	0.1
Potassium	0.0488	13	8.9	0.0317	3.07	9.6	0.0317	3.07	1.2	NL
Selenium	0.0488	0.1	ND	0.0317	0.1	ND	0.0317	0.1	ND	0.05
Silicon	0.0488	57.9	NA	0.0317	53.1	NA	0.0317	53.1	NA	NL
Silver	0.0488	0.005	ND	0.0317	0.005	ND	0.0317	0.005	ND	0.18
Sodium	0.0488	8.01	5.5	0.0317	4.41	5.3	0.0317	4.41	4.2	NL
Strontium	0.0488	0.385	NA	0.0317	0.07	NA	0.0317	0.07	NA	NL
Thallium	NA	NA	ND	NA	NA	ND	NA	NA	ND	NL
Vanadium	0.0859	0.0859	0.052	0.0793	0.0793	0.25	0.0793	0.0793	0.15	NL
Zinc	0.307	0.307	0.18	0.0903	0.0903	0.30	0.0903	0.0903	0.53	11
Zirconium	7.42	0.025	NA	10.4	0.025	NA	10.4	0.025	NA	NL

(Continued on following page)

Note: Unit of measure for all results is **mg/L**.
NA = Not Analyzed
ND = Non-Detected
NL = No Limit established by ADEC.
MCL = Maximum Contaminant Level

Table 5-20 (Continued)
LF03–Groundwater-Metals

Analyte Metal	CMW-5			CMW-6			CMW-7			MCL
	1997	1999	2000	1997	1999	2000	1997	1999	2000	
Aluminum	NA	2.76	3.1	NA	16.7	14	NA	25.2	16	NL
Antimony	NA	0.222	ND	NA	0.222	ND	NA	0.222	ND	0.006
Arsenic	0.111	0.111	ND	0.111	0.111	ND	0.111	0.111	ND	0.05
Barium	0.0918	0.0918	0.089	0.305	0.305	0.23	0.507	0.507	0.28	2
Beryllium	0.00222	0.00222	ND	0.00222	0.00222	ND	0.00222	0.00222	ND	0.004
Boron	0.00222	0.111	NA	0.00222	0.111	NA	0.00222	0.111	NA	NL
Calcium	8.22	8.22	6.0	6.63	6.63	5.1	12.6	12.6	7.6	NL
Cadmium	8.22	0.022	ND	6.63	0.0222	ND	12.6	0.0222	ND	0.005
Chromium	0.0111	0.0111	ND	0.0111	0.0111	0.020	0.0371	0.0371	0.048	0.1
Cobalt	0.0111	0.0111	ND	0.0323	0.0323	ND	0.0861	0.0861	ND	NL
Copper	0.0111	0.0111	ND	0.0156	0.0156	0.0087	0.03	0.03	0.015	1.3
Iron	0.0111	12.2	7.3	0.0156	25.9	18	0.03	43	24	NL
Lead	5	0.11	ND	5	0.111	ND	11.4	0.111	ND	0.015
Magnesium	5	2.09	1.6	5	6.92	4.8	11.4	15.1	8.1	NL
Manganese	5	1.56	1.6	5	0.612	0.40	11.4	0.864	0.43	NL
Molybdenum	5	0.0556	ND	5	0.0556	ND	11.4	0.0556	ND	NL
Nickel	4.15	0.022	ND	4.24	0.0222	ND	5.53	0.0483	ND	0.1
Potassium	4.15	5	1.2	4.24	5	2.8	5.53	11.4	6.5	NL
Selenium	4.15	0.222	ND	4.24	0.111	ND	5.53	0.111	ND	0.05
Silicon	4.15	7.02	NA	4.24	23.7	NA	5.53	34.5	NA	NL
Silver	4.15	0.011	ND	4.24	0.011	ND	5.53	0.011	ND	0.18
Sodium	4.15	4.15	3.7	4.24	4.24	4.6	5.53	5.53	5.1	NL
Strontium	4.15	0.0842	NA	4.24	0.0866	NA	5.53	0.122	NA	NL
Thallium	NA	NA	ND	NA	NA	ND	NA	NA	ND	NL
Vanadium	0.0111	0.0111	ND	0.0367	0.0367	0.022	0.0972	0.0972	0.052	NL
Zinc	0.0649	0.0649	0.034	0.0585	0.0585	0.035	0.107	0.107	0.055	11
Zirconium	25.7	0.0556	NA	10.9	0.0556	NA	19.8	0.0556	NA	NL

Note: Unit of measure for all results is **mg/L**.
NA = Not Analyzed
ND = Non-Detected
NL = No Limit established by ADEC.
MCL = Maximum Contaminant Level

5.3.4 Site LF03 – Sediment – Metals

Metals sampling requirements for LF03 sediment sites included collection of samples from sediment areas SD/SW-1, SD/SW-2 and SD/SW-3. See Figure 5 for sample locations. See Section 4.3.3 for related hydrocarbon data.

Table 5-21
LF03 Sediment Sample Locations and Testing Requirements

LF03 Sampling Locations	Matrix	Metals
SD/SW-1 SD/SW-2 SD/SW-3	SD	Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Vanadium and Zinc.

Table 5-22
Site LF03 Sediment Metals Data 1997, 1999, and 2000

Analyte	SD/SW-1			SD/SW-2			SD/SW-3			MCL
	1997	1999	2000	1997	1999	2000	1997	1999	2000	
Aluminum	NA	**13,000**	**7,000**	NA	**8,670**	**7,900**	NA	**20,200**	**15,000**	NL
Antimony	ND	11.7	ND	ND	ND	ND	ND	ND	ND	NL
Arsenic	3.1	7.72	ND	6.43	6.57	ND	3.56	ND	ND	2
Barium	55.3	91.2	72	128	73.1	88	68.3	174	120	1,100
Beryllium	0.132	0.186	ND	0.23	0.123	ND	0.195	ND	0.57	42
Boron	NA	5.84	NA	NA	ND	NA	NA	ND	NA	NL
Cadmium	0.1	1.17	ND	0.62	ND	ND	0.084	ND	ND	5
Calcium	NA	2,510	1,600	NA	1,510	1,200	NA	4,060	2,000	NL
Chromium	8.46	27.1	15	15.1	18.5	21	13.9	4.2	27	26
Cobalt	4.62	8.59	5.9	9.34	7.1	7.9	6.7	14.2	9.5	NL
Copper	15.5	23.6	37	14.9	9.75	12	9	15.9	13	NL
Iron	NA	**24,500**	**11,000**	NA	**16,200**	**17,000**	NA	**32,400**	**18,000**	**NL**
Lead	16.6	311	19	17.5	9.23	12	5.25	9.33	ND	400
Magnesium	NA	**5,040**	**2,800**	NA	**3,950**	**3,700**	NA	**10,400**	**4,300**	**NL**
Manganese	NA	253	200	NA	349	570	NA	273	290	NL
Molybdenum	NA	2.92	ND	NA	2.98	ND	NA	ND	ND	NL
Nickel	12.7	17.2	11	14.5	13.1	15	11.1	26.4	17	87
Potassium	NA	1,070	690	NA	1,590	1,600	NA	4,950	1,300	NL
Selenium	NA	11.7	ND	NA	ND	ND	NA	ND	ND	3.5
Silver	ND	5.84	5.1	ND	0.59	ND	ND	ND	ND	21
Sodium	NA	108	ND	NA	86.2	ND	NA	231	ND	NL
Strontium	NA	12.9	NA	NA	5.59	NA	NA	16.3	NA	NL
Thallium	NA	NA	ND	NA	NA	ND	NA	NA	ND	NL
Vanadium	18.2	38.5	26	17	27.2	28	26.4	62.3	45	3,400
Zinc	26.8	86.9	33	169	81.3	110	30.7	59.5	44	9,100
Zirconium	NA	6.23	NA	NA	3.38	NA	NA	7.27	NA	NL

ll results in **mg/Kg.**
A = Not Analyzed
D = Not Detected above method reporting limit / practical quantitation limit.
L = No Limit established by ADEC.

Review of the September 2000 data and comparison to the previous years data reveals that there are elevated levels of aluminum, iron, and magnesium (shown in **bold** above). There are no established MCLs for these elements, but their close proximity to landfill seep areas indicate that migration is likely occurring from the landfill.

6.0 Landfill #2 (LF03) Cap Inspection and Repair Recommendations

Landfill Cap inspection activities and objectives for Cape Romanzof Landfill #2 (LF03) included visual inspection of the cap, an assessment of cap integrity and effectiveness, and recommendations for any necessary repairs. See Figure 5.

6.1 Landfill #2 (LF03) Cap Inspection – September 2000

On September 19, 2000, a visual inspection of the Landfill #2 (LF03) Cap was conducted. The entire cap area was thoroughly inspected for integrity and any deficiencies due to wind or water erosion. Landfill Cap inspection activities and objectives included visual inspection of the cap, an assessment of cap integrity and effectiveness, and recommendations for any necessary repairs. Inspection observations and findings are presented on Figure 5 and in the following photographs.

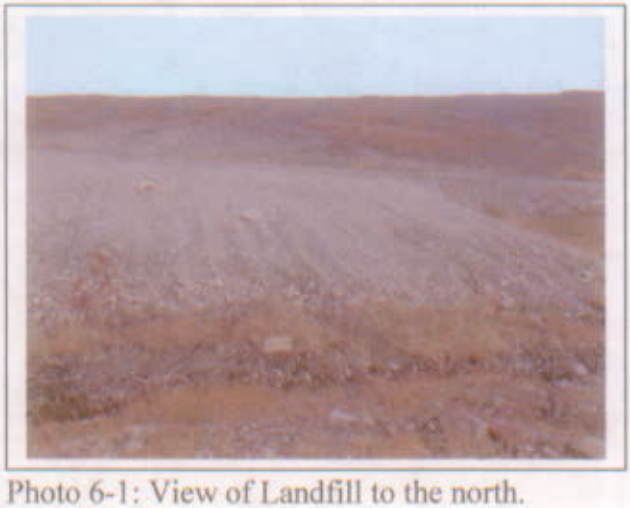


Photo 6-1: View of Landfill to the north.

Photo 6-2: Drainage channels on the slopes.

Photo 6-3: Tire track ruts at north side of the cap near the road.

Tire track ruts were observed on the cap surface in several areas adjacent to the road. The landfill liner was partially exposed in three areas and several drainage channels were observed on the sloping edge of the cap cover. Two seep areas were observed on the southeast edge of the landfill cap. These seep areas were originally identified in 1998. A third seep area was observed on the southwest edge of the cap near monitoring well CMW-4. Each seep area has noticeable rust colored stained soils. Miscellaneous debris, including metal pieces, rusted cans and trash etc. are scattered all around the east, south and west sides of the cap.

Photo 6-4: Exposed liner on southeast slope of Landfill Cap.

Photo 6-5: Large seep area near creek on the southeast side of the Landfill Cap.

A fair overall integrity of the cap was found. The cap is functional but needs some repair.

6.2 Repair Recommendations

Cover exposed liner in several locations, tire track ruts and drainage channels with a minimum of 6 inches of fill material. The fill should consist of 3-inch minus local material. The cap should be graded to allow for proper drainage. Reduce vehicle traffic usage on the cap cover to prevent future surface erosion.

Miscellaneous debris that is visible around the east, south and west sides of the current cap should be collected and placed in the landfill that is currently in use. Groundwater, soil and sediment associated with the three seep areas should be sampled and analyzed for hydrocarbon constituents, metals and, in particular, PCB to assess potential contaminant migration from the landfill.

7.0 Conclusions and Recommendations

This section presents conclusions and recommendations for sampling and inspection activities at sites SS13, SS15 and LF03.

Table 7-1
Summary of Conclusions and Recommendations for Site SS13

Conclusions	Recommendations
Groundwater samples at this location were collected at monitoring wells MW1 and MW2. **MW1 Findings and Conclusions** Except for Xylene, there has been a consistent decrease in hydrocarbon levels from 1997 through 2000. In 1997, all of the target hydrocarbons were detected. In 1999, only DRO and RRO constituents had detectable levels, with DRO (2.7 mg/L) slightly exceeding the MCL (1.5 mg/L). September 2000 data shows that all hydrocarbon constituents were non-detected except for DRO and Xylene. In September 2000, DRO levels were decreased from 1999 levels but still exceeded the MCL. Persistent DRO detections may indicate continuing contact with contaminant source. Xylene was detected below the MCL (10 mg/L) but higher than 1999 (ND) and 1997 (0.004 mg/L). The detection of Xylene may be due to complex transport mechanism. Field parameter data and inorganic data from this well indicate that MW1 and MW2 may be part of different groundwater systems. Required parameters for intrinsic remediation are present and there has been an overall decrease in detectable hydrocarbon constituents. Biodegradation rates are limited by low temperature.	**MW1 Recommendations** Continue Long Term Monitoring at MW1 Install additional monitoring wells between MW01 and MW02 Collect water quality parameters and hydrocarbon data from these additional wells to characterize groundwater systems in the area Collect soil-boring samples adjacent to MW1 to establish soil hydrocarbon levels

(Continued on following page)

Table 7-1 (Continued)
Summary of Conclusions and Recommendations for Site SS13

Conclusions	Recommendations
MW2 Findings and Conclusions There has been a consistent decrease in hydrocarbon levels from 1997 through 2000. In 1997, DRO, RRO, Benzene, and Toluene were all detected at MW2. In 1999 samples, only DRO was detected with all other constituents being non-detected. September 2000 data shows that no hydrocarbon constituents were detected at MW2. Required parameters for intrinsic remediation are present and there has been an overall decrease in detectable hydrocarbon constituents. Biodegradation rates are limited by low temperature.	**MW2 Recommendations** Continue Long Term Monitoring at MW2
Surface water samples at this site were collected at areas SW-01, SW-02 and SW-03. **SW-01 Findings and Conclusions** Hydrocarbon levels have been non-detected for all constituents for all three years EXCEPT for a detection of GRO in September 2000. A detection of GRO in moving surface water indicates some upstream contaminant source. September 2000 field parameters and inorganics measurements at these sites were limited to sulfate and nitrate. Both nitrate and sulfate levels were lower than 1999 levels. **SW-02 Findings and Conclusions** Hydrocarbon levels have been non-detected for all constituents for all three years at this location. September 2000 field parameters and inorganics measurements at these sites were limited to sulfate and nitrate. Both nitrate and sulfate levels were lower than 1999 levels.	**SW-01 Recommendations** Continue Long Term Monitoring at this site Collect additional samples all upstream surface water sources Collect sediment samples in same location as water samples Collect field parameters and inorganics data **SW-02 Recommendations** Continue Long Term Monitoring at this site Collect additional samples all upstream surface water sources Collect sediment samples in same location as water samples Collect field parameters and inorganics data

(Continued on following page)

Table 7-1 (Continued)
Summary of Conclusions and Recommendations for Site SS13

Conclusions	Recommendations
SW-03 Findings and Conclusions Hydrocarbon levels have been non-detected for all constituents for all three years EXCEPT for a detection of RRO in September 2000. A detection of RRO in moving surface water indicates some contaminant source up stream. RRO detected at location SW-02 may have been associated with surface water flowing from previous spill areas at SS-13. September 2000 field parameters and inorganics measurements at these sites were limited to sulfate and nitrate. Both nitrate and sulfate levels were lower than 1999 levels.	**SW-03 Recommendations** Continue Long Term Monitoring at this site Collect additional samples all upstream surface water sources Collect sediment samples in same location as water samples Collect field parameters and inorganics data
Sediment samples were collected at locations SS01 and SB04 (substituted for SS06). **SS01 Findings and Conclusions** BTEX was non-detected in 1999 and 2000 samples. GRO level (13 mg/Kg) is overall consistent with previous data. September 2000 DRO (52,000 mg/Kg) and RRO (3,800 mg/Kg) levels are slightly decreased from 1999 levels but still greatly exceed the MCLs; reduction in levels may be attributed to non-uniform distribution of contaminants during previous spill events. As shown on Figure 3, sediment sample location SS01 is upstream from sediment sample location SB04 and surface water sample locations SW-01, SW-02 and SW-03. Hydrocarbon contaminated sediments may be adversely impacting Site SS13 surface water. **SB04 Findings and Conclusions** GRO and BTEX are non-detect in September 2000 samples. The RRO level was 4,300 mg/Kg. DRO (4,300 mg/Kg) was higher than the MCL. Data from SS01 and SB04 indicates that the sediment in this area does have significant levels of DRO and RRO. Hydrocarbon contaminated sediments may be adversely impacting Site SS13 surface water and groundwater. SS13 Sediment sample data indicates DRO levels of 4,300 to 52,000 mg/Kg and RRO levels of about 4,000 mg/Kg may be typical of this area.	**SS01 Recommendations** Continue Long Term Monitoring at SS01 Collect sediment samples in this and adjacent areas to determine the extent of DRO/RRO Collect associated surface water samples concurrently **SB04 Recommendations** Continue Long Term Monitoring at SB04 and SS06 Collect sediment samples in this and adjacent areas to determine the extent of DRO/RRO Collect associated surface water samples concurrently

(Continued on following page)

Table 7-1 (Continued)
Summary of Conclusions and Recommendations for Site SS13

Conclusions	Recommendations
Near surface soil samples were collected at locations LB-03, LB-07 and LB-08.	
LB-03 Findings and Conclusions GRO and BTEX are non-detected in 1999 and 2000 samples. An SVOC was detected in September 2000 but below the MCL. September 2000 DRO (48 mg/Kg) and RRO (140 mg/Kg) levels are decreased from 1997-1999 levels. Reduction in levels may be attributed to non-uniform distribution of contaminants during previous spill events and/or intrinsic remediation.	**LB-03 Recommendations** Continue Long Term Monitoring at LB-03 Collect additional subsurface soils concurrently to assess vertical / lateral contaminant migration.
LB-07 Findings and Conclusions GRO and BTEX are non-detected in September 2000 samples. An SVOC was detected in September 2000 but below the MCL. DRO (8,900 mg/Kg), exceeding the MCL, and RRO (6,800 mg/Kg) levels are higher than 1999 sample data. Variations in hydrocarbon levels may be attributed to non-uniform distribution of contaminants during previous spill events.	**LB-07 Recommendations** Continue Long Term Monitoring at LB-07 Collect additional subsurface soils concurrently to assess vertical / lateral contaminant migration.
LB-08 Findings and Conclusions GRO and BTEX are non-detected in September 2000 samples and in 1999 samples. SVOC compounds were detected in September 2000 but below the MCL. DRO (620 mg/Kg) and RRO (810 mg/Kg) levels are decreased compared to 1997 and 1999 levels; however September 2000 DRO (620 mg/Kg) still exceed the MCL (250 mg/Kg). Reduction in levels may be attributed to intrinsic remediation processes and or non-uniform distribution of contaminants during previous spill events.	**LB-08 Recommendations** Continue Long Term Monitoring at LB-08 Collect additional subsurface soils concurrently to assess vertical / lateral contaminant migration.

Table 7-2
Summary of Conclusions and Recommendations for Site SS15

Conclusions	Recommendations
Groundwater samples at this location were collected from monitoring wells WW02, WW07 and WW08. **WW02 Findings and Conclusions** There was an overall decrease in hydrocarbon levels at WW02 in September 2000 samples when compared to 1997 levels. DRO has reduced since 1997, but still exceeds the MCL. High DO level and high alkalinity indicates that conditions for intrinsic remediation processes are within acceptable ranges but low temperatures will limit rate of remediation. Field parameter data and inorganic data from this well indicate that WW02 may be representative of a different groundwater system than WW07 and WW08. **WW07 Findings and Conclusions** Sample data from 1997 indicated that GRO, RRO, Benzene and Ethylbenzene were non-detected with very slight detections of DRO, Toluene, Xylene and SVOC. In 1999 samples all hydrocarbon constituents were non-detected. September 2000 sample data shows significant increases in the detectable hydrocarbons – GRO, SVOC and Ethylbenzene were non-detected, but DRO, RRO, Benzene, Toluene and Xylene had detections below the MCL but higher than in previous sampling events. Increasing hydrocarbon detections indicates that there may be contaminant plume migration or contact with a different contaminant source. High DO level and acceptable pH indicates that conditions for intrinsic remediation processes are present but low temperatures will limit rate of remediation. Field parameter data and inorganic data from this well indicate that WW07 and WW08 may be representative of different groundwater systems than WW02.	**WW02 Recommendations** Continue Long Term Monitoring at WW02 Install additional monitoring wells upgradient and downgradient from WW02 Collect water quality parameters and hydrocarbon data from these additional wells to characterize groundwater systems in the area Collect soil-boring samples adjacent to WW02 to establish soil hydrocarbon levels **WW07 Recommendations** Continue Long Term Monitoring at WW07 Install additional monitoring wells between WW07 and WW02 Collect water quality parameters and hydrocarbon data from these additional wells to characterize groundwater systems in the area Collect soil-boring samples adjacent to WW07 to establish soil hydrocarbon levels

(Continued on following page)

Table 7-2 (Continued)
Summary of Conclusions and Recommendations for Site SS15

Conclusions	Recommendations
WW08 Findings and Conclusions Sample data from 1997 indicated that GRO and BTEX constituents were non-detected with very slight detections of DRO, RRO and SVOC detected above detection limits, but below the MCLs. In 1999 samples, all hydrocarbon constituents were non-detected except for DRO, which was higher than 1997 levels but still below the MCL. September 2000 sample data shows that GRO, SVOC, Benzene, Ethylbenzene and Toluene were non-detected, while DRO, RRO, and Xylene had detections below the MCL but higher than in previous sampling events. Increasing hydrocarbon detections indicate that there may be contaminant plume migration or contact with a different contaminant source. Field parameter data and inorganic data from this well indicate that WW08 and WW07 may be representative of different groundwater systems than WW02.	**WW08 Recommendations** Collect Long Term Monitoring at WW08 Install additional monitoring wells between WW08 and WW02 Collect water quality parameters and hydrocarbon data from these additional wells to characterize groundwater systems in the area Collect soil-boring samples adjacent to WW08 to establish soil hydrocarbon levels

Table 7-3
Summary of Conclusions and Recommendations for Site LF03

Conclusions	Recommendations
Landfill #2 (LF03) – Sampling	
Groundwater samples at this location were collected from monitoring wells MW-1, CMW-1, CMW-3, CMW-4, CMW-5, CMW-6 and CMW-7. **Findings & Conclusions** All constituents were non-detected for all groundwater samples in 2000. In general, hydrocarbon levels have decreased at all wells compared to sample data from previous years. High DO level and acceptable pH indicate that conditions are present for intrinsic remediation processes. Nickel and Beryllium at CMW-3 slightly exceeded the MCLs. Lead and Cadmium exceeded the MCLs at CMW-4. CMW-3 and CMW-4 are located directly down gradient from the landfill. Elevated levels of metals at these wells may be associated with migration from the landfill.	**Recommendations** Continue Long Term Monitoring at these monitoring wells

(Continued on following page)

Table 7-3 (Continued)
Summary of Conclusions and Recommendations for Site LF03

Conclusions	Recommendations
Landfill #2 (LF03) – Sampling	
Surface water samples at this site were collected at locations SD/SW-1 and SD/SW-3. **Findings and Conclusions** All constituents were non-detected for all surface water samples in 2000, except for VOC detected at SD/SW-3, which were below the MCLs. All ICP metals were non-detected or well below the MCLs. No sample could be collected from area SD/SW-2 due to the insufficient volume of surface water at this site.	**Recommendations** Continue Long Term Monitoring at these surface water sample locations
Sediment samples collected at this site were collected at SD/SW-1, SD/SW-2 and SD/SW-3. **SD/SW-1 Findings and Conclusions** In 1997, all hydrocarbon constituents sampled including PCB were non-detected, except for DRO, which was below the MCL. In 1999, only DRO was detected showing an increase from 1997 levels but still below the MCL. September 2000 data shows that GRO, VOC and SVOC constituents were non-detected and DRO was reduced compared to 1999, but PCB were detected at low levels. The detection of PCB in the sediment may indicate that PCB are non-uniformly distributed in the sediments in this area and/or may be associated with migration from the landfill. No ICP metals exceeded MCLs. Elevated aluminum, iron and magnesium levels may indicate that migration is occurring from the landfill. **SD/SW-2 Findings and Conclusions** In 1997, sample data shows that GRO and VOC were non-detected while DRO and SVOC compounds were detected, but below the MCLs. PCB (69.1 mg/Kg) were detected at levels higher than the MCL (10 mg/Kg). In October 1999 data, GRO, VOC, SVOC and PCB were non-detected. DRO was detected but below the MCL.	**SD/SW-1 Recommendations** Continue Long Term Monitoring at SD/SW-1 Collect sediment and surface water samples upgradient to SD/SW-1 location **SD/SW-2 Recommendations** Continue Long Term Monitoring at SD/SW-2 Collect additional sediment samples in this area to establish lateral extent of potential PCB impact and potential PCB migration from the landfill.

(Continued on following page)

Table 7-3 (Continued)
Summary of Conclusions and Recommendations for Site LF03

Conclusions	Recommendations
Landfill #2 (LF03) – Sampling	
SD/SW-2 Findings and Conclusions (continued) September 2000 data shows that GRO and VOC constituents were non-detected. SVOC were detected below the MCL. September 2000 DRO level of 310 mg/Kg exceeds the MCL (250 mg/Kg) and shows an increase over 1999 samples. The PCB level of 250 mg/Kg exceeds the MCL (10 mg/Kg) and shows a significant increase over 1997 and 1999 levels. PCB contaminated sediments associated with the LF03 sampling locations may be associated with previous PCB impacted soils from this area. Variability of PCB levels in this area may indicate a non-uniform distribution of PCB impacted sediment and soils from a previous spill event and/or migration of contaminant from the landfill. SD/SW-2 is located on the west (down gradient) side of the landfill LF03 and may be impacted by contaminant migration from landfill materials. No ICP metals exceeded MCLs. Elevated aluminum, iron and magnesium levels may indicate that migration is occurring from the landfill.	
SD/SW-3 Findings and Conclusions GRO, VOC and PCB were non-detected in 1997, 1999 and in September 2000 samples. No SVOC were detected in 1997 or in 1999. September 2000 data indicates that one SVOC compound was detected but lower than the MCL. DRO has decreased from 1999 levels and is well below the MCL. No ICP metals exceeded MCLs. Elevated aluminum, iron and magnesium levels may indicate that migration is occurring from the landfill.	**SD/SW-3 Recommendations** Continue Long Term Monitoring at SD/SW-3 Collect additional sediment samples upgradient and adjacent to SD/SW-3 to assess the potential source of SVOC
Landfill #2 (LF03) – Landfill Cap Inspection	
The Landfill Cap cover shows exposed liner in several locations, tire tracks, and drainage channels on the slopes. Overall, the cap is functional. Three seep areas with rust colored stained soils were identified.	Add fill and regrade the cap area to allow proper drainage. Collect representative samples from the seep areas to assess potential contaminant migration from the landfill.

8.0 Compliance Documents and References

This section presents a list of applicable compliance documents and a list of references used in developing and preparing this report.

8.1 Compliance Documents

- Occupational Safety and Health Administration (OSHA) Act
- Model Quality Assurance Project Plan (QAPP), current edition, Air Force Center for Environmental Excellence/Environmental Restoration Division (AFCEE/ER), Brooks AFB, TX
- ADEC UST Procedures Manual, December 1, 1999
- ADEC UST 18 AAC 78, as amended through April 16, 2000
- ADEC UST 18 AAC 75, Articles 3 and 9, as amended through January 22, 1999

8.2 References

Final Work Plan and Site Safety & Health Plan Addendum No. 2, U.S. Air Force 611th ASG CES, Elmendorf AFB, Alaska, August 1996.

Final SS15 Technical Report, U.S. Air Force, Cape Romanzof LRRS, Alaska, Installation Restoration Program, July 1998.

Final Remedial Investigation/Feasibility Study Report for SS13, U.S. Air Force, Cape Romanzof LRRS, Alaska, Installation Restoration Program, August 1998.

Closure Monitoring Report, Landfill 2 (LF03), Cape Romanzof LRRS, Alaska, U.S. Air Force, 611th ASG CES, Elmendorf AFB, Alaska, April 1997.

Closure Monitoring Report, Landfill 2 (LF03), Cape Romanzof LRRS, Alaska, U.S. Air Force, 611th ASG CES, Elmendorf AFB, Alaska, April 1998.

Long Term Monitoring and Landfill Cap Inspection Report, Cape Romanzof LRRS, Alaska, November 2000.

Technical Protocol for Implementing Intrinsic Remediation with Long-Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater, Air Force Center for Environmental Excellence Technology Transfer Division Brooks AFB, San Antonio, Texas, November 1995 – Volume I

Technical Protocol for Implementing Intrinsic Remediation with Long-Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater, Air Force Center for Environmental Excellence Technology Transfer Division Brooks AFB, San Antonio, Texas, November 1995 – Volume II

TAB

Appendix A

Soil sampling location LB-03 at SS13, view to north.

Collecting surface water sample 00CN13SW11 from Fowler Creek at SS13.

Purging groundwater prior to sample collection at well WW-02, SS15.

Collection of groundwater sample from well CMW-7 at site LF03.

Collecting sediment sample at SD/SW-1, LF03. Note the seep area at the southeast side of the landfill cap adjacent to the creek in the foreground.

Sediment and surface water sample location SD/SW-2 at LF03. The sediment sample collected at this site showed high DRO and PCB levels. No surface water sample was collected due to the insufficient amount of water available at this site.

TAB

Appendix B

DAILY STATUS REPORT

Landfill No.2 (LF03), SS13, and SS15 Long Term Monitoring at Cape Romanzof LRRS

Date September 18, 2000
Weather Overcast, wind 13 knots, ~ 38 degrees F
Field Crew Dr. Chuck Ronan, Renate Keller, Chris McDonnell

WORK PERFORMED

BNCI personnel arrived on site at approximately 1 p.m. Check-in and briefing for site visitors.

Groundwater samples from three monitoring wells (WW02, WW07 and WW08) were collected at SS15. A PID reading was taken at each well immediately after removing the well cap. Water level measurements were obtained to calculate the well and purge volume for each well. Three well volumes were purged from the wells prior to sample collection. Field parameters for temperature, pH, conductivity, turbidity, dissolved oxygen, and reduction/oxidation potential were collected after each well purging. Pictures were taken to document activities and sampling locations.
The purged well water was containerized and was discharged into the facility shop wastewater treatment system where it is processed through a Granular Activated Carbon (GAC) System.

FUTURE WORK PLAN

Collect groundwater, surface water, sediment, and soil samples at SS13.
Collect groundwater, surface water, and sediment samples at LF03. Visually inspect the landfill cap.

BETHEL OFFICE:
Post Office Box 719
Bethel, Alaska 99559
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•ANCHORAGE OFFICE:
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Anchorage, Alaska 99511-0512
(907) 522-6103 FAX: (907) 522-3150

DAILY STATUS REPORT

Landfill No.2 (LF03), SS13, and SS15 Long Term Monitoring at Cape Romanzof LRRS

Date September 19, 2000
Weather Overcast, wind from E/SE ~ 30 knots, ~ 36 degrees F
Field Crew Dr. Chuck Ronan, Renate Keller, Chris McDonnell

WORK PERFORMED

Site SS13:

Groundwater samples from two monitoring wells (MW1, MW2) were collected. A PID reading was taken at each well immediately after removing the well cap. Water level measurements were obtained to calculate the well and purge volume for each well. Three well volumes were purged from the wells prior to sample collection. Field parameters for temperature, pH, conductivity, turbidity, dissolved oxygen, and reduction/oxidation potential were collected after each well purging.
The purged well water was containerized and was discharged into the facility shop wastewater treatment system where it is processed through a Granular Activated Carbon (GAC) System.
Three surface water samples plus one duplicate were collected at the approximate locations SW-01, SW-02, and SW-03.
Two sediment samples were collected at SS-01 and SB-04. SB-04 was substituted as a sampling location because no water was found at SS-06, the original sampling location per scope of work.
Three near surface soil samples plus one duplicate were collected at LB-03, LB-07, and LB-08.

Site LF03:

The entire landfill cap was visually inspected for current effectiveness and deficiencies. The overall integrity of the cap is functional but it needs regrading and fill in some areas. Tire ruts have formed on the surface of the cap. Signs of erosion were visible. The liner was exposed in several locations. Channels possibly caused by surface water runoff were observed on the south and west slopes of the cap. Rust stains were found in several locations on the south and west edges of the cap.

Seven groundwater samples (including one duplicate) were collected from six monitoring wells (MW1, CMW-1, CMW-4, CMW-5, CMW-6, CMW-7). A PID reading was taken at each well immediately after removing the well cap. Water level measurements were obtained to calculate the well and purge volume for each well. Three well volumes were purged from the wells prior to sample collection. Field parameters for temperature, pH, conductivity, turbidity, dissolved oxygen, and reduction/oxidation potential were collected after each well purging. The purged well water was containerized and was discharged into the facility shop wastewater treatment system where it is processed through a Granular Activated Carbon (GAC) System.

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FUTURE WORK PLAN

Collect two groundwater samples, four surface water samples (including one duplicate), and four sediment samples (including one duplicate) at LF03.

BNC INTERNATIONAL, INC.

A Subsidiary of Bethel Native Corporation

DAILY STATUS REPORT

Landfill No.2 (LF03), SS13, and SS15 Long Term Monitoring at Cape Romanzof LRRS

Date September 20, 2000
Weather Fog, rain, wind gusts up to 24 knots, ~ 45 degrees F
Field Crew Dr. Chuck Ronan, Renate Keller, Chris McDonnell

WORK PERFORMED

Site LF03:

One groundwater sample was collected from monitoring well CMW-3. A PID reading was taken immediately after removing the well cap. Water level measurements were obtained to calculate the well and purge volume. Three well volumes were purged from the well prior to sample collection. Field parameters for temperature, pH, conductivity, turbidity, dissolved oxygen, and reduction/oxidation potential were collected after each well purging.
The purged well water was containerized and was discharged into the facility shop wastewater treatment system where it is processed through a Granular Activated Carbon (GAC) System.
Monitoring well CMW-2 was almost dry. There was not enough water available to collect field parameters and/or to collect a sample.
Three surface water samples (including one QA/QC sample) were collected at SD/SW-1 and SD/SW-3. The sample jars were submerged directly into the water and filled slowly with minimal flow. No surface water sample could be collected at SD/SW-2 because there was not enough water available at this site.
After the collection of the surface water samples four sediment samples (including one QA/QC sample) were collected at the same three sites.

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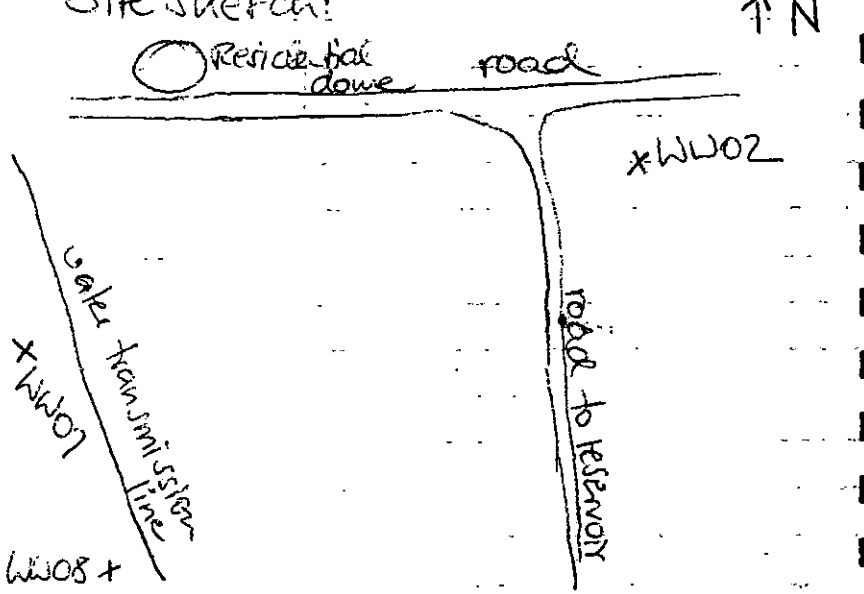
TAB

Appendix C

SS 15

Groundwater samples

Site sketch:



Date: 9-18-00

Weather: overcast, low clouds, ~43°F (at runway) ~38°F (at lower camp area), wind 13kts

Sample ID #: COCRISGL21

Location: Monitoring well WW02

Sample type: G

Sampled by: CR/RK

time: 15:38

matrix: water

anal. methods: AK101, 102, 103; EPA 8270, EPA 8021B, EPA 6010 (total Fe) EPA 300 (sulfate, nitrate), EPA 310.1

# of containers: 7

sampl. equip.: bailer, disposable gloves

date shipped/delivered: 9-22-00

Field parameters:

PID: 0.0 ppm

date	9-18-00	9-18-00	9-18-00	
time	15:07	15:23	15:36	
temp °C	2.05	1.95	1.93	°C
pH	5.59	5.59	5.57	
conductivity	45.8	35.4	34.6	mS/cm
turbidity	54.7	48.4	199	NTU
dissolved oxygen	6.85	11.3	9.85	mg/L
REDOX	236	236	235	mV

Signature, title & date:

Cindy L Rosen 9-20-00

well volume: $50.5 - 33.8 \times (4)^2 \times 0.0408 =$ 10.9 gal.

purge vol. (gal): 3 (# vols) × 10.9 (well volume) = 32.7

order of collection:

1.	GRO / BTEX	AK 101 / EPA 8021 B
2.	Semi-Volatiles	EPA 8270
3.	DRO / RRO	AK 102 / AK 103
4.	Alkalinity	EPA 310.1
5.	Total iron	EPA 6010
6.	Sulfate	EPA 300
7.	Nitrate	EPA 300

photographs:

Comments: very slight sheen on water, fuel odor

Signature, time & date:

Charles B. Conan 9-20-00

Sample ID#: 00CR15GW071

Location: Monitoring well MW07

Sample type: G

sampled by: CR/RK

time: 16:09 matrix: water

analyt. methods: AK 101, 102, 103
EPA 8270, EPA 8021 B, EPA 6010 (total Fe)
EPA 300 (sulfate, nitrate), EPA 310.1

# of containers: 7

sampl. equip.: bailer, disposable gloves

date shipped/deliv: 9-22-00

Field parameters:

PID: 0.0 ppm

date	9-18-00	9-18-00	9-18-00	
time	15:46	15:53	16:01	
temp.	1.78	1.65	1.92	°C
pH	5.79	5.76	5.63	
conductivity	7.6	7.4	7.0	ms/cm
turbidity	442.0	958	1000	NTU
diss. oxygen	11.7	11.9	11.98	mg/L
REDOX	237	239	239	mV

Well volume: 27.5 - 5.8 x (2)² x 0.0408
= 3.5

purge vol. (gal.): 3 (# vols.) x 3.5 well vol. = 10.5

order of collection:
same for all
see OOCR15GW21

photographs:

comments:

Signature, time & date:
Charles B Rosen 9-20-00

Sample ID#: OOCR15GW81
Location: Monitoring well GW08
sample type: G
sampled by: CR/RK
time: 16:30 matrix: water

qualyf. methods: AK 101, 102, 103
EPA 8270, EPA 8021 B, EPA 6010 (total Fe)
EPA 300 (sulfate, nitrate), EPA 310.1
# of containers: 7
sampl. equip.: bailer, disp. gloves

date shipped/delivered: 9-22-00

Field parameters:
PID: 0.0 ppm

date	9-18-00	9-18-00	9-18-00	
time	16:18	16:20	16:23	
temp.	1.03	0.85	1.19	°C
pH	5.58	5.78	5.63	
conductivity	8.2	7.8	7.5	ms/cm
turbidity	133	215	265	NTU
diss. oxygen	12.05	11.97	12.13	mg/L
REDOX	238	236	235	mV

well volume: 25.5 - 6.5 x (2)² x 0.0408
(gal.) = 5.1

purge vol. (gal.): 3 (# vols.) x 3.1 well vol. = 9.3

Order of collection:
See 00CR15GL121

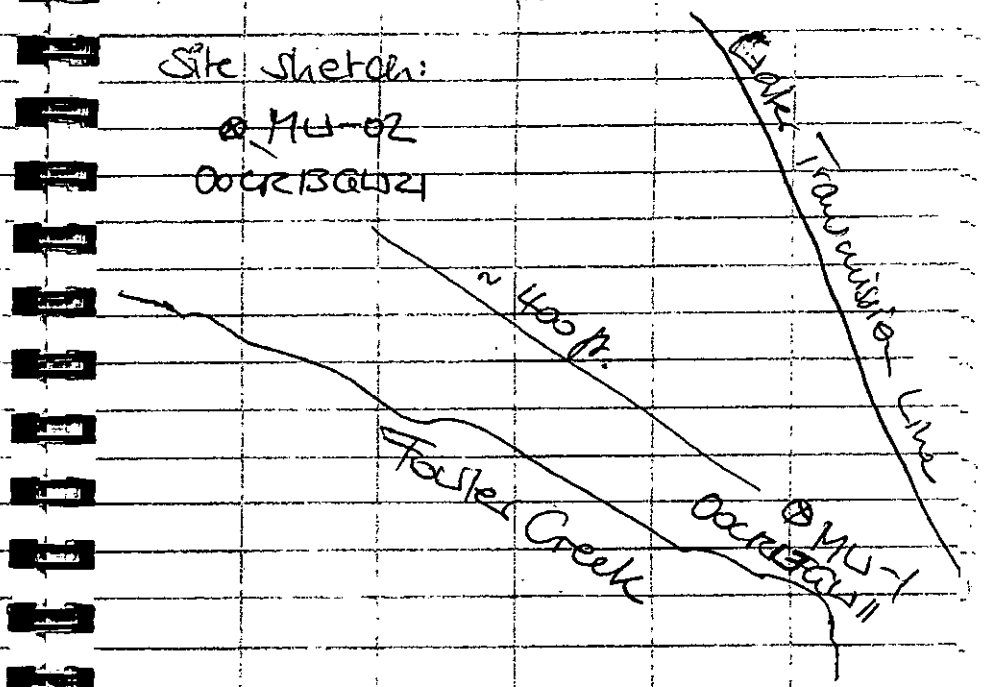
photographs:

Comments:

SS13

Groundwater sample:

Site Sketch:



Signature, time & date:

Charles B Rosen 9-20-00

date: 09-19-00
weather: partly cloudy
(morning) strong wind from ~ E/SE
~ 35°F ~ 30 knots
Sample I.D#: 00CR13QL311
Location: Monitoring well MW1
sample type: G sampled by: CR/RK
time: 9:15 matrix: water
analyt. methods: AK 101, 102, 103, EPA 8021B, 8270, 6010 (Total Fe), EPA 300 (sulfate, nitrate), EPA 310.1
# of containers: 7
sampl. equip.: bailer, disposable gloves

order of collection:
1. GRO/BTEX
2. Semi-Volatiles
3. DRO/RRO
4. Alkalinity
5. Total Iron
6. Sulfate
7. Nitrate

date shipped/delivered: 9-22-00

Field parameters:

PID: 0.2 ppm

date	09-19-00	09-19	09-19-00	
time	9:05	9:09	9:13	
temp.	2.8	2.05	1.7	°C
pH	5.36	5.27	5.30	
conductivity	17.4	18.6	16.0	
turbidity	121.0	161.0	132.0	
diss. oxygen	9.5	7.78	9.70	
REDOX	79	70	87	

well vol. (gal.) $26.5 - 6.4 \times (2)^2 \times .0408 = 3.3$

purge vol. (gal.): $3 \times 3.3 = 9.9$
(# vols) well vol.

photographs:

Comments:

Signature, time & date:
Charles B Ronan 9-20-00

Sample ID#: 00CR13GW21
Location: Monitoring well MW2
Sample type: G   sampled by: CR/RK
time: 9:42   matrix: water
analyt. methods: AK 101, 102, 103
EPA 8021 B, 8270, 300 (sulfate, nitrate),
EPA 310.1, EPA 6010 (Total Fe)
# of containers: 7
sampl. equip.: bailer, disp. gloves

order of collection:
see 00CR13GW11

date shipped/delivered: 9-22-00
Field parameters:
PID: 0.3 ppm

date	9-19-00	9-19-00	9-19-00
time	9:30	9:33	9:36
temp.	1.19	0.96	0.92 °C
pH	5.7	5.58	5.55
conductivity	5.1	4.3	4.6
turbidity	100	380	561
diss. oxygen	13.17	13.3	13.1
REDOX	129	166	190

well vol. (gal.) = 19.8 − 1 × (2)² × 0.0408 = 3.1

purge vol. (gal.) = 3 (# vols.) × 3.1 (well vol.) = 9.3

photographs:

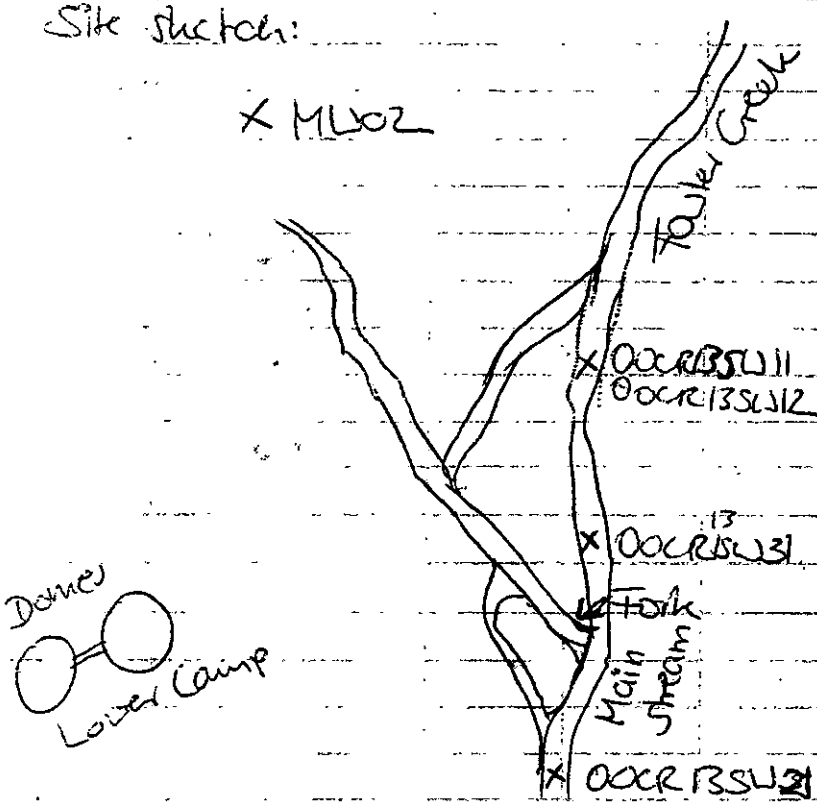
Comments: Monitoring well casing full of water over the intake.

Signature, time & date:
Charles B. Ronan 9-20-00

SS13 09-19-00

Surface Waters Sampled

Site Sketch:



Sample I.D#: OOCR13SW11

Location: ~~SW-01~~ corrected to SW-03

sample type: G sampled by: CR/RK

time: 11:08 matrix: water

Analyt. methods: AK 101, 102, 103, EPA 8021 B, 8270, 300 (sulfate, nitrate)

# of containers: 5

sampl. equip.: disposable gloves

method: jar submerged below surface & filled with minimal disturbance

order of collection:

1. GRO AK 101
2. RRO/DRO AK 103/102
3. Semi-Volatiles EPA 8270
4. alkalinity EPA 310.1
5. Total Iron EPA 6010
6. Sulfate/nitrate EPA 300

photographs:

date shipped/delivered: 9-22-00

comments:

Signature, time & date:

Charles B. Ronan 9-20-00

Sample ID#: 00CR13SW21 (RK)
Location: ~~SW-02~~ corrected to SW-01
sample type: G sampled by: CR/RK
time: 11:02 matrix: water
analyt. methods: AK 101, 102, 103, EPA 8021 B, 8270, 300 (sulfate, nitrate)

# of containers: ~~7~~ 5
sampl. equip: disposable gloves
method: ~~2~~ jar submerged below surface & filled with minimal disturbance
order of collection:
see 00CR13SW11

photographs:

date shipped/delivered: 9-22-00
comments:

Signature, time & date:
Charles B Rowan 9-20-00

Sample ID#: 00CR13SW31
sample type: G sampled by: CR/RK
time: 11:07 matrix: water
analyt. methods: AK 101, 102, 103, EPA 8021 B, 8270, 300 (sulfate, nitrate)

# of containers: ~~7~~ 5 (RK)
Location: ~~SW-03~~ corrected to SW-02
sampl. equip.: disposable gloved
method: jar submerged below surface & filled with minimal disturbance
order of collection see 00CR13SW11

photographs:

date shipped/delivered: 9-22-00
comments:

Signature, time & date:
Charles B Rowan 9-20-00

Sample ID#: 00CR13SW12 (RK)
Location: ~~SS-01~~ corrected to SW-03
sample type: G sampled by: CR/RK
time: 11:10 matrix: water
analyt. methods: AK 101, 102, 103, EPA 8021B, 8270, 300 (nitrate, sulfate)

# of containers: 5
sampl. equip.: dispos. gloves
method: jar submerged below water surface & filled with minimal disturbance
order of collection: see 00CR13SW11

photographs:

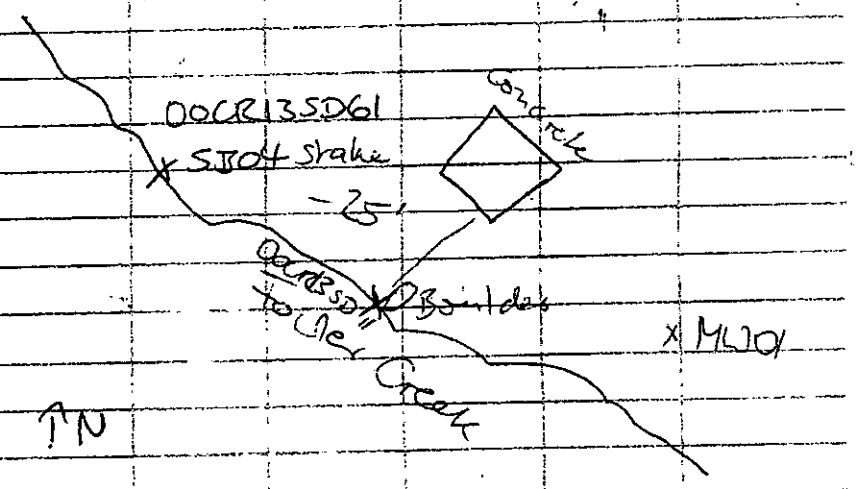
date shipped/delivered: 9-22-00
comments: duplicate of 00CR13SW11

Signature, time & date:
Charles B Roman 9-20-00

SS13

Sediment samples 09-19-00

Site sketch:



sample ID#: 00CR13SD11
Location: SS01
sample type: G sampled by: CR/RK
time: 10:20 matrix: S
analyt. methods: AK 101, 102, 103
EPA 8021B, EPA 8270

# of containers: 3 depth: 4" below surface
sampl. equip.: disposable glove & scoop

date shipped/delivered: 9-22-00
comments:

Sample ID #: 00CR13SD61
Location: (SS06) SB-04
sample type: G sampled by: CR/RK
time: 10:43 matrix: S
analyt. methods: AK 101, 102, 103
EPA 8021B, EPA 8270
# of containers: 3 depth: ~3" bss
sampl. equip.: disposable glove & scoop
date shipped/delivered: 9-22-00
comments: sample taken at SB-04 stake because no surface water at SS06 location

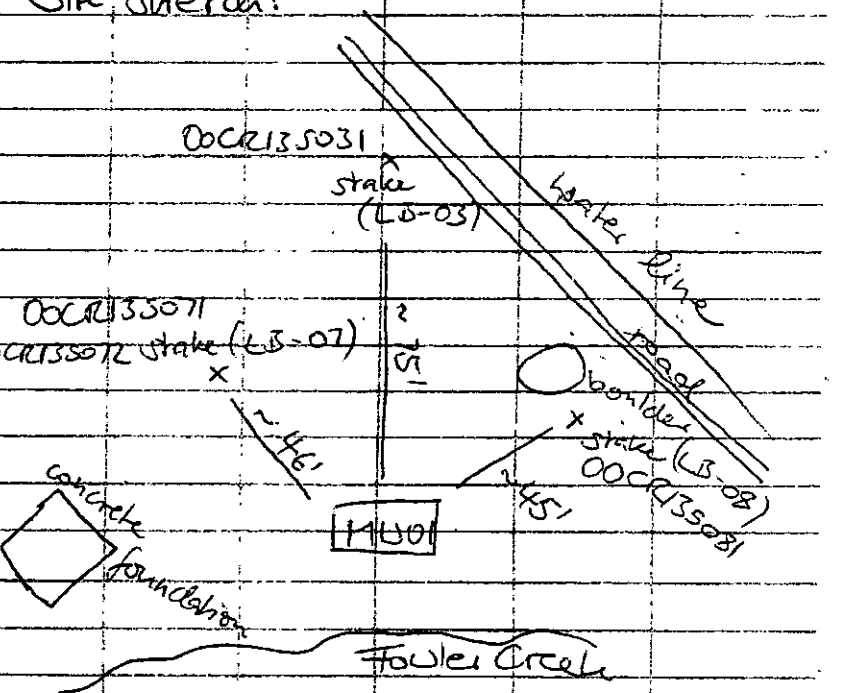
photographs:

Signature, time & date:
Charles B. Ronan 9-20-00

SS 13

Near surface soil samples 09-19-00

Site Sketch:



Sample ID #: 00CR13S031
Location: LB-03
sample type: G sampled by: CR/RK
time: 10:03 matrix: soil

analyt. methods: EPA 8270, EPA 8021B, AK 101, 102, 103
# of containers: 3 depth: ~0-3"
sampl. equip.: disposable gloves & scoop

photographs:

date shipped/delivered: 9-22-00
comments:

Sample ID#: 00CR13S071
Location: LB-07
sample type: G sampled by: CR/RK
time: 10:00 matrix: soil
analyt. methods: EPA 8270, 8021B, AK 101, 102, 103
# of containers: 3 depth: 0-3"
sampl. equip.: disposable gloves & scoop
photographs:
date shipped/delivered: 9-22-00
comments:

Signature, time & date:
Charles B. Roman 9-20-00

Sample ID#: 00CR13S081
Location: LB-08
sample type: G sampled by: CR/RK
time: 9:55 matrix: soil
analyt. methods: AK 101, 102, 103, EPA 8021B 8270
# of containers: 3 depth: ~0-3"
sampl. equip.: disposable gloves and scoop
photographs:
date shipped/delivered: 9-22-00
comments:

Sample ID#: 00CR13S072
Location: LB-07
sample type: G sampled by: CR/RK
time: 10:01 matrix: soil
analyt. methods: AK 101, 102, 103 EPA 8021B, 8270
# of containers: 3 depth: 0-3"
sampl. equip.: disp. gloves & scoop
photographs:
date shipped/delivered: 9-22-00
comments: duplicate of 00CR13S071

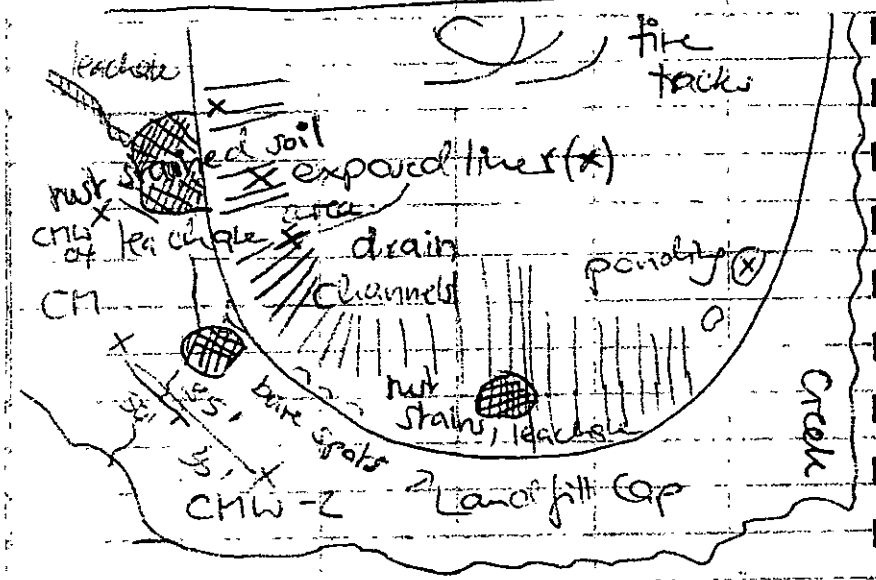
Signature, time & date:
Charles B. Roman 9.20-00

LF 03

Landfill Cap Inspection

weather: partly cloudy, ~ 37°F, ~ 30 knots wind from ~SE
Date: 9-19-00
time: 14:05 – 14:42
conducted by: Charles Ronan
Renate Keller

Site Sketch:



Cap Outegrity:
fair overall integrity

Current effectiveness:
functional but needs fill on exposed liner areas
- lots of trash all around cap (metal pieces, cans, etc.)

Deficiencies/disturbance:
fire tracks on top of cap,
(generally) undisturbed surface
some bare spots on slopes, edge of liner
Signs of erosion: to CMW-2
Ponding on slope, liner exposed in pond & in other areas (see sketch)
(some) drainage channels on slope

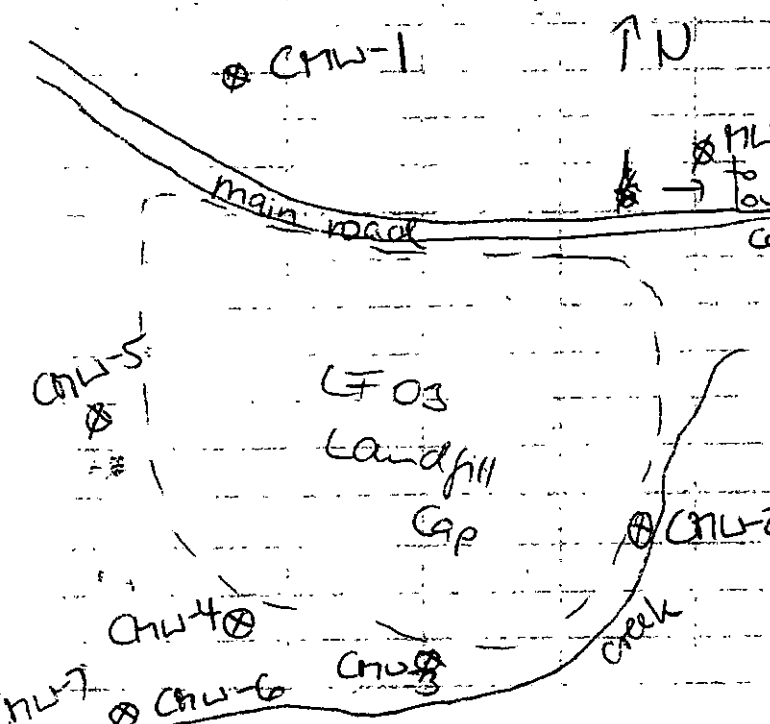
Recommendations:
fill in exposed liner areas & punctures
regrade drainage channels
further investigate leachate / rust stains (iron in water or from trash under cap?)

Signature, time & date:
Charles B. Ronan 9-20-00

LF 03

Groundwater samples

Site sketch:



date: 9-19-00

weather: overcast, ~ 37°F (afternoon)

strong wind from ~ SE up to 30 knots

Sample ID#: 00CRLFGW11

Location: Monitoring well MW-1

sample type: G sampled by: CR/RK

time: 13:51 matrix: water

analyt. methods: AK 101, 102, EPA 8082, 8260, 8270, 6010 (ICP metals), 310.1

# of containers: 9

sampl. equip: bailer, disposable gloves

field parameters:

PID: 0.4 ppm

date	9-19-00	9-19-00	9-19-00	
time	13:35	13:40	13:46	
temp.	1.68	2.51	2.63	°C
pH	5.9	5.6	5.66	
conductivity	4.1	3.3	3.2	mS/cm
turbidity	41.5	999	999	NTU
diss. oxygen	12.7	12.55	12.75	mg/L
REDOX	207	231	241	mV

Signature, time & date:

Charles B. Kanan

Well volume: 20.4 − 9.3 x (4)² x 0.0408 = 7.2
(gal.)

purge vol. (gal.): 3 (# vols.) x 7.2 well vol. = 21.6

order of collection:
1. GRO
2. Volatiles
3. Semi-Vol.
4. DRO
5. Alkalinity
6. ICP Metals
7. PCB

photographs.

Date shipped/delivered: 9-22-00
Comments: well case full of water

Signature, time & date:
Charles B. Ronan 9-20-00

Sample ID#: OOCRLFRLVC11
Location: Monitoring well CMW-1
sample type: G sampled by: CR/RK
time: 14:15 matrix: Water
analyt. methods: ~~KM~~ 101/102, EPA 8082, 8260, 8270, 6010, 310.1

# of containers: 9
sampl. equip.: disposable gloves, bailer

field parameters:
PID: 0.4 ppm

date	9-19-00	9-19-00	9-19-00	
time	14:03	14:04	14:07	
temp.	2.9	2.8	2.74	°C
pH	5.54	5.48	5.69	
conductivity	2.6	2.6	2.6	ms/cm
turbidity	969	990	999	NTU
diss. oxygen	11.9	12.1	12.8	mg/L
REDOX	265	265	263	mV

Signature, time & date:
Charles B. Ronan 9-20-00

well volume: 10.3 − 3.8 × (2)² × 0.0408 = 1.06 (gal.)

purge vol. (gal.): 3 × 1.06 = 3.18
(# vols.) well vol.

order of collection: see OOCRLFGW11

photographs:

date shipped/delivered: 9-22-00

comments:

Signature, time & date: Charles B. Roman 9-20-00

Sample ID#: OOCRLFGWC21
Location: Monitoring well CMW-2
sample type: G sampled by: CR/RK
time: — matrix: water
analyt. methods:
N/A

# of containers: 9
sampl. equip.: bailer, disposable gloves

field parameters:
PID 0.6 ppm

	9-20-00	9-20-00
date		
time		
temp.		
pH		
conductivity		
turbidity		
diss. oxygen		
REDOX		

no collection of field parameters due to lack of water

well vol. (gal.): 9.7 − 8.9 × (2)² × 0.0408 = 0.13

purge vol. (gal.): 3 × 0.13 = 0.39
(# vols.) well vol.

order of collection: see OOCRLFGW11
photographs:
date shipped: —
comments:
sample could not be collected due to lack of water
Signature, time & date: Charles B. Roman 9-20-00

Sample ID#: 00CRLFGLWC31
Location: Monitoring well CHW-3
sample type: G sampled by: CR/RK
time: 14:58 matrix: water
analyt. methods: AK 101, 102
EPA 8082, 8260, 8270, 6010, 310.1

# of containers: 9
sampl. equip.: bailer, disposable gloves
field parameters:
PID: 0.4 ppm

date	09-20	09-20	09-20
time	14:37	14:42	14:45
temp.	5.93	4.87	4.93
pH	6.35	5.65	5.61
conductivity	5.3	4.8	4.7
turbidity	276	997	999
diss. oxygen	9.48	10.1	10.94
REDOX	216	229	249

well vol. (gal.): 9.7 - 7 x $(2)^2$ x 0.0408
= 0.44

purge vol. (gal.): 3 x 0.44 = 1.32
(# vols.) well vol.

order of collection: see 00CRLFGLW11
photographs:

date shipped/delivered: 9-22-00
comments:

Sample ID#: 00CRLFGLWC41
Location: Monitoring well CHW-4
sample type: G sampled by: CR/RK
time: 15:48 matrix: water
analyt. methods: AK 101, 102
EPA 310.1, 6010, 8082, 8260, 8270

# of containers: 9
sampl. equip.: bailer, disposable gloves

order of collection: see 00CRLFGLW11
photographs:

date shipped/delivered: 9-22-00

Signature, time & date:
Charles Ross 9-20-00

Field parameters:

PID: 0.3 ppm

date	9-19-00	9-19-00	9-19-00
time	15:34	15:35	15:37
temp.	4.51	3.81	3.55
pH	5.57	5.8	5.90
conductivity	10.7	11.9	13.6
turbidity	62	104	399
diss. oxygen	10.7	7.28	9.61
REDOX	170	124	96

comments: well vol.

purge vol. $3 \times 0.93 = 2.8$

$10.3 - 4.6 \times (2)^2 \times 0.0408 = 0.93$

Sample ID#: OOCRLFGWC51

Location: Monitoring well CHW-5

sample type: G sampled by: CR/RK

time: 16:05 Mabox: wake

Analyt. methods: AK 101, 102

EPA 310.1, 6010, 8082, 8260, 8270

# of containers: 9

samp. equip.: bailer, disposable gloves

Field parameters:

PID: 0.1 ppm

date	9-19-00	9-19-00	9-19-00	
time	15:58	16:00	16:02	
temp.	3.8	3.3	3.2	°C
pH	6.28	5.9	5.66	
cond.	5.3	5.9	6.2	
turb.	63	208	137	
diss. ox.	10.3	1a4	8.45	
REDOX	197	169	145	

well vol. (gal.): $10.3 - 5.0 \times (2)^2 \times 0.0408 = 0.86$

purge vol. (gal.) $3 \times 0.86 = 2.6$

order of collection: see OOCRLFGW11

photographs:

date shipped/delivered: 9-22-00

comments:

Signature, time & date:

Charles B. Ronan 9-20-00

Sample ID#: 00CRLFAWC52
Location: Monitoring well CMW-5
sample type: A sampled by: CR/RK
time: 16:12 matrix: water
analyt. methods: AK 101, 102, EPA 8082, 6010, 8260, 8270, 310.1

# of containers: 9
sampl. equip.: bailer, dispos. gloves
order of collection: 00CRLFAW11
date shipped/delivered: 9-22-00
Comments: duplicate of 00CRLFAWC51

Sample ID#: 00CRLFAWC61
Location: Monitoring well CMW-6
sample type: A sampled by: CR/RK
time: 15:24 matrix: water
analyt. methods: see sample above
# of containers: 9
sampl. equip.: disposable bailer & gloves

Field parameters:
PID: 0.2 ppm

date	09-19	09-19	09-19
time	15:13	15:14	15:17
temp.	1.68	1.25	1.13
pH	5.94	5.72	5.57
cond.	4.3	4.3	4.3
turb.	127	395	571
diss.oxyg.	12.8	12.6	12.66
REDOX	278	281	279

well vol.: $15.0 - 7.6 \times (2)^2 \times 0.0408 = 1.2$ (gal.)

purge vol.: $3 \times 1.2 = 3.6$ (gal.)

order of collection: see 00CRLFAW11
photographs:
date shipped/delivered 9-22-00
comments:

Signature, time & date:
Charles B. Rowe 9-22-00

Sample ID#: 00CRLFGW71
Location: Monitoring well CMW-7
Sample type: G sampled by: CR/RK
time: 15:07 matrix: water
analyt. methods: AK 101, 102,
EPA 8082, 6010, 8260, 8270, 310.1

# of containers: 9
sampl. equip: disposable bailers & gloves
Field parameters:
PID: 0.2 ppm

date	09-19	09-19	09-19	
time	14:54	14:56	14:57	
pH	5.63	5.69	5.78	
temp.	2.37	1.58	1.34	°C
cond.	6.2	6.0	5.9	mi/cm
turb.	261	512	566	
diss. ox.	10.96	10.04	10.85	
REDOX	273	275	272	

well vol. (gal.) = 14.1 − 6.4 × (2)² × 0.0408 = 1.3

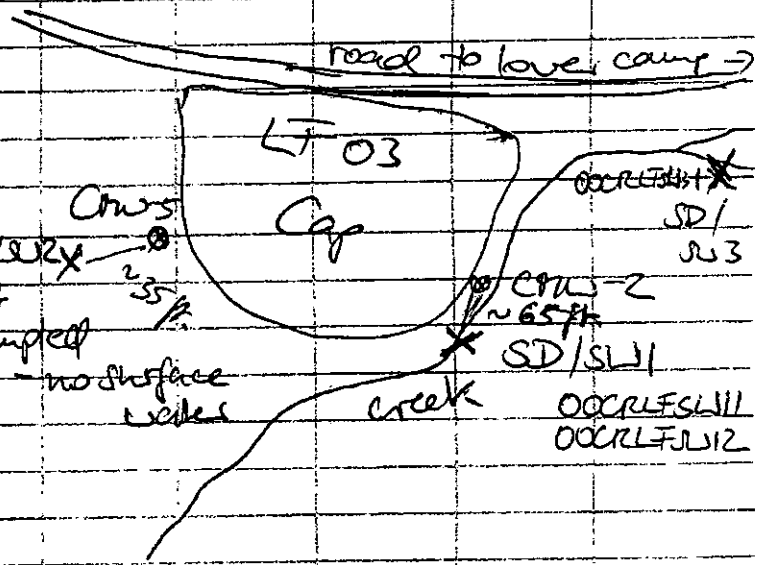
purge vol. (gal.) = 3 × 1.3 = 3.9

order of collection: see 00CRLFGW11
photographs:
date shipped/delivered: 9-22-00
comments:

Signature, time & date: 9-20-00 1300

LF03 Surface Water Sampler
09-6-00

Site sketch:



137 100

Sample ID#: OOCRLFSL11
Location: SD/SL-1
sample type: G sampled by: CR/RK
time: 14:16 matrix: water
analyt. methods: AK 101, 102, EPA 8082, 8260, 8270, 6010, 310.1
# of containers: 9
sampl. equip.: disposable gloves
method: pa submerged & filled with minimal disturbance
order of collection:
1. GRO
2. Volatiles
3. Semi-Volatiles
4. DRO
5. Alkalinity
6. ICP metals
7. PCB
photographs:

date shipped/delivered: 9-22-00
comments:

Signature, time & date:
9-21-00
1000

Sample ID#: OOCRLFSL12
Location: SD/SL-1
sample type: G sampled by: CR/RK
time: 14:28 matrix: water
analyt. methods: AK 101, 102, EPA 8082, 8260, 8270, 6010, 310.1
# of containers: 9
sampl. equip.: disposable gloves
method: pa submerged, filled with minimal disturbance.
order of collection: see OOCRLFSL11

date shipped/delivered: 9-22-00
comments: duplicate of OOCRLFSL11

Signature, time & date:
9-21-00
1400

Sample ID#: OOCRLFSL13
Location: SD/SL-3

sample type: G sampled by: CR/RK
time: 15:40 matrix: water
analyt. methods: AK 101, 102, EPA 8082, 8260, 8270, 6010, 310.1

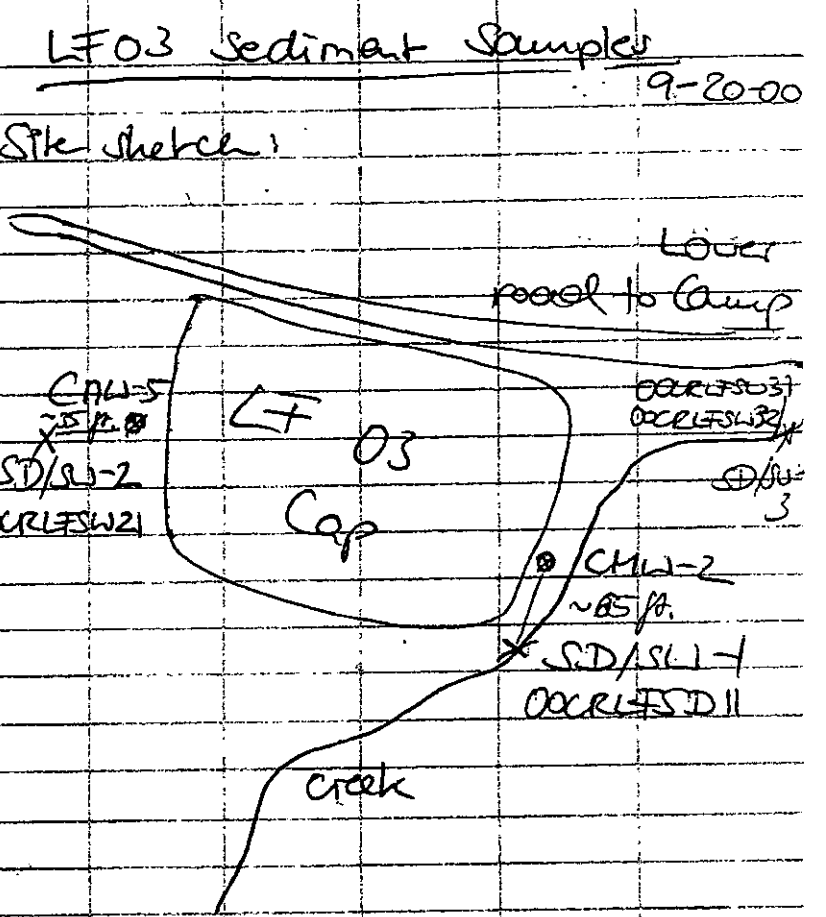
# of containers: 9
sampl. equip.: disposable gloves
method: jar submerged, filled with dist.
order of collection: see OOCRLFSW11
photographs:

date shipped/delivered: 9-22-00
comments:

Signature, time & date: 1500

LF03 Sediment Samples
9-20-00

Site sketch:



Sample ID#: OOCRLFSD11
Location: SD/SW-1
sample type: G sampled by: CR/RK
time: 14:33 matrix: S
analyt. methods: AK 101/102, EPA 8082, 8260, 8270, EPA 310.1, EPA 6010
# of containers: 6 depth:

sampl. equip.: disposable gloves & scoop
date shipped/delivered: 9-22-00
comments:

Sample ID#: OOCRLFSD21
Location: SD/SW-2
sample type: G sampled by: CR/RK
time: 15:08 matrix: S
analyt. methods: AK 101/102, EPA 8082, EPA 8260, 8270, EPA 310.1, EPA 6010
# of containers: 6 depth:
sampl. equip.: disp. gloves & scoop
date shipped/delivered: 9-22-00
comments:

Signature, time & date:
Charles Rowe 9-21-00 1600

Sample ID#: OOCRLFSD31
Location: SD/SW-3
sample type: G sampled by: CR/RK
time: 15:43 matrix: S
analyt. methods: AK 101/102, EPA 8082, 8260, 8270, EPA 310.1, EPA 6010
# of containers: 6 depth:

sampl. equip.: disposable gloves & scoop
date shipped/delivered: 9-22-00
comments:

Sample ID#: OOCRLFSD32
Location: SD/SW-3
sample type: G sampled by: CR/RK
time: 15:52 matrix: S
analyt. methods: AK 101, 102, EPA 8082, 8260, 8270, 310.1, 6010
# of containers: 6 depth:
sampl. equip.: disp. gloves & scoop
date shipped/delivered: 9-22-00
comments: duplicate of OOCRLFSL331

Signature, time & date:
Charles Rowe 9-21-00 1600

TAB

Appendix D

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 9-19-00
Sampled By: CR/RK

Well Location: SS13
Well Number: MW-1
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(26.5 - 6.4) * (2)2 * 0.0408 = 3.3 gallons

Purge Volume

3 well volumes * 3.3 gallons = 9.9 Purge Volume gallons

Field Parameters

PID : 0.2 ppm

Sample ID			
Date	09-19-00	09-19-00	09-19-00
Time	9:05	9:09	9:13
Purge Vol (gal)			
Temp (°C)	2.8	2.05	1.7
pH	5.36	5.27	5.30
Conductivity (ms/cm)	17.4	18.6	16.0
Turbidity (NTU)	121.0	161.0	132.0
Dissolved O_2 (mg/L)	9.5	7.78	9.70
REDOX (mV)	79	70	87

Samples Collected	DRO	GRO	BTEX			
OOCR13GW11						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 9-19-00
Sampled By: CR/RK

Well Location: SS13
Well Number: MW-2
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(19.8 - 1) * (2)2 * 0.0408 = 3.1 gallons

Purge Volume

3 well volumes * 3.1 gallons = 9.3 Purge Volume gallons

Field Parameters

Sample ID			
Date	09-19-00	09-19-00	09-19-00
Time	9:30	9:33	9:36
Purge Vol (gal)			
Temp (°C)	1.19	0.96	0.92
pH	5.7	5.58	5.55
Conductivity (ms/cm)	5.1	4.3	4.6
Turbidity (NTU)	100	380	561
Dissolved O_2 (mg/L)	13.17	13.3	13.1
REDOX (mV)	129	166	190

Samples Collected	DRO	GRO	BTEX			
OOCR13GW21						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-18-00
Sampled By: CR/RK

Well Location: SS15
Well Number: WL02
Well Type: Monitoring well

Well Data

Well Volume
(Well Depth(ft) - Water Level(ft)) * (Well Dia (ft))2 * 0.0408 = _____ gallons
(50.5 - 33.8) * (4)2 * 0.0408 = 10.9 gallons

Purge Volume
3 well volumes * 10.9 gallons = 32.7 Purge Volume gallons

Field Parameters

PID: 0.0 ppm

Sample ID			
Date	09-18-00	09-18-00	09-18-00
Time	15:07	15:23	15:36
Purge Vol (gal)			
Temp (°C)	2.05	1.95	1.93
pH	5.59	5.59	5.57
Conductivity (ms/cm)	45.8	35.4	34.6
Turbidity (NTU)	54.7	48.4	199
Dissolved O_2 (mg/L)	6.85	11.3	9.85
REDOX (mV)	236	236	235

Samples Collected	DRO	GRO	BTEX			
00CR15GL021						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof	Well Location: SS15
Sample Date: 09-18-00	Well Number: WW07
Sampled By: CR / RK	Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (ft))2 * 0.0408 = _____ gallons

(27.5 - 5.8) * (2)2 * 0.0408 = 3.5 gallons

Purge Volume

3 well volumes * 3 gallons = 10.5 Purge Volume gallons

Field Parameters

PID: 0.0 ppm

Sample ID			
Date	09-18-00	09-18-00	09-18-00
Time	15:46	15:53	16:01
Purge Vol (gal)			
Temp (°C)	1.78	1.65	1.92
pH	5.79	5.76	5.63
Conductivity (ms/cm)	7.6	7.4	7.0
Turbidity (NTU)	442.0	958	1000
Dissolved O_2 (mg/L)	11.7	11.9	11.98
REDOX (mV)	237	239	239

Samples Collected	DRO	GRO	BTEX			
00CR15GW71						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-18-00
Sampled By: CR/RK

Well Location: SS15
Well Number: WW08
Well Type: Monitoring well

Well Data

Well Volume
(Well Depth(ft) - Water Level(ft)) * (Well Dia (ft))2 * 0.0408 = _____ gallons
(25.5 - 6.5) * (2)2 * 0.0408 = 3.1 gallons

Purge Volume
3 well volumes * 3.1 gallons = 9.3 Purge Volume gallons

Field Parameters

PID: 0.0ppm

Sample ID			
Date	09-18-00	09-18-00	09-18-00
Time	16:18	16:20	16:23
Purge Vol (gal)			
Temp (°C)	1.03	0.85	1.19
pH	5.58	5.78	5.63
Conductivity (ms/cm)	8.2	7.8	7.5
Turbidity (NTU)	133	215	265
Dissolved O_2 (mg/L)	12.05	11.97	12.13
REDOX (mV)	238	236	235

Samples Collected	DRO	GRO	BTEX			
00CR15GW81						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof	Well Location: LF03
Sample Date: 9-19-00	Well Number: MW1
Sampled By: CR/RK	Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(20.4 - 9.3) * (4)2 * 0.0408 = 7.2 gallons

Purge Volume

3 well volumes * 7.2 gallons = 21.6 Purge Volume gallons

PID: 0.4 ppm

Field Parameters

Sample ID			
Date	9-19-00	9-19-00	9-19-00
Time	13:35	13:40	13:46
Purge Vol (gal)			
Temp (°C)	1.68	2.51	2.63
pH	5.9	5.6	5.66
Conductivity (ms/cm)	4.1	3.3	3.2
Turbidity (NTU)	41.5	999	999
Dissolved O_2 (mg/L)	12.7	12.55	12.75
REDOX (mV)	207	231	241

Samples Collected	DRO	GRO	BTEX			
OOCRLFGW11						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-19-00
Sampled By: CR/RK

Well Location: LF03
Well Number: CHW1
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(10.3 - 3.8) * (2)2 * 0.0408 = 1.06 gallons

Purge Volume

3 well volumes * 1.06 gallons = 3.18 Purge Volume gallons

Field Parameters

PID : 0.14 ppm

Sample ID	—	—	—
Date	09-19-00	09-19-00	09-19-00
Time	14:03	14:04	14:07
Purge Vol (gal)			
Temp (°C)	2.9	2.8	2.74
pH	5.54	5.48	5.69
Conductivity (ms/cm)	2.6	2.6	2.6
Turbidity (NTU)	969	990	999
Dissolved O_2 (mg/L)	11.9	12.1	12.8
REDOX (mV)	265	265	263

Samples Collected	DRO	GRO	BTEX			
00CRLFGWC11						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-20-00
Sampled By: CR/RK

Well Location: LF03
Well Number: CMW-2
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(9.7 - 8.9) * (2)2 * 0.0408 = 0.13 gallons

Purge Volume

3 well volumes * 0.13 gallons = 0.39 Purge Volume gallons

PID: 0.6 ppm

Field Parameters

Sample ID			
Date			
Time	well almost dry -		
Purge Vol (gal)			
Temp (°C)			
pH	not enough water to collect field parameters or sample		
Conductivity (ms/cm)			
Turbidity (NTU)			
Dissolved O_2 (mg/L)			
REDOX (mV)			

Samples Collected	DRO	GRO	BTEX			
none -	well	almost	dry			

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-20-00
Sampled By: CR / RK

Well Location: LF03
Well Number: CMW-3
Well Type: Monitoring well

Well Data

Well Volume
(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons
(9.7 - 7) * (2)2 * 0.0408 = 0.44 gallons

Purge Volume
3 well volumes * 0.44 gallons = 1.32 Purge Volume gallons

PID: 0.4 ppm

Field Parameters

Sample ID	—	—	—
Date	09-20-00	09-20-00	09-20-00
Time	14:37	14:42	14:45
Purge Vol (gal)			
Temp (°C)	5.93	4.87	4.93
pH	6.35	5.65	5.61
Conductivity (ms/cm)	5.3	4.8	4.7
Turbidity (NTU)	276	999	999
Dissolved O_2 (mg/L)	9.48	10.1	10.94
REDOX (mV)	216	229	249

Samples Collected	DRO	GRO	BTEX			
00CRLFQWC31						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-19-00
Sampled By: CR/RK

Well Location: LF03
Well Number: CMW-4
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(10.3 - 4.6) * (2)2 * 0.0408 = 0.93 gallons

Purge Volume

3 well volumes * 0.93 gallons = 2.8 Purge Volume gallons

PID : 0.3 ppm

Field Parameters

Sample ID	—	—	—
Date	09-19-00	09-19-00	09-19-00
Time	15:34	15:35	15:37
Purge Vol (gal)			
Temp (°C)	4.51	3.81	3.55
pH	5.57	5.8	5.9
Conductivity (ms/cm)	10.7	11.9	13.6
Turbidity (NTU)	62	104	399
Dissolved O_2 (mg/L)	10.7	7.28	9.61
REDOX (mV)	170	124	96

Samples Collected	DRO	GRO	BTEX			
00CRLFGWCH						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 09-19-00
Sampled By: CR/RK

Well Location: LF03
Well Number: CMW-5
Well Type: Monitoring well

Well Data

Well Volume
(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons
(10.3 - 5.0) * (2)2 * 0.0408 = 0.86 gallons

Purge Volume
3 well volumes * 0.86 gallons = 2.6 Purge Volume gallons

Field Parameters

PID: 0.1 ppm

Sample ID	—	—	—
Date	09-19-00	09-19-00	09-19-00
Time	15:58	16:00	16:02
Purge Vol (gal)			
Temp (°C)	3.8	3.3	3.2
pH	6.28	5.9	5.66
Conductivity (ms/cm)	5.3	5.9	6.2
Turbidity (NTU)	63	208	137
Dissolved O_2 (mg/L)	10.3	10.4	8.45
REDOX (mV)	197	169	145

Samples Collected	DRO	GRO	BTEX			
00CRLFGWC51						
00CRLFGWC52						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 9-19-00
Sampled By: CR/RK

Well Location: LF03
Well Number: CDW-6
Well Type: Monitoring well

Well Data

Well Volume
(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons
(15.0 - 7.6) * (2)2 * 0.0408 = 1.2 gallons

Purge Volume
3 well volumes * 1.2 gallons = 3.6 Purge Volume gallons

Field Parameters

PID: 0.2 ppm

Sample ID	—	—	—
Date	09-19-00	09-19-00	09-19-00
Time	15:13	15:14	15:17
Purge Vol (gal)			
Temp (°C)	1.68	1.25	1.13
pH	5.94	5.72	5.57
Conductivity (ms/cm)	4.3	4.3	4.3
Turbidity (NTU)	127	395	571
Dissolved O_2 (mg/L)	12.8	12.6	12.66
REDOX (mV)	278	281	279

Samples Collected	DRO	GRO	BTEX			
OOCRLFGWCG01						

Groundwater Sampling Record Sheet

Project Information

Project: Cape Romanzof
Sample Date: 9-19-00
Sampled By: CR/RK

Well Location: CMW-7
Well Number: LF03
Well Type: Monitoring well

Well Data

Well Volume

(Well Depth(ft) - Water Level(ft)) * (Well Dia (in))2 * 0.0408 = _____ gallons

(14.1 - 6.4) * (2)2 * 0.0408 = 1.3 gallons

Purge Volume

3 well volumes * 1.3 gallons = 3.9 Purge Volume gallons

PID 0.2 ppm

Field Parameters

Sample ID	—	—	—
Date	09-19-00	09-19-00	09-19-00
Time	14:54	14:56	14:57
Purge Vol (gal)			
Temp (°C)	2.37	1.58	1.34
pH	5.63	5.69	5.78
Conductivity (ms/cm)	6.2	6.0	5.9
Turbidity (NTU)	261	512	566
Dissolved O_2 (mg/L)	10.96	10.04	10.85
REDOX (mV)	273	275	272

Samples Collected	DRO	GRO	BTEX			
00CRLFQLC71						

TAB

Appendix E

(3) sets out the results of sampling and analysis;

(4) demonstrates that the inspections, sampling, and analysis performed adequately characterize the extent of hazardous substance contamination; and

(5) proposes cleanup techniques for the site.

(d) The department will approve the report submitted under (c) of this section if the department determines that the work described in the report and the cleanup techniques proposed are protective of human health, safety, and welfare, and of the environment. The department will, as part of its approval, modify proposed cleanup techniques or require additional cleanup techniques for the site as the department determines to be necessary to protect human health, safety, and welfare, and the environment. (Eff. 1/22/99, Register 149)

Authority:	AS 46.03.020	AS 46.03.745	AS 46.04.070
	AS 46.03.050	AS 46.03.755	AS 46.09.010
	AS 46.03.710	AS 46.04.020	AS 46.09.020
	AS 46.03.740		

18 AAC 75.340. SOIL CLEANUP LEVELS; GENERAL REQUIREMENTS. (a) This section provides the requirements for cleanup levels for hazardous substances in soil. For each site, except as provided in (b) of this section, a responsible person shall propose soil cleanup levels for approval, shall base those cleanup levels upon an estimate of the reasonable maximum exposure expected to occur under current and future site conditions, and shall develop those cleanup levels using one or more of the following methods:

(1) method one for petroleum hydrocarbon-contaminated soil in

(A) a non-Arctic zone as set out in Table A1 of 18 AAC 75.341(a); or

(B) an Arctic zone as set out in Table A2 of 18 AAC 75.341(b);

(2) method two for soil contaminated with

(A) chemicals other than petroleum hydrocarbons as set out in Table B1 of 18 AAC 75.341(c); or

(B) petroleum hydrocarbons as set out in Table B2 of 18 AAC 75.341(d);

(3) method three, as described in (e) of this section, for developing site-specific alternative cleanup levels; or

(4) method four, as described in (f) of this section, for developing site-specific alternative cleanup levels.

(b) Alternative soil cleanup levels developed under method three or method four may not

be used at another site without prior approval. If alternative cleanup levels are developed for one site within a facility with multiple similarly contaminated sites, and if the department determines that the use of those cleanup levels at another site within that facility will be protective of human health, safety, and welfare, and of the environment, the department will approve the use of those cleanup levels at the other site.

(c) For methods two, three, and four, a responsible person shall demonstrate that the Arctic zone cleanup level, if applicable, is protective of migration to surface water.

(d) The soil cleanup levels provided under method one and method two apply at a contaminated site unless the department approves an alternative cleanup level that the responsible person has proposed under method three or method four. To obtain approval for an alternative cleanup level, a responsible person must demonstrate that an alternative cleanup level proposed under method three or method four is protective of human health, safety, and welfare, and of the environment, and must demonstrate compliance with the applicable institutional control requirements under 18 AAC 75.375.

(e) Under method three, a responsible person may propose a site-specific alternative cleanup level that modifies

(1) the migration to groundwater or inhalation levels in Table B1 of 18 AAC 75.341(c) or Table B2 of 18 AAC 75.341(d), based on the use of approved site-specific soil data, and the equations set out in the department's *Guidance on Cleanup Standards Equations and Input Parameters,* adopted by reference in 18 AAC 75.325; the alternative cleanup level that then applies at the site for a hazardous substance is the most stringent of the Table B1 or Table B2 ingestion-based level and the site-specific calculated levels for inhalation or migration to groundwater;

(2) the migration to groundwater levels in Table B1 or Table B2 based on approved site-specific soil data and an approved fate and transport model that demonstrates that alternative soil cleanup levels are protective of the applicable groundwater cleanup levels under 18 AAC 75.345 if the alternative migration to groundwater cleanup level does not exceed

(A) the ingestion-based level in Table B1 or Table B2;

(B) the inhalation level in Table B1 or Table B2; or

(C) a site-specific inhalation level calculated under (1) of this subsection; the level that applies at the site is the most stringent level; or

(3) the ingestion level or the inhalation level in Table B1 or Table B2 based on use of commercial/industrial exposure parameters listed in Appendix B of the *Guidance on Cleanup Standards Equations and Input Parameters,* adopted by reference in 18 AAC 75.325, if the department determines that the site serves a commercial or industrial land use, and if the alternative ingestion level or inhalation level does not exceed the migration to groundwater cleanup level in Table B1 or Table B2 or a site-specific migration to groundwater level calculated under (2) of this subsection; the department will base a land use determination under this

paragraph upon

(A) consultation with the public, including the local zoning authority, if any;

(B) a determination that the site does not serve a residential land use;

(C) a determination that the site will not serve a future residential land use based on consideration of the factors in EPA's *Land Use in the CERCLA Remedy Selection Process*, OSWER Dir. No. 9355.7-04, dated May 25, 1995, adopted by reference; land in an undeveloped area for which it would be difficult to determine a future use pattern is capable of being a residential area, unless demonstrated otherwise; and

(D) consent of each landowner who is affected by the contamination at the site that a cleanup level less stringent than a cleanup level appropriate to residential land use is appropriate for the site.

(f) Under method four, the department will approve a site-specific alternative cleanup level if a responsible person

(1) performs a site-specific risk assessment and submits a risk assessment report to the department for approval, and if the department determines that the alternative cleanup level is protective of human health, safety, and welfare, and of the environment based on the site-specific risk assessment; in performing the risk assessment, a responsible person shall follow the department's *Risk Assessment Procedures Manual*, dated November 24, 1998, adopted by reference; and

(2) obtains the consent of each landowner who is affected by the contamination at the site that a cleanup level less stringent than a cleanup level appropriate to residential land use is appropriate for the site.

(g) The department will require a responsible person to develop a site-specific cleanup level for a hazardous substance not listed under 18 AAC 75.341(c) using methods provided under (e) or (f) of this section, unless that person demonstrates that a site-specific cleanup level is not necessary to ensure protection of human health, safety, and welfare, and of the environment.

(h) The department will approve less stringent soil cleanup levels subject to any institutional controls required under 18 AAC 75.375, if a responsible person demonstrates that

(1) background concentrations of a hazardous substance in the site area, as determined by the department's *Technical Guidance Document on Determination of Background Concentrations*, dated September 17, 1998 and adopted by reference, exceed the applicable cleanup level for the hazardous substance; or

(2) the practical quantitation limit for the hazardous substance exceeds the applicable cleanup level for that substance.

(i) The department will require a responsible person to modify a cleanup level under this section or to perform a site-specific analysis of additional site risks if the department determines that

(1) as a result of site conditions or new data, a modification is necessary to protect human health, safety, or welfare, or the environment; or

(2) a site-specific analysis is necessary due to

(A) exposure pathways such as

(i) accumulation of vapors in buildings or other structures at levels that threaten human health; and

(ii) human inhalation of fugitive dust if the proposed remedy includes leaving a hazardous substance in place within the upper one foot of the surface soil at the site;

(B) sediment contamination;

(C) impacts to ecological receptors; or

(D) other site uses such as recreational, agricultural, or subsistence use.

(j) Soil cleanup levels based on

(1) migration of a hazardous substance to groundwater must be attained in the surface soil and the subsurface soil;

(2) human exposure from ingestion or inhalation of a volatile hazardous substance must be attained in the surface soil and the subsurface soil to a depth of at least 15 feet, unless an institutional control or site conditions prevent human exposure to the subsurface soil; and

(3) the maximum allowable concentrations for petroleum hydrocarbons described in Table B2 of 18 AAC 75.341(d) must be attained in the surface soil and the subsurface soil.

(k) For a cleanup conducted under methods two and three, a chemical that is detected at one-tenth or more of the Table B1 value set out in 18 AAC 75.341(c) or the Table B2 value set out in 18 AAC 75.341(d) must be included when calculating cumulative risk under 18 AAC 75.325(g). (Eff. 1/22/99, Register 149)

Authority:	AS 46.03.020	AS 46.03.740	AS 46.04.070
	AS 46.03.050	AS 46.03.745	AS 46.09.020
	AS 46.03.710	AS 46.04.020	

Editor's note: The documents adopted by reference in 18 AAC 75.340 may be reviewed at, or requested from, the department's offices in Anchorage, Fairbanks, Juneau, and Soldotna.

18 AAC 75.341. SOIL CLEANUP LEVELS; TABLES. (a) If a responsible person uses method one for a non-Arctic zone under 18 AAC 75.340, the soil cleanup levels must be based on Table A1 in this subsection.

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TABLE A1. METHOD ONE – PETROLEUM HYDROCARBON SOIL CLEANUP LEVELS IN NONARCTIC ZONES
(See notes to table for further requirements)

Part A: Determine score for each item*

1. Depth to Groundwater		
Less than 5 feet	(10)	
5 feet to 15 feet	(8)	
More than 15 feet to 25 feet	(6)	
More than 25 feet to 50 feet	(4)	
More than 50 feet	(1)	
2. Mean Annual Precipitation		
More than 40 inches	(10)	
More than 25 inches to 40 inches	(5)	
15 inches to 25 inches	(3)	
Less than 15 inches	(1)	
3. Soil Type (Unified Soil Classification)		
Clean, coarse-grained soils	(10)	
Coarse-grained soils with fines	(8)	
Fine-grained soils (low organic carbon)	(3)	
Fine-grained soils (high organic carbon)	(1)	
4. Potential Receptors		
(Select the most applicable category)		
a. Public water system within 1000 feet, or private water system within 500 feet	(15)	
b. Public/private water system within 1/2 mile	(12)	
c. Public/private water system within one mile	(8)	
d. No water system within one mile	(4)	
e. Nonpotable groundwater	(1)	
5. Volume of Contaminated Soil		
More than 500 cubic yards	(10)	
More than 100 cubic yards to 500 cubic yards	(8)	
More than 25 cubic yards to 100 cubic yards	(5)	
10 cubic yards to 25 cubic yards	(2)	
Less than 10 cubic yards	(0)	

*The items to be scored are defined in note 1 to this table.

Part B: Add scores from Part A to determine matrix score and cleanup level

Matrix Score for Each Category	Cleanup Level in mg/kg		
	Gasoline Range Organics	Diesel Range Organics	Residual Range Organics
Category A: More than 40	50	100	2000
Category B: More than 26 to 40	100	200	2000
Category C: 21-26	500	1000	2000
Category D: Less than 21	1000	2000	2000

Notes to Table A1:

1. The following definitions for items 1 - 5 in Part A, apply for purposes of using method one:

a. "depth to groundwater" means the measurement from the lowest point of the zone of soil contamination to the seasonal high groundwater table; a responsible person may not claim a lower matrix score for soil by moving contaminated soil to a higher elevation relative to the groundwater table;

b. "mean annual precipitation" is defined at 18 AAC 75.990;

c. "soil type" means the predominant Unified Soil Classification (USC) soil type between the deepest point of contamination and the seasonal high groundwater table; a responsible person may seek to demonstrate that otherwise coarse-grained soil has an organic carbon content that might enable a lower point classification. Soil types using the USC system are further defined as shown in Figure 1:

Figure 1.

SOIL TYPE	UNIFIED SOIL CLASSIFICATIONS
Clean coarse-grained	GW, GP, SW, SP
Coarse-grained with fines	GM, GC, SM, SC, GP-GC, SP-SM, GW-GM, SW-SM, SW-SC
Fine-grained with low organic carbon	ML, CL, HM, CH
Fine-grained with high organic carbon	OL, OH, Pt

d. for the "potential receptors" categories,

(i) "public water system" and "private water system" have the meaning given those terms in 18 AAC 80.990;

(ii) "nonpotable" means unusable for drinking water due to a water quality condition, such as salinity, that was not caused by or that does not arise from contamination at the site;

e. "volume of contaminated soil" means the total estimated volume of soil that is contaminated above the applicable cleanup level before a responsible person begins a removal or cleanup action.

2. For the "potential receptors" categories, a responsible person shall submit a demonstration supporting the score assigned, including the results of an approved water well survey; the most conservative score must be used to determine the proximity of potential receptors; for example, if a water system is within one-quarter mile, the category "public/private water system within one mile" that would score 8 would be superseded by the category "public/private water system

3. The identity of a released refined petroleum product must be assumed to be unknown unless a responsible person demonstrates that the product is only gasoline, or only a refined nongasoline product; the department will waive the requirement that a product be identified by analysis if a responsible person demonstrates that only one type of product was stored or distributed at the site; the soil cleanup levels in Part B are based on gas chromatographic analytical measurements corresponding to a specific measured range of petroleum hydrocarbons as follows:

a. gasoline range organics: light-range petroleum products such as gasoline, with petroleum hydrocarbon compounds corresponding to an alkane range from the beginning of C_6 to the beginning of C_{10} and a boiling point range between approximately 60° Centigrade and 170° Centigrade;

b. diesel range organics: mid-range petroleum products such as diesel fuel, with petroleum hydrocarbon compounds corresponding to an alkane range from the beginning of C_{10} to the beginning of C_{25} and a boiling point range between approximately 170° Centigrade and 400° Centigrade;

c. residual range organics: heavy-range petroleum products such as lubricating oils, with petroleum hydrocarbon compounds corresponding to an alkane range from the beginning of C_{25} to the beginning of C_{36} and a boiling point range between approximately 400° Centigrade and 500° Centigrade.

4. In addition to meeting the soil cleanup levels in Part B, a responsible person shall ensure that the site meets the most stringent standards for benzene, toluene, ethylbenzene, and total xylenes for the applicable exposure pathway in Table B1 in (c) of this section.

(b) If a responsible person uses method one for an Arctic zone under 18 AAC 75.340, the soil cleanup levels must be based on Table A2 in this subsection.

TABLE A2. METHOD ONE - PETROLEUM HYDROCARBON SOIL CLEANUP LEVELS IN ARCTIC ZONES

PRODUCT	Cleanup Level in mg/kg		
	Diesel Range Petroleum Hydrocarbons	Gasoline Range Petroleum Hydrocarbons	Residual Range Petroleum Hydrocarbons
Gasoline	N/A	100	N/A
Diesel	200*	N/A	N/A
Unknown/Crude	200	100	N/A
Residual	N/A	N/A	200

In this table, "N/A" means "not applicable."

* If a responsible party demonstrates that contamination is due to a diesel spill, that levels of benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are less than 15 mg/kg, that benzene levels are less than 0.5 mg/kg, and that other site conditions are favorable, and if the department determines that a less stringent level is protective of human health, safety, and welfare, and of the environment, the department will allow a cleanup level of 500 mg/kg for diesel range petroleum hydrocarbons.

The Arctic Zone numeric cleanup levels in this table cover only contamination related to manmade pads and roads. The department will determine the cleanup levels for undisturbed tundra or other undisturbed native vegetation on a site-specific basis, depending upon whether remediation efforts would cause more severe or long-term damage than would the discharge or release alone.

(c) If a responsible person uses method two for chemicals other than petroleum hydrocarbons under 18 AAC 75.340, the soil cleanup levels must be based on Table B1 in this subsection.

TABLE B1. METHOD TWO – SOIL CLEANUP LEVELS TABLE (See notes to table for additional requirements)										
		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
	ORGANICS									
83-32-9	Acenaphthene[15]	8200			6100		210	5000		190
67-64-1	Acetone (2-Propanone)	14000			10000		10	8300		9
309-00-2	**Aldrin**	0.7	35		0.5	24	1.6	0.40	18	1.5
120-12-7	Anthracene[15]	41000			30000		4300	24900		3900
71-43-2	**Benzene** [15]	390	13		290	9	0.02	230	6.4	0.02
56-55-3	**Benzo(a)anthracene** [15]	15			11		6	9		5.5
205-99-2	**Benzo(b)fluoranthene** [15]	15			11		20	9		17
207-08-9	**Benzo(k)fluoranthene** [15]	150			110		200	93		170
65-85-0	Benzoic acid	547500			410000		390	332000		350
50-32-8	**Benzo(a)pyrene** [15]	1.5			1		3	0.9		2.4
111-44-4	**Bis(2-chlorethyl)ether**	10	5		8	3	0.002	6	2.4	0.002
117-81-7	**Bis(2-ethylhexyl)phthalate**	800			590		1200	490		1100
75-27-4	**Bromodichloromethane**	180			130		0.35	110		0.3
75-25-2	**Bromoform (Tribromomethane)**	1400	590[12]		1050	500	0.38	860	370	0.34
71-36-3	Butanol	14000			10000		10	8300		9
85-68-7	Butyl benzyl phthalate	27000			20000		5600	16600		5000
86-74-8	**Carbazole**	560			420		2	340		2
75-15-0	Carbon disulfide	14000	453[12]		10000	453[12]	17	8300	453[12]	16
56-23-5	**Carbon tetrachloride**	86	5		64	3.4	0.03	52	2.6	0.03
57-74-9	**Chlordane**	9	200		6	140	3	5	100	3
106-47-8	p-Chloroaniline	550			410		0.5	330		0.46
108-90-7	Chlorobenzene	2700	160		2000	110	0.6	1700	81	0.5
124-48-1	**Chlorodibromomethane**	130			100		0.2	80		0.2

TABLE B1. METHOD TWO – SOIL CLEANUP LEVELS TABLE (See notes to table for additional requirements)										
		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
67-66-3	**Chloroform**	1400	5		1000	3.4	0.34	830	2.4	0.3
95-57-8	2-Chlorophenol	680			510		1.4	415		1.3
218-01-9	**Chrysene [15]**	1500			1100		620	930		550
72-54-8	**DDD**	47			35		47	28		42
72-55-9	**DDE**	33			24		150	20		130
50-29-3	**DDT**	33	7800		24	5300	88	20	3900	80
53-70-3	**Dibenzo(a,h)anthracene [15]**	1.5			1		6	0.9		5
84-74-2	Di-n-butyl phthalate	14000			10000		1700	8300		1500
117-84-0	Di-n-octyl phthalate	2700			2000		810000	1700		720000
95-50-1	1,2-Dichlorobenzene	12000	110[12]		9100	110[12]	7	7500	110[12]	6
106-46-7	**1,4-Dichlorobenzene**	470	12000		350	8000	0.8	280	6000	0.7
91-94-1	**3,3-Dichlorobenzidine**	25			18		0.02	15		0.02
75-34-3	1,1-Dichloroethane	14000	890[12]		10000	890[12]	12	8300	890[12]	11
107-06-2	**1,2-Dichloroethane**	120	7		91	5	0.015	75	3.5	0.01
75-35-4	**1,1-Dichloroethylene**	19	1.3		14	0.9	0.03	11	0.65	0.03
156-59-2	cis-1,2-Dichloroethylene	1400			1000		0.2	830		0.2
156-60-5	trans-1,2-Dichloroethylene	2700			2000		0.4	1700		0.34
120-83-2	2,4-Dichlorophenol	410			300		0.45	250		0.45
78-87-5	**1,2-Dichloropropane**	160	25		120	17	0.017	100	12	0.015
542-75-6	**1,3-Dichloropropene**	41	2.3		30	1.5	0.02	25	1	0.02
60-57-1	**Dieldrin**	0.7	12		0.5	8	0.015	0.4	6	0.014
131-11-3	Dimethyl phthalate	>1000000			>1000000		1400	830000		1200
84-66-2	Diethyl phthalate	110000			81000		190	66000		170
105-67-9	2,4-Dimethylphenol	2700			2000		4	1700		3.6
51-28-5	2,4-Dinitrophenol	270			200		0.2	170		0.17

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TABLE B1. METHOD TWO – SOIL CLEANUP LEVELS TABLE (See notes to table for additional requirements)										
		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
131-11-3	Dimethyl phthalate	>1000000			>1000000		1400	830000		1200
121-14-2	**2,4-Dinitrotoluene**	17			12		0.005	10		0.0044
606-20-2	**2,6-Dinitrotoluene**	17			12		0.0044	10		0.004
174-60-16	**Dioxin [8]**									
115-29-7	Endosulfan	820			610		7	500		6
72-20-8	Endrin	41			30		0.3	25		0.3
100-41-4	Ethylbenzene [15]	13700	89[12]		10000	89[12]	5.5	8300	89[12]	5
206-44-0	Fluoranthene	5500			4100		2100	3300		1900
86-73-7	Fluorene[15]	5500			4100		270	3300		240
76-44-8	**Heptachlor**	2.5	1.2		2	0.8	8	1.5	0.6	7
1024-57-3	**Heptachlor epoxide**	1	50		0.9	33	0.2	0.75	25	0.2
118-74-1	**Hexachlorobenzene**	7	10		5	7	0.73	4	5	0.7
87-68-3	**Hexachloro-1,3-butadiene**	27	82		20	55	8	17	41	7
319-84-6	**alpha-Hexachlorocyclohexane**	2	8		1.3	5.5	0.0026	1	4	0.002
319-85-7	**beta-Hexachlorocyclohexane**	6	65		4.6	43	0.009	4	32	0.008
58-89-9	**gamma-Hexachlorocyclohex-ane (Lindane)**	9			6.4		0.003	5		0.003
77-47-4	Hexachlorocyclopentadiene	960	11		710	7	130	580	5	120
67-72-1	**Hexachloroethane**	139	580		101	390	1.6	83	290	1.4
193-39-5	**Indeno(1,2,3-c,d)pyrene [15]**	15			11		54	9		50
78-59-1	**Isophorone**	11800			8700		3	7200		2.6
72-43-5	Methoxychlor	680			510		52	420		47
74-83-9	Methyl bromide	190	21		140	14	0.16	120	11	0.14
75-09-2	**Methylene chloride**	1500	270		1100	180	0.015	900	135	0.01
95-48-7	2-Methylphenol (o-cresol)	6800			5100		7	4200		6

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TABLE B1. METHOD TWO – SOIL CLEANUP LEVELS TABLE (See notes to table for additional requirements)										
		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
91-20-3	Naphthalene[15]	5500			4100		43	3300		38
98-95-3	Nitrobenzene	68	130		51	90	0.06	42	67	0.06
86-30-6	**n-Nitrosodiphenylamine**	2300			1700		3.4	1400		3
621-64-7	**n-Nitrosodi-n-propylamine**	1.6			1.2		0.00036	1.0		0.0003
87-86-5	**Pentachlorophenol**	46.7[13]			35[13]		0.01	28[13]		0.009
108-95-2	Phenol	82000			60800		67	50000		60
133-63-63	**Polychlorinated Biphenyls (PCBs)** [9]	10	10		10	10	10	10	10	10
129-00-0	Pyrene[15]	4100			3000		1500	2500		1400
100-42-5	Styrene	27400	280[12]		20300	280[12]	1.3	17000	280[12]	1.2
79-34-5	**1,1,2,2-Tetrachloroethane**	56	8		42	5.4	0.017	34	4	0.01
127-18-4	**Tetrachloroethylene**	220	80[12]		160	80[12]	0.03	130	79	0.025
108-88-3	Toluene [15]	27400	180[12]		20300	180[12]	5.4	17000	180[12]	4.8
8001-35-2	**Toxaphene**	10	920		8	620	10	6	460	9
120-82-1	1,2,4-Trichlorobenzene	1400	570[12]		1000	570[12]	2	830	570[12]	1.7
71-55-6	1,1,1-Trichloroethane		460[12]			460[12]	1.0		460[12]	0.9
79-00-5	**1,1,2-Trichloroethane**	200	15		150	10	0.017	120	8	0.015
79-01-6	**Trichloroethylene**	1000	64		750	43	0.027	620	32	0.02
95-95-4	2,4,5-Trichlorophenol	13700			10000		90	8300		78
88-06-2	**2,4,6-Trichlorophenol**	1000	2300		750	1500	0.6	620	1100	0.5
108-05-4	Vinyl acetate	137900	2200[12]		101000	1500	100	83000	1100	90
75-01-4	**Vinyl chloride** (Chloroethene)	6	0.7		4	0.5	0.009	4	0.3	0.008
1330-20-7	Xylenes (total)[15]	274000	81[12]		203000	81[12]	78	166000	81[12]	69
	INORGANICS									
7440-36-0	Antimony	55			41		3.6	33		3

TABLE B1. METHOD TWO – SOIL CLEANUP LEVELS TABLE (See notes to table for additional requirements)										
		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)
7440-38-2	**Arsenic**	8			5.5		2	4.5		1.8
7440-39-3	Barium	9600			7100		1100	5800		982
7440-41-7	**Beryllium**	2.6			1.9		42	1.6		38
7440-43-9	Cadmium	140			100		5	83		4.5
7440-47-3	Chromium (Total)	680			510		26	420		23
16065-83-1	Chromium +3	137,000			100000		>1000000	83000		>1000000
18540-29-9	Chromium +6	680			510		26	420		23
57-12-5	Cyanide [10]	2700			2000		27	1700		24
7439-92-1	Lead [11]									
7439-97-6	Mercury		26			18	1.4		13	1.24
7440-02-0	Nickel	2700			2000		87	1700		78
7782-49-2	Selenium	680			510		3.5	420		3
7440-22-4	Silver	680			510		21	420		19
7440-62-2	Vanadium	960			710		3400	580		3050
7440-66-6	Zinc	41000			30000		9100	25000		8100

NOTES TO TABLE B1 FOLLOW TABLE B2 IN (d) OF THIS SECTION

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(d) If a responsible person uses method two for petroleum hydrocarbons under 18 AAC 75.340, the soil leanup levels must be based on Table B2 in this subsection

TABLE B2. METHOD TWO - PETROLEUM HYDROCARBON SOIL CLEANUP LEVELS

Petroleum Hydrocarbon Range	Arctic Zone			Under 40 Inch Zone			Over 40 Inch Zone			Maximum Allowable Concentrations[14] mg/kg
	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	
For Laboratory Analysis using AK Methods 101, 102, and 103										
C_6-C_{10} GRO using AK 101	1400	1400	N/A	1400	1400	300	1400	1400	260	1400
C_{10}-C_{25} DRO using AK 102	12500	12500	N/A	10250	12500	250	8250	12500	230	12500
C_{25}-C_{36} RRO using AK 103	13700	22000	N/A	10000	22000	11000	8300	22000	9700	22000
For Laboratory Analysis using AK Aliphatic and Aromatic Fraction Methods 101AA, 102AA, and 103AA										
C_6-C_{10} Aliphatics	1000	1000	N/A	1000	1000	270	1000	1000	240	1000
C_6-C_{10} Aromatics	1000	1000	N/A	1000	1000	150	1000	1000	130	1000
C_{10}-C_{25} Aliphatics	10000	10000	N/A	10000	10000	7200	8300	10000	6400	10000
C_{10}-C_{25} Aromatics	5000	5000	N/A	4100	5000	100	3300	5000	90	5000
C_{25}-C_{36} Aliphatics	20000	20000	N/A	20000	20000	20000	20000	20000	20000	20000
C_{25}-C_{36} Aromatics	4100	10000	N/A	3000	10000	3300	2500	10000	2900	10000

See notes to table for further requirements. "N/A" means not applicable.

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Notes to Tables B1 and B2:

For PCB-free mineral oils, the department will approve alternate levels or exposure pathways, if the department determines that the alternative levels or exposure pathways are protective of human health, safety, and welfare, and of the environment. Although migration to groundwater is not applicable to the Arctic zone, site-specific levels must be protective of migration to surface water. Concentrations of hazardous substances in soil must be calculated and presented on a per dry weight basis. For volatile organic hazardous substances for which toxicity data is not currently available, the cleanup level that applies at a site is the calculated saturation concentration determined using the equations set out in *Guidance on Cleanup Standards Equations and Input Parameters*, adopted by reference in 18 AAC 75.325. The cleanup level from Table B1 or B2 that applies at a site is the most stringent of the applicable exposure pathway-specific cleanup levels based on ingestion, inhalation, or migration to groundwater. In Table B1, a blank space means not available or not applicable.

1. "Arctic zone" is defined at 18 AAC 75.990.
2. "under 40 inch zone" means a site that receives mean annual precipitation of less than 40 inches each year.
3. "over 40 inch zone" means a site that receives mean annual precipitation of 40 or more inches each year.
4. "CAS Number" means the Chemical Abstract Service (CAS) registry number uniquely assigned to chemicals by the American Chemical Society and recorded in the CAS Registry System.
5. "ingestion" means a potential pathway of exposure to hazardous substances in soil through direct consumption of the soil.
6. "Inhalation" means a potential pathway of exposure to volatile organic hazardous substances in the soil through volatilization.
7. "Migration to groundwater" means a potential exposure to hazardous substances in soil through direct ingestion of groundwater contaminated with concentrations of hazardous substances at levels listed in Table C at 18 AAC 75.345(b)(1) as a result of movement of hazardous substances through soil to the groundwater; this exposure pathway is not applicable to the Arctic zone, where soil cleanup levels protective of migration to surface water must be determined on a site-specific basis.
8. Dioxin cleanup levels must be determined on a site-specific basis.
9. For residential land use, the cleanup level for PCBs in surface soil is 1 mg/kg; for commercial or industrial land use, the cleanup level for PCBs in surface soils is 10 mg/kg and for PCBs in subsurface soil is 25 mg/kg; a responsible person may also propose an alternative cleanup level through an approved site-specific risk assessment, conducted according to the *Risk Assessment Procedures Manual*, adopted by reference at 18 AAC 75.340.
10. Cyanide expressed as free, or physiologically available cyanide.
11. Lead cleanup levels must be determined on a site-specific basis, based on land use; for residential land use, the soil cleanup level is 400 mg/kg, and for commercial or industrial land use, that level is 1,000 mg/kg; through an approved site-specific risk assessment, conducted according to the *Risk Assessment Procedures Manual*, adopted by reference at 18 AAC 75.340, approved exposure models may be used to evaluate exposure to a child resident or an adult worker; a responsible person may also propose an alternative cleanup level, through a site-specific risk assessment conducted according to the *Manual*, and based on a chemical speciation

of the lead present at the site.

12. These levels are based on soil saturation level (Csat) using the equations set out in *Guidance on Cleanup Standards Equations and Input Parameters*, adopted by reference in 18 AAC 75.325.

13. Ingestion value is adjusted by a factor of 0.5 to account for dermal exposure.

14. This level is the concentration of C_6 - C_{10}, C_{10} - C_{25}, or C_{25} - C_{36} petroleum hydrocarbon range in surface and subsurface soil that, if exceeded, indicates an increased potential for hazardous substance migration or for risk to human health, safety, or welfare, or to the environment; the level of a petroleum hydrocarbon may not remain at a concentration above the maximum allowable concentration unless a responsible person demonstrates that the petroleum hydrocarbon will not migrate and will not pose a significant risk to human health, safety, or welfare, or to the environment. Free product must be recovered as required by 18 AAC 75.325(f).

15. If using method two or method three, the applicable petroleum hydrocarbon cleanup levels must be met in addition to the applicable chemical-specific cleanup levels for benzene, toluene, ethylbenzene, and total xylenes; the chemical-specific cleanup levels for the polynuclear aromatic hydrocarbons acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, and pyrene must also be met unless the department determines that those cleanup levels need not be met to protect human health, safety, and welfare, and the environment. (Eff. 1/22/99, Register 149)

Authority: AS 46.03.020 AS 46.03.740 AS 46.04.070
AS 46.03.050 AS 46.03.745 AS 46.09.020
AS 46.03.710 AS 46.04.020

18 AAC 75.345. GROUNDWATER AND SURFACE WATER CLEANUP LEVELS. (a) Except as otherwise provided in this section, cleanup of a discharge or release of a hazardous substance to groundwater or surface water must meet the requirements of this section.

(b) Contaminated groundwater must meet

(1) the cleanup levels in Table C if the current use or the reasonably expected potential future use of the groundwater, determined under 18 AAC 75.350, is a drinking water source;

TABLE C. GROUNDWATER CLEANUP LEVELS
(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Acenaphthene	83-32-9	2.2
Acetone	67-64-1	3.65
Aldrin	309-00-2	0.00005
Anthracene	120-12-7	11.0
Antimony	7440-36-0	0.006
Arsenic	7440-38-2	0.05
Barium	7440-39-3	2.0
Benzene	71-43-2	0.005
Benzo(a)anthracene	56-55-3	0.001
Benzo(b)fluoranthene	205-99-2	0.001
Benzo(k)fluoranthene	207-08-9	0.01
Benzoic acid	65-85-0	146.0
Benzo(a)pyrene	50-32-8	0.0002
Beryllium	7440-4-17	0.004
Bis(2-chloroethyl)ether	111-44-4	0.00077
Bis(2-ethylhexyl)phthalate	117-81-7	0.006
Bromodichloromethane	75-27-4	0.1
Bromoform (Tribromomethane)	75-25-2	0.1
Butanol	71-36-3	3.65
Butyl benzyl phthalate	85-68-7	7.3
Cadmium	7440-04-39	0.005
Carbazole	86-74-8	0.04
Carbon disulfide	75-15-0	3.65
Carbon tetrachloride	56-23-5	0.005
Chlordane	57-74-9	0.002
p-Chloroaniline	106-47-8	0.15
Chlorobenzene	108-90-7	0.1
Chlorodibromomethane	124-48-1	0.06
Chloroform	67-66-3	0.1
2-Chlorophenol	95-57-8	0.2
Chromium (Total)	7440-47-3	0.1
Chromium +3	16065-83-1	36.5
Chromium +6	18540-29-9	0.1
Chrysene	218-01-9	0.1
Copper	7440-05-08	1.3
Cyanide	57-12-5	0.2
DDD	72-54-8	0.0036
DDE	72-55-9	0.0025
DDT	50-29-3	0.0025
Dibenzo(a,h)anthracene	53-70-3	0.0001
Di-n-butyl phthalate	84-74-2	3.65

TABLE C. GROUNDWATER CLEANUP LEVELS
(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
1,2-Dichlorobenzene	95-50-1	0.6
1,4-Dichlorobenzene	106-46-7	0.075
3,3-Dichlorobenzidine	91-94-1	0.002
1,1-Dichloroethane	75-34-3	3.65
1,2-Dichloroethane	107-06-2	0.005
1,1-Dichloroethylene	75-35-4	0.007
cis-1,2-Dichloroethylene	156-59-2	0.07
trans-1,2-Dichloroethylene	156-60-5	0.1
2,4-Dichlorophenol	120-83-2	0.1
1,2-Dichloropropane	78-87-5	0.005
1,3-Dichloropropene	542-75-6	0.005
Dieldrin	60-57-1	0.00005
Diethyl phthalate	84-66-2	29.0
2,4-Dimethylphenol	105-67-9	0.7
2,4-Dinitrophenol	51-28-5	0.07
2,4-Dinitrotoluene	121-14-2	0.00125
2,6-Dinitrotoluene	606-20-2	0.00125
Di-n-octyl phthalate	117-84-0	0.7
Dioxin	174-60-16	0.00000003
Endosulfan	115-29-7	0.2
Endrin	72-20-8	0.002
Ethylbenzene	100-41-4	0.7
Fluoranthene	206-44-0	1.46
Fluorene	86-73-7	1.46
Heptachlor	76-44-8	0.0004
Heptachlor epoxide	1024-57-3	0.0002
Hexachlorobenzene	118-74-1	0.001
Hexachloro-1,3-butadiene	87-68-3	0.01
alpha-Hexachlorocyclohexane	319-84-6	0.0001
beta-Hexachlorocyclohexane	319-85-7	0.00047
gamma-Hexachlorocyclohexane (Lindane)	58-89-9	0.0002
Hexachlorocyclopentadiene	77-47-4	0.05
Hexachloroethane	67-72-1	0.06
Indeno(1,2,3-c,d)pyrene	193-39-5	0.001
Isophorone	78-59-1	0.9
Lead	7439-92-1	0.015
Mercury	7439-97-6	0.002
Methoxychlor	72-43-5	0.04
Methyl bromide	74-83-9	0.05
Methylene chloride	75-09-2	0.005
2-Methylphenol (o-cresol)	95-48-7	1.8
Naphthalene	91-20-3	1.46
Nickel	7440-02-0	0.1

TABLE C. GROUNDWATER CLEANUP LEVELS
(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Nitrobenzene	98-95-3	0.018
n-Nitrosodiphenylamine	86-30-6	0.17
n-Nitrosodi-n-propylamine	621-64-7	0.0001
Pentachlorophenol	87-86-5	0.001
Phenol	108-95-2	22.0
Polychlorinated biphenyls (PCBs)	133-63-63	0.0005
Pyrene	129-00-0	1.1
Selenium	7782-49-2	0.05
Silver	7440-22-4	0.18
Styrene	100-42-5	0.1
1,1,2,2-Tetrachloroethane	79-34-5	0.004
Tetrachloroethylene	127-18-4	0.005
Thallium	7440280	0.002
Toluene	108-88-3	1.0
Toxaphene	8001-35-2	0.003
1,2,4-Trichlorobenzene	120-82-1	0.07
1,1,1-Trichloroethane	71-55-6	0.2
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene	79-01-6	0.005
2,4,5-Trichlorophenol	95-95-4	3.65
2,4,6-Trichlorophenol	88-06-2	0.077
Vanadium	7440-06-22	0.26
Vinyl acetate	108-05-4	36.5
Vinyl chloride (Chloroethene)	75-01-4	0.002
Xylenes (total)	1330-20-7	10.0
Zinc	7440-66-6	11.0
Petroleum Hydrocarbons		
GRO - C_6 - C_{10} (AK 101)		1.3*
DRO - C_{10} - C_{25} (AK 102)		1.5
RRO - C_{25} - C_{36}		1.1
C_6 - C_{10} - Aliphatics		1.3*
C_6 - C_{10} - Aromatics		7.3
C_{10} - C_{25} - Aliphatics		0.1*
C_{10} - C_{25} - Aromatics		1.5
C_{25} - C_{36} – Aliphatics		N/A (insoluble)
C_{25} - C_{36} - Aromatics		1.1

*Standards based on estimated solubility

(2) a concentration equal to 10 times the cleanup levels in Table C, based on a determination of groundwater use made under 18 AAC 75.350 in consultation with each site landowner, the public, and appropriate government officials if

(A) the department determines that the groundwater is not a current source of drinking water or that the reasonably expected potential future use of the groundwater is not a drinking water source; and

(B) the cleanup levels in Table C are met at the property boundary in an area where the current use or reasonably expected potential future use of groundwater in the neighboring property is determined to be a source of drinking water; or

(3) an approved cleanup level based on an approved site-specific risk assessment conducted under the *Risk Assessment Procedures Manual* adopted by reference in 18 AAC 75.340.

(c) The department will require a more stringent cleanup level than the applicable level under (b) of this section, if the department determines that a more stringent cleanup level is necessary to ensure protection of human health, safety, or welfare, or of the environment, and based on actual onsite and actual or likely offsite uses of the groundwater that are likely to be affected by the hazardous substance, and

(1) the groundwater use classifications other than for drinking water, as set out under 18 AAC 70.020(a)(1)(A) and 18 AAC 70.050(a)(2);

(2) groundwater hazardous substance concentrations complying with the secondary maximum contaminant levels in 18 AAC 80.070 for actual or likely drinking water supplies; and

(3) the standards in this section for groundwater contaminated with petroleum; the contamination may not exceed, for each petroleum hydrocarbon range applicable, including the gasoline range, the diesel range, and the residual range,

(A) a Threshold Odor Number (TON) of 1 for odor, as measured by Method 2150B, *Standard Methods for the Examination of Water and Wastewater*, 18th edition, American Public Health Association (1992), adopted by reference; or

(B) a Flavor Threshold Number (FTN) of 1 for flavor, as measured by Method 2160B, *Standard Methods for the Examination of Water and Wastewater*, adopted by reference in (A) of this paragraph.

(d) Toxic substances in sediment may not cause, and may not be reasonably be expected to cause, a toxic or other deleterious effect on aquatic life, except as authorized under 18 AAC 70. For purposes of this subsection, "toxic substances" has the meaning given in 18 AAC 70.990.

(e) The point of compliance where groundwater cleanup levels must be attained is throughout the site from each point extending vertically from the uppermost level of the saturated zone to the lowest possible depth that could potentially be affected by the discharge or release of a hazardous substance, unless the department approves an alternative point of compliance as part of the cleanup action under 18 AAC 75.360. To be approved under this subsection, an

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

UNDERGROUND STORAGE TANKS PROCEDURES MANUAL

*

GUIDANCE FOR TREATMENT OF PETROLEUM-CONTAMINATED SOIL AND WATER AND STANDARD SAMPLING PROCEDURES

December 1, 1999

This publication was released by the Alaska Department of Environmental Conservation. It was printed in Juneau, Alaska, and contains information adopted by reference in department regulations. It was produced at a cost to the department of $9.50 per copy, including $3.00 postage.

Table 1: Reference Guide to Sample Collection and Laboratory Analysis
Part A: Soils, Sediments, Sludges, and Fill Materials

Parameter	Preparation/ Analytical Method[1]	Method Detection Limit[2]	Practical Quantitation Limit[3]	Container Description (Minimum) [Clear glass may be substituted for amber if samples are protected from exposure to light, this exception does not apply metals]	Preservation/ Holding Time
Gasoline range organics	AK101*	2 mg/kg	20 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Diesel range organics	AK102*	2 mg/kg	20 mg/kg	4 oz. amber glass, TLC	Cool 4° ± 2°C / 14 days to extraction, less than 40 days to analysis of extract
Residual range organics	AK103*	10 mg/kg	100 mg/kg	4 oz. amber glass, TLC	Cool 4° ± 2°C / 14 days to extraction, less than 40 days to analysis of extract
Aliphatic gasoline range organics	AK101AA*	2 mg/kg	20 mg/kg	4 oz. wide-mouth amber glass jar with teflon lined silicon rubber septum seal	Methanol preservative / 28 days from sampling
Aromatic gasoline range organics	AK101AA*	2 mg/kg	20 mg/kg	4 oz. wide-mouth amber glass jar with teflon lined silicon rubber septum seal	Methanol preservative / 28 days from sampling
Aliphatic diesel range organics	AK102AA*	2 mg/kg	20 mg/kg	4 oz. wide-mouth amber glass jar, TLC	No preservative / 14 days to extraction, less than 40 days to analysis of extract
Aromatic diesel range organics	AK102AA*	2 mg/kg	20 mg/kg	4 oz. wide-mouth amber glass jar, TLC	No preservative / 14 days to extraction, less than 40 days to analysis of extract
Aliphatic residual range organics	AK103AA*	10 mg/kg	100 mg/kg	4 oz. wide-mouth amber glass jar. TLC	No preservative / 14 days to extraction, less than 40 days to analysis of extract
Aromatic residual range organics	AK103AA*	10 mg/kg	100 mg/kg	4 oz. wide-mouth amber glass jar, TLC	No preservative / 14 days to extraction of sample, less than 40 days to analysis of extract
Benzene	AK101[4], 8021B, or 8260B	0.007 mg/kg	0.02 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Toluene	AK101[4], 8021B, or 8260B	0.007 mg/kg	0.05 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Ethylbenzene	AK101[4], 8021B, or 8260B	0.007 mg/kg	0.05 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Total xylenes	AK101[4], 8021B, or 8260B	0.007 mg/kg	0.05 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Total BTEX	AK101[4], 8021B, or 8260B	0.007 mg/kg	0.05 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Polynuclear Aromatic Hydrocarbons (PAH)	8270C or 8310	0.1 mg/kg	1.0 mg/kg	4 oz. amber glass, TLS	Cool 4° ± 2°C / 14 days to extraction, less than 40 days to analysis of extract
Total Volatile Chlorinated Solvents**	8260B or 8021B	0.008 mg/kg	0.08 mg/kg	4 oz. amber glass, TLS	Methanol preservative, <25°C / 28 days
Polychlorinated biphenyls (PCBs)	8082	0.01 mg/kg	0.05 mg/kg	4 oz amber glass, TLC	Cool 4° ± 2°C / 14 days to extraction, less than 40 days to analysis of extract
Total Arsenic	6010B, 6020, 7060A, or 7061A	1 mg/kg	10 mg/kg	4 oz amber glass, TLC	Cool 4° ± 2°C / 6 months
Total Cadmium	6010B, 6020,	1 mg/kg	10 mg/kg	4 oz amber glass, TLC	Cool 4° ± 2°C / 6 months

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Table 1: Reference Guide to Sample Collection and Laboratory Analysis Part A: Soils, Sediments, Sludges, and Fill Materials					
Parameter	Preparation/ Analytical Method[1]	Method Detection Limit[2]	Practical Quantitation Limit[3]	Container Description (Minimum) [Clear glass may be substituted for amber if samples are protected from exposure to light, this exception does not apply metals]	Preservation/ Holding Time
	7130, or 7131A				
Total Chromium	6010B, 6020, 7190, or 7191	1 mg/kg	10 mg/kg	4 oz amber glass, TLC	Cool 4° ± 2°C / 6 months
Total Lead	6010B, 6020, 7420, 7421	1 mg/kg	10 mg/kg	4 oz amber glass, TLC	Cool 4° ± 2°C / 6 months
Total Barium	6010B, 6020, 7080A, or 7081	1 mg/kg	10 mg/kg	4 oz. amber glass, TLC	Cool 4° ± 2°C / 6 months
Total Nickel	6010B, 6020, 7520, or 7521	1 mg/kg	10 mg/kg	4 oz. amber glass, TLC	Cool 4° ± 2°C / 6 months
Total Vanadium	6010B, 7911, 6020, or 7910	1 mg/kg	10 mg/kg	4 oz. amber glass, TLC	Cool 4° ± 2°C / 6 months

Legend to follow Part B

Notes to Table 1, Part A:

! Unless otherwise noted, all preparation and analytical methods refer to those contained in EPA's *Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, adopted by reference in 18 AAC 78.090.

[2] Method detection limits (MDL), specified in 40 C.F.R., Part 136, Appendix B, revised as of July 1, 1996, adopted by reference, are determined at the department's chemistry laboratory.

[3] Practical quantitation limits (PQL), like method detection limits, are instrument specific. PQLs must be established by each laboratory and must equal or have a value lower than the PQL in the table. For purposes of this chapter, PQL = 10 x MDL, except for PCBs which are PQL= 5 x MDL (56 C.F.R. 26511), and BTEX which is PQL = 7.14 x MDL.

* ADEC Analytical Methods AK101, AK102, and AK103 are included in Appendix D. ADEC Analytical Methods AK101AA, AK102AA, and AK103AA are included in Appendix E.

** May be analyzed out of AK101 methanol preserved sample, if not used, then sample must be preserved with methanol in the field.

⊥ The AK101 method can be extended for specific determination of volatile aromatics (BTEX) as specified in EPA Method 8021B for solids utilizing methanol preservation option only. All AK101 samples must be preserved with methanol.

Table 1: Reference Guide to Sample Collection and Laboratory Analysis (cont.)
Part B: Ground, Surface, Waste, and Marine Waters[4]

Parameter	Preparation/ Analytical Method[1]	Method Detection Limit[2]	Practical Quantitation Limit[2]	Container Description	Preservation/ Holding Time
Gasoline range organics	AK101*	10 µg/L	100 µg/L	40 mL VOA, TLS	HCL to pH less than 2, 4° ± 2°C /14 days from sampling
Diesel range organics	AK102*	80 µg/L	800 µg/L	1 L amber glass, TLC	HCL to pH less than 2, 4° ± 2°C /7 days to extraction, 40 days to analysis of extract
Residual range organics	AK 103*	50 µg/L	250 µg/L	1 L amber glass, TLC	Acidify to a pH of 2 using HCL, H_2SO_4 or HNO_3 / 7 days to extraction, 40 days to analysis of extract
Aliphatic gasoline range organics	AK101AA**	2 µg/L	10 µg/L	40 ml VOA with teflon lined silicon rubber septum seal	HCL to a pH of 2 / 14 days from sampling
Aromatic gasoline range organics	AK101AA**	0.2 µg/L	1 µg/L	40 ml VOA with teflon lined silicon rubber septum seal	HCL to a pH of 2 / 14 days from sampling
Aliphatic diesel range organics	AK102AA**	20 µg/L	100 µg/L	1 L amber glass, TLC	Acidify to a pH of 2 using HCL, H_2SO_4 or HNO_3 / 7 days to extraction, 40 days to analysis of extract
Aromatic diesel range organics	AK102AA**	20 µg/L	100 µg/L	1 L amber glass, TLC	Acidify to a pH of 2 using HCL, H_2SO_4 or HNO_3 / 7 days to extraction, 40 days to analysis of extract
Aliphatic residual range organics	--	--	--	--	--
Aromatic residual range organics	AK103AA**	50 µg/L	250µg/L	1 L amber glass, TLC	Acidify to a pH of 2 using HCL, H_2SO_4 or HNO_3 / 7 days to extraction, 40 days to analysis of extract
Benzene	AK101, 8021B, or 8260B	0.7 µg/L	5 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C /14 days
Toluene	AK101, 8021B, or 8260B	0.7 µg/L	5 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C /14 days
Ethylbenzene	AK101, 8021B, or 8260B	0.7 µg/L	5 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C /14 days
Total xylenes	AK101, 8021B, or 8260B	0.7 µg/L	5 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C /14 days
Total BTEX	AK101, 8021B, or 8260B	0.7 µg/L	5 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C /14 days
Polynuclear Aromatic Hydrocarbons (PAH)	8270C or 8310	1 µg/L	10 µg/L	1 L amber glass, TLS	4° ± 2°C, $Na_2S_2O_3$, dark / 7 days to extraction, 40 days to analysis of extract
Total Volatile Chlorinated Solvents	8021B or 8260B	0.8 µg/L	8 µg/L	duplicate 40 mL vials/sample, TLS	HCL to pH less than 2, 4° ± 2°C / 14 days
Polychlorinated biphenyls (PCBs)	8081A or 8082	1 µg/L	5 µg/L	1 L amber glass, TLC	4° ± 2°C / 7 days to extraction / 40 days to analysis of extract
Total Arsenic †	6010B, 6020, 7060, or 7061	5 µg/L	50 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / 6 months max. total holding time
Total Cadmium †	6010B, 6020, 7130, or 7131A	10 µg/L	100 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / 6 months max. total holding time
Total Chromium †	6010B, 6020, 7190, or 7191	100 µg/L	1000 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / 6 months max. total holding time
Total Lead †	6010B, 6020, 7420, or 7421	1.5 µg/L	15 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / months max. total holding time

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Total Barium	6010B, 6020, 7080A, or 7081	5 µg/L	50 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / months max. total holding time
Total Nickel	6010B, 6020, 7520, or 7521	10 µg/L	100 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / months max. total holding time
Total Vanadium	6010B, 6020, 7910, or 7911	10 µg/L	100 µg/L	min. 100 mL HDPE[5]	HNO_3 to pH less than 2 / months max. total holding time

Notes to Table 1, Part B:

[1] Unless otherwise noted, all preparation and analytical methods refer to those contained in EPA's *Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, (PB84128677), adopted by reference in 18 AAC 78.090.

[2] Method detection limits (MDL), specified in 40 C.F.R., Part 136, Appendix B, revised as of July 1, 1996, adopted by reference, are determined at the department's chemistry laboratory.

[3] Practical quantitation limits (PQL), like method detection limits, are instrument specific. PQLs must be established by each laboratory and must equal or have a value lower than the PQL in the table. For purposes of this chapter, PQL = 10 x MDL, except for PCBs which are PQL= 5 x MDL (56 C.F.R. 26511), and BTEX which is PQL = 7.14 x MDL.

[4] Sample collection and laboratory analyses for water collected from drinking water sources must be done in accordance with 18 AAC 80.

[5] HDPE, High Density Polyethylene sample collection bottles, critically cleaned for trace metals analysis.

* ADEC Analytical Methods AK101, AK102, and AK103 are included in Appendix D. ADEC Analytical Methods AK101AA, AK102AA, and AK103AA are included in Appendix E.

† Analytical methods 6010B, 7080A, 7130, 7420, 7520, and 7910 are for high contaminant level screening only. These can be used for closure only if site specific MDL criteria are met. Analytical methods 6020, 7031A, 7060, 7061, 7081A. 7190, 7191, 7421, 7521, and 7911 are acceptable for closure.

Legend to Table 1:

PAH = naphthalene, fluorene, anthracene, pyrene, benzo-a-anthracene, acenaphthene, chrysene, benzo-a-pyrene,dibenzo-a,h-anthracene, benzo-b-fluoranthene, benzo-k-fluoranthene, ideno-123-cd-pyrene;
VOA = Volatile Organic Analysis;
TLC = Teflon lined screw caps;
TLS = Teflon lined septa sonically bonded to screw caps

TAB

Appendix F

VALIDATA

Chemical Services, Inc.

P.O. Box 930422, Norcross, GA 30003

(770) 923-3890
(770) 923-8769 (Fax)
www.datavalidator.com

DATA VALIDATION SUMMARY
REPORT

COMPANY:	BNCI
SITE NAME:	Cape Romanzof, Alaska
LAB ORDER NUMBER:	A0009068
CONTRACTED LAB:	Analytica Alaska, Inc.
QA/QC LEVEL:	EPA Level III
EPA SOW/METHODS:	EPA SW-846
VALIDATION GUIDELINES:	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 1994
SAMPLE MATRIX:	Soil and Water
TYPES OF ANALYSIS:	Gasoline Range Organics (GRO), Diesel Range Organics (DRO), Residual Range Organics (RRO), BTEX
SDG NUMBER:	A0009068 (Level III)

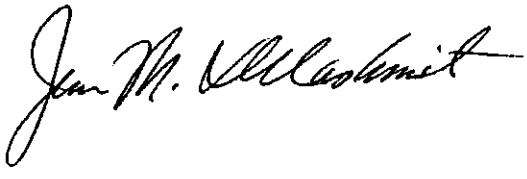
OVERVIEW

SAMPLES:

Client Sample #	Lab Sample #	Matrix	GRO	DRO	RRO	BTEX
00CRLFGWC52	A0009068-1	Water	X	X		
00CRLFGWC51	A0009068-2	Water	X	X		
00CRLFGWC41	A0009068-3	Water	X	X		
00CR15GW21	A0009068-4	Water	X	X	X	X
00CR15GW71	A0009068-5	Water	X	X	X	X
00CR15GW81	A0009068-6	Water	X	X	X	X
00CR13SW12	A0009068-7	Water	X	X	X	X
00CR13SW11	A0009068-8	Water	X	X	X	X
00CR13SW31	A0009068-9	Water	X	X	X	X
00CR13SW21	A0009068-10	Water	X	X	X	X
00CRLFGWC31	A0009068-11	Water	X	X		
00CRLFGWC12	A0009068-12	Water	X	X		
00CRLFSW31	A0009068-13	Water	X	X		
00CRLFGW11	A0009068-14	Water	X	X		
00CRLFGWC61	A0009068-15	Water	X	X		
00CRLFGWC71	A0009068-16	Water	X	X		
00CRLFGWC11	A0009068-17	Water	X	X		
00CR13GW11	A0009068-18	Water	X	X	X	X
00CR13GW21	A0009068-19	Water	X	X	X	X

Client Sample #	Lab Sample #	Matrix	GRO	DRO	RRO	BTEX
00CR13SO31	A0009068-20	Soil	X	X	X	X
00CR13SO71	A0009068-21	Soil	X	X	X	X
00CR13SO72	A0009068-22	Soil	X	X	X	X
00CR13SO81	A0009068-23	Soil	X	X	X	X
00CR13SD11	A0009068-24	Soil	X	X	X	X
00CR13SD61	A0009068-25	Soil	X	X	X	X
00CRLFSW11	A0009068-26	Water	X	X		
00CRLFSD21	A0009068-27	Soil	X	X		
00CRLFSD31	A0009068-28	Soil	X	X		
00CRLFSD11	A0009068-29	Soil	X	X		
00CRLFSD32	A0009068-30	Soil	X	X		
Trip Blank	A0009068-31	Water	X			X

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE: 

Data Qualifier Definitions

J	-	The associated numerical value is an estimated quantity.
R	-	The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
U	-	The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
UJ	-	The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Analytica Alaska, Inc. - A0009068 Organics

SAMPLES: 00CRLFGWC52, 00CRLFGWC51, 00CRLFGWC41, 00CR15GW21, 00CR15GW71, 00CR15GW81, 00CR13SW12, 00CR13SW11, 00CR13SW31, 00CR13SW21, 00CRLFGWC31, 00CRLFGWC12, 00CRLFSW31, 00CRLFGW11, 00CRLFGWC61, 00CRLFGWC71, 00CRLFGWC11, 00CR13GW11, 00CR13GW21, 00CR13SO31, 00CR13SO71, 00CR13SO72, 00CR13SO81, 00CR13SD11, 00CR13SD61, 00CRLFSW11, 00CRLFSD21, 00CRLFSD31, 00CRLFSD11, 00CRLFSD32, Trip Blank

GASOLINE RANGE ORGANICS (GRO)

SUMMARY

I.) General:

The analyses for GRO were performed using Methods AK-101 and SW 8021.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was taken.

IV.) Blanks:

There no detections in the method or trip blanks. No action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%Rs) of bromofluoromethane were below the 60-120% QC limits in the following samples:

Sample ID	%R
00CR13SO31	49
00CR13SO71	32
00CR13SO72	24
00CR13SO81	54
00CR13SD11	31
00CR13SD61	37
00CRLFSD21	53
00CRLFSD31	43
00CRLFSD11	57
00CRLFSD32	38

All positive and non-detect GRO results in these samples were flagged as estimated (J) and (UJ).

VI.) Laboratory Control Samples (LCS):

Fourteen LCSs were analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples from this SDG were not analyzed by the laboratory. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL):

All Compound Quantitation and CRQL criteria were met. No action was necessary.

XI.) System Performance:

All System Performance criteria were met. No action was taken.

DIESEL RANGE ORGANICS (DRO) AND RESIDUAL RANGE ORGANICS (RRO)

SUMMARY

I.) General:

The analyses for DRO and RRO were performed using Methods AK-101 and AK-102, respectively.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were observed in the analysis of these two fractions of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was taken.

IV.) Blanks:

There were no detections in the method blanks. No action was required.

V.) Surrogate Recoveries:

The surrogate (o-terphenyl) was diluted out of samples 00CR13SO71, 00CR13SO72 and 00CR13SD11. No action was required.

VI.) Laboratory Control Samples (LCS):

Ten LCSs were analyzed for these two fractions of the SDG. All LCS Recovery criteria were met. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples from this SDG were not analyzed by the laboratory. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was necessary.

XI.) System Performance:

All System Performance criteria were met. No action was taken.

BTEX

SUMMARY

I.) General:

The analyses for BTEX were performed using Method SW 8021.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was taken.

IV.) Blanks:

There no detections in the method and trip blanks. No action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%Rs) of bromofluoromethane were below the 60-120% QC limits in the following samples:

Sample	%R
00CR13SO31	49
00CR13SO71	32
00CR13SO72	24
00CR13SO81	54
00CR13SD11	31
00CR13SD61	37

All BTEX results (benzene, toluene, ethylbenzene and xylenes) in these samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

VI.) Laboratory Control Samples (LCS):

Eight LCSs were analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was necessary.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples from this SDG were not analyzed by the laboratory. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was taken.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was necessary.

XI.) System Performance:

All System Performance criteria were met. No action was taken.

Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring
Analytical Method: **AK 101 Water**
Sample Prep Method: 5030B

UNITS: ug/L

ID	Client Sample Name	Gasoline Range Organics
01A	00CRLFGWC52	ND(100)
02A	00CRLFGWC51	ND(100)
03A	00CRLFGWC41	ND(100)
11A	00CRLFGWC31	ND(100)
12A	00CRLFSWC12	ND(100)
13A	00CRLFSWC31	ND(100)
14A	00CRLFGW11	ND(100)
15A	00CRLFGWC61	ND(100)
16A	00CRLFGWC71	ND(100)
17A	00CRLFGWC11	ND(100)
26A	00CRLFSW11	ND(100)

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring

Analytical Method: AK 101 Soil
Sample Prep Method: 5030B

UNITS: mg/Kg

ID	Client Sample Name	Gasoline Range Organics
27A	00CRLFSD21	ND(1.4) UJ
28A	00CRLFSD31	ND(1.6) UJ
29A	00CRLFSD11	ND(1.7) UJ
30A	00CRLFSD32	ND(2.0) UJ

YMS
12-29-00

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

roject: Cape Romanzof Long Term Monitoring
lient: Bethel Native Corporation
lient Project Number: Cape Romanzof Long Term
Monitoring

Analytical Method: **BTX/GAS Water (8021)**
Sample Prep Method: 5030B

UNITS: ug/L

ID	Client Sample Name	Benzene	Toluene	Ethyl Benzene	Xylenes	Gasoline Range Organics
04A	00CR15GW21	700(10)	170(10)	140(10)	370(20)	4,400(1,000)
05A	00CR15GW71	1.3(1.0)	1.1(1.0)	ND(1.0)	3.3(2.0)	ND(100)
06A	00CR15GW81	ND(1.0)	ND(1.0)	ND(1.0)	2.0(2.0)	ND(100)
07A	00CR13SW12	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(100)
08A	00CR13SW11	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(100)
09A	00CR13SW31	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(100)
10A	00CR13SW21	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	150(100)
18A	00CR13GW11	ND(1.0)	ND(1.0)	ND(1.0)	2.9(2.0)	ND(100)
19A	00CR13GW21	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(100)

lease Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring

Analytical Method: **BTX/GAS Soil (8021)**
Sample Prep Method: 5030B

UNITS: mg/Kg

ID	Client Sample Name	Benzene	Toluene	Ethyl Benzene	Xylenes	Gasoline Range Organics
20A	00CR13SO31	ND(0.0089) UJ	ND(0.0089) UJ	ND(0.0089) UJ	ND(0.018) UJ	ND(0.89) UJ
21A	00CR13SO71	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.074)	ND(3.7) UJ
22A	00CR13SO72	ND(0.049)	ND(0.049)	ND(0.049)	ND(0.099)	ND(4.9) UJ
23A	00CR13SO81	ND(0.012)	ND(0.012)	ND(0.012)	ND(0.025)	ND(1.2) UJ
24A	00CR13SD11	ND(0.083)	ND(0.083)	ND(0.083)	ND(0.17)	13(8.3) J
25A	00CR13SD61	ND(0.054)	ND(0.054)	ND(0.054)	ND(0.11)	ND(5.4) UJ
31A	Trip Blank	ND(0.027)	ND(0.027)	ND(0.027)	ND(0.054)	ND(2.7)

YNS
12-24-00

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

roject: Cape Romanzof Long Term Monitoring
lient: Bethel Native Corporation
lient Project Number: Cape Romanzof Long Term
lonitoring

nalytical Method: **DRO by AK 102**
mple Prep Method: 3510C

UNITS: mg/L

ID	Client Sample Name	Diesel Range Organics
)1B	00CRLFGWC52	ND(0.10)
)2B	00CRLFGWC51	ND(0.10)
)3B	00CRLFGWC41	ND(0.10)
1B	00CRLFGWC31	ND(0.10)
2B	00CRLFSWC12	ND(0.11)
3B	00CRLFSWC31	ND(0.10)
4B	00CRLFGW11	ND(0.10)
5B	00CRLFGWC61	ND(0.10)
6B	00CRLFGWC71	ND(0.10)
7B	00CRLFGWC11	ND(0.11)
6B	00CRLFSW11	ND(0.11)

ease Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring
Analytical Method: **DRO in Soil by AK102**
Sample Prep Method: 3550B

UNITS: mg/Kg

ID	Client Sample Name	Diesel Range Organics
27B	00CRLFSD21	310(8.6)
28B	00CRLFSD31	14(13)
29B	00CRLFSD11	21(11)
30B	00CRLFSD32	18(14)

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring

Analytical Method: **DRO/RRO by AK 102/103**
Sample Prep Method: 3510C

UNITS: mg/L

ID	Client Sample Name	Diesel Range Organics	Residual Range Organics
04B	00CR15GW21	3.2(0.11)	ND(0.22)
05B	00CR15GW71	0.46(0.10)	0.69(0.21)
06B	00CR15GW81	0.16(0.10)	0.23(0.21)
07B	00CR13SW12	ND(0.10)	0.22(0.21)
08B	00CR13SW11	ND(0.10)	0.23(0.21)
09B	00CR13SW31	ND(0.10)	ND(0.21)
10B	00CR13SW21	ND(0.10)	ND(0.21)
18B	00CR13GW11	1.9(0.11)	ND(0.22)
19B	00CR13GW21	ND(0.10)	ND(0.21)

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Summary Tabular Analytical Report

Analytica Alaska Inc.
Work Order: A0009068

Project: Cape Romanzof Long Term Monitoring
Client: Bethel Native Corporation
Client Project Number: Cape Romanzof Long Term Monitoring

Analytical Method: **DRO/RRO AK 102/103**
Sample Prep Method: 3550B

UNITS: mg/Kg

ID	Client Sample Name	Diesel Range Organics	Residual Range Organics
20B	00CR13SO31	48(4.9)	140(9.8)
21B	00CR13SO71	8,900(140)	6,800(270)
22B	00CR13SO72	12,000(130)	6,000(250)
23B	00CR13SO81	620(8.9)	810(18)
24B	00CR13SD11	52,000(270)	3,800(540)
25B	00CR13SD61	4,300(100)	4,300(210)

Please Note: ND = Not detected at or above the reporting limit, value in parentheses is PQL

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Compound	MS, %R	MSD, %R
1,2,3-trichlorobenzene	45	
trans-1,4-dichloro-2-butene	44	49
2-chloroethyl vinyl ether	0	0
idomethane	75	
4-methyl-2-pentanone	125	130

Data validation action based on MS / MSD criteria alone was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All Internal Standards Performance criteria were met. No action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was necessary.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was required.

XII.) System Performance:

All System Performance criteria were met. No action was taken.

SEMIVOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for semivolatile organics were performed by Gas Chromatography / Mass Spectroscopy (GC / MS) using Method SW 8270C.

II.) Overall Assessment of Data:

All laboratory were acceptable with qualifications.

MAJOR ISSUES

No major problems were encountered in this fraction of the SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Difference (%D) was 36.8% for hexachlorocyclopentadiene in the standards analyzed on instrument MS1 at 11:15 on 10/11/00 at 11:15, which exceeded the 25% QC limit. All results for this compound in the SDG samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

The Percent Differences (%Ds) exceeded the 25% QC limit for the standards analyzed on 10/11/00 at 23:30 on instrument MS1 for the following compounds:

4-methylphenol	44.2%
benzoic acid	62.3%
4-chloroaniline	65.9%
4-chloro-3-methylphenol	64.6%
4-nitrophenol	37.2%
pentachlorophenol	60.3%

All results for these compounds in SDG samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

There were no detections in the method blank. No action was necessary.

Tentatively Identified Compounds (TIC):

TIC data was not present in the data package. No action was required.

V.) Surrogate Recoveries:

The Percent Recoveries (%Rs) of terphenyl-d14 were 24.0% and 32.7%, respectively, in samples 00CR15GW21 and 00CR15GW71, which were below the 33-141% QC limits. Since only one %R was below the QC limits in the base/neutral fraction of each sample, no action was required.

VI.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. Eight Percent Recoveries (%Rs) were slightly below their respective QC limits. Data validation action based on LCS criteria was not required.. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples were not analyzed in this SDG. Data validation action based on MS / MSD criteria alone was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD's):

All ISTD criteria were met. No action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was taken.

XII.) System Performance:

All System Performance criteria were met. No action was taken.

POLYCHLORINATED BIPHENYLS (PCBs)

SUMMARY

I.) General:

The analyses for PCB's were performed by gas chromatography using Method SW 8082.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

There were no major problems associated with this SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

Resolution and PEM standards were not required for Method SW 8082 analysis. No action was taken.

III.) Calibration:

All Initial Calibration and Continuing Calibration criteria were met. No action was necessary.

IV.) Blanks:

There were no detections in the method blanks. No action was taken.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

Two LCSs were analyzed with this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples were not analyzed with this SDG. No action was necessary.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Pesticide/PCB Identification Summary (PIS):

PIS evaluation and qualification were not required for this method. No action was necessary.

X.) Sample Cleanup Check:

The sample extracts were not cleaned using either florisil cartridge or GPC clean-up methods. No action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was necessary.

TOTAL METALS AND IRON

SUMMARY

I.) General:

The analyses for metals were performed by Inductively Coupled Plasma Spectroscopy (ICP) using Method SW 6060B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

Initial Calibration and Initial Calibration Verification (ICV):

All Initial Calibration and ICV criteria were met. No action was necessary.

Continuing Calibration Verification (CCV)

The Percent Recoveries (%Rs) of potassium and sodium were 85% and 79%, respectively, for the standard analyzed at 18:03 on 10/5/00, which were below the 90-110% QC limits. All results for these two analytes in the associated samples, which consisted entirely of positive results, were flagged as estimated (J). The associated samples were 00CRLFGW11, 00CRLFGWC61, 00CRLFGWC71, 00CRLFGWC52, 00CRLFGWC51 and 00CRLFGWC41.

The Percent Recovery (%R) of sodium was 87% for the standard analyzed at 17:14 on 10/5/00, which was below the 90-110% QC limits. All results for this analyte were previously qualified based on the previous CCV. No further action was necessary.

III.) Blanks:

There were no positive results in the preparation and calibration blanks greater than the Practical Quantitation Limit (PQL). No action was required.

IV.) ICP Interference Check Sample Results:

All Interference Check Sample Percent Recovery criteria were met. No action was required.

The following analytes were detected in ICS Solution A:

beryllium	1 ug/L
chromium	10 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in any sample at a concentration greater than their respective concentrations in ICS solution A, data qualification was not required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution samples were not analyzed in this SDG. No action was necessary.

VI.) Laboratory Control Samples (LCS):

All LCS Recovery criteria were met. No action was taken.

VII.) Duplicate Sample Analysis (MD):

All Duplicate Sample criteria were met. No action was required.

VIII.) Matrix Spike Recovery (MS):

The Percent Recovery (%R) was 135% for aluminum in spiked sample 00CR15GW21MS, which exceeded the 75-125% QC limits. All positive results for aluminum in the SDG samples were flagged as estimated (J).

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was necessary.

XI.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

ALKALINITY

SUMMARY

I.) General:

The analyses for alkalinity were performed using Method EPA 310.1.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of alkalinity in the method blanks. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

All Relative Percent Difference (RPD) criteria were met. No action was required.

VII.) Matrix Spike Recovery (MS):

All MS Recovery criteria were met. No action was required.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

NITRATE

SUMMARY

I.) General:

The analyses for nitrate were performed using Method EPA 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of nitrate in the method blanks. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

All Relative Percent Difference (RPD) criteria were met. No action was required.

VII.) Matrix Spike Recovery (MS):

All MS Recovery criteria were met. No action was required.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

SULFATE

SUMMARY

I.) General:

The analyses for sulfate were performed using Method EPA 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of sulfate in the method blanks. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

All Relative Percent Difference (RPD) criteria were met. No action was required.

VII.) Matrix Spike Recovery (MS):

All MS Recovery criteria were met. No action was required.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

The Percent Differences (%Ds) exceeded the 25% QC limit for the standards analyzed on 10/13/00 at 111:45 on instrument MS1 for the following compounds:

2-chloronaphthalene	31.2%
benzoic acid	36.4%
hexachlorocyclopentadiene	39.9%
pentachlorophenol	36.1%

All results for these compounds in associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 00CR13SO31, 00CR13SO71, 00CR13SO81, 00CRLFSD21, 00CRLFSD31, 00CRLFSD11 and 00CRLFSD32.

The Percent Difference (%D) was 33.9% for benzoic acid in the standards analyzed on 10/18/00 at 12:14 on instrument MS1, exceeded the 25% QC limit. The non-detect result for this compound in associated sample 00CR13SO72 was flagged as estimated (UJ).

IV.) Blanks:

Bis(2-ethylhexyl)phthalate and di-n-butylphthalate were detected at 3.1 ug/L and 3.2 ug/L, respectively, in method blank MB-1011. All detections of these two compounds in the SDG water samples, which were less than 10X the blank amounts were flagged as undetected (U), with results less than the CRQL being raised to the CRQL.

Tentatively Identified Compounds (TIC):

TIC data was not present in the data package. No action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%Rs) were outside the QC limits in the following samples:

Sample ID	Surrogate	%R	QC Limits
00CR13SO71	2-fluorophenol	25	30-122%
	phenol-d5	26	30-117%
00CR13SO72	2-fluorophenol	21	30-122%
	phenol-d5	28	30-117%
00CR13SD11	2-fluorophenol	27	30-122%
	phenol-d5	27	30-117%
	nitrobenzene-d5	27	30-122%
00CR13SD61	nitrobenzene-d5	28	30-122%
00CRLFSD21	2-fluorophenol	22	30-122%
	terphenyl-d14	139	30-134%
00CRLFSD31	nitrobenzene-d5	25	30-122%

00CRLFSD32	2-fluorophenol	27	30-122%
	nitrobenzene-d5	29	30-122%

If only one %R was outside the QC limits in the base neutral and/or acid fraction, no action was required. All acid fraction results in samples 00CR13SO71, 00CR13SO72 and 00CR13SD11, which consisted entirely of non-detects, were flagged as estimated (UJ) since two acid surrogates were outside the QC limits in each sample.

VI.) Laboratory Control Samples (LCS):

Seven LCSs were analyzed in this fraction of the SDG. Thirty-four LCS Percent Recoveries (%Rs) were below their respective QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD11MS and 00CRLFSD11MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
bromomethane	177		60-140%
2,2-chloropropane	123		80-120%
1,1,1-trichloroethane	123		80-120%
1,3-dichlorobenzene	77	68	80-120%
1,4-dichlorobenzene	77	71	80-120%
1,2-dichlorobenzene	74	68	80-120%
1,2-dibromo-3-chloropropane	126		80-120%
1,2,4-trichlorobenzene	52	68	80-120%
naphthalene	71	65	80-120%
1,2,3-trichlorobenzene	71	71	80-120%
4-methyl-2-pentanone		55	80-120%
vinyl acetate	5	4	65-135%
1,2,4-trimethylbenzene		77	80-120%
4-isopropyltoluene		77	80-120%

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD32MS and 00CRLFSD32MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
bis(2-chloroisopropyl)ether	40	43	53-113%
2-nitrophenol	47		52-111%
2,4-dimethylphenol	14	15	58-128%
2,4-dinitrophenol	43	47	53-109%
3,3'-dichlorobenzidine	0	0	15-100%

Data validation action based on MS / MSD criteria alone was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD's):

All ISTD criteria were met. No action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was taken.

XII.) System Performance:

All System Performance criteria were met. No action was taken.

POLYCHLORINATED BIPHENYLS (PCB)

SUMMARY

I.) General:

The analyses for PCBs were performed by gas chromatography using Method SW 8082.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no major problems associated with this SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

Resolution and PEM standards were not required for SW846 Method 8082 analysis. No action was taken.

Order # M0-09-219
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 01A 00CR15GW21 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		12		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		40		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		11		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

12-24-00

Sample: 01A 00CR15GW21 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		ND	U	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		38.7		Min: 21	Max: 100	
d5-Phenol		36.7		Min: 10	Max: 94	
d5-Nitrobenzene		55.0		Min: 35	Max: 114	
2-Fluorobiphenyl		46.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		48.7		Min: 10	Max: 123	
d14-Terphenyl		24.0	*	Min: 33	Max: 141	

Sample: 01B 00CR15GW21 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	110		5.0	mg/L	09/29/00

12-24-00

Sample: 01C 00CR15GW21 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Iron		10		0.050	mg/L	10/05/00

Sample: 01D 00CR15GW21 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	ND		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	42		0.50	mg/L	09/26/00

Sample: 02A 00CR15GW71 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.4	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.4	ug/L	10/11/00
2-Chlorophenol		ND		5.4	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.4	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.4	ug/L	10/11/00
Benzyl alcohol		ND		11	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.4	ug/L	10/11/00
2-Methylphenol		ND		5.4	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.4	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.4	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.4	ug/L	10/11/00
Hexachloroethane		ND		5.4	ug/L	10/11/00
Nitrobenzene		ND		5.4	ug/L	10/11/00
Isophorone		ND		5.4	ug/L	10/11/00
2-Nitrophenol		ND		5.4	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.4	ug/L	10/11/00
Benzoic acid		ND	UJ	140	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.4	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.4	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.4	ug/L	10/11/00
Naphthalene		ND		11	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.4	ug/L	10/11/00
Hexachlorobutadiene		ND		5.4	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.4	ug/L	10/11/00
2-Methylnaphthalene		ND		5.4	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	11	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.4	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.4	ug/L	10/11/00
2-Chloronaphthalene		ND		11	ug/L	10/11/00
2-Nitroaniline		ND		54	ug/L	10/11/00
Dimethylphthalate		ND		5.4	ug/L	10/11/00
Acenaphthylene		ND		5.4	ug/L	10/11/00
3-Nitroaniline		ND		54	ug/L	10/11/00
Acenaphthene		ND		5.4	ug/L	10/11/00
2,4-Dinitrophenol		ND		76	ug/L	10/11/00

12-24-00

Sample: 02A 00CR15GW71 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
4-Nitrophenol		ND	UJ	54	ug/L	10/11/00
Dibenzofuran		ND		5.4	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.4	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.4	ug/L	10/11/00
Diethylphthalate		ND		5.4	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.4	ug/L	10/11/00
Fluorene		ND		5.4	ug/L	10/11/00
4-Nitroaniline		ND		54	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		54	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.4	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.4	ug/L	10/11/00
Hexachlorobenzene		ND		5.4	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.4	ug/L	10/11/00
Phenanthrene		ND		5.4	ug/L	10/11/00
Anthracene		ND		5.4	ug/L	10/11/00
Di-n-butylphthalate		ND		5.4	ug/L	10/11/00
Fluoranthene		ND		5.4	ug/L	10/11/00
Pyrene		ND		5.4	ug/L	10/11/00
Butylbenzylphthalate		ND		5.4	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		22	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.4	ug/L	10/11/00
Chrysene		ND		5.4	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.4	ug/L	10/11/00
Di-n-octylphthalate		ND		5.4	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.4	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.4	ug/L	10/11/00
Benzo(a)pyrene		ND		5.4	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.4	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.4	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.4	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		22	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		62.5		Min: 21	Max: 100	
d5-Phenol		58.1		Min: 10	Max: 94	
d5-Nitrobenzene		75.5		Min: 35	Max: 114	
2-Fluorobiphenyl		76.4		Min: 43	Max: 116	
2,4,6-Tribromophenol		68.8		Min: 10	Max: 123	
d14-Terphenyl		32.7	*	Min: 33	Max: 141	

Sample: 02B 00CR15GW71 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	22		5.0	mg/L	09/29/00

MS
12-24-00

Sample: 02C 00CR15GW71 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Iron		110		0.050	mg/L	10/05/00

Sample: 02D 00CR15GW71 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	0.99		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	3.1		0.50	mg/L	09/26/00

Sample: 03A 00CR15GW81 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00

JMS
12-26-00

Order # M0-09-219
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 03A 00CR15GW81 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		60.0		Min: 21		Max: 100
d5-Phenol		53.3		Min: 10		Max: 94
d5-Nitrobenzene		73.0		Min: 35		Max: 114
2-Fluorobiphenyl		78.0		Min: 43		Max: 116
2,4,6-Tribromophenol		73.3		Min: 10		Max: 123
d14-Terphenyl		39.0		Min: 33		Max: 141

Sample: 03B 00CR15GW81 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	26		5.0	mg/L	09/29/00

12-2-00

Order # M0-09-219
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 03C 00CR15GW81 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Iron		28		0.050	mg/L	10/05/00

Sample: 03D 00CR15GW81 Collected: 09/18/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	1.0		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.9		0.50	mg/L	09/26/00

Sample: 04A 00CR13SW12 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00

JMH
12-29-00

Sample: 04A 00CR13SW12 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		60.7		Min: 21	Max: 100	
d5-Phenol		55.3		Min: 10	Max: 94	
d5-Nitrobenzene		79.0		Min: 35	Max: 114	
2-Fluorobiphenyl		86.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		66.7		Min: 10	Max: 123	
d14-Terphenyl		77.0		Min: 33	Max: 141	

Sample: 04B 00CR13SW12 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	0.10		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.2		0.50	mg/L	09/26/00

12-24-00

Sample: 05A 00CR13SW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

12-24-00

Sample: 05A 00CR13SW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00

SURROGATES, % Recovery	Result		Min		Max
2-Fluorophenol	46.7	Min:	21	Max:	100
d5-Phenol	41.3	Min:	10	Max:	94
d5-Nitrobenzene	68.0	Min:	35	Max:	114
2-Fluorobiphenyl	78.0	Min:	43	Max:	116
2,4,6-Tribromophenol	61.3	Min:	10	Max:	123
d14-Terphenyl	67.0	Min:	33	Max:	141

Sample: 05B 00CR13SW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	0.11		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.2		0.50	mg/L	09/26/00

Sample: 06A 00CR13SW31 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

MS
12-24-02

Sample: 06A 00CR13SW31 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		ND	U	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		55.3		Min: 21	Max: 100	
d5-Phenol		49.3		Min: 10	Max: 94	
d5-Nitrobenzene		67.0		Min: 35	Max: 114	
2-Fluorobiphenyl		75.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		73.3		Min: 10	Max: 123	
d14-Terphenyl		85.0		Min: 33	Max: 141	

Sample: 06B 00CR13SW31 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	ND		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.2		0.50	mg/L	09/26/00

MR
12-24-00

Sample: 07A 00CR13SW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

MS
12-24-00

Sample: 07A 00CR13SW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		ND	U J	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		58.0		Min: 21	Max: 100	
d5-Phenol		51.3		Min: 10	Max: 94	
d5-Nitrobenzene		71.0		Min: 35	Max: 114	
2-Fluorobiphenyl		80.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		66.7		Min: 10	Max: 123	
d14-Terphenyl		86.0		Min: 33	Max: 141	

Sample: 07B 00CR13SW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	ND		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.2		0.50	mg/L	09/26/00

Sample: 08A 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/05/00
PCB-1232		ND		0.51	ug/L	10/05/00
PCB-1242		ND		0.51	ug/L	10/05/00
PCB-1248		ND		0.51	ug/L	10/05/00
PCB-1254		ND		0.51	ug/L	10/05/00
PCB-1260		ND		0.51	ug/L	10/05/00
PCB-1016		ND		0.51	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		90.2		Min: 29	Max: 133	
Decachlorobiphenyl		42.7		Min: 26	Max: 137	

Sample: 08B 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0	4.1 JB U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

12-24-00

Sample: 08B 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		106		Min: 88	Max: 110	
p-Bromofluorobenzene		108		Min: 86	Max: 115	

DNS
12-24-00

Sample: 08D 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00

12-24-00

Sample: 08D 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		54.0		Min: 21	Max: 100	
d5-Phenol		51.3		Min: 10	Max: 94	
d5-Nitrobenzene		75.0		Min: 35	Max: 114	
2-Fluorobiphenyl		83.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		58.7		Min: 10	Max: 123	
d14-Terphenyl		50.0		Min: 33	Max: 141	

12-24-00

Sample: 08E 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	ND		5.0	mg/L	09/29/00

Sample: 08F 00CRLFGW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		110	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.95		0.0040	mg/L	10/05/00
Beryllium		0.0037		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		11		0.10	mg/L	10/05/00
Chromium		0.19		0.010	mg/L	10/05/00
Cobalt		0.061		0.020	mg/L	10/05/00
Copper		0.10		0.0050	mg/L	10/05/00
Iron		110		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		27		0.10	mg/L	10/05/00
Manganese		2.3		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		0.13		0.040	mg/L	10/05/00
Potassium		13	J	1.0	mg/L	10/09/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		5.3	J	3.0	mg/L	10/09/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.26		0.010	mg/L	10/05/00
Zinc		0.27		0.0050	mg/L	10/05/00

Sample: 09A 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/05/00
PCB-1232		ND		0.51	ug/L	10/05/00
PCB-1242		ND		0.51	ug/L	10/05/00
PCB-1248		ND		0.51	ug/L	10/05/00
PCB-1254		ND		0.51	ug/L	10/05/00
PCB-1260		ND		0.51	ug/L	10/05/00
PCB-1016		ND		0.51	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		82.9		Min: 29	Max: 133	
Decachlorobiphenyl		59.8		Min: 26	Max: 137	

MS
12-14-00

Sample: 09B 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		~~5.0~~ 1.5	~~JB~~ U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

MS
12-24-00

Sample: 09B 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		108		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

12-24-00

Sample: 09D 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00

DMS
12-24-00

Sample: 09D 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		50.7		Min: 21	Max: 100	
d5-Phenol		46.0		Min: 10	Max: 94	
d5-Nitrobenzene		70.0		Min: 35	Max: 114	
2-Fluorobiphenyl		81.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		66.7		Min: 10	Max: 123	
d14-Terphenyl		66.0		Min: 33	Max: 141	

12-24-00

Sample: 09E 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	10		5.0	mg/L	09/29/00

Sample: 09F 00CRLFGWC61 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		14	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.23		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		5.1		0.10	mg/L	10/05/00
Chromium		0.020		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		0.0087		0.0050	mg/L	10/05/00
Iron		18		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		4.8		0.10	mg/L	10/05/00
Manganese		0.40		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		2.8	J	1.0	mg/L	10/09/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		4.6	J	3.0	mg/L	10/09/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.022		0.010	mg/L	10/05/00
Zinc		0.035		0.0050	mg/L	10/05/00

Sample: 10A 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/05/00
PCB-1232		ND		0.51	ug/L	10/05/00
PCB-1242		ND		0.51	ug/L	10/05/00
PCB-1248		ND		0.51	ug/L	10/05/00
PCB-1254		ND		0.51	ug/L	10/05/00
PCB-1260		ND		0.51	ug/L	10/05/00
PCB-1016		ND		0.51	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		86.6		Min: 29	Max: 133	
Decachlorobiphenyl		70.7		Min: 26	Max: 137	

MS
12-24-00

Sample: 10B 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0 3.2 JB	U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

12-OK-00

Sample: 10B 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

JMS
12-27-00

Sample: 10D 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.6	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.6	ug/L	10/11/00
2-Chlorophenol		ND		5.6	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.6	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.6	ug/L	10/11/00
Benzyl alcohol		ND		11	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.6	ug/L	10/11/00
2-Methylphenol		ND		5.6	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.6	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.6	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.6	ug/L	10/11/00
Hexachloroethane		ND		5.6	ug/L	10/11/00
Nitrobenzene		ND		5.6	ug/L	10/11/00
Isophorone		ND		5.6	ug/L	10/11/00
2-Nitrophenol		ND		5.6	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.6	ug/L	10/11/00
Benzoic acid		ND	UJ	140	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.6	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.6	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.6	ug/L	10/11/00
Naphthalene		ND		11	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.6	ug/L	10/11/00
Hexachlorobutadiene		ND		5.6	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.6	ug/L	10/11/00
2-Methylnaphthalene		ND		5.6	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	11	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.6	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.6	ug/L	10/11/00

MS
12-24-00

Sample: 10D 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		11	ug/L	10/11/00
2-Nitroaniline		ND		56	ug/L	10/11/00
Dimethylphthalate		ND		5.6	ug/L	10/11/00
Acenaphthylene		ND		5.6	ug/L	10/11/00
3-Nitroaniline		ND		56	ug/L	10/11/00
Acenaphthene		ND		5.6	ug/L	10/11/00
2,4-Dinitrophenol		ND		78	ug/L	10/11/00
4-Nitrophenol		ND	UJ	56	ug/L	10/11/00
Dibenzofuran		ND		5.6	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.6	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.6	ug/L	10/11/00
Diethylphthalate		ND		5.6	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.6	ug/L	10/11/00
Fluorene		ND		5.6	ug/L	10/11/00
4-Nitroaniline		ND		56	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		56	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.6	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.6	ug/L	10/11/00
Hexachlorobenzene		ND		5.6	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.6	ug/L	10/11/00
Phenanthrene		ND		5.6	ug/L	10/11/00
Anthracene		ND		5.6	ug/L	10/11/00
Di-n-butylphthalate		ND		5.6	ug/L	10/11/00
Fluoranthene		ND		5.6	ug/L	10/11/00
Pyrene		ND		5.6	ug/L	10/11/00
Butylbenzylphthalate		ND		5.6	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		22	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.6	ug/L	10/11/00
Chrysene		ND		5.6	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.6	ug/L	10/11/00
Di-n-octylphthalate		ND		5.6	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.6	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.6	ug/L	10/11/00
Benzo(a)pyrene		ND		5.6	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.6	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.6	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.6	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		22	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		49.4		Min: 21	Max: 100	
d5-Phenol		44.7		Min: 10	Max: 94	
d5-Nitrobenzene		67.3		Min: 35	Max: 114	
2-Fluorobiphenyl		72.7		Min: 43	Max: 116	
2,4,6-Tribromophenol		58.8		Min: 10	Max: 123	
d14-Terphenyl		39.1		Min: 33	Max: 141	

12-24-00

Sample: 10E 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	18		5.0	mg/L	09/29/00

Sample: 10F 00CRLFGWC71 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		16	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.28		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		7.6		0.10	mg/L	10/05/00
Chromium		0.048		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		0.015		0.0050	mg/L	10/05/00
Iron		24		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		8.1		0.10	mg/L	10/05/00
Manganese		0.43		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		6.5	J	1.0	mg/L	10/09/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		5.1	J	3.0	mg/L	10/09/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.052		0.010	mg/L	10/05/00
Zinc		0.055		0.0050	mg/L	10/05/00

Sample: 11A 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.56	ug/L	10/05/00
PCB-1232		ND		0.56	ug/L	10/05/00
PCB-1242		ND		0.56	ug/L	10/05/00
PCB-1248		ND		0.56	ug/L	10/05/00
PCB-1254		ND		0.56	ug/L	10/05/00
PCB-1260		ND		0.56	ug/L	10/05/00
PCB-1016		ND		0.56	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		93.3		Min: 29	Max: 133	
Decachlorobiphenyl		53.9		Min: 26	Max: 137	

YMS
12-24-00

Sample: 11B 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		ND		5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

MS
12-24-00

Sample: 11B 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		104		Min: 80	Max: 120	
Toluene d-8		108		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

SMS
12-24-00

Sample: 11D 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00

12-24-00

Sample: 11D 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		61.3		Min: 21	Max: 100	
d5-Phenol		50.7		Min: 10	Max: 94	
d5-Nitrobenzene		83.0		Min: 35	Max: 114	
2-Fluorobiphenyl		110		Min: 43	Max: 116	
2,4,6-Tribromophenol		64.7		Min: 10	Max: 123	
d14-Terphenyl		50.0		Min: 33	Max: 141	

12-14-00

Sample: 11E 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	22		5.0	mg/L	09/29/00

Sample: 11F 00CRLFGWC52 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		12	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.22		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		8.6		0.10	mg/L	10/05/00
Chromium		0.011		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		0.011		0.0050	mg/L	10/05/00
Iron		27		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		3.5		0.10	mg/L	10/05/00
Manganese		2.5		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		2.3	J	1.0	mg/L	10/09/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		4.9	J	3.0	mg/L	10/09/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.019		0.010	mg/L	10/05/00
Zinc		0.060		0.0050	mg/L	10/05/00

Sample: 12A 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/05/00
PCB-1232		ND		0.51	ug/L	10/05/00
PCB-1242		ND		0.51	ug/L	10/05/00
PCB-1248		ND		0.51	ug/L	10/05/00
PCB-1254		ND		0.51	ug/L	10/05/00
PCB-1260		ND		0.51	ug/L	10/05/00
PCB-1016		ND		0.51	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		92.7		Min: 29	Max: 133	
Decachlorobiphenyl		72.0		Min: 26	Max: 137	

12-24-00

Sample: 12B 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		ND		5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

DMS
12-24-00

Sample: 12B 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		108		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

MS
12-14-00

Sample: 12D 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00

YMS
12-24-00

Sample: 12D 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		60.7		Min: 21		Max: 100
d5-Phenol		52.0		Min: 10		Max: 94
d5-Nitrobenzene		72.0		Min: 35		Max: 114
2-Fluorobiphenyl		81.0		Min: 43		Max: 116
2,4,6-Tribromophenol		56.7		Min: 10		Max: 123
d14-Terphenyl		64.0		Min: 33		Max: 141

12-24-00

Sample: 12E 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	20		5.0	mg/L	09/29/00

Sample: 12F 00CRLFGWC51 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		3.1	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.089		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		6.0		0.10	mg/L	10/05/00
Chromium		ND		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		ND		0.0050	mg/L	10/05/00
Iron		7.3		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		1.6		0.10	mg/L	10/05/00
Manganese		1.6		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		1.2	J	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		3.7	J	3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		ND		0.010	mg/L	10/05/00
Zinc		0.034		0.0050	mg/L	10/05/00

Sample: 13A 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/05/00
PCB-1232		ND		0.51	ug/L	10/05/00
PCB-1242		ND		0.51	ug/L	10/05/00
PCB-1248		ND		0.51	ug/L	10/05/00
PCB-1254		ND		0.51	ug/L	10/05/00
PCB-1260		ND		0.51	ug/L	10/05/00
PCB-1016		ND		0.51	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		95.1		Min: 29	Max: 133	
Decachlorobiphenyl		89.0		Min: 26	Max: 137	

12-24-00

Sample: 13B 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0 ~~2.3~~	~~JB~~ U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

MS
12-24-00

Sample: 13B 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		ND	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		ND	UJ	2.0	ug/L	09/30/00
Napthalene		ND	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		ND	UJ	2.0	ug/L	09/30/00
Acetone		ND	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		ND	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		ND	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		106		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

MS
12-24-00

Sample: 13D 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		ND	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		ND	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		ND	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND	UJ	10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00

MR
12-24-00

Sample: 13D 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		ND	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		2.3	J	5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		59.3		Min: 21	Max: 100	
d5-Phenol		51.3		Min: 10	Max: 94	
d5-Nitrobenzene		67.0		Min: 35	Max: 114	
2-Fluorobiphenyl		75.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		61.3		Min: 10	Max: 123	
d14-Terphenyl		65.0		Min: 33	Max: 141	

12-14-00

Order # MO-09-219
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 13E 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	50		5.0	mg/L	09/29/00

Sample: 13F 00CRLFGWC41 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		49	J	0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.61		0.0040	mg/L	10/05/00
Beryllium		0.0021		0.0010	mg/L	10/05/00
Cadmium		0.0078		0.0050	mg/L	10/05/00
Calcium		24		0.10	mg/L	10/05/00
Chromium		0.12		0.010	mg/L	10/05/00
Cobalt		0.037		0.020	mg/L	10/05/00
Copper		0.12		0.0050	mg/L	10/05/00
Iron		77		0.050	mg/L	10/05/00
Lead		0.38		0.070	mg/L	10/05/00
Magnesium		19		0.10	mg/L	10/05/00
Manganese		3.1		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		0.069		0.040	mg/L	10/05/00
Potassium		1.2	J	1.0	mg/L	10/09/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		4.2	J	3.0	mg/L	10/09/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.15		0.010	mg/L	10/05/00
Zinc		0.53		0.0050	mg/L	10/05/00

MB
12-24-00

QA/QC REPORT
MATRIX SPIKE SUMMARY
10/17/00

PAGE: 16
ORDER#: M009219

CLIENT: BNCI

SAMPLE ID	ANALYTE	UNITS	ANAL DATE	RESULT	LIMIT	SPIKE	REF VAL	%REC	FLAG	QC SPECS LOW	QC SPECS UPPER
009219-01C	ICP Metals, Total	mg/L	10/05/00								
	Aluminum			5.3	0.050	2.0	2.6	135	*	70	130
	Antimony			0.52	0.050	0.50	ND	104		70	130
	Arsenic			2.2	0.10	2.0	ND	110		70	130
	Barium			2.2	0.0040	2.0	0.11	105		70	130
	Beryllium			0.052	0.0010	0.050	ND	104		70	130
	Cadmium			0.069	0.0050	0.065	ND	106		70	130
	Calcium			49	0.10	10	37	120		70	130
	Chromium			0.22	0.010	0.20	ND	110		70	130
	Cobalt			0.53	0.020	0.50	ND	106		70	130
	Copper			0.27	0.0050	0.25	ND	108		70	130
	Iron			12	0.050	1.0	10	NC		70	130
	Lead			0.50	0.070	0.50	ND	100		70	130
	Magnesium			20	0.10	10	9.6	104		70	130
	Manganese			6.2	0.010	0.50	5.5	NC		70	130
	Molybdenum			0.51	0.010	0.50	ND	102		70	130
	Nickel			0.51	0.040	0.50	ND	102		70	130
	Selenium			1.1	0.10	1.0	ND	110		70	130
	Silver			0.051	0.015	0.050	ND	102		70	130
	Thallium			0.49	0.40	0.50	ND	98.0		70	130
	Vanadium			0.53	0.010	0.50	ND	106		70	130
	Zinc			0.53	0.0050	0.50	0.014	103		70	130
9219-01C	ICP Metals, Total	mg/L	10/09/00								
	Potassium			11	1.0	10	2.0	90.0		70	130
	Sodium			17	3.0	10	7.5	95.0		70	130

QA/QC REPORT
SAMPLE DUPLICATE SUMMARY
10/17/00

PAGE: 21
ORDER#: M009219

CLIENT: BNCI

SAMPLE ID	ANALYTE	UNITS	ANAL DATE	RESULT	LIMIT	REF VAL	%RPD	FLAG	QC SPECS UPPER
009219-01B	ALKALINITY	mg/L	09/29/00	110	5.0	110	0.00		20
009219-01C	ICP Metals, Total	mg/L	10/05/00						
	Aluminum			2.6	0.050	2.6	0.00		20
	Antimony			ND	0.050	ND	NC		20
	Arsenic			ND	0.10	ND	NC		20
	Barium			0.12	0.0040	0.11	8.70		20
	Beryllium			ND	0.0010	ND	NC		20
	Cadmium			ND	0.0050	ND	NC		20
	Calcium			39	0.10	37	5.26		20
	Chromium			ND	0.010	ND	NC		20
	Cobalt			ND	0.020	ND	NC		20
	Copper			ND	0.0050	ND	NC		20
	Iron			11	0.050	10	9.52		20
	Lead			ND	0.070	ND	NC		20
	Magnesium			10	0.10	9.6	4.08		20
	Manganese			5.7	0.010	5.5	3.57		20
	Molybdenum			ND	0.010	ND	NC		20
	Nickel			ND	0.040	ND	NC		20
	Selenium			ND	0.10	ND	NC		20
	Silver			ND	0.015	ND	NC		20
	Thallium			ND	0.40	ND	NC		20
	Vanadium			ND	0.010	ND	NC		20
	Zinc			0.015	0.0050	0.014	6.90		20
D009219-01C	ICP Metals, Total	mg/L	10/09/00						
	Potassium			2.1	1.0	2.0	NC		20
	Sodium			7.6	3.0	7.5	NC		20
D009219-01D	NITRATE as N by IC	mg/L	09/26/00	ND	0.10	ND	NC		20
D009219-01D	SULFATE by IC	mg/L	09/26/00	42	0.50	42	0.00		20

VALIDATA
Chemical Services, Inc.
P.O. Box 930422, Norcross, GA 30003
(770) 923-3890
(770) 923-8769 (Fax)
www.datavalidator.com

DATA VALIDATION SUMMARY
REPORT

COMPANY:	BNCI
SITE NAME:	Cape Romanzof, Alaska
LAB ORDER NUMBER:	M0-09-220
CONTRACTED LAB:	Analytica Environmental Laboratories
QA/QC LEVEL:	EPA Level III
EPA SOW/METHODS:	EPA SW-846
VALIDATION GUIDELINES:	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 1994
SAMPLE MATRICES:	Soil and Water
TYPES OF ANALYSIS:	Volatile Organics, Semivolatile Organics, Polychlorinated Biphenyls (PCB), Total Metals, Iron, Alkalinity, Nitrate, Sulfate, Percent Moisture (%M)
SDG NUMBER:	M009220 (Level III)

OVERVIEW

SAMPLES:

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi-volatiles	PCBs	Total Metals
00CRLFGWC11	M009220-1	Water	X	X	X	X
00CR13GW11	M009220-2	Water		X		
00CR13GW21	M009220-3	Water		X		
00CR13SO31	M009220-4	Soil		X		
00CR13SO71	M009220-5	Soil		X		
00CR13SO72	M009220-6	Soil		X		
00CR13SO81	M009220-7	Soil		X		
00CR13SD11	M009220-8	Soil		X		
00CR13SD61	M009220-9	Soil		X		
00CRLFSW11	M009220-10	Water	X	X	X	X
00CRLFSD21	M009220-11	Soil	X	X	X	X
00CRLFSD31	M009220-12	Soil	X	X	X	X
00CRLFSD11	M009220-13	Soil	X	X	X	X
00CRLFSD32	M009229-14	Soil	X	X	X	X
00CRLFGWC31	M009220-15	Water	X	X	X	X
00CRLFSW12	M009220-16	Water	X	X	X	X
00CRLFSW31	M009220-17	Water	X	X	X	X
00CRLFSD11MS	M009220-13MS	Soil	X			
00CRLFSD11MSD	M009220-13MSD	Soil	X			

Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi-volatiles	PCBs	Total Metals
00CRLFSD32MS	M009229-14MS	Soil	X	X		
00CRLFSD32MSD	M009229-14MSD	Soil	X	X		
00CRLFSW12MS	M009220-16MS	Water	X			
00CRLFSW12MSD	M009220-16MSD	Water	X			

Client Sample #	Lab Sample #	Matrix	Alkalinity	Iron	Nitrate	Sulfate	%M
00CRLFGWC11	M009220-1	Water	X				
00CR13GW11	M009220-2	Water	X	X	X	X	
00CR13GW21	M009220-3	Water	X	X	X	X	
00CR13SO31	M009220-4	Soil					X
00CR13SO71	M009220-5	Soil					X
00CR13SO72	M009220-6	Soil					X
00CR13SO81	M009220-7	Soil					X
00CR13SD11	M009220-8	Soil					X
00CR13SD61	M009220-9	Soil					X
00CRLFSW11	M009220-10	Water	X				
00CRLFSD21	M009220-11	Soil					X
00CRLFSD31	M009220-12	Soil					X
00CRLFSD11	M009220-13	Soil					X
00CRLFSD32	M009229-14	Soil					X
00CRLFGWC31	M009220-15	Water	X				
00CRLFSW12	M009220-16	Water	X				
00CRLFSW31	M009220-17	Water	X				
00CRLFSD21MD	M009220-11MD	Soil					X
00CRLFSD31MD	M009220-12MD	Soil					X
00CRLFSD11MD	M009220-13MD	Soil					X
00CRLFSD32MD	M009229-14MD	Soil					X

Suffix Codes: MD = MATRIX DUPLICATE, MS = MATRIX SPIKE, MSD = MATRIX SPIKE DUPLICATE

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE: Jean M. Delashmit

Data Qualifier Definitions

J	-	The associated numerical value is an estimated quantity.
R	-	The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
U	-	The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
UJ	-	The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Analytica Environmental Laboratories - M009219 Organics and Inorganics

SAMPLES: 00CRLFGWC11, 00CR13GW11, 00CR13GW21, 00CR13SO31, 00CR13SO71, 00CR13SO72, 00CR13SO81, 00CR13SD11, 00CR13SD61, 00CRLFSW11, 00CRLFSD21, 00CRLFSD31, 00CRLFSD11, 00CRLFSD32, 00CRLFGWC31, 00CRLFSW12, 00CRLFSW31

VOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for volatile organics were performed by gas chromatography / mass spectroscopy (GC / MS) using Method SW 8260C.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in this fraction of the SDG..

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSDs) were 50.6% and 33.5%, respectively, for acetone and vinyl acetate in the standards analyzed on 9/28/00 on instrument MS2, which exceeded the 30% QC limit. All results for these two compounds in the associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 00CRLFGWC11, 00CRLFSW11, 00CRLFGWC31, 00CRLFSW12 and 00CRLFSW31.

The Percent Relative Standard Deviations (%RSDs) exceeded the 25% QC limit for the standards analyzed on 10/3/00 on instrument MS1 for the following compounds:

bromomethane	31.7%
acetone	47.0%
methylene chloride	58.7%
1,2,3-trichlorobenzene	32.3%

All positive and non-detect results for these compounds in the associated samples were flagged as estimated (J) and (UJ). The associated samples were 00CRLFSD21, 00CRLFSD31, 00CRLFSD11 and 00CRLFSD32.

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 9/30/00 at 06:57 on instrument MS2 for the following compounds:

dichlorodifluoromethane	46.6%
idomethane	32.0%
vinyl acetate	40.1%
1,2-dibromo-3-chloropropane	27.9%
hexachlorobutadiene	29.4%
naphthalene	41.8%
1,2,3-trichlorobenzene	38.4%

All results for vinyl acetate were previously qualified using the initial calibration. All results for the other six compounds in the samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 00CRLFGWC11, 00CRLFSW11, 00CRLFGWC31, 00CRLFSW12 and 00CRLFSW31.

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 10/3/00 at 04:03 on instrument MS1 for the following compounds:

dichlorodifluoromethane	37.9%
trichlorotrifluoroethane	28.1%
acetone	26.9%
methylene chloride	31.8%
2,2-dichloropropane	40.6%

All positive and non-detect results for these compounds in associated samples 00CRLFSD21 and 00CRLFSD31 were flagged as estimated (J) and (UJ).

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 10/4/00 at 13:36 on instrument MS1 for the following compounds:

dichlorodifluoromethane	29.4%
idomethane	61.6%
methylene chloride	30.7%

2-chloroethyl vinyl ether 80.2%

All results for these compounds in associated samples 00CRLFSD11 and 00CRLFSD32, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Methylene chloride was detected at 11 ug/L in method blank MB-0930. All detections of this compound in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with the results below the CRQL being raised to the CRQL. The associated samples were 00CRLFGWC11, 00CRLFSW11, 00CRLFSW12 and 00CRLFSW31.

Methylene chloride was detected at 2.8 ug/L in method blank MB-1030. All detections of this compound in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U). The associated samples were 00CRLFSD21, 00CRLFSD31, 00CRLFSD11 and 00CRLFSD32.

Tentatively Identified Compounds (TIC):

TIC results were not present in the data package. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

Eight LCSs were analyzed with this fraction of the SDG. Thirty-four Percent Recoveries (%Rs) were below their respective QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD11MS and 00CRLFSD11MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
bromomethane	177		60-140%
2,2-chloropropane	123		80-120%
1,1,1-trichloroethane	123		80-120%
1,3-dichlorobenzene	77	68	80-120%
1,4-dichlorobenzene	77	71	80-120%
1,2-dichlorobenzene	74	68	80-120%
1,2-dibromo-3-chloropropane	126		80-120%
1,2,4-trichlorobenzene	52	68	80-120%
naphthalene	71	65	80-120%
1,2,3-trichlorobenzene	71	71	80-120%
4-methyl-2-pentanone		55	80-120%
vinyl acetate	5	4	65-135%

Compound	MS, %R	MSD, %R	QC Limits
1,2,4-trimethylbenzene		77	80-120%
4-isopropyltoluene		77	80-120%

The Percent Recoveries (%Rs) in spiked water samples 00CRLFSW12MS and 00CRLFSW12MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
2,2-chloropropane	75	75	80-120%
1,2,4-trichlorobenzene	60		80-120%
hexachlorobutadiene	47	60	80-120%
naphthalene	55		80-120%
1,2,3-trichlorobenzene	45		80-120%
2-chloroethyl vinyl ether	0	0	60-140%
trans-1,4-dichloro-2-butene	44	49	80-120%
4-methyl-2-pentanone	75	130	80-120%
vinyl acetate	125		80-120%
2-hexanone		135	80-120%

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD32MS and 00CRLFSD32MSD were outside the QC limits for 128 of 148 compounds. Since the list was so extensive, the %Rs are not listed here. Data validation action based on MS / MSD criteria alone was not required; no action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD):

All Internal Standards Performance criteria were met. No action was taken.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was necessary.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was required.

XII.) System Performance:

All System Performance criteria were met. No action was taken.

SEMIVOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for semivolatile organics were performed by Gas Chromatography / Mass Spectroscopy (GC / MS) using Method SW 8270C.

II.) Overall Assessment of Data:

All laboratory were acceptable with qualifications.

MAJOR ISSUES

No major problems were encountered in this fraction of the SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was necessary.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was required.

Continuing Calibration:

The Percent Differences (%Ds) exceeded the 25% QC limit for the standards analyzed on 10/11/00 at 23:30 on instrument MS1 for the following compounds:

4-methylphenol	44.2%
benzoic acid	62.3%
4-chloroaniline	65.9%
4-chloro-3-methylphenol	64.6%
4-nitrophenol	37.2%
pentachlorophenol	60.3%

All results for these compounds in associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 00CRLFGWC11, 00CR13GW11, 00CRLFSW11, 00CRLFGWC31, 00CRLFSW12 and 00CRLFSW31.

The Percent Differences (%Ds) exceeded the 25% QC limit for the standards analyzed on 10/13/00 at 111:45 on instrument MS1 for the following compounds:

2-chloronaphthalene	31.2%
benzoic acid	36.4%
hexachlorocyclopentadiene	39.9%
pentachlorophenol	36.1%

All results for these compounds in associated samples, which consisted entirely of non-detects, were flagged as estimated (UJ). The associated samples were 00CR13SO31, 00CR13SO71, 00CR13SO81, 00CRLFSD21, 00CRLFSD31, 00CRLFSD11 and 00CRLFSD32.

The Percent Difference (%D) was 33.9% for benzoic acid in the standards analyzed on 10/18/00 at 12:14 on instrument MS1, exceeded the 25% QC limit. The non-detect result for this compound in associated sample 00CR13SO72 was flagged as estimated (UJ).

IV.) Blanks:

Bis(2-ethylhexyl)phthalate and di-n-butylphthalate were detected at 3.1 ug/L and 3.2 ug/L, respectively, in method blank MB-1011. All detections of these two compounds in the SDG water samples, which were less than 10X the blank amounts were flagged as undetected (U), with results less than the CRQL being raised to the CRQL.

Tentatively Identified Compounds (TIC):

TIC data was not present in the data package. No action was required.

V.) Surrogate Recoveries:

The Surrogate Percent Recoveries (%Rs) were outside the QC limits in the following samples:

Sample ID	Surrogate	%R	QC Limits
00CR13SO71	2-fluorophenol	25	30-122%
	phenol-d5	26	30-117%
00CR13SO72	2-fluorophenol	21	30-122%
	phenol-d5	28	30-117%
00CR13SD11	2-fluorophenol	27	30-122%
	phenol-d5	27	30-117%
	nitrobenzene-d5	27	30-122%
00CR13SD61	nitrobenzene-d5	28	30-122%
00CRLFSD21	2-fluorophenol	22	30-122%
	terphenyl-d14	139	30-134%
00CRLFSD31	nitrobenzene-d5	25	30-122%

00CRLFSD32	2-fluorophenol	27	30-122%
	nitrobenzene-d5	29	30-122%

If only one %R was outside the QC limits in the base neutral and/or acid fraction, no action was required. All acid fraction results in samples 00CR13SO71, 00CR13SO72 and 00CR13SD11, which consisted entirely of non-detects, were flagged as estimated (UJ) since two acid surrogates were outside the QC limits in each sample.

VI.) Laboratory Control Samples (LCS):

Seven LCSs were analyzed in this fraction of the SDG. Thirty-four LCS Percent Recoveries (%Rs) were below their respective QC limits. Data validation action based on LCS criteria was not required. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD11MS and 00CRLFSD11MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
bromomethane	177		60-140%
2,2-chloropropane	123		80-120%
1,1,1-trichloroethane	123		80-120%
1,3-dichlorobenzene	77	68	80-120%
1,4-dichlorobenzene	77	71	80-120%
1,2-dichlorobenzene	74	68	80-120%
1,2-dibromo-3-chloropropane	126		80-120%
1,2,4-trichlorobenzene	52	68	80-120%
naphthalene	71	65	80-120%
1,2,3-trichlorobenzene	71	71	80-120%
4-methyl-2-pentanone		55	80-120%
vinyl acetate	5	4	65-135%
1,2,4-trimethylbenzene		77	80-120%
4-isopropyltoluene		77	80-120%

The Percent Recoveries (%Rs) in spiked soil samples 00CRLFSD32MS and 00CRLFSD32MSD were outside the QC limits for the following compounds:

Compound	MS, %R	MSD, %R	QC Limits
bis(2-chloroisopropyl)ether	40	43	53-113%
2-nitrophenol	47		52-111%
2,4-dimethylphenol	14	15	58-128%
2,4-dinitrophenol	43	47	53-109%
3,3'-dichlorobenzidine	0	0	15-100%

Data validation action based on MS / MSD criteria alone was not required. No action was taken.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Internal Standards Performance (ISTD's):

All ISTD criteria were met. No action was necessary.

X.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was taken.

XII.) System Performance:

All System Performance criteria were met. No action was taken.

POLYCHLORINATED BIPHENYLS (PCB)

SUMMARY

I.) General:

The analyses for PCBs were performed by gas chromatography using Method SW 8082.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

There were no major problems associated with this SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was required.

II.) Instrument Performance:

Resolution and PEM standards were not required for SW846 Method 8082 analysis. No action was taken.

III.) Calibration:

Initial Calibration:

All Initial Calibration criteria were met. No action was necessary.

Continuing Calibration:

The Percent Differences (%Ds) for aroclor-1016 (33.6%) and aroclor-1260 (56.9%) exceeded the 25% QC limit. All positive and non-detect results for sample 00CRLFSD21 were flagged as estimated (J) and (UJ).

IV.) Blanks:

There were no detections in the method blanks. No action was taken.

V.) Surrogate Recoveries:

The surrogates were diluted out of sample 00CRLFSD21. All other Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

Two LCSs were analyzed with this fraction of the SDG. One Percent Recovery (%R) exceeded the QC limits in one of the LCSs. Data validation action based on LCS criteria was not required. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples were not analyzed in this fraction of the SDG. No action was necessary.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

IX.) Pesticide/PCB Identification Summary (PIS):

PIS evaluation and qualification were not required for this method. No action was necessary.

X.) Sample Cleanup Check:

The sample extracts were not cleaned using either florisil cartridge or GPC clean-up methods. No action was taken.

XI.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL's):

All Compound Quantitation and CRQL criteria were met. No action was necessary.

TOTAL METALS AND IRON

SUMMARY

I.) General:

The analyses for metals were performed by Inductively Coupled Plasma Spectroscopy (ICP) using Method SW 6060B.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

Initial Calibration and Continuing Calibration criteria were met. No action was required.

III.) Blanks:

Zinc was detected at 0.88 mg/kg in the soil preparation blank (PBS). All detections of zinc in the SDG soil samples were greater than 5X the blank amount were. There were no other positive results in the preparation and calibration blanks greater than the Practical Quantitation Limit (PQL). No further action was required.

IV.) ICP Interference Check Sample Results:

All Interference Check Sample Percent Recovery criteria were met. No action was required.

The following analytes were detected in ICS Solution A:

beryllium	1 ug/L
chromium	10 ug/L
manganese	36 ug/L

Since neither aluminum, calcium, iron nor magnesium was present in any sample at a concentration greater than their respective concentrations in ICS solution A, data qualification was not required.

V.) ICP Serial Dilution Analysis:

ICP Serial Dilution samples were not analyzed in this SDG. No action was necessary.

VI.) Laboratory Control Samples (LCS):

The Percent Recovery (%R) was 76% for potassium in the water LCS, which was below the 80-120% QC limits. All positive and non-detect results for potassium in the SDG water samples were flagged as estimated (J) and (UJ).

The Percent Recovery (%R) was 124% for cadmium in the soil LCS, which exceeded the 80-120% QC limits. Cadmium was not detected in the SDG soil samples. No action was required.

VII.) Duplicate Sample Analysis (MD):

All Duplicate Sample criteria were met. No action was required.

VIII.) Matrix Spike Recovery (MS):

The Percent Recovery (%R) was 71% for magnesium in spiked soil sample 00CRLFSD21MS, which was below the 75-125% QC limits. All positive and non-detect results for magnesium in the SDG soil samples were flagged as estimated (J).

IX.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was required.

X.) Sample Result, Calculation/Transcription Verification:

All criteria were met. No action was necessary.

XI.) Quarterly Verification of Instrumental Parameters:

All criteria were met, so no action was taken.

ALKALINITY

SUMMARY

I.) General:

The analyses for alkalinity were performed using Method EPA 310.1.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of alkalinity in the method blank. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

Laboratory Duplicate samples were not analyzed in this fraction of the SDG. No action was required.

VII.) Matrix Spike Recovery (MS):

MS samples were not analyzed in this fraction of the SDG. No action was necessary.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

NITRATE

SUMMARY

I.) General:

The analyses for nitrate were performed using Method EPA 300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of nitrate in the method blank. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

Laboratory Duplicate samples were not analyzed in this fraction of the SDG. No action was required.

VII.) Matrix Spike Recovery (MS):

MS samples were not analyzed in this fraction of the SDG. No action was necessary.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

SULFATE

SUMMARY

I.) General:

The analyses for sulfate were performed using Method EPA300.0.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were encountered in the analysis of this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Instrument Performance:

All Instrument Performance criteria were met. No action was necessary.

III.) Calibration:

All Initial and Continuing Calibration criteria were met. No action was required.

IV.) Blanks:

There were no detections of sulfate in the method blank. No action was necessary.

V.) Laboratory Control Samples (LCS):

One LCS was analyzed in this fraction of the SDG. All LCS Recovery criteria were met. No action was taken.

VI.) Laboratory Duplicate (MD):

Laboratory Duplicate samples were not analyzed in this fraction of the SDG. No action was required.

VII.) Matrix Spike Recovery (MS):

MS samples were not analyzed in this fraction of the SDG. No action was necessary.

VIII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was necessary.

IX.) TCL Compound Identification:

All TCL Compound Identification criteria were met. No action was required.

X.) Compound Quantitation and Reported Contract Required Quantitation Limits (CRQLs):

All Compound Quantitation and CRQL criteria were met. No action was taken.

PERCENT MOISTURE (%M)

SUMMARY

I.) General:

The analyses for percent moisture were performed using Method ASTM D-2216.

II.) Overall Assessment of Data:

All laboratory data were acceptable without qualification.

MAJOR ISSUES

No major problems were observed in this fraction of the SDG.

MINOR ISSUES

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) Calibration:

All Calibration criteria were met. No action was necessary.

III.) Blanks:

Blank determination was not required for moisture content. No action was taken.

IV.) Laboratory Control Sample (LCS):

LCS analysis was not performed by the laboratory in this fraction of the SDG. No action was taken.

V.) Laboratory Duplicate Analysis (MD):

Four laboratory duplicates were analyzed by the laboratory in this fraction of the SDG. All Relative Percent Difference (RPD) criteria were met. No action was necessary.

VI.) Matrix Spike Recovery (MS)):

MS samples were not analyzed in this fraction of the SDG. No action was required.

VII.) Field Duplicates:

Field duplicate samples were not analyzed in this SDG. No action was taken.

VIII.) Compound Quantitation and Reported Contract Required Detection Limits (CRDL):

All Compound Quantitation and CRDL criteria were met. No action was necessary.

Sample: 01A 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.56	ug/L	10/05/00
PCB-1232		ND		0.56	ug/L	10/05/00
PCB-1242		ND		0.56	ug/L	10/05/00
PCB-1248		ND		0.56	ug/L	10/05/00
PCB-1254		ND		0.56	ug/L	10/05/00
PCB-1260		ND		0.56	ug/L	10/05/00
PCB-1016		ND		0.56	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		94.4		Min: 29	Max: 133	
Decachlorobiphenyl		75.3		Min: 26	Max: 137	

Sample: 01B 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0 ~~1.6~~ JB	U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00

01-08-01

Sample: 01B 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		~~ND~~	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		~~ND~~	UJ	2.0	ug/L	09/30/00
Napthalene		~~ND~~	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	2.0	ug/L	09/30/00
Acetone		~~ND~~	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		~~ND~~	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		~~ND~~	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		104		Min: 80	Max: 120	
Toluene d-8		102		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

jk 01-08-01

Sample: 01C 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		~~ND~~	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		~~ND~~	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		~~ND~~	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND		10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		~~ND~~	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

01-08-01

Sample: 01C 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		5.1	~~1.6~~ J U	5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		65.3		Min: 21	Max: 100	
d5-Phenol		52.7		Min: 10	Max: 94	
d5-Nitrobenzene		76.0		Min: 35	Max: 114	
2-Fluorobiphenyl		91.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		86.7		Min: 10	Max: 123	
d14-Terphenyl		82.0		Min: 33	Max: 141	

Sample: 01D 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	6.0		5.0	mg/L	09/29/00

jpl 01-08-01

Sample: 01E 00CRLFGWC11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		31		0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.70		0.0040	mg/L	10/05/00
Beryllium		0.0021		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		8.7		0.10	mg/L	10/05/00
Chromium		0.051		0.010	mg/L	10/05/00
Cobalt		0.040		0.020	mg/L	10/05/00
Copper		0.035		0.0050	mg/L	10/05/00
Iron		33		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		8.4		0.10	mg/L	10/05/00
Manganese		0.66		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		8.9	J	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		5.5		3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.052		0.010	mg/L	10/05/00
Zinc		0.18		0.0050	mg/L	10/05/00

01-08-01

Sample: 02A 00CR13GW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.3	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.3	ug/L	10/11/00
2-Chlorophenol		ND		5.3	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.3	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.3	ug/L	10/11/00
Benzyl alcohol		ND		11	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.3	ug/L	10/11/00
2-Methylphenol		ND		5.3	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.3	ug/L	10/11/00
4-Methylphenol		~~ND~~	UJ	5.3	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.3	ug/L	10/11/00
Hexachloroethane		ND		5.3	ug/L	10/11/00
Nitrobenzene		ND		5.3	ug/L	10/11/00
Isophorone		ND		5.3	ug/L	10/11/00
2-Nitrophenol		ND		5.3	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.3	ug/L	10/11/00
Benzoic acid		~~ND~~	UJ	140	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.3	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.3	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.3	ug/L	10/11/00
Naphthalene		ND		11	ug/L	10/11/00
4-Chloroaniline		~~ND~~	UJ	5.3	ug/L	10/11/00
Hexachlorobutadiene		ND		5.3	ug/L	10/11/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.3	ug/L	10/11/00
2-Methylnaphthalene		ND		5.3	ug/L	10/11/00
Hexachlorocyclopentadiene		ND		11	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.3	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.3	ug/L	10/11/00
2-Chloronaphthalene		ND		11	ug/L	10/11/00
2-Nitroaniline		ND		53	ug/L	10/11/00
Dimethylphthalate		ND		5.3	ug/L	10/11/00
Acenaphthylene		ND		5.3	ug/L	10/11/00
3-Nitroaniline		ND		53	ug/L	10/11/00
Acenaphthene		ND		5.3	ug/L	10/11/00
2,4-Dinitrophenol		ND		74	ug/L	10/11/00
4-Nitrophenol		~~ND~~	UJ	53	ug/L	10/11/00
Dibenzofuran		ND		5.3	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.3	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.3	ug/L	10/11/00
Diethylphthalate		ND		5.3	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.3	ug/L	10/11/00
Fluorene		ND		5.3	ug/L	10/11/00
4-Nitroaniline		ND		53	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		53	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.3	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.3	ug/L	10/11/00
Hexachlorobenzene		ND		5.3	ug/L	10/11/00

jjl 01-08-01

Sample: 02A 00CR13GW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		5.3	ug/L	10/11/00
Phenanthrene		ND		5.3	ug/L	10/11/00
Anthracene		ND		5.3	ug/L	10/11/00
Di-n-butylphthalate		ND		5.3	ug/L	10/11/00
Fluoranthene		ND		5.3	ug/L	10/11/00
Pyrene		ND		5.3	ug/L	10/11/00
Butylbenzylphthalate		ND		5.3	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.3	ug/L	10/11/00
Chrysene		ND		5.3	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.3	ug/L	10/11/00
Di-n-octylphthalate		ND		5.3	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.3	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.3	ug/L	10/11/00
Benzo(a)pyrene		ND		5.3	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.3	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.3	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.3	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		59.4		Min: 21	Max: 100	
d5-Phenol		45.6		Min: 10	Max: 94	
d5-Nitrobenzene		70.0		Min: 35	Max: 114	
2-Fluorobiphenyl		75.5		Min: 43	Max: 116	
2,4,6-Tribromophenol		75.0		Min: 10	Max: 123	
d14-Terphenyl		41.8		Min: 33	Max: 141	

Sample: 02B 00CR13GW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	42		5.0	mg/L	09/29/00

jd 01-08-01

Sample: 02C 00CR13GW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Iron		20		0.050	mg/L	10/05/00

Sample: 02D 00CR13GW11 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	ND		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	4.4		0.50	mg/L	09/26/00

Sample: 03A 00CR13GW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		~~ND~~	UJ	5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		~~ND~~	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		ND		10	ug/L	10/11/00
4-Chloroaniline		~~ND~~	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		ND		5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND		10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00

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Sample: 03A 00CR13GW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
4-Nitrophenol		~~ND~~	UJ	51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00
Pentachlorophenol		~~ND~~	UJ	5.1	ug/L	10/11/00
Phenanthrene		ND		5.1	ug/L	10/11/00
Anthracene		ND		5.1	ug/L	10/11/00
Di-n-butylphthalate		ND		5.1	ug/L	10/11/00
Fluoranthene		ND		5.1	ug/L	10/11/00
Pyrene		ND		5.1	ug/L	10/11/00
Butylbenzylphthalate		ND		5.1	ug/L	10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/11/00
Chrysene		ND		5.1	ug/L	10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L	10/11/00
Di-n-octylphthalate		ND		5.1	ug/L	10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/11/00
Benzo(a)pyrene		ND		5.1	ug/L	10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L	10/11/00
SURROGATES, % Recovery						
2-Fluorophenol		54.7		Min: 21	Max: 100	
d5-Phenol		46.0		Min: 10	Max: 94	
d5-Nitrobenzene		69.0		Min: 35	Max: 114	
2-Fluorobiphenyl		76.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		62.0		Min: 10	Max: 123	
d14-Terphenyl		76.0		Min: 33	Max: 141	

Sample: 03B 00CR13GW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	10		5.0	mg/L	09/29/00

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Sample: 03C 00CR13GW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Iron		39		0.050	mg/L	10/05/00

Sample: 03D 00CR13GW21 Collected: 09/19/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Nitrate as N by IC	EPA 300.0	0.18		0.10	mg/L	09/26/00
Sulfate by IC	EPA 300.0	1.5		0.50	mg/L	09/26/00

Sample: 04A 00CR13SO31 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	13.6		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		ND		460	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		190	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		190	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		230	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		230	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		390	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		230	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		190	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		190	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		190	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		190	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		250	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		210	ug/Kg-DRY	10/13/00
Isophorone		ND		190	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		190	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		190	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	1900	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		190	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		190	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		230	ug/Kg-DRY	10/13/00
Naphthalene		ND		190	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		310	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		230	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		190	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		190	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	250	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		190	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		190	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	190	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		1900	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		190	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		190	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		1900	ug/Kg-DRY	10/13/00
Acenaphthene		ND		190	ug/Kg-DRY	10/13/00

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Sample: 04A 00CR13SO31 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		1900	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		1900	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		190	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		190	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		190	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		190	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		190	ug/Kg-DRY	10/13/00
Fluorene		ND		190	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		1900	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		1900	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		290	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		190	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		190	ug/Kg-DRY	10/13/00
Pentachlorophenol		~~ND~~	UJ	190	ug/Kg-DRY	10/13/00
Phenanthrene		ND		190	ug/Kg-DRY	10/13/00
Anthracene		ND		190	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		42	J	190	ug/Kg-DRY	10/13/00
Fluoranthene		ND		190	ug/Kg-DRY	10/13/00
Pyrene		ND		190	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		620	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		770	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		190	ug/Kg-DRY	10/13/00
Chrysene		ND		190	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		ND		190	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		190	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		190	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		190	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		190	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		190	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		190	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		190	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		190	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		41.4		Min: 30	Max: 122	
d5-Phenol		51.7		Min: 30	Max: 117	
d5-Nitrobenzene		38.5		Min: 30	Max: 122	
2-Fluorobiphenyl		53.8		Min: 36	Max: 121	
2,4,6-Tribromophenol		56.9		Min: 30	Max: 113	
d14-Terphenyl		92.3		Min: 30	Max: 134	

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Sample: 05A 00CR13SO71 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	40.3		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		~~ND~~	UJ	6700	ug/Kg-DRY	10/12/00
bis(2-Chloroethyl) ether		ND		2800	ug/Kg-DRY	10/12/00
2-Chlorophenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
1,3-Dichlorobenzene		ND		3300	ug/Kg-DRY	10/12/00
1,4-Dichlorobenzene		ND		3300	ug/Kg-DRY	10/12/00
Benzyl alcohol		ND		5600	ug/Kg-DRY	10/12/00
1,2-Dichlorobenzene		ND		3300	ug/Kg-DRY	10/12/00
2-Methylphenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
bis(2-Chloroisopropyl) eth		ND		2800	ug/Kg-DRY	10/12/00
4-Methylphenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
n-Nitroso-di-n-propylamine		ND		2800	ug/Kg-DRY	10/12/00
Hexachloroethane		ND		3600	ug/Kg-DRY	10/12/00
Nitrobenzene		ND		3100	ug/Kg-DRY	10/12/00
Isophorone		ND		2800	ug/Kg-DRY	10/12/00
2-Nitrophenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
2,4-Dimethylphenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
Benzoic acid		~~ND~~	UJ	28000	ug/Kg-DRY	10/12/00
bis(2-Chloroethoxy)methane		ND		2800	ug/Kg-DRY	10/12/00
2,4-Dichlorophenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
1,2,4-Trichlorobenzene		ND		3300	ug/Kg-DRY	10/12/00
Naphthalene		ND		2800	ug/Kg-DRY	10/12/00
4-Chloroaniline		ND		4500	ug/Kg-DRY	10/12/00
Hexachlorobutadiene		ND		3300	ug/Kg-DRY	10/12/00
4-Chloro-3-methylphenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
2-Methylnaphthalene		ND		2800	ug/Kg-DRY	10/12/00
Hexachlorocyclopentadiene		~~ND~~	UJ	3600	ug/Kg-DRY	10/12/00
2,4,6-Trichlorophenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
2,4,5-Trichlorophenol		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
2-Chloronaphthalene		~~ND~~	UJ	2800	ug/Kg-DRY	10/12/00
2-Nitroaniline		ND		28000	ug/Kg-DRY	10/12/00
Dimethylphthalate		ND		2800	ug/Kg-DRY	10/12/00
Acenaphthylene		ND		2800	ug/Kg-DRY	10/12/00
3-Nitroaniline		ND		28000	ug/Kg-DRY	10/12/00
Acenaphthene		ND		2800	ug/Kg-DRY	10/12/00
2,4-Dinitrophenol		~~ND~~	UJ	28000	ug/Kg-DRY	10/12/00
4-Nitrophenol		~~ND~~	UJ	28000	ug/Kg-DRY	10/12/00
Dibenzofuran		ND		2800	ug/Kg-DRY	10/12/00
2,6-Dinitrotoluene		ND		2800	ug/Kg-DRY	10/12/00
2,4-Dinitrotoluene		ND		2800	ug/Kg-DRY	10/12/00
Diethylphthalate		ND		2800	ug/Kg-DRY	10/12/00
4-Chlorophenyl-phenylether		ND		2800	ug/Kg-DRY	10/12/00
Fluorene		ND		2800	ug/Kg-DRY	10/12/00
4-Nitroaniline		ND		28000	ug/Kg-DRY	10/12/00
4,6-Dinitro-2-methylphenol		~~ND~~	UJ	28000	ug/Kg-DRY	10/12/00
n-Nitrosodiphenylamine		ND		4200	ug/Kg-DRY	10/12/00
4-Bromophenyl-phenylether		ND		2800	ug/Kg-DRY	10/12/00
Hexachlorobenzene		ND		2800	ug/Kg-DRY	10/12/00

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Sample: 05A 00CR13SO71 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~	UJ	11000	ug/Kg-DRY	10/12/00
Phenanthrene		ND		2800	ug/Kg-DRY	10/12/00
Anthracene		ND		2800	ug/Kg-DRY	10/12/00
Di-n-butylphthalate		ND		2800	ug/Kg-DRY	10/12/00
Fluoranthene		ND		2800	ug/Kg-DRY	10/12/00
Pyrene		ND		2800	ug/Kg-DRY	10/12/00
Butylbenzylphthalate		ND		8900	ug/Kg-DRY	10/12/00
3,3'-Dichlorobenzidine		ND		11000	ug/Kg-DRY	10/12/00
Benzo(a)Anthracene		ND		2800	ug/Kg-DRY	10/12/00
Chrysene		ND		2800	ug/Kg-DRY	10/12/00
Bis(2-Ethylhexyl)phthalate		630	DJ	2800	ug/Kg-DRY	10/12/00
Di-n-octylphthalate		ND		2800	ug/Kg-DRY	10/12/00
Benzo(b)fluoranthene		ND		2800	ug/Kg-DRY	10/12/00
Benzo(k)fluoranthene		ND		2800	ug/Kg-DRY	10/12/00
Benzo(a)pyrene		ND		2800	ug/Kg-DRY	10/12/00
Indeno(1,2,3-cd)pyrene		ND		2800	ug/Kg-DRY	10/12/00
Dibenz(a,h)anthracene		ND		2800	ug/Kg-DRY	10/12/00
Benzo(g,h,i)perylene		ND		2800	ug/Kg-DRY	10/12/00
p-Chlorophenylmethylsulfone		ND		2800	ug/Kg-DRY	10/12/00
SURROGATES, % Recovery						
2-Fluorophenol		25.0	*	Min: 30	Max: 122	
d5-Phenol		26.2	*	Min: 30	Max: 117	
d5-Nitrobenzene		30.4		Min: 30	Max: 122	
2-Fluorobiphenyl		32.1		Min: 36	Max: 121	
2,4,6-Tribromophenol		34.5		Min: 30	Max: 113	
d14-Terphenyl		39.3		Min: 30	Max: 134	

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Sample: 06A 00CR13SO72 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	47.0		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		~~ND~~	UJ	7500	ug/Kg-DRY	10/18/00
bis(2-Chloroethyl) ether		ND		3100	ug/Kg-DRY	10/18/00
2-Chlorophenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
1,3-Dichlorobenzene		ND		3800	ug/Kg-DRY	10/18/00
1,4-Dichlorobenzene		ND		3800	ug/Kg-DRY	10/18/00
Benzyl alcohol		ND		6300	ug/Kg-DRY	10/18/00
1,2-Dichlorobenzene		ND		3800	ug/Kg-DRY	10/18/00
2-Methylphenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
bis(2-Chloroisopropyl) eth		ND		3100	ug/Kg-DRY	10/18/00
4-Methylphenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
n-Nitroso-di-n-propylamine		ND		3100	ug/Kg-DRY	10/18/00
Hexachloroethane		ND		4100	ug/Kg-DRY	10/18/00
Nitrobenzene		ND		3400	ug/Kg-DRY	10/18/00
Isophorone		ND		3100	ug/Kg-DRY	10/18/00
2-Nitrophenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
2,4-Dimethylphenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
Benzoic acid		~~ND~~	UJ	31000	ug/Kg-DRY	10/18/00
bis(2-Chloroethoxy)methane		ND		3100	ug/Kg-DRY	10/18/00
2,4-Dichlorophenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
1,2,4-Trichlorobenzene		ND		3800	ug/Kg-DRY	10/18/00
Naphthalene		ND		3100	ug/Kg-DRY	10/18/00
4-Chloroaniline		ND		5000	ug/Kg-DRY	10/18/00
Hexachlorobutadiene		ND		3800	ug/Kg-DRY	10/18/00
4-Chloro-3-methylphenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
2-Methylnaphthalene		ND		3100	ug/Kg-DRY	10/18/00
Hexachlorocyclopentadiene		ND		4100	ug/Kg-DRY	10/18/00
2,4,6-Trichlorophenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
2,4,5-Trichlorophenol		~~ND~~	UJ	3100	ug/Kg-DRY	10/18/00
2-Chloronaphthalene		ND		3100	ug/Kg-DRY	10/18/00
2-Nitroaniline		ND		31000	ug/Kg-DRY	10/18/00
Dimethylphthalate		ND		3100	ug/Kg-DRY	10/18/00
Acenaphthylene		ND		3100	ug/Kg-DRY	10/18/00
3-Nitroaniline		ND		31000	ug/Kg-DRY	10/18/00
Acenaphthene		ND		3100	ug/Kg-DRY	10/18/00
2,4-Dinitrophenol		~~ND~~	UJ	31000	ug/Kg-DRY	10/18/00
4-Nitrophenol		~~ND~~	UJ	31000	ug/Kg-DRY	10/18/00
Dibenzofuran		ND		3100	ug/Kg-DRY	10/18/00
2,6-Dinitrotoluene		ND		3100	ug/Kg-DRY	10/18/00
2,4-Dinitrotoluene		ND		3100	ug/Kg-DRY	10/18/00
Diethylphthalate		ND		3100	ug/Kg-DRY	10/18/00
4-Chlorophenyl-phenylether		ND		3100	ug/Kg-DRY	10/18/00
Fluorene		ND		3100	ug/Kg-DRY	10/18/00
4-Nitroaniline		ND		31000	ug/Kg-DRY	10/18/00
4,6-Dinitro-2-methylphenol		~~ND~~	UJ	31000	ug/Kg-DRY	10/18/00
n-Nitrosodiphenylamine		ND		4700	ug/Kg-DRY	10/18/00
4-Bromophenyl-phenylether		ND		3100	ug/Kg-DRY	10/18/00
Hexachlorobenzene		ND		3100	ug/Kg-DRY	10/18/00

01-08-01

Sample: 06A 00CR13SO72 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		13000	ug/Kg-DRY	10/18/00
Phenanthrene		ND		3100	ug/Kg-DRY	10/18/00
Anthracene		ND		3100	ug/Kg-DRY	10/18/00
Di-n-butylphthalate		ND		3100	ug/Kg-DRY	10/18/00
Fluoranthene		ND		3100	ug/Kg-DRY	10/18/00
Pyrene		ND		3100	ug/Kg-DRY	10/18/00
Butylbenzylphthalate		ND		10000	ug/Kg-DRY	10/18/00
3,3'-Dichlorobenzidine		ND		13000	ug/Kg-DRY	10/18/00
Benzo(a)Anthracene		ND		3100	ug/Kg-DRY	10/18/00
Chrysene		ND		3100	ug/Kg-DRY	10/18/00
Bis(2-Ethylhexyl)phthalate		1500	DJ	3100	ug/Kg-DRY	10/18/00
Di-n-octylphthalate		ND		3100	ug/Kg-DRY	10/18/00
Benzo(b)fluoranthene		ND		3100	ug/Kg-DRY	10/18/00
Benzo(k)fluoranthene		ND		3100	ug/Kg-DRY	10/18/00
Benzo(a)pyrene		ND		3100	ug/Kg-DRY	10/18/00
Indeno(1,2,3-cd)pyrene		ND		3100	ug/Kg-DRY	10/18/00
Dibenz(a,h)anthracene		ND		3100	ug/Kg-DRY	10/18/00
Benzo(g,h,i)perylene		ND		3100	ug/Kg-DRY	10/18/00
p-Chlorophenylmethylsulfone		ND		3100	ug/Kg-DRY	10/18/00
SURROGATES, % Recovery						
2-Fluorophenol		21.3	*	Min: 30	Max: 122	
d5-Phenol		27.7	*	Min: 30	Max: 117	
d5-Nitrobenzene		36.5		Min: 30	Max: 122	
2-Fluorobiphenyl		44.4		Min: 36	Max: 121	
2,4,6-Tribromophenol		52.1		Min: 30	Max: 113	
d14-Terphenyl		68.3		Min: 30	Max: 134	

01-08-01

Sample: 07A 00CR13SO81 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	25.4		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		ND		540	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		220	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		220	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		270	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		270	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		450	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		270	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		220	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		220	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		220	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		220	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		290	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		250	ug/Kg-DRY	10/13/00
Isophorone		ND		220	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		220	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		220	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	2200	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		220	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		220	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		270	ug/Kg-DRY	10/13/00
Naphthalene		ND		220	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		360	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		270	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		220	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		220	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	290	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		220	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		220	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	220	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		2200	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		220	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		220	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		2200	ug/Kg-DRY	10/13/00
Acenaphthene		ND		220	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		2200	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		2200	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		220	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		220	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		220	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		220	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		220	ug/Kg-DRY	10/13/00
Fluorene		ND		220	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		2200	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		2200	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		330	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		220	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		220	ug/Kg-DRY	10/13/00

jl 01-08-01

Sample: 07A 00CR13SO81 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		220	ug/Kg-DRY	10/13/00
Phenanthrene		ND		220	ug/Kg-DRY	10/13/00
Anthracene		ND		220	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		120	J	220	ug/Kg-DRY	10/13/00
Fluoranthene		ND		220	ug/Kg-DRY	10/13/00
Pyrene		ND		220	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		710	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		890	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		220	ug/Kg-DRY	10/13/00
Chrysene		ND		220	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		87	J	220	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		220	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		220	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		220	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		220	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		220	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		220	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		220	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		220	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		38.8		Min: 30	Max: 122	
d5-Phenol		47.8		Min: 30	Max: 117	
d5-Nitrobenzene		37.8		Min: 30	Max: 122	
2-Fluorobiphenyl		42.2		Min: 36	Max: 121	
2,4,6-Tribromophenol		68.7		Min: 30	Max: 113	
d14-Terphenyl		91.1		Min: 30	Max: 134	

01-08-01

Sample: 08A 00CR13SD11 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	68.0		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		ND	UJ	12000	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		5200	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		6200	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		6200	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		10000	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		6200	ug/Kg-DRY	10/13/00
2-Methylphenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		5200	ug/Kg-DRY	10/13/00
4-Methylphenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		5200	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		6800	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		5700	ug/Kg-DRY	10/13/00
Isophorone		ND		5200	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
Benzoic acid		ND	UJ	52000	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		5200	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		6200	ug/Kg-DRY	10/13/00
Naphthalene		ND		5200	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		8300	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		6200	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		5200	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		ND	UJ	6800	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND	UJ	5200	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		ND	UJ	5200	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		52000	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		5200	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		5200	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		52000	ug/Kg-DRY	10/13/00
Acenaphthene		ND		5200	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND	UJ	52000	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND	UJ	52000	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		5200	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		5200	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		5200	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		5200	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		5200	ug/Kg-DRY	10/13/00
Fluorene		ND		5200	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		52000	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND	UJ	52000	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		7800	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		5200	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		5200	ug/Kg-DRY	10/13/00

MS
12-24-00

Sample: 08A 00CR13SD11 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		ND	U J	21000	ug/Kg-DRY	10/13/00
Phenanthrene		ND		5200	ug/Kg-DRY	10/13/00
Anthracene		ND		5200	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		ND		5200	ug/Kg-DRY	10/13/00
Fluoranthene		ND		5200	ug/Kg-DRY	10/13/00
Pyrene		ND		5200	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		17000	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		21000	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		5200	ug/Kg-DRY	10/13/00
Chrysene		ND		5200	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		1000	D	5200	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		5200	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		5200	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		5200	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		5200	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		5200	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		5200	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		5200	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		5200	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		26.9	*	Min: 30	Max: 122	
d5-Phenol		26.9	*	Min: 30	Max: 117	
d5-Nitrobenzene		27.0	*	Min: 30	Max: 122	
2-Fluorobiphenyl		50.0		Min: 36	Max: 121	
2,4,6-Tribromophenol		36.3		Min: 30	Max: 113	
d14-Terphenyl		50.0		Min: 30	Max: 134	

MS
12-27-00

Sample: 09A 00CR13SD61 Collected: 09/19/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	51.3		0.1	WT%	09/29/00
Semivolatile Organics	SW 8270C					
Phenol		ND		1600	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		680	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		680	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		820	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		820	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		1400	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		820	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		680	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		680	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		680	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		680	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		890	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		750	ug/Kg-DRY	10/13/00
Isophorone		ND		680	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		680	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		680	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	6800	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		680	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		680	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		820	ug/Kg-DRY	10/13/00
Naphthalene		ND		680	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		1100	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		820	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		680	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		680	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	890	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		680	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		680	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	680	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		6800	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		680	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		680	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		6800	ug/Kg-DRY	10/13/00
Acenaphthene		ND		680	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		6800	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		6800	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		680	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		680	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		680	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		680	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		680	ug/Kg-DRY	10/13/00
Fluorene		ND		680	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		6800	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		6800	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		1000	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		680	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		680	ug/Kg-DRY	10/13/00

01-08-01

Sample: 10B 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0 ~~2.4~~	~~JB~~ U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

01-08-01

Sample: 10B 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		~~ND~~	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		~~ND~~	UJ	2.0	ug/L	09/30/00
Napthalene		~~ND~~	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	2.0	ug/L	09/30/00
Acetone		~~ND~~	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		~~ND~~	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		~~ND~~	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		106		Min: 80	Max: 120	
Toluene d-8		106		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

01-08-01

Sample: 10C 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/11/00
2-Chlorophenol		ND		5.1	ug/L	10/11/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/11/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/11/00
Benzyl alcohol		ND		10	ug/L	10/11/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/11/00
2-Methylphenol		ND		5.1	ug/L	10/11/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/11/00
4-Methylphenol		ND		5.1	ug/L	10/11/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/11/00
Hexachloroethane		ND		5.1	ug/L	10/11/00
Nitrobenzene		ND		5.1	ug/L	10/11/00
Isophorone		ND		5.1	ug/L	10/11/00
2-Nitrophenol		ND		5.1	ug/L	10/11/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/11/00
Benzoic acid		~~ND~~	UJ	130	ug/L	10/11/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/11/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/11/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/11/00
Naphthalene		~~ND~~	UJ	10	ug/L	10/11/00
4-Chloroaniline		~~ND~~	UJ	5.1	ug/L	10/11/00
Hexachlorobutadiene		~~ND~~	UJ	5.1	ug/L	10/11/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.1	ug/L	10/11/00
2-Methylnaphthalene		ND		5.1	ug/L	10/11/00
Hexachlorocyclopentadiene		ND		10	ug/L	10/11/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/11/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/11/00
2-Chloronaphthalene		ND		10	ug/L	10/11/00
2-Nitroaniline		ND		51	ug/L	10/11/00
Dimethylphthalate		ND		5.1	ug/L	10/11/00
Acenaphthylene		ND		5.1	ug/L	10/11/00
3-Nitroaniline		ND		51	ug/L	10/11/00
Acenaphthene		ND		5.1	ug/L	10/11/00
2,4-Dinitrophenol		ND		72	ug/L	10/11/00
4-Nitrophenol		ND		51	ug/L	10/11/00
Dibenzofuran		ND		5.1	ug/L	10/11/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/11/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/11/00
Diethylphthalate		ND		5.1	ug/L	10/11/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/11/00
Fluorene		ND		5.1	ug/L	10/11/00
4-Nitroaniline		ND		51	ug/L	10/11/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/11/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/11/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/11/00
Hexachlorobenzene		ND		5.1	ug/L	10/11/00

01-08-01

Sample: 10C 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)					
Pentachlorophenol		~~ND~~	UJ	5.1	ug/L		10/11/00
Phenanthrene		ND		5.1	ug/L		10/11/00
Anthracene		ND		5.1	ug/L		10/11/00
Di-n-butylphthalate		ND		5.1	ug/L		10/11/00
Fluoranthene		ND		5.1	ug/L		10/11/00
Pyrene		ND		5.1	ug/L		10/11/00
Butylbenzylphthalate		ND		5.1	ug/L		10/11/00
3,3'-Dichlorobenzidine		ND		21	ug/L		10/11/00
Benzo(a)Anthracene		ND		5.1	ug/L		10/11/00
Chrysene		ND		5.1	ug/L		10/11/00
Bis(2-Ethylhexyl)phthalate		ND		5.1	ug/L		10/11/00
Di-n-octylphthalate		ND		5.1	ug/L		10/11/00
Benzo(b)fluoranthene		ND		5.1	ug/L		10/11/00
Benzo(k)fluoranthene		ND		5.1	ug/L		10/11/00
Benzo(a)pyrene		ND		5.1	ug/L		10/11/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L		10/11/00
Dibenz(a,h)anthracene		ND		5.1	ug/L		10/11/00
Benzo(g,h,i)perylene		ND		5.1	ug/L		10/11/00
p-Chlorophenylmethylsulfone		ND		21	ug/L		10/11/00
SURROGATES, % Recovery							
2-Fluorophenol		46.7		Min:	21	Max:	100
d5-Phenol		37.3		Min:	10	Max:	94
d5-Nitrobenzene		61.0		Min:	35	Max:	114
2-Fluorobiphenyl		74.0		Min:	43	Max:	116
2,4,6-Tribromophenol		64.0		Min:	10	Max:	123
d14-Terphenyl		93.0		Min:	33	Max:	141

jf 01-08-01

Sample: 10D 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	6.0		5.0	mg/L	09/29/00

Sample: 10E 00CRLFSW11 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		0.36		0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.014		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		1.5		0.10	mg/L	10/05/00
Chromium		ND		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		ND		0.0050	mg/L	10/05/00
Iron		0.30		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		0.53		0.10	mg/L	10/05/00
Manganese		ND		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		~~ND~~	UJ	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		3.0		3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		ND		0.010	mg/L	10/05/00
Zinc		0.018		0.0050	mg/L	10/05/00

01-08-01

Sample: 11A 00CRLFSD21 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	28.2		0.1	WT%	09/29/00
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	7.0	ug/Kg-DRY	10/03/00
Chloromethane		ND		7.0	ug/Kg-DRY	10/03/00
Vinyl Chloride		ND		7.0	ug/Kg-DRY	10/03/00
Bromomethane		~~ND~~	UJ	28	ug/Kg-DRY	10/03/00
Chloroethane		ND		7.0	ug/Kg-DRY	10/03/00
Trichlorofluoromethane		ND		7.0	ug/Kg-DRY	10/03/00
1,1-Dichloroethene		ND		7.0	ug/Kg-DRY	10/03/00
Trichlorotrifluoroethane		~~ND~~	UJ	7.0	ug/Kg-DRY	10/03/00
Methylene Chloride		15	~~B~~ UJ	7.0	ug/Kg-DRY	10/03/00
trans-1,2-Dichloroethene		ND		2.8	ug/Kg-DRY	10/03/00
1,1-Dichloroethane		ND		2.8	ug/Kg-DRY	10/03/00
2,2-Dichloropropane		~~ND~~	UJ	2.8	ug/Kg-DRY	10/03/00
cis-1,2-Dichloroethene		ND		2.8	ug/Kg-DRY	10/03/00
Bromochloromethane		ND		2.8	ug/Kg-DRY	10/03/00
Chloroform		ND		2.8	ug/Kg-DRY	10/03/00
1,1,1-Trichloroethane		ND		2.8	ug/Kg-DRY	10/03/00
Carbon Tetrachloride		ND		2.8	ug/Kg-DRY	10/03/00
1,1-Dichloropropene		ND		2.8	ug/Kg-DRY	10/03/00
Benzene		ND		2.8	ug/Kg-DRY	10/03/00
1,2-Dichloroethane		ND		2.8	ug/Kg-DRY	10/03/00
Trichloroethene		ND		2.8	ug/Kg-DRY	10/03/00
1,2-Dichloropropane		ND		2.8	ug/Kg-DRY	10/03/00
Dibromomethane		ND		2.8	ug/Kg-DRY	10/03/00
Bromodichloromethane		ND		2.8	ug/Kg-DRY	10/03/00
cis-1,3-Dichloropropene		ND		2.8	ug/Kg-DRY	10/03/00
Toluene		ND		2.8	ug/Kg-DRY	10/03/00
trans-1,3-Dichloropropene		ND		2.8	ug/Kg-DRY	10/03/00
1,1,2-Trichloroethane		ND		2.8	ug/Kg-DRY	10/03/00
Tetrachloroethene		ND		2.8	ug/Kg-DRY	10/03/00
1,3-Dichloropropane		ND		2.8	ug/Kg-DRY	10/03/00
Dibromochloromethane		ND		2.8	ug/Kg-DRY	10/03/00
1,2-Dibromoethane		ND		2.8	ug/Kg-DRY	10/03/00
Chlorobenzene		ND		2.8	ug/Kg-DRY	10/03/00
Ethylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,1,1,2-Tetrachloroethane		ND		2.8	ug/Kg-DRY	10/03/00
m,p-Xylenes		ND		2.8	ug/Kg-DRY	10/03/00
o-Xylene		ND		2.8	ug/Kg-DRY	10/03/00
Styrene		ND		2.8	ug/Kg-DRY	10/03/00
Bromoform		ND		2.8	ug/Kg-DRY	10/03/00
Isopropylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
Bromobenzene		ND		2.8	ug/Kg-DRY	10/03/00
n-Propylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,1,2,2-Tetrachlorethane		ND		2.8	ug/Kg-DRY	10/03/00
1,2,3-Trichloropropane		ND		7.0	ug/Kg-DRY	10/03/00
2-Chlorotoluene		ND		2.8	ug/Kg-DRY	10/03/00
1,3,5-Trimethylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
4-Chlorotoluene		ND		5.6	ug/Kg-DRY	10/03/00

01-05-01

Sample: 11A 00CRLFSD21 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,2,4-Trimethylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
sec-Butylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
4-Isopropyltoluene		ND		7.0	ug/Kg-DRY	10/03/00
1,3-Dichlorobenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,4-Dichlorobenzene		ND		2.8	ug/Kg-DRY	10/03/00
n-Butylbenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,2-Dichlorobenzene		ND		2.8	ug/Kg-DRY	10/03/00
1,2-Dibromo-3-chloropropan		ND		7.0	ug/Kg-DRY	10/03/00
1,2,4-Trichlorobenzene		ND		2.8	ug/Kg-DRY	10/03/00
Hexachlorobutadiene		ND		2.8	ug/Kg-DRY	10/03/00
Napthalene		ND		7.0	ug/Kg-DRY	10/03/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	2.8	ug/Kg-DRY	10/03/00
Acetone		5.8	J	70	ug/Kg-DRY	10/03/00
Acrylonitrile		ND		70	ug/Kg-DRY	10/03/00
2-Butanone		ND		70	ug/Kg-DRY	10/03/00
Carbon Disulfide		ND		7.0	ug/Kg-DRY	10/03/00
trans-1,4-Dichloro-2-buten		ND		70	ug/Kg-DRY	10/03/00
2-Chloroethyl Vinyl Ether		ND		70	ug/Kg-DRY	10/03/00
2-Hexanone		ND		28	ug/Kg-DRY	10/03/00
Iodomethane		ND		7.0	ug/Kg-DRY	10/03/00
4-Methyl-2-pentanone		ND		14	ug/Kg-DRY	10/03/00
Vinyl Acetate		ND		70	ug/Kg-DRY	10/03/00
tert-Butyl methyl ether		ND		2.8	ug/Kg-DRY	10/03/00
SURROGATES, % Recovery						
Dibromofluoromethane		98.6		Min: 80	Max: 120	
Toluene d-8		109		Min: 81	Max: 117	
p-Bromofluorobenzene		101		Min: 74	Max: 121	

jl 01-05-01

Sample: 11B 00CRLFSD21 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		7900		11	mg/Kg-DRY	10/03/00
Antimony		ND		15	mg/Kg-DRY	10/03/00
Arsenic		ND		18	mg/Kg-DRY	10/03/00
Barium		88		0.56	mg/Kg-DRY	10/03/00
Beryllium		ND		0.28	mg/Kg-DRY	10/03/00
Cadmium		ND		1.1	mg/Kg-DRY	10/03/00
Calcium		1200		19	mg/Kg-DRY	10/03/00
Chromium		21		2.8	mg/Kg-DRY	10/03/00
Cobalt		7.9		4.2	mg/Kg-DRY	10/03/00
Copper		12		0.84	mg/Kg-DRY	10/03/00
Iron		17000		8.4	mg/Kg-DRY	10/03/00
Lead		12		8.4	mg/Kg-DRY	10/03/00
Magnesium		3700	J	14	mg/Kg-DRY	10/03/00
Manganese		570		1.4	mg/Kg-DRY	10/03/00
Molybdenum		ND		2.8	mg/Kg-DRY	10/03/00
Nickel		15		5.6	mg/Kg-DRY	10/03/00
Potassium		1600		140	mg/Kg-DRY	10/03/00
Selenium		ND		15	mg/Kg-DRY	10/03/00
Silver		ND		2.1	mg/Kg-DRY	10/03/00
Sodium		ND		420	mg/Kg-DRY	10/03/00
Thallium		ND		28	mg/Kg-DRY	10/03/00
Vanadium		28		1.4	mg/Kg-DRY	10/03/00
Zinc		110		0.84	mg/Kg-DRY	10/03/00
Percent Moisture	ASTM D2216	28.2		0.1	WT%	09/29/00
Polychlorinated Biphenyls	SW 8082					
PCB-1221		~~ND~~	UJ	6900	ug/Kg-DRY	10/11/00
PCB-1232		~~ND~~	↓	6900	ug/Kg-DRY	10/11/00
PCB-1242		~~ND~~		6900	ug/Kg-DRY	10/11/00
PCB-1248		~~ND~~		6900	ug/Kg-DRY	10/11/00
PCB-1254		~~ND~~		6900	ug/Kg-DRY	10/11/00
PCB-1260		250000	~~D~~ J	6900	ug/Kg-DRY	10/11/00
PCB-1016		~~ND~~	UJ	6900	ug/Kg-DRY	10/11/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		0	*	Min: 11	Max: 102	
Decachlorobiphenyl		0	*	Min: 35	Max: 141	

01-08-01

Order # M0-09-220
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 11B 00CRLFSD21 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		560	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		230	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		230	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		280	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		280	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		460	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		280	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		230	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		230	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		230	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		230	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		300	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		250	ug/Kg-DRY	10/13/00
Isophorone		ND		230	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		230	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		230	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	2300	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		230	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		230	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		280	ug/Kg-DRY	10/13/00
Naphthalene		ND		230	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		370	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		280	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		230	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		230	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	300	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		230	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		230	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	230	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		2300	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		230	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		230	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		2300	ug/Kg-DRY	10/13/00
Acenaphthene		ND		230	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		2300	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		2300	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		230	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		230	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		230	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		230	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		230	ug/Kg-DRY	10/13/00
Fluorene		ND		230	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		2300	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		2300	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		350	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		230	ug/Kg-DRY	10/13/00
Hexachlorobenzene		130	J	230	ug/Kg-DRY	10/13/00

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Sample: 11B 00CRLFSD21 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~	U5	230	ug/Kg-DRY	10/13/00
Phenanthrene		ND		230	ug/Kg-DRY	10/13/00
Anthracene		ND		230	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		160	J	230	ug/Kg-DRY	10/13/00
Fluoranthene		ND		230	ug/Kg-DRY	10/13/00
Pyrene		ND		230	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		740	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		930	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		230	ug/Kg-DRY	10/13/00
Chrysene		ND		230	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		840		230	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		230	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		230	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		230	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		230	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		230	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		230	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		230	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		230	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		21.7	*	Min: 30	Max: 122	
d5-Phenol		36.2		Min: 30	Max: 117	
d5-Nitrobenzene		37.0		Min: 30	Max: 122	
2-Fluorobiphenyl		54.3		Min: 36	Max: 121	
2,4,6-Tribromophenol		47.8		Min: 30	Max: 113	
d14-Terphenyl		139	*	Min: 30	Max: 134	

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Sample: 12A 00CRLFSD31 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	56.2		0.1	WT%	09/29/00
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	11	ug/Kg-DRY	10/03/00
Chloromethane		ND		11	ug/Kg-DRY	10/03/00
Vinyl Chloride		ND		11	ug/Kg-DRY	10/03/00
Bromomethane		~~ND~~	UJ	46	ug/Kg-DRY	10/03/00
Chloroethane		ND		11	ug/Kg-DRY	10/03/00
Trichlorofluoromethane		ND		11	ug/Kg-DRY	10/03/00
1,1-Dichloroethene		ND		11	ug/Kg-DRY	10/03/00
Trichlorotrifluoroethane		~~ND~~	UJ	11	ug/Kg-DRY	10/03/00
Methylene Chloride		23	~~B~~ UJ	11	ug/Kg-DRY	10/03/00
trans-1,2-Dichloroethene		ND		4.6	ug/Kg-DRY	10/03/00
1,1-Dichloroethane		ND		4.6	ug/Kg-DRY	10/03/00
2,2-Dichloropropane		~~ND~~	UJ	4.6	ug/Kg-DRY	10/03/00
cis-1,2-Dichloroethene		ND		4.6	ug/Kg-DRY	10/03/00
Bromochloromethane		ND		4.6	ug/Kg-DRY	10/03/00
Chloroform		ND		4.6	ug/Kg-DRY	10/03/00
1,1,1-Trichloroethane		ND		4.6	ug/Kg-DRY	10/03/00
Carbon Tetrachloride		ND		4.6	ug/Kg-DRY	10/03/00
1,1-Dichloropropene		ND		4.6	ug/Kg-DRY	10/03/00
Benzene		ND		4.6	ug/Kg-DRY	10/03/00
1,2-Dichloroethane		ND		4.6	ug/Kg-DRY	10/03/00
Trichloroethene		ND		4.6	ug/Kg-DRY	10/03/00
1,2-Dichloropropane		ND		4.6	ug/Kg-DRY	10/03/00
Dibromomethane		ND		4.6	ug/Kg-DRY	10/03/00
Bromodichloromethane		ND		4.6	ug/Kg-DRY	10/03/00
cis-1,3-Dichloropropene		ND		4.6	ug/Kg-DRY	10/03/00
Toluene		ND		4.6	ug/Kg-DRY	10/03/00
trans-1,3-Dichloropropene		ND		4.6	ug/Kg-DRY	10/03/00
1,1,2-Trichloroethane		ND		4.6	ug/Kg-DRY	10/03/00
Tetrachloroethene		ND		4.6	ug/Kg-DRY	10/03/00
1,3-Dichloropropane		ND		4.6	ug/Kg-DRY	10/03/00
Dibromochloromethane		ND		4.6	ug/Kg-DRY	10/03/00
1,2-Dibromoethane		ND		4.6	ug/Kg-DRY	10/03/00
Chlorobenzene		ND		4.6	ug/Kg-DRY	10/03/00
Ethylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,1,1,2-Tetrachloroethane		ND		4.6	ug/Kg-DRY	10/03/00
m,p-Xylenes		ND		4.6	ug/Kg-DRY	10/03/00
o-Xylene		ND		4.6	ug/Kg-DRY	10/03/00
Styrene		ND		4.6	ug/Kg-DRY	10/03/00
Bromoform		ND		4.6	ug/Kg-DRY	10/03/00
Isopropylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
Bromobenzene		ND		4.6	ug/Kg-DRY	10/03/00
n-Propylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,1,2,2-Tetrachlorethane		ND		4.6	ug/Kg-DRY	10/03/00
1,2,3-Trichloropropane		ND		11	ug/Kg-DRY	10/03/00
2-Chlorotoluene		ND		4.6	ug/Kg-DRY	10/03/00
1,3,5-Trimethylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
4-Chlorotoluene		ND		9.1	ug/Kg-DRY	10/03/00

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Sample: 12A 00CRLFSD31 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,2,4-Trimethylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
sec-Butylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
4-Isopropyltoluene		ND		11	ug/Kg-DRY	10/03/00
1,3-Dichlorobenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,4-Dichlorobenzene		ND		4.6	ug/Kg-DRY	10/03/00
n-Butylbenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,2-Dichlorobenzene		ND		4.6	ug/Kg-DRY	10/03/00
1,2-Dibromo-3-chloropropan		ND		11	ug/Kg-DRY	10/03/00
1,2,4-Trichlorobenzene		ND		4.6	ug/Kg-DRY	10/03/00
Hexachlorobutadiene		ND		4.6	ug/Kg-DRY	10/03/00
Napthalene		ND		11	ug/Kg-DRY	10/03/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	4.6	ug/Kg-DRY	10/03/00
Acetone		4.5	J	110	ug/Kg-DRY	10/03/00
Acrylonitrile		ND		110	ug/Kg-DRY	10/03/00
2-Butanone		ND		110	ug/Kg-DRY	10/03/00
Carbon Disulfide		ND		11	ug/Kg-DRY	10/03/00
trans-1,4-Dichloro-2-buten		ND		110	ug/Kg-DRY	10/03/00
2-Chloroethyl Vinyl Ether		ND		110	ug/Kg-DRY	10/03/00
2-Hexanone		ND		46	ug/Kg-DRY	10/03/00
Iodomethane		ND		11	ug/Kg-DRY	10/03/00
4-Methyl-2-pentanone		ND		23	ug/Kg-DRY	10/03/00
Vinyl Acetate		ND		110	ug/Kg-DRY	10/03/00
tert-Butyl methyl ether		ND		4.6	ug/Kg-DRY	10/03/00
SURROGATES, % Recovery						
Dibromofluoromethane		109		Min: 80	Max: 120	
Toluene d-8		109		Min: 81	Max: 117	
p-Bromofluorobenzene		109		Min: 74	Max: 121	

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Sample: 12B 00CRLFSD31 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		15000		18	mg/Kg-DRY	10/03/00
Antimony		ND		25	mg/Kg-DRY	10/03/00
Arsenic		ND		30	mg/Kg-DRY	10/03/00
Barium		120		0.91	mg/Kg-DRY	10/03/00
Beryllium		0.57		0.46	mg/Kg-DRY	10/03/00
Cadmium		ND		1.8	mg/Kg-DRY	10/03/00
Calcium		2000		32	mg/Kg-DRY	10/03/00
Chromium		27		4.6	mg/Kg-DRY	10/03/00
Cobalt		9.5		6.8	mg/Kg-DRY	10/03/00
Copper		13		1.4	mg/Kg-DRY	10/03/00
Iron		18000		14	mg/Kg-DRY	10/03/00
Lead		ND		14	mg/Kg-DRY	10/03/00
Magnesium		4300	J	23	mg/Kg-DRY	10/03/00
Manganese		290		2.3	mg/Kg-DRY	10/03/00
Molybdenum		ND		4.6	mg/Kg-DRY	10/03/00
Nickel		17		9.1	mg/Kg-DRY	10/03/00
Potassium		1300		230	mg/Kg-DRY	10/03/00
Selenium		ND		25	mg/Kg-DRY	10/03/00
Silver		ND		3.4	mg/Kg-DRY	10/03/00
Sodium		ND		680	mg/Kg-DRY	10/03/00
Thallium		ND		46	mg/Kg-DRY	10/03/00
Vanadium		45		2.3	mg/Kg-DRY	10/03/00
Zinc		44		1.4	mg/Kg-DRY	10/03/00
Percent Moisture	ASTM D2216	56.2		0.1	WT%	09/29/00
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		11	ug/Kg-DRY	10/07/00
PCB-1232		ND		11	ug/Kg-DRY	10/07/00
PCB-1242		ND		11	ug/Kg-DRY	10/07/00
PCB-1248		ND		11	ug/Kg-DRY	10/07/00
PCB-1254		ND		11	ug/Kg-DRY	10/07/00
PCB-1260		ND		11	ug/Kg-DRY	10/07/00
PCB-1016		ND		11	ug/Kg-DRY	10/07/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		60.7		Min: 11	Max: 102	
Decachlorobiphenyl		100		Min: 35	Max: 141	

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Sample: 12B 00CRLFSD31 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		910	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		380	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		380	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		460	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		460	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		760	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		460	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		380	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		380	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		380	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		380	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		490	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		420	ug/Kg-DRY	10/13/00
Isophorone		ND		380	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		380	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		380	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	3800	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		380	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		380	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		460	ug/Kg-DRY	10/13/00
Naphthalene		ND		380	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		610	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		460	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		380	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		380	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	490	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		380	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		380	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	380	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		3800	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		380	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		380	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		3800	ug/Kg-DRY	10/13/00
Acenaphthene		ND		380	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		3800	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		3800	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		380	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		380	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		380	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		380	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		380	ug/Kg-DRY	10/13/00
Fluorene		ND		380	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		3800	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		3800	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		570	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		380	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		380	ug/Kg-DRY	10/13/00

01-08-01

Sample: 12B 00CRLFSD31 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		380	ug/Kg-DRY	10/13/00
Phenanthrene		ND		380	ug/Kg-DRY	10/13/00
Anthracene		ND		380	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		570		380	ug/Kg-DRY	10/13/00
Fluoranthene		ND		380	ug/Kg-DRY	10/13/00
Pyrene		ND		380	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		1200	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		1500	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		380	ug/Kg-DRY	10/13/00
Chrysene		ND		380	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		110	J	380	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		380	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		380	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		380	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		380	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		380	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		380	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		380	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		380	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		30.0		Min: 30	Max: 122	
d5-Phenol		44.5		Min: 30	Max: 117	
d5-Nitrobenzene		25.0	*	Min: 30	Max: 122	
2-Fluorobiphenyl		36.8		Min: 36	Max: 121	
2,4,6-Tribromophenol		70.9		Min: 30	Max: 113	
d14-Terphenyl		103		Min: 30	Max: 134	

01-08-01

Sample: 13A 00CRLFSD11 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	35.0		0.1	WT%	09/29/00
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	7.7	ug/Kg-DRY	10/04/00
Chloromethane		ND		7.7	ug/Kg-DRY	10/04/00
Vinyl Chloride		ND		7.7	ug/Kg-DRY	10/04/00
Bromomethane		~~ND~~	UJ	31	ug/Kg-DRY	10/04/00
Chloroethane		ND		7.7	ug/Kg-DRY	10/04/00
Trichlorofluoromethane		ND		7.7	ug/Kg-DRY	10/04/00
1,1-Dichloroethene		ND		7.7	ug/Kg-DRY	10/04/00
Trichlorotrifluoroethane		ND		7.7	ug/Kg-DRY	10/04/00
Methylene Chloride		17	~~B~~ UJ	7.7	ug/Kg-DRY	10/04/00
trans-1,2-Dichloroethene		ND		3.1	ug/Kg-DRY	10/04/00
1,1-Dichloroethane		ND		3.1	ug/Kg-DRY	10/04/00
2,2-Dichloropropane		ND		3.1	ug/Kg-DRY	10/04/00
cis-1,2-Dichloroethene		ND		3.1	ug/Kg-DRY	10/04/00
Bromochloromethane		ND		3.1	ug/Kg-DRY	10/04/00
Chloroform		ND		3.1	ug/Kg-DRY	10/04/00
1,1,1-Trichloroethane		ND		3.1	ug/Kg-DRY	10/04/00
Carbon Tetrachloride		ND		3.1	ug/Kg-DRY	10/04/00
1,1-Dichloropropene		ND		3.1	ug/Kg-DRY	10/04/00
Benzene		ND		0.77	ug/Kg-DRY	10/04/00
1,2-Dichloroethane		ND		3.1	ug/Kg-DRY	10/04/00
Trichloroethene		ND		3.1	ug/Kg-DRY	10/04/00
1,2-Dichloropropane		ND		3.1	ug/Kg-DRY	10/04/00
Dibromomethane		ND		3.1	ug/Kg-DRY	10/04/00
Bromodichloromethane		ND		3.1	ug/Kg-DRY	10/04/00
cis-1,3-Dichloropropene		ND		3.1	ug/Kg-DRY	10/04/00
Toluene		ND		3.1	ug/Kg-DRY	10/04/00
trans-1,3-Dichloropropene		ND		3.1	ug/Kg-DRY	10/04/00
1,1,2-Trichloroethane		ND		3.1	ug/Kg-DRY	10/04/00
Tetrachloroethene		ND		3.1	ug/Kg-DRY	10/04/00
1,3-Dichloropropane		ND		3.1	ug/Kg-DRY	10/04/00
Dibromochloromethane		ND		3.1	ug/Kg-DRY	10/04/00
1,2-Dibromoethane		ND		3.1	ug/Kg-DRY	10/04/00
Chlorobenzene		ND		3.1	ug/Kg-DRY	10/04/00
Ethylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,1,1,2-Tetrachloroethane		ND		3.1	ug/Kg-DRY	10/04/00
m,p-Xylenes		ND		3.1	ug/Kg-DRY	10/04/00
o-Xylene		ND		3.1	ug/Kg-DRY	10/04/00
Styrene		ND		3.1	ug/Kg-DRY	10/04/00
Bromoform		ND		3.1	ug/Kg-DRY	10/04/00
Isopropylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
Bromobenzene		ND		3.1	ug/Kg-DRY	10/04/00
n-Propylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,1,2,2-Tetrachlorethane		ND		3.1	ug/Kg-DRY	10/04/00
1,2,3-Trichloropropane		ND		7.7	ug/Kg-DRY	10/04/00
2-Chlorotoluene		ND		3.1	ug/Kg-DRY	10/04/00
1,3,5-Trimethylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
4-Chlorotoluene		ND		6.2	ug/Kg-DRY	10/04/00

01-08-01

Sample: 13A 00CRLFSD11 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,2,4-Trimethylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
sec-Butylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
4-Isopropyltoluene		ND		7.7	ug/Kg-DRY	10/04/00
1,3-Dichlorobenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,4-Dichlorobenzene		ND		3.1	ug/Kg-DRY	10/04/00
n-Butylbenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,2-Dichlorobenzene		ND		3.1	ug/Kg-DRY	10/04/00
1,2-Dibromo-3-chloropropan		ND		7.7	ug/Kg-DRY	10/04/00
1,2,4-Trichlorobenzene		ND		3.1	ug/Kg-DRY	10/04/00
Hexachlorobutadiene		ND		3.1	ug/Kg-DRY	10/04/00
Napthalene		ND		7.7	ug/Kg-DRY	10/04/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	3.1	ug/Kg-DRY	10/04/00
Acetone		~~ND~~	UJ	77	ug/Kg-DRY	10/04/00
Acrylonitrile		ND		77	ug/Kg-DRY	10/04/00
2-Butanone		ND		77	ug/Kg-DRY	10/04/00
Carbon Disulfide		ND		7.7	ug/Kg-DRY	10/04/00
trans-1,4-Dichloro-2-buten		ND		77	ug/Kg-DRY	10/04/00
2-Chloroethyl Vinyl Ether		~~ND~~	UJ	77	ug/Kg-DRY	10/04/00
2-Hexanone		ND		31	ug/Kg-DRY	10/04/00
Iodomethane		~~ND~~	UJ	7.7	ug/Kg-DRY	10/04/00
4-Methyl-2-pentanone		ND		15	ug/Kg-DRY	10/04/00
Vinyl Acetate		ND		77	ug/Kg-DRY	10/04/00
tert-Butyl methyl ether		ND		3.1	ug/Kg-DRY	10/04/00
SURROGATES, % Recovery						
Dibromofluoromethane		84.4		Min: 80	Max: 120	
Toluene d-8		106		Min: 81	Max: 117	
p-Bromofluorobenzene		112		Min: 74	Max: 121	

01-08-01

Sample: 13B 00CRLFSD11 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		7000		12	mg/Kg-DRY	10/03/00
Antimony		ND		17	mg/Kg-DRY	10/03/00
Arsenic		ND		20	mg/Kg-DRY	10/03/00
Barium		72		0.62	mg/Kg-DRY	10/03/00
Beryllium		ND		0.31	mg/Kg-DRY	10/03/00
Cadmium		ND		1.2	mg/Kg-DRY	10/03/00
Calcium		1600		22	mg/Kg-DRY	10/03/00
Chromium		15		3.1	mg/Kg-DRY	10/03/00
Cobalt		5.9		4.6	mg/Kg-DRY	10/03/00
Copper		37		0.92	mg/Kg-DRY	10/03/00
Iron		11000		9.2	mg/Kg-DRY	10/03/00
Lead		19		9.2	mg/Kg-DRY	10/03/00
Magnesium		2800	J	15	mg/Kg-DRY	10/03/00
Manganese		200		1.5	mg/Kg-DRY	10/03/00
Molybdenum		ND		3.1	mg/Kg-DRY	10/03/00
Nickel		11		6.2	mg/Kg-DRY	10/03/00
Potassium		690		150	mg/Kg-DRY	10/03/00
Selenium		ND		17	mg/Kg-DRY	10/03/00
Silver		5.1		2.3	mg/Kg-DRY	10/03/00
Sodium		ND		460	mg/Kg-DRY	10/03/00
Thallium		ND		31	mg/Kg-DRY	10/03/00
Vanadium		26		1.5	mg/Kg-DRY	10/03/00
Zinc		33		0.92	mg/Kg-DRY	10/03/00
Percent Moisture	ASTM D2216	35.0		0.1	WT%	09/29/00

01-08-01

Sample: 13B 00CRLFSD11 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		7.6	ug/Kg-DRY	10/07/00
PCB-1232		ND		7.6	ug/Kg-DRY	10/07/00
PCB-1242		ND		7.6	ug/Kg-DRY	10/07/00
PCB-1248		ND		7.6	ug/Kg-DRY	10/07/00
PCB-1254		45		7.6	ug/Kg-DRY	10/07/00
PCB-1260		ND		7.6	ug/Kg-DRY	10/07/00
PCB-1016		ND		7.6	ug/Kg-DRY	10/07/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		61.0		Min: 11	Max: 102	
Decachlorobiphenyl		92.7		Min: 35	Max: 141	
Semivolatile Organics	SW 8270C					
Phenol		ND		610	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		260	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		260	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		310	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		310	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		510	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		310	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		260	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		260	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		260	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		260	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		330	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		280	ug/Kg-DRY	10/13/00
Isophorone		ND		260	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		260	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		260	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	2600	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		260	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		260	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		310	ug/Kg-DRY	10/13/00
Naphthalene		ND		260	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		410	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		310	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		260	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		260	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	330	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		260	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		260	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	260	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		2600	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		260	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		260	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		2600	ug/Kg-DRY	10/13/00
Acenaphthene		ND		260	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		2600	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		2600	ug/Kg-DRY	10/13/00

jl 01-08-01

Sample: 13B 00CRLFSD11 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Dibenzofuran		ND		260	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		260	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		260	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		260	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		260	ug/Kg-DRY	10/13/00
Fluorene		ND		260	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		2600	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		2600	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		380	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		260	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		260	ug/Kg-DRY	10/13/00
Pentachlorophenol		~~ND~~	UJ	260	ug/Kg-DRY	10/13/00
Phenanthrene		ND		260	ug/Kg-DRY	10/13/00
Anthracene		ND		260	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		95	J	260	ug/Kg-DRY	10/13/00
Fluoranthene		ND		260	ug/Kg-DRY	10/13/00
Pyrene		ND		260	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		820	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		1000	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		260	ug/Kg-DRY	10/13/00
Chrysene		ND		260	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		51	J	260	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		260	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		260	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		260	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		260	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		260	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		260	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		260	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		260	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		35.1		Min: 30	Max: 122	
d5-Phenol		48.1		Min: 30	Max: 117	
d5-Nitrobenzene		31.4		Min: 30	Max: 122	
2-Fluorobiphenyl		39.2		Min: 36	Max: 121	
2,4,6-Tribromophenol		68.8		Min: 30	Max: 113	
d14-Terphenyl		110		Min: 30	Max: 134	

jd 01-08-01

Sample: 14A 00CRLFSD32 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	44.0		0.1	WT%	09/29/00
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	8.9	ug/Kg-DRY	10/04/00
Chloromethane		ND		8.9	ug/Kg-DRY	10/04/00
Vinyl Chloride		ND		8.9	ug/Kg-DRY	10/04/00
Bromomethane		~~ND~~	UJ	36	ug/Kg-DRY	10/04/00
Chloroethane		ND		8.9	ug/Kg-DRY	10/04/00
Trichlorofluoromethane		ND		8.9	ug/Kg-DRY	10/04/00
1,1-Dichloroethene		ND		8.9	ug/Kg-DRY	10/04/00
Trichlorotrifluoroethane		ND		8.9	ug/Kg-DRY	10/04/00
Methylene Chloride		13	B UJ	8.9	ug/Kg-DRY	10/04/00
trans-1,2-Dichloroethene		ND		3.6	ug/Kg-DRY	10/04/00
1,1-Dichloroethane		ND		3.6	ug/Kg-DRY	10/04/00
2,2-Dichloropropane		ND		3.6	ug/Kg-DRY	10/04/00
cis-1,2-Dichloroethene		ND		3.6	ug/Kg-DRY	10/04/00
Bromochloromethane		ND		3.6	ug/Kg-DRY	10/04/00
Chloroform		ND		3.6	ug/Kg-DRY	10/04/00
1,1,1-Trichloroethane		ND		3.6	ug/Kg-DRY	10/04/00
Carbon Tetrachloride		ND		3.6	ug/Kg-DRY	10/04/00
1,1-Dichloropropene		ND		3.6	ug/Kg-DRY	10/04/00
Benzene		ND		3.6	ug/Kg-DRY	10/04/00
1,2-Dichloroethane		ND		3.6	ug/Kg-DRY	10/04/00
Trichloroethene		ND		3.6	ug/Kg-DRY	10/04/00
1,2-Dichloropropane		ND		3.6	ug/Kg-DRY	10/04/00
Dibromomethane		ND		3.6	ug/Kg-DRY	10/04/00
Bromodichloromethane		ND		3.6	ug/Kg-DRY	10/04/00
cis-1,3-Dichloropropene		ND		3.6	ug/Kg-DRY	10/04/00
Toluene		ND		3.6	ug/Kg-DRY	10/04/00
trans-1,3-Dichloropropene		ND		3.6	ug/Kg-DRY	10/04/00
1,1,2-Trichloroethane		ND		3.6	ug/Kg-DRY	10/04/00
Tetrachloroethene		ND		3.6	ug/Kg-DRY	10/04/00
1,3-Dichloropropane		ND		3.6	ug/Kg-DRY	10/04/00
Dibromochloromethane		ND		3.6	ug/Kg-DRY	10/04/00
1,2-Dibromoethane		ND		3.6	ug/Kg-DRY	10/04/00
Chlorobenzene		ND		3.6	ug/Kg-DRY	10/04/00
Ethylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,1,1,2-Tetrachloroethane		ND		3.6	ug/Kg-DRY	10/04/00
m,p-Xylenes		ND		3.6	ug/Kg-DRY	10/04/00
o-Xylene		ND		3.6	ug/Kg-DRY	10/04/00
Styrene		ND		3.6	ug/Kg-DRY	10/04/00
Bromoform		ND		3.6	ug/Kg-DRY	10/04/00
Isopropylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
Bromobenzene		ND		3.6	ug/Kg-DRY	10/04/00
n-Propylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,1,2,2-Tetrachlorethane		ND		3.6	ug/Kg-DRY	10/04/00
1,2,3-Trichloropropane		ND		8.9	ug/Kg-DRY	10/04/00
2-Chlorotoluene		ND		3.6	ug/Kg-DRY	10/04/00
1,3,5-Trimethylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
4-Chlorotoluene		ND		7.1	ug/Kg-DRY	10/04/00

P01-08-01

Sample: 14A 00CRLFSD32 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,2,4-Trimethylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
sec-Butylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
4-Isopropyltoluene		ND		8.9	ug/Kg-DRY	10/04/00
1,3-Dichlorobenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,4-Dichlorobenzene		ND		3.6	ug/Kg-DRY	10/04/00
n-Butylbenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,2-Dichlorobenzene		ND		3.6	ug/Kg-DRY	10/04/00
1,2-Dibromo-3-chloropropan		ND		8.9	ug/Kg-DRY	10/04/00
1,2,4-Trichlorobenzene		ND		3.6	ug/Kg-DRY	10/04/00
Hexachlorobutadiene		ND		3.6	ug/Kg-DRY	10/04/00
Napthalene		ND		8.9	ug/Kg-DRY	10/04/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	3.6	ug/Kg-DRY	10/04/00
Acetone		~~ND~~	UJ	89	ug/Kg-DRY	10/04/00
Acrylonitrile		ND		89	ug/Kg-DRY	10/04/00
2-Butanone		ND		89	ug/Kg-DRY	10/04/00
Carbon Disulfide		ND		8.9	ug/Kg-DRY	10/04/00
trans-1,4-Dichloro-2-buten		ND		89	ug/Kg-DRY	10/04/00
2-Chloroethyl Vinyl Ether		~~ND~~	UJ	89	ug/Kg-DRY	10/04/00
2-Hexanone		ND		36	ug/Kg-DRY	10/04/00
Iodomethane		~~ND~~	UJ	8.9	ug/Kg-DRY	10/04/00
4-Methyl-2-pentanone		ND		18	ug/Kg-DRY	10/04/00
Vinyl Acetate		ND		89	ug/Kg-DRY	10/04/00
tert-Butyl methyl ether		ND		3.6	ug/Kg-DRY	10/04/00
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		106		Min: 81	Max: 117	
p-Bromofluorobenzene		102		Min: 74	Max: 121	

01-08-01

Sample: 14B 00CRLFSD32 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		13000		14	mg/Kg-DRY	10/03/00
Antimony		ND		20	mg/Kg-DRY	10/03/00
Arsenic		ND		23	mg/Kg-DRY	10/03/00
Barium		100		0.71	mg/Kg-DRY	10/03/00
Beryllium		0.46		0.36	mg/Kg-DRY	10/03/00
Cadmium		ND		1.4	mg/Kg-DRY	10/03/00
Calcium		1800		25	mg/Kg-DRY	10/03/00
Chromium		24		3.6	mg/Kg-DRY	10/03/00
Cobalt		9.9		5.4	mg/Kg-DRY	10/03/00
Copper		13		1.1	mg/Kg-DRY	10/03/00
Iron		17000		11	mg/Kg-DRY	10/03/00
Lead		ND		11	mg/Kg-DRY	10/03/00
Magnesium		4200	J	18	mg/Kg-DRY	10/03/00
Manganese		340		1.8	mg/Kg-DRY	10/03/00
Molybdenum		ND		3.6	mg/Kg-DRY	10/03/00
Nickel		17		7.1	mg/Kg-DRY	10/03/00
Potassium		1100		180	mg/Kg-DRY	10/03/00
Selenium		ND		20	mg/Kg-DRY	10/03/00
Silver		ND		2.7	mg/Kg-DRY	10/03/00
Sodium		ND		540	mg/Kg-DRY	10/03/00
Thallium		ND		36	mg/Kg-DRY	10/03/00
Vanadium		40		1.8	mg/Kg-DRY	10/03/00
Zinc		42		1.1	mg/Kg-DRY	10/03/00
Percent Moisture	ASTM D2216	44.0		0.1	WT%	09/29/00
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		8.9	ug/Kg-DRY	10/07/00
PCB-1232		ND		8.9	ug/Kg-DRY	10/07/00
PCB-1242		ND		8.9	ug/Kg-DRY	10/07/00
PCB-1248		ND		8.9	ug/Kg-DRY	10/07/00
PCB-1254		11		8.9	ug/Kg-DRY	10/07/00
PCB-1260		ND		8.9	ug/Kg-DRY	10/07/00
PCB-1016		ND		8.9	ug/Kg-DRY	10/07/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		58.3		Min: 11	Max: 102	
Decachlorobiphenyl		95.8		Min: 35	Max: 141	

01-08-01

Sample: 14B 00CRLFSD32 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		710	ug/Kg-DRY	10/13/00
bis(2-Chloroethyl) ether		ND		300	ug/Kg-DRY	10/13/00
2-Chlorophenol		ND		300	ug/Kg-DRY	10/13/00
1,3-Dichlorobenzene		ND		360	ug/Kg-DRY	10/13/00
1,4-Dichlorobenzene		ND		360	ug/Kg-DRY	10/13/00
Benzyl alcohol		ND		590	ug/Kg-DRY	10/13/00
1,2-Dichlorobenzene		ND		360	ug/Kg-DRY	10/13/00
2-Methylphenol		ND		300	ug/Kg-DRY	10/13/00
bis(2-Chloroisopropyl) eth		ND		300	ug/Kg-DRY	10/13/00
4-Methylphenol		ND		300	ug/Kg-DRY	10/13/00
n-Nitroso-di-n-propylamine		ND		300	ug/Kg-DRY	10/13/00
Hexachloroethane		ND		390	ug/Kg-DRY	10/13/00
Nitrobenzene		ND		330	ug/Kg-DRY	10/13/00
Isophorone		ND		300	ug/Kg-DRY	10/13/00
2-Nitrophenol		ND		300	ug/Kg-DRY	10/13/00
2,4-Dimethylphenol		ND		300	ug/Kg-DRY	10/13/00
Benzoic acid		~~ND~~	UJ	3000	ug/Kg-DRY	10/13/00
bis(2-Chloroethoxy)methane		ND		300	ug/Kg-DRY	10/13/00
2,4-Dichlorophenol		ND		300	ug/Kg-DRY	10/13/00
1,2,4-Trichlorobenzene		ND		360	ug/Kg-DRY	10/13/00
Naphthalene		ND		300	ug/Kg-DRY	10/13/00
4-Chloroaniline		ND		470	ug/Kg-DRY	10/13/00
Hexachlorobutadiene		ND		360	ug/Kg-DRY	10/13/00
4-Chloro-3-methylphenol		ND		300	ug/Kg-DRY	10/13/00
2-Methylnaphthalene		ND		300	ug/Kg-DRY	10/13/00
Hexachlorocyclopentadiene		~~ND~~	UJ	390	ug/Kg-DRY	10/13/00
2,4,6-Trichlorophenol		ND		300	ug/Kg-DRY	10/13/00
2,4,5-Trichlorophenol		ND		300	ug/Kg-DRY	10/13/00
2-Chloronaphthalene		~~ND~~	UJ	300	ug/Kg-DRY	10/13/00
2-Nitroaniline		ND		3000	ug/Kg-DRY	10/13/00
Dimethylphthalate		ND		300	ug/Kg-DRY	10/13/00
Acenaphthylene		ND		300	ug/Kg-DRY	10/13/00
3-Nitroaniline		ND		3000	ug/Kg-DRY	10/13/00
Acenaphthene		ND		300	ug/Kg-DRY	10/13/00
2,4-Dinitrophenol		ND		3000	ug/Kg-DRY	10/13/00
4-Nitrophenol		ND		3000	ug/Kg-DRY	10/13/00
Dibenzofuran		ND		300	ug/Kg-DRY	10/13/00
2,6-Dinitrotoluene		ND		300	ug/Kg-DRY	10/13/00
2,4-Dinitrotoluene		ND		300	ug/Kg-DRY	10/13/00
Diethylphthalate		ND		300	ug/Kg-DRY	10/13/00
4-Chlorophenyl-phenylether		ND		300	ug/Kg-DRY	10/13/00
Fluorene		ND		300	ug/Kg-DRY	10/13/00
4-Nitroaniline		ND		3000	ug/Kg-DRY	10/13/00
4,6-Dinitro-2-methylphenol		ND		3000	ug/Kg-DRY	10/13/00
n-Nitrosodiphenylamine		ND		440	ug/Kg-DRY	10/13/00
4-Bromophenyl-phenylether		ND		300	ug/Kg-DRY	10/13/00
Hexachlorobenzene		ND		300	ug/Kg-DRY	10/13/00

01-05-01

Sample: 14B 00CRLFSD32 Collected: 09/20/00 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		300	ug/Kg-DRY	10/13/00
Phenanthrene		ND		300	ug/Kg-DRY	10/13/00
Anthracene		ND		300	ug/Kg-DRY	10/13/00
Di-n-butylphthalate		880		300	ug/Kg-DRY	10/13/00
Fluoranthene		ND		300	ug/Kg-DRY	10/13/00
Pyrene		ND		300	ug/Kg-DRY	10/13/00
Butylbenzylphthalate		ND		950	ug/Kg-DRY	10/13/00
3,3'-Dichlorobenzidine		ND		1200	ug/Kg-DRY	10/13/00
Benzo(a)Anthracene		ND		300	ug/Kg-DRY	10/13/00
Chrysene		ND		300	ug/Kg-DRY	10/13/00
Bis(2-Ethylhexyl)phthalate		ND		300	ug/Kg-DRY	10/13/00
Di-n-octylphthalate		ND		300	ug/Kg-DRY	10/13/00
Benzo(b)fluoranthene		ND		300	ug/Kg-DRY	10/13/00
Benzo(k)fluoranthene		ND		300	ug/Kg-DRY	10/13/00
Benzo(a)pyrene		ND		300	ug/Kg-DRY	10/13/00
Indeno(1,2,3-cd)pyrene		ND		300	ug/Kg-DRY	10/13/00
Dibenz(a,h)anthracene		ND		300	ug/Kg-DRY	10/13/00
Benzo(g,h,i)perylene		ND		300	ug/Kg-DRY	10/13/00
p-Chlorophenylmethylsulfone		ND		300	ug/Kg-DRY	10/13/00
SURROGATES, % Recovery						
2-Fluorophenol		27.0	*	Min: 30	Max: 122	
d5-Phenol		39.3		Min: 30	Max: 117	
d5-Nitrobenzene		28.8	*	Min: 30	Max: 122	
2-Fluorobiphenyl		37.3		Min: 36	Max: 121	
2,4,6-Tribromophenol		55.1		Min: 30	Max: 113	
d14-Terphenyl		100		Min: 30	Max: 134	

Sample: 15A 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.56	ug/L	10/05/00
PCB-1232		ND		0.56	ug/L	10/05/00
PCB-1242		ND		0.56	ug/L	10/05/00
PCB-1248		ND		0.56	ug/L	10/05/00
PCB-1254		ND		0.56	ug/L	10/05/00
PCB-1260		ND		0.56	ug/L	10/05/00
PCB-1016		ND		0.56	ug/L	10/05/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		82.0		Min: 29	Max: 133	
Decachlorobiphenyl		52.8		Min: 26	Max: 137	

01-05-01

Sample: 15B 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~ UJ		5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		ND		5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

Sample: 15B 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		~~ND~~	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		~~ND~~	UJ	2.0	ug/L	09/30/00
Napthalene		~~ND~~	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	2.0	ug/L	09/30/00
Acetone		~~ND~~	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		~~ND~~	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		~~ND~~	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		104		Min: 80	Max: 120	
Toluene d-8		108		Min: 88	Max: 110	
p-Bromofluorobenzene		104		Min: 86	Max: 115	

01-08-01

Sample: 15C 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/12/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/12/00
2-Chlorophenol		ND		5.1	ug/L	10/12/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/12/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/12/00
Benzyl alcohol		ND		10	ug/L	10/12/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/12/00
2-Methylphenol		ND		5.1	ug/L	10/12/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/12/00
4-Methylphenol		~~ND~~	UJ	5.1	ug/L	10/12/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/12/00
Hexachloroethane		ND		5.1	ug/L	10/12/00
Nitrobenzene		ND		5.1	ug/L	10/12/00
Isophorone		ND		5.1	ug/L	10/12/00
2-Nitrophenol		ND		5.1	ug/L	10/12/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/12/00
Benzoic acid		~~ND~~	UJ	130	ug/L	10/12/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/12/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/12/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/12/00
Naphthalene		ND		10	ug/L	10/12/00
4-Chloroaniline		~~ND~~	UJ	5.1	ug/L	10/12/00
Hexachlorobutadiene		ND		5.1	ug/L	10/12/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.1	ug/L	10/12/00
2-Methylnaphthalene		ND		5.1	ug/L	10/12/00
Hexachlorocyclopentadiene		ND		10	ug/L	10/12/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/12/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/12/00
2-Chloronaphthalene		ND		10	ug/L	10/12/00
2-Nitroaniline		ND		51	ug/L	10/12/00
Dimethylphthalate		ND		5.1	ug/L	10/12/00
Acenaphthylene		ND		5.1	ug/L	10/12/00
3-Nitroaniline		ND		51	ug/L	10/12/00
Acenaphthene		ND		5.1	ug/L	10/12/00
2,4-Dinitrophenol		ND		72	ug/L	10/12/00
4-Nitrophenol		~~ND~~	UJ	51	ug/L	10/12/00
Dibenzofuran		ND		5.1	ug/L	10/12/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/12/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/12/00
Diethylphthalate		ND		5.1	ug/L	10/12/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/12/00
Fluorene		ND		5.1	ug/L	10/12/00
4-Nitroaniline		ND		51	ug/L	10/12/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/12/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/12/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/12/00
Hexachlorobenzene		ND		5.1	ug/L	10/12/00

01-08-01

Sample: 15C 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~	UJ	21	ug/L	10/12/00
Phenanthrene		ND		5.1	ug/L	10/12/00
Anthracene		ND		5.1	ug/L	10/12/00
Di-n-butylphthalate		5.1 ~~3.2~~	B U	5.1	ug/L	10/12/00
Fluoranthene		ND		5.1	ug/L	10/12/00
Pyrene		ND		5.1	ug/L	10/12/00
Butylbenzylphthalate		ND		5.1	ug/L	10/12/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/12/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/12/00
Chrysene		ND		5.1	ug/L	10/12/00
Bis(2-Ethylhexyl)phthalate		5.1 ~~2.1~~	B U	5.1	ug/L	10/12/00
Di-n-octylphthalate		ND		5.1	ug/L	10/12/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/12/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/12/00
Benzo(a)pyrene		ND		5.1	ug/L	10/12/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/12/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/12/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/12/00
p-Chlorophenylmethylsulfone		ND		5.1	ug/L	10/12/00
SURROGATES, % Recovery						
2-Fluorophenol		47.3		Min: 21	Max: 100	
d5-Phenol		40.0		Min: 10	Max: 94	
d5-Nitrobenzene		58.0		Min: 35	Max: 114	
2-Fluorobiphenyl		52.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		73.3		Min: 10	Max: 123	
d14-Terphenyl		62.0		Min: 33	Max: 141	

01-08-01

Sample: 15D 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	12		5.0	mg/L	09/29/00

Sample: 15E 00CRLFGWC31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		87		0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		1.1		0.0040	mg/L	10/05/00
Beryllium		0.0041		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		19		0.10	mg/L	10/05/00
Chromium		0.16		0.010	mg/L	10/05/00
Cobalt		0.066		0.020	mg/L	10/05/00
Copper		0.089		0.0050	mg/L	10/05/00
Iron		120		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		28		0.10	mg/L	10/05/00
Manganese		2.2		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		0.11		0.040	mg/L	10/05/00
Potassium		9.6	J	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		5.3		3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		0.25		0.010	mg/L	10/05/00
Zinc		0.30		0.0050	mg/L	10/05/00

Sample: 16A 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/06/00
PCB-1232		ND		0.51	ug/L	10/06/00
PCB-1242		ND		0.51	ug/L	10/06/00
PCB-1248		ND		0.51	ug/L	10/06/00
PCB-1254		ND		0.51	ug/L	10/06/00
PCB-1260		ND		0.51	ug/L	10/06/00
PCB-1016		ND		0.51	ug/L	10/06/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		96.3		Min: 29	Max: 133	
Decachlorobiphenyl		117		Min: 26	Max: 137	

01-08-01

Sample: 16B 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0	B U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

01-05-01

Sample: 16B 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		~~ND~~	UJ	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		ND		2.0	ug/L	09/30/00
Hexachlorobutadiene		~~ND~~	UJ	2.0	ug/L	09/30/00
Napthalene		~~ND~~	UJ	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		~~ND~~	UJ	2.0	ug/L	09/30/00
Acetone		~~ND~~	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		~~ND~~	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		~~ND~~	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		104		Min: 80	Max: 120	
Toluene d-8		108		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

01-08-01

Sample: 16C 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.4	ug/L	10/12/00
bis(2-Chloroethyl) ether		ND		5.4	ug/L	10/12/00
2-Chlorophenol		ND		5.4	ug/L	10/12/00
1,3-Dichlorobenzene		ND		5.4	ug/L	10/12/00
1,4-Dichlorobenzene		ND		5.4	ug/L	10/12/00
Benzyl alcohol		ND		11	ug/L	10/12/00
1,2-Dichlorobenzene		ND		5.4	ug/L	10/12/00
2-Methylphenol		~~ND~~	UJ	5.4	ug/L	10/12/00
bis(2-Chloroisopropyl) eth		ND		5.4	ug/L	10/12/00
4-Methylphenol		ND		5.4	ug/L	10/12/00
n-Nitroso-di-n-propylamine		ND		5.4	ug/L	10/12/00
Hexachloroethane		ND		5.4	ug/L	10/12/00
Nitrobenzene		ND		5.4	ug/L	10/12/00
Isophorone		ND		5.4	ug/L	10/12/00
2-Nitrophenol		ND		5.4	ug/L	10/12/00
2,4-Dimethylphenol		ND		5.4	ug/L	10/12/00
Benzoic acid		~~ND~~	UJ	140	ug/L	10/12/00
bis(2-Chloroethoxy)methane		ND		5.4	ug/L	10/12/00
2,4-Dichlorophenol		ND		5.4	ug/L	10/12/00
1,2,4-Trichlorobenzene		ND		5.4	ug/L	10/12/00
Naphthalene		ND		11	ug/L	10/12/00
4-Chloroaniline		~~ND~~	UJ	5.4	ug/L	10/12/00
Hexachlorobutadiene		ND		5.4	ug/L	10/12/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.4	ug/L	10/12/00
2-Methylnaphthalene		ND		5.4	ug/L	10/12/00
Hexachlorocyclopentadiene		ND		11	ug/L	10/12/00
2,4,6-Trichlorophenol		ND		5.4	ug/L	10/12/00
2,4,5-Trichlorophenol		ND		5.4	ug/L	10/12/00
2-Chloronaphthalene		ND		11	ug/L	10/12/00
2-Nitroaniline		ND		54	ug/L	10/12/00
Dimethylphthalate		ND		5.4	ug/L	10/12/00
Acenaphthylene		ND		5.4	ug/L	10/12/00
3-Nitroaniline		ND		54	ug/L	10/12/00
Acenaphthene		ND		5.4	ug/L	10/12/00
2,4-Dinitrophenol		ND		76	ug/L	10/12/00
4-Nitrophenol		~~ND~~	UJ	54	ug/L	10/12/00
Dibenzofuran		ND		5.4	ug/L	10/12/00
2,6-Dinitrotoluene		ND		5.4	ug/L	10/12/00
2,4-Dinitrotoluene		ND		5.4	ug/L	10/12/00
Diethylphthalate		ND		5.4	ug/L	10/12/00
4-Chlorophenyl-phenylether		ND		5.4	ug/L	10/12/00
Fluorene		ND		5.4	ug/L	10/12/00
4-Nitroaniline		ND		54	ug/L	10/12/00
4,6-Dinitro-2-methylphenol		ND		54	ug/L	10/12/00
n-Nitrosodiphenylamine		ND		5.4	ug/L	10/12/00
4-Bromophenyl-phenylether		ND		5.4	ug/L	10/12/00
Hexachlorobenzene		ND		5.4	ug/L	10/12/00

01-08-01

Sample: 16C 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~	UJ	22	ug/L	10/12/00
Phenanthrene		ND		5.4	ug/L	10/12/00
Anthracene		ND		5.4	ug/L	10/12/00
Di-n-butylphthalate		5.4~~4.6~~	J U	5.4	ug/L	10/12/00
Fluoranthene		ND		5.4	ug/L	10/12/00
Pyrene		ND		5.4	ug/L	10/12/00
Butylbenzylphthalate		ND		5.4	ug/L	10/12/00
3,3'-Dichlorobenzidine		ND		22	ug/L	10/12/00
Benzo(a)Anthracene		ND		5.4	ug/L	10/12/00
Chrysene		ND		5.4	ug/L	10/12/00
Bis(2-Ethylhexyl)phthalate		5.4~~2.5~~	J U	5.4	ug/L	10/12/00
Di-n-octylphthalate		ND		5.4	ug/L	10/12/00
Benzo(b)fluoranthene		ND		5.4	ug/L	10/12/00
Benzo(k)fluoranthene		ND		5.4	ug/L	10/12/00
Benzo(a)pyrene		ND		5.4	ug/L	10/12/00
Indeno(1,2,3-cd)pyrene		ND		5.4	ug/L	10/12/00
Dibenz(a,h)anthracene		ND		5.4	ug/L	10/12/00
Benzo(g,h,i)perylene		ND		5.4	ug/L	10/12/00
p-Chlorophenylmethylsulfone		ND		5.4	ug/L	10/12/00
SURROGATES, % Recovery						
2-Fluorophenol		46.9		Min: 21	Max: 100	
d5-Phenol		36.9		Min: 10	Max: 94	
d5-Nitrobenzene		61.8		Min: 35	Max: 114	
2-Fluorobiphenyl		70.9		Min: 43	Max: 116	
2,4,6-Tribromophenol		75.0		Min: 10	Max: 123	
d14-Terphenyl		73.6		Min: 33	Max: 141	

Sample: 16D 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	6.0		5.0	mg/L	09/29/00

01-08-01

Sample: 16E 00CRLFSW12 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		0.96		0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.019		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		1.4		0.10	mg/L	10/05/00
Chromium		ND		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		ND		0.0050	mg/L	10/05/00
Iron		0.81		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		0.63		0.10	mg/L	10/05/00
Manganese		0.015		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		~~ND~~	WJ	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		ND		3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		ND		0.010	mg/L	10/05/00
Zinc		ND		0.0050	mg/L	10/05/00

Sample: 17A 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		0.51	ug/L	10/06/00
PCB-1232		ND		0.51	ug/L	10/06/00
PCB-1242		ND		0.51	ug/L	10/06/00
PCB-1248		ND		0.51	ug/L	10/06/00
PCB-1254		ND		0.51	ug/L	10/06/00
PCB-1260		ND		0.51	ug/L	10/06/00
PCB-1016		ND		0.51	ug/L	10/06/00
SURROGATES, % Recovery						
Tetrachlorometaxylene		86.6		Min: 29	Max: 133	
Decachlorobiphenyl		122		Min: 26	Max: 137	

01-01-01

Sample: 17B 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		~~ND~~	UJ	5.0	ug/L	09/30/00
Chloromethane		ND		5.0	ug/L	09/30/00
Vinyl Chloride		ND		2.0	ug/L	09/30/00
Bromomethane		ND		5.0	ug/L	09/30/00
Chloroethane		ND		5.0	ug/L	09/30/00
Trichlorofluoromethane		ND		2.0	ug/L	09/30/00
1,1-Dichloroethene		ND		2.0	ug/L	09/30/00
Trichlorotrifluoroethane		ND		2.0	ug/L	09/30/00
Methylene Chloride		5.0 ~~3.6~~	~~JB~~ U	5.0	ug/L	09/30/00
trans-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
1,1-Dichloroethane		ND		2.0	ug/L	09/30/00
2,2-Dichloropropane		ND		2.0	ug/L	09/30/00
cis-1,2-Dichloroethene		ND		2.0	ug/L	09/30/00
Bromochloromethane		ND		2.0	ug/L	09/30/00
Chloroform		ND		2.0	ug/L	09/30/00
1,1,1-Trichloroethane		ND		2.0	ug/L	09/30/00
Carbon Tetrachloride		ND		2.0	ug/L	09/30/00
1,1-Dichloropropene		ND		2.0	ug/L	09/30/00
Benzene		ND		2.0	ug/L	09/30/00
1,2-Dichloroethane		ND		2.0	ug/L	09/30/00
Trichloroethene		ND		2.0	ug/L	09/30/00
1,2-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromomethane		ND		2.0	ug/L	09/30/00
Bromodichloromethane		ND		2.0	ug/L	09/30/00
cis-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
Toluene		ND		2.0	ug/L	09/30/00
trans-1,3-Dichloropropene		ND		2.0	ug/L	09/30/00
1,1,2-Trichloroethane		ND		2.0	ug/L	09/30/00
Tetrachloroethene		ND		2.0	ug/L	09/30/00
1,3-Dichloropropane		ND		2.0	ug/L	09/30/00
Dibromochloromethane		ND		2.0	ug/L	09/30/00
1,2-Dibromoethane		ND		2.0	ug/L	09/30/00
Chlorobenzene		ND		2.0	ug/L	09/30/00
Ethylbenzene		ND		2.0	ug/L	09/30/00
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
m,p-Xylenes		ND		2.0	ug/L	09/30/00
o-Xylene		ND		2.0	ug/L	09/30/00
Styrene		ND		2.0	ug/L	09/30/00
Bromoform		ND		2.0	ug/L	09/30/00
Isopropylbenzene		ND		2.0	ug/L	09/30/00
Bromobenzene		ND		2.0	ug/L	09/30/00
n-Propylbenzene		ND		2.0	ug/L	09/30/00
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	09/30/00
1,2,3-Trichloropropane		ND		2.0	ug/L	09/30/00
2-Chlorotoluene		ND		2.0	ug/L	09/30/00
1,3,5-Trimethylbenzene		ND		2.0	ug/L	09/30/00
4-Chlorotoluene		ND		2.0	ug/L	09/30/00

01-05-01

Order # M0-09-220
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 17B 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2,4-Trimethylbenzene		ND		2.0	ug/L	09/30/00
sec-Butylbenzene		ND		2.0	ug/L	09/30/00
4-Isopropyltoluene		ND		2.0	ug/L	09/30/00
1,3-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,4-Dichlorobenzene		ND		2.0	ug/L	09/30/00
n-Butylbenzene		ND		2.0	ug/L	09/30/00
1,2-Dichlorobenzene		ND		2.0	ug/L	09/30/00
1,2-Dibromo-3-chloropropane		5.0	J	10	ug/L	09/30/00
1,2,4-Trichlorobenzene		4.0		2.0	ug/L	09/30/00
Hexachlorobutadiene		~~ND~~	UJ	2.0	ug/L	09/30/00
Napthalene		9.0	J	2.0	ug/L	09/30/00
1,2,3-Trichlorobenzene		7.2	J	2.0	ug/L	09/30/00
Acetone		~~ND~~	UJ	50	ug/L	09/30/00
Acrylonitrile		ND		10	ug/L	09/30/00
2-Butanone		ND		50	ug/L	09/30/00
Carbon Disulfide		ND		2.0	ug/L	09/30/00
trans-1,4-Dichloro-2-buten		ND		10	ug/L	09/30/00
2-Chloroethyl Vinyl Ether		ND		10	ug/L	09/30/00
2-Hexanone		ND		20	ug/L	09/30/00
Iodomethane		~~ND~~	UJ	2.0	ug/L	09/30/00
4-Methyl-2-pentanone		ND		20	ug/L	09/30/00
Vinyl Acetate		~~ND~~	UJ	5.0	ug/L	09/30/00
tert-Butyl methyl ether		ND		2.0	ug/L	09/30/00
SURROGATES, % Recovery						
Dibromofluoromethane		108		Min: 80	Max: 120	
Toluene d-8		106		Min: 88	Max: 110	
p-Bromofluorobenzene		104		Min: 86	Max: 115	

01-08-01

Sample: 17C 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.1	ug/L	10/12/00
bis(2-Chloroethyl) ether		ND		5.1	ug/L	10/12/00
2-Chlorophenol		ND		5.1	ug/L	10/12/00
1,3-Dichlorobenzene		ND		5.1	ug/L	10/12/00
1,4-Dichlorobenzene		ND		5.1	ug/L	10/12/00
Benzyl alcohol		ND		10	ug/L	10/12/00
1,2-Dichlorobenzene		ND		5.1	ug/L	10/12/00
2-Methylphenol		ND		5.1	ug/L	10/12/00
bis(2-Chloroisopropyl) eth		ND		5.1	ug/L	10/12/00
4-Methylphenol		~~ND~~	UJ	5.1	ug/L	10/12/00
n-Nitroso-di-n-propylamine		ND		5.1	ug/L	10/12/00
Hexachloroethane		ND		5.1	ug/L	10/12/00
Nitrobenzene		ND		5.1	ug/L	10/12/00
Isophorone		ND		5.1	ug/L	10/12/00
2-Nitrophenol		ND		5.1	ug/L	10/12/00
2,4-Dimethylphenol		ND		5.1	ug/L	10/12/00
Benzoic acid		~~ND~~	UJ	130	ug/L	10/12/00
bis(2-Chloroethoxy)methane		ND		5.1	ug/L	10/12/00
2,4-Dichlorophenol		ND		5.1	ug/L	10/12/00
1,2,4-Trichlorobenzene		ND		5.1	ug/L	10/12/00
Naphthalene		ND		10	ug/L	10/12/00
4-Chloroaniline		~~ND~~	UJ	5.1	ug/L	10/12/00
Hexachlorobutadiene		ND		5.1	ug/L	10/12/00
4-Chloro-3-methylphenol		~~ND~~	UJ	5.1	ug/L	10/12/00
2-Methylnaphthalene		ND		5.1	ug/L	10/12/00
Hexachlorocyclopentadiene		ND		10	ug/L	10/12/00
2,4,6-Trichlorophenol		ND		5.1	ug/L	10/12/00
2,4,5-Trichlorophenol		ND		5.1	ug/L	10/12/00
2-Chloronaphthalene		ND		10	ug/L	10/12/00
2-Nitroaniline		ND		51	ug/L	10/12/00
Dimethylphthalate		ND		5.1	ug/L	10/12/00
Acenaphthylene		ND		5.1	ug/L	10/12/00
3-Nitroaniline		~~ND~~	UJ	51	ug/L	10/12/00
Acenaphthene		ND		5.1	ug/L	10/12/00
2,4-Dinitrophenol		ND		72	ug/L	10/12/00
4-Nitrophenol		ND		51	ug/L	10/12/00
Dibenzofuran		ND		5.1	ug/L	10/12/00
2,6-Dinitrotoluene		ND		5.1	ug/L	10/12/00
2,4-Dinitrotoluene		ND		5.1	ug/L	10/12/00
Diethylphthalate		ND		5.1	ug/L	10/12/00
4-Chlorophenyl-phenylether		ND		5.1	ug/L	10/12/00
Fluorene		ND		5.1	ug/L	10/12/00
4-Nitroaniline		ND		51	ug/L	10/12/00
4,6-Dinitro-2-methylphenol		ND		51	ug/L	10/12/00
n-Nitrosodiphenylamine		ND		5.1	ug/L	10/12/00
4-Bromophenyl-phenylether		ND		5.1	ug/L	10/12/00
Hexachlorobenzene		ND		5.1	ug/L	10/12/00

jd a-08-01

Order # M0-09-220
ANALYTICA, INC.

BNCI
TEST RESULTS by SAMPLE

Sample: 17C 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Pentachlorophenol		~~ND~~ UJ		21	ug/L	10/12/00
Phenanthrene		ND		5.1	ug/L	10/12/00
Anthracene		ND		5.1	ug/L	10/12/00
Di-n-butylphthalate		5.1 ~~1.4~~ J	U	5.1	ug/L	10/12/00
Fluoranthene		ND		5.1	ug/L	10/12/00
Pyrene		ND		5.1	ug/L	10/12/00
Butylbenzylphthalate		ND		5.1	ug/L	10/12/00
3,3'-Dichlorobenzidine		ND		21	ug/L	10/12/00
Benzo(a)Anthracene		ND		5.1	ug/L	10/12/00
Chrysene		ND		5.1	ug/L	10/12/00
Bis(2-Ethylhexyl)phthalate		5.1 ~~5.0~~ J	U	5.1	ug/L	10/12/00
Di-n-octylphthalate		ND		5.1	ug/L	10/12/00
Benzo(b)fluoranthene		ND		5.1	ug/L	10/12/00
Benzo(k)fluoranthene		ND		5.1	ug/L	10/12/00
Benzo(a)pyrene		ND		5.1	ug/L	10/12/00
Indeno(1,2,3-cd)pyrene		ND		5.1	ug/L	10/12/00
Dibenz(a,h)anthracene		ND		5.1	ug/L	10/12/00
Benzo(g,h,i)perylene		ND		5.1	ug/L	10/12/00
p-Chlorophenylmethylsulfone		ND		5.1	ug/L	10/12/00
SURROGATES, % Recovery						
2-Fluorophenol		58.7		Min: 21	Max: 100	
d5-Phenol		52.0		Min: 10	Max: 94	
d5-Nitrobenzene		70.0		Min: 35	Max: 114	
2-Fluorobiphenyl		65.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		73.3		Min: 10	Max: 123	
d14-Terphenyl		73.0		Min: 33	Max: 141	

Sample: 17D 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Alkalinity, Total	EPA 310.1	6.0		5.0	mg/L	09/29/00

01-08-01

Sample: 17E 00CRLFSW31 Collected: 09/20/00 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, Total	SW 6010B					
Aluminum		ND		0.050	mg/L	10/05/00
Antimony		ND		0.050	mg/L	10/05/00
Arsenic		ND		0.10	mg/L	10/05/00
Barium		0.0093		0.0040	mg/L	10/05/00
Beryllium		ND		0.0010	mg/L	10/05/00
Cadmium		ND		0.0050	mg/L	10/05/00
Calcium		1.5		0.10	mg/L	10/05/00
Chromium		ND		0.010	mg/L	10/05/00
Cobalt		ND		0.020	mg/L	10/05/00
Copper		ND		0.0050	mg/L	10/05/00
Iron		ND		0.050	mg/L	10/05/00
Lead		ND		0.070	mg/L	10/05/00
Magnesium		0.45		0.10	mg/L	10/05/00
Manganese		ND		0.010	mg/L	10/05/00
Molybdenum		ND		0.010	mg/L	10/05/00
Nickel		ND		0.040	mg/L	10/05/00
Potassium		~~ND~~	UJ	1.0	mg/L	10/05/00
Selenium		ND		0.10	mg/L	10/05/00
Silver		ND		0.015	mg/L	10/05/00
Sodium		ND		3.0	mg/L	10/05/00
Thallium		ND		0.40	mg/L	10/05/00
Vanadium		ND		0.010	mg/L	10/05/00
Zinc		ND		0.0050	mg/L	10/05/00

VALIDATA
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(770) 923-8769 (Fax)
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DATA VALIDATION SUMMARY
REPORT

COMPANY:	BNCI
SITE NAME:	Cape Romanzof, Alaska
LAB ORDER NUMBER:	M0-09-219
CONTRACTED LAB:	Analytica Environmental Laboratories
QA/QC LEVEL:	EPA Level III
EPA SOW/METHODS:	EPA SW-846
VALIDATION GUIDELINES:	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* 1994
SAMPLE MATRIX:	Water
TYPES OF ANALYSIS:	Volatile Organics, Semivolatile Organics, Polychlorinated Biphenyls (PCB), Total Metals, Iron, Alkalinity, Nitrate, Sulfate
SDG NUMBER:	M009219 (Level III)

OVERVIEW

SAMPLES:

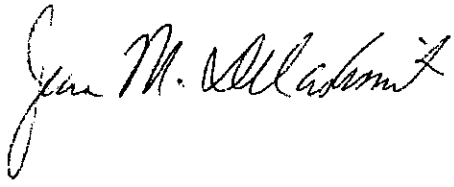
Client Sample #	Lab Sample #	Matrix	Volatile Organics	Semi-volatiles	PCB	Total Metals
00CR15GW21	M009219-1	Water		X		
00CR15GW71	M009219-2	Water		X		
00CR15GW81	M009219-3	Water		X		
00CR13SW12	M009219-4	Water		X		
00CR13SW11	M009219-5	Water		X		
00CR13SW31	M009219-6	Water		X		
00CR13SW21	M009219-7	Water		X		
00CRLFGW11	M009219-8	Water	X	X	X	X
00CRLFGWC61	M009219-9	Water	X	X	X	X
00CRLFGWC71	M009219-10	Water	X	X	X	X
00CRLFGWC52	M009219-11	Water	X	X	X	X
00CRLFGWC51	M009219-12	Water	X	X	X	X
00CRLFGWC41	M009219-13A	Water	X	X	X	X
00CR15GW21MD	M009219-1MD	Water				X
00CR15GW21MS	M009219-1MS	Water				X

Client Sample #	Lab Sample #	Matrix	Alkalinity	Iron	Nitrate	Sulfate
00CR15GW21	M009219-1	Water	X	X	X	X
00CR15GW71	M009219-2	Water	X	X	X	X

Client Sample #	Lab Sample #	Matrix	Alkalinity	Iron	Nitrate	Sulfate
00CR15GW81	M009219-3	Water	X	X	X	X
00CR13SW12	M009219-4	Water			X	X
00CR13SW11	M009219-5	Water			X	X
00CR13SW31	M009219-6	Water			X	X
00CR13SW21	M009219-7	Water			X	X
00CRLFGW11	M009219-8	Water	X			
00CRLFGWC61	M009219-9	Water	X			
00CRLFGWC71	M009219-10	Water	X			
00CRLFGWC52	M009219-11	Water	X			
00CRLFGWC51	M009219-12	Water	X			
00CRLFGWC41	M009219-13A	Water	X			
00CR15GW21MD	M009219-1MD	Water	X		X	X
00CR15GW21MS	M009219-1MS	Water	X		X	X

Suffix Codes: MD = MATRIX DUPLICATE, MS = MATRIX SPIKE

DATA REVIEWER(S): Marvin L. Smith, Jean M. Delashmit

RELEASE SIGNATURE: 

Data Qualifier Definitions

J	-	The associated numerical value is an estimated quantity.
R	-	The data are unusable (the compound/analyte may or may not be present). Resampling and reanalysis are necessary for verification.
U	-	The compound/analyte was analyzed for, but not detected. The associated numerical value is the sample quantitation limit.
UJ	-	The compound/analyte was analyzed for, but not detected. The sample quantitation limit is an estimated quantity.

DATA QUALIFICATION SUMMARY

Analytica Environmental Laboratories - M009219 Organics and Inorganics

SAMPLES: 00CR15GW21, 00CR15GW71, 00CR15GW81, 00CR13SW12, 00CR13SW11, 00CR13SW31, 00CR13SW21, 00CRLFGW11, 00CRLFGWC61, 00CRLFGWC71, 00CRLFGWC52, 00CRLFGWC51, 00CRLFGWC41

VOLATILE ORGANICS

SUMMARY

I.) General:

The analyses for volatile organics were performed by gas chromatography / mass spectroscopy (GC / MS) using Method SW 8260C.

II.) Overall Assessment of Data:

All laboratory data were acceptable with qualifications.

MAJOR ISSUES

No major problems were observed in this fraction of the SDG.

MINOR PROBLEMS

I.) Holding Times:

All Holding Time criteria were met. No action was taken.

II.) GC / MS Tuning:

All GC / MS Tuning criteria were met. No action was necessary.

III.) Calibration:

Initial Calibration:

The Percent Relative Standard Deviations (%RSDs) were 50.6% and 33.5%, respectively, for acetone and vinyl acetate in the standards analyzed on 9/28/00 on instrument MS2, which exceeded the 30% QC limit. All results for these two compounds in the SDG samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

Continuing Calibration:

The Percent Differences (%D's) exceeded the 25% QC limit for the standards analyzed on 9/30/00 at 06:57 on instrument MS2 for the following compounds:

dichlorodifluoromethane	46.6%
idomethane	32.0%
vinyl acetate	40.1%
1,2-dibromo-3-chloropropane	27.9%
hexachlorobutadiene	29.4%
naphthalene	41.8%
1,2,3-trichlorobenzene	38.4%

All results for vinyl acetate were previously qualified based on the initial calibration. All results for the other six compounds in the SDG samples, which consisted entirely of non-detects, were flagged as estimated (UJ).

IV.) Blanks:

Methylene chloride was detected at 2.3 ug/L in method blank MB0930. All detections of this compound in the associated samples, which were less than 10X the blank amount, were flagged as undetected (U) with the results being raised to the CRQL.

Tentatively Identified Compounds (TIC):

TIC results were not present in the data package. No action was necessary.

V.) Surrogate Recoveries:

All Surrogate Recovery criteria were met. No action was required.

VI.) Laboratory Control Samples (LCS):

Two LCSs were analyzed with this fraction of the SDG. Eight Percent Recoveries (%Rs) were slightly below their respective QC limits. Data validation action based on LCS Recovery criteria was not required. No action was taken.

VII.) Matrix Spike / Matrix Spike Duplicate (MS / MSD):

MS / MSD samples were not analyzed using samples from this SDG. The MS / MSD was associated with sample 00CRLFSW12 from SDG M009220. The Percent Recoveries (%Rs) were outside the 80-120% QC limits for the following compounds:

Compound	MS, %R	MSD, %R
2,2-chloropropane	75	75
1,2,4-trichlorobenzene	60	
hexachlorobutadiene	47	60
naphthalene	55	

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE