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Final Report

Monitoring Event 10 - November 1997
Site 9: Neptune Drive Disposal Site
Naval Air Station, Brunswick, Maine

Contract No. N62472-92-D-1296
Contract Task Order No. 0047

Prepared for

Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop No. 82
Lester, Pennsylvania 19113-2090

Prepared by

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April 1998
296.0047

296.0047

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Charles E. McLeod, P.E. — 4/6/98 Date
CTO Manager

FOR
Charles R. Flynn, Jr., Ph.D., P.H. — 4/3/98 Date
Program Manager

April 1998

QUALITY REVIEW STATEMENT

Contract No. N62472-92-D-1296
Contract Task Order No. 0047
Activity: Naval Air Station, Brunswick, Maine

EA Project Number: 29600.47.7393

Description of Report/Deliverable:

Final Report Monitoring Event 10 - November 1997, Site 9: Neptune Drive Disposal Site, Naval Air Station, Brunswick, Maine

EA CTO Manager: Charles E. McLeod, P.E.

In compliance with EA's Quality Procedures for review of deliverables outlined in the Quality Management Plan, this final deliverable has been reviewed for quality by the undersigned Senior Technical Reviewer(s). The information presented in this report/deliverable has been prepared in accordance with the approved Implementation Plan for the Contract Task Order (CTO) and reflects a proper presentation of the data and/or the conclusions drawn and/or the analyses or design completed during the conduct of the work. This statement is based upon the standards identified in the CTO and/or the standard of care existing at the time of preparation.

Senior Technical Reviewer

Michael S. Battle

APRIL 3, 1998

Michael S. Battle, P.G.
Branch Manager, New York Operations

(Date)

CONTENTS

Page

LIST OF FIGURES
LIST OF TABLES

1. PROJECT ACTIVITIES 1

1.1 Introduction 1
1.2 Measurement of Water Level Elevations 1
1.3 Ground-Water Monitoring, Sampling, and Analysis 2
1.4 Surface Water, Sediment, and Leachate Station Seep/Sediment Sampling and Analysis 3
1.5 Visual Inspection 3
1.6 Quality Assurance/Quality Control 3
1.7 Analytical Data Quality Review 4

2. MONITORING EVENT RESULTS 5

2.1 Water Level Gauging 5
2.2 Water Quality Indicator Parameters 5
2.3 Ground Water 6
2.4 Surface Water 6
2.5 Sediment 7
2.6 Leachate Station Seep and Sediment 7

REFERENCES

APPENDIX A: FIELD MONITORING AND SAMPLING FORMS
APPENDIX B: ANALYTICAL DATA QUALITY REVIEW
APPENDIX C: SUMMARY TABLES FOR ANALYSES OF TENTATIVELY IDENTIFIED COMPOUNDS
APPENDIX D: ANALYTICAL REPORT DATA TABLE

LIST OF FIGURES

Number	Title
1	Site location map and background well locations, Naval Air Station, Brunswick, Maine.
2	Site plan - Site 9 (Neptune Drive Disposal Site), Naval Air Station, Brunswick, Maine.
3	Schematic of generalized installation of dedicated submersible pump system in a monitoring well.
4	Interpreted potentiometric surface elevations, 2 September 1997 well gauging data, Site 9 (Neptune Drive Disposal Site), Naval Air Station, Brunswick, Maine.
5	Interpreted potentiometric surface elevations, 4 November 1997 well gauging data, Site 9 (Neptune Drive Disposal Site), Naval Air Station, Brunswick, Maine.

LIST OF TABLES

Number	Title
1	Summary of long-term monitoring program at Site 9, Naval Air Station, Brunswick, Maine.
2	Monitoring well gauging summary, Site 9, Naval Air Station, Brunswick, Maine.
3	Summary of water quality indicator parameters measured in ground-water samples collected on 17-18 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.
4	Summary of water quality indicator parameters measured in surface water and leachate seep samples collected on 16 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.
5	Summary of analytical results for ground-water samples collected on 17-18 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.
6	Summary of analytical results for surface water samples collected on 16 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.
7	Summary of analytical results for sediment samples collected on 16 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.
8	Summary of analytical results for the seep and sediment samples collected on 16 November 1997 at Site 9, Naval Air Station, Brunswick, Maine.

1. PROJECT ACTIVITIES

1.1 INTRODUCTION

Under Contract No. N62472-92-D-1296, Contract Task Order (CTO) No. 0047, Northern Division, Naval Facilities Engineering Command contracted with EA Engineering, Science, and Technology to perform long-term monitoring at the Neptune Drive Disposal Site (Site 9), Naval Air Station (NAS), Brunswick, Maine. NAS Brunswick is located south of the Androscoggin River between Brunswick and Bath, Maine (Figure 1). The layout of Site 9 is provided on Figure 2.

At Site 9, the Navy is performing long-term monitoring, maintenance, and corrective measures as part of the long-term remedial actions required by the Interim Groundwater Record of Decision dated September 1994 (ABB-ES 1994a). A Long-Term Monitoring Plan (LTMP) (ABB-ES 1995) was established pursuant to the Interim Groundwater Record of Decision. The Quality Assurance Project Plan prepared for long-term monitoring activities is contained in a companion LTMP prepared for Building 95 and Sites 1 and 3 and the Eastern Plume (ABB-ES 1994b). The LTMP document establishes the requirement for monitoring/sampling of ground water, surface water, sediment, and leachate to be conducted several times annually, along with the implementation of institutional controls to prevent human contact with ground water in the area. Tri-annual sampling was initiated in June 1996 following approval by the State of Maine Department of Environmental Protection and U.S. Environmental Protection Agency (EPA) Region 1. It is anticipated that monitoring will continue until a review is completed which suggests that no further action, or an alternate remedial action (i.e., other than natural attenuation), should be implemented.

This report provides the results for the November 1997 monitoring/sampling event (Monitoring Event 10). A discussion of temporal trends and other observations based on data collected during tri-annual monitoring will be presented in the Annual Report for 1997.

1.2 MEASUREMENT OF WATER LEVEL ELEVATIONS

Water level measurements were obtained during Monitoring Event 10 on 4 November 1997 at the 13 ground-water monitoring wells specified in the LTMP and indicated in Table 1. Although not required by the LTMP, bi-monthly water table elevation data were collected from Site 9 wells on 2 September 1997. These additional bi-monthly water table elevation data were collected to identify seasonal fluctuations in water table elevations, and to identify any significant variations in the direction of ground-water flow over time. The locations of the wells are provided on Figure 2. The gauging procedures are detailed in the final report for Monitoring Event 4 (EA 1996) and the LTMP (ABB-ES 1994b).

1.3 GROUND-WATER MONITORING, SAMPLING, AND ANALYSIS

The ground-water sampling program was performed on 17-18 November 1997 in accordance with the general methodologies established in the LTMP (ABB-ES 1994b). Previously installed dedicated Grundfos Redi-Flo2 stainless steel and Teflon® submersible pumping systems were utilized for sample collection. Table 1 provides a summary of the wells included in the long-term monitoring program. Figure 3 provides a schematic of a typical dedicated submersible pump installed in a monitoring well. Ground-water sampling procedures are detailed in the final report for Monitoring Event 4 (EA 1996).

Ground-water samples were collected from 8 of 9 wells specified in the LTMP during the November 1997 sampling event using the low flow sampling technique. One well (MW-NASB-079) was sampled using a peristaltic pump.

Water quality indicator parameters, including pH, conductivity, temperature, dissolved oxygen, and turbidity, were measured during well purging. Although not required by the LTMP, oxidation-reduction potential (Eh) was recorded for informational purposes and measured during well purging and sampling. Stabilization of water quality indicator parameters was achieved when measurements agreed to within approximately 10 percent on three successive readings and turbidity was below 10 NTU. Wells were purged at the lowest flow rate obtainable with the submersible or peristaltic pump (i.e., approximately 0.2 L/minute). The lowest flow rate attainable at MW-NASB-071, an artesian well, was 1.6 L/minute. Seven of 9 monitoring wells at Site 9 reached equilibrium of the water quality indicator parameters prior to sampling, although turbidity stabilized in excess of 10 nephelometric turbidity units (NTU) at 3 of these wells: MW-NASB-069 (33 NTU), MW-NASB-074 (24 NTU), and MW-NASB-079 (22 NTU). One well (MW-NASB-080) had the water level drawn down to the top of the pump during purging. The well was allowed to recharge 5 minutes so water quality parameter readings could be recorded. At this well, temperature and turbidity did not stabilize to within 10 percent on three successive readings. One well (MW-NASB-076) was sampled prior to stabilization of 2 water quality parameters (temperature and Eh). The sampling pump was overheating at this location and has been repaired.

Ground-water samples were collected for analysis of Target Compound List (TCL) volatile organic compounds (VOC) plus a library search of 15 tentatively identified compounds by EPA Method 8260. Five of 9 ground-water samples were also collected for analysis of Target Analyte List (TAL) elements, including metals by inductively coupled plasma (EPA Method 6010) and graphite furnace (EPA Method 7000 series), and mercury by cold vapor atomic adsorption (EPA Method 7470). Chromium was analyzed by inductively coupled plasma (EPA Method 6010) rather than graphite furnace atomic adsorption (EPA Method 7191) as specified in LTMP (ABB-ES 1994b); the precision and accuracy objectives and reporting requirements identified in the LTMP were met.

1.4 SURFACE WATER, SEDIMENT, AND LEACHATE STATION SEEP/SEDIMENT SAMPLING AND ANALYSIS

The surface water, sediment, and leachate station seep/sediment sampling program was performed on 16 November 1997, in accordance with the general methodologies established in the LTMP (ABB-ES 1994b). Due to the presence of the recently constructed surface water impoundment, surface water and sediment samples were collected from 1 of 6 stations located along the streams south of Site 9 (SW/SED-010). Five tri-annual surface water and sediment sampling locations (SW/SED 011, SW/SED 012, SW/SED 915, SW/SED 919, and SW/SED 922) were flooded following completion on the two surface impoundments at Site 9; thus, no samples were collected. One location (SW/SED-916) is sampled annually, but was not sampled during Monitoring Event 10. Leachate station seep and sediment samples were collected at the foot of the drain located south of Site 9 (Figure 2). Table 1 provides a summary of the surface water, sediment, and leachate station seep/sediment sampling program.

Surface water, sediment, and seep samples were collected for analysis of TCL VOC plus a library search of 15 tentatively identified compounds by EPA Method 8260. Leachate station seep and sediment samples were also collected for analysis of TAL elements by trace inductively coupled plasma (EPA Method 6010) and graphite furnace (EPA Method 7000 series), and mercury by cold vapor atomic adsorption (EPA Method 7470). Chromium was analyzed by inductively coupled plasma (EPA Method 6010) rather than graphite furnace atomic adsorption (EPA Method 7191) as specified in LTMP (ABB-ES 1994b); the precision and accuracy objectives and reporting requirements identified in the LTMP were met. Sediment samples (Table 1) were further analyzed for the presence of TCL semivolatile organic compounds (SVOC) plus a library search of 20 tentatively identified compounds by EPA Method 8270.

1.5 VISUAL INSPECTION

Site inspection activities at Site 9 were completed on 19 November 1997 by a civil engineer in accordance with the LTMP (ABB-ES 1995). The site inspection indicated no evidence of stressed vegetation in the vicinity of the site, although snow cover was present at the time of the inspection. Historically, no evidence of stressed vegetation has been reported. Beaver activity was noted in the vicinity of the surface water impoundments. The volume of water contained by the surface water impoundments was noted to be increasing compared to the previous engineering inspection conducted in July 1997. No physical evidence of tampering of site wells was evident. All wells were observed to be capped, locked, and in good condition. All wells were labeled.

1.6 QUALITY ASSURANCE/QUALITY CONTROL

A rigorous quality assurance/quality control program is required by the LTMP to meet the data quality objectives of the aqueous and sediment sampling program, as outlined in the Quality Assurance Project Plan associated with the LTMP (ABB-ES 1995). The data obtained during the

November 1997 sampling event were determined to be of sufficient quality to be used to evaluate the long-term effectiveness of the remedial action (i.e., natural attenuation). Field monitoring and sampling forms are presented in Appendix A.

1.7 ANALYTICAL DATA QUALITY REVIEW

As required by the LTMP (ABB-ES 1995), a review of laboratory data was performed on selected quality control parameters to evaluate precision, accuracy, completeness, and data quality objective requirements. A summary of the analytical data quality review is provided in Appendix B. With the exceptions discussed in Appendix B, the data represented in this report were found to meet specified acceptance criteria and, therefore, represent data in general compliance with the Quality Assurance Project Plan contained in the LTMP (ABB-ES 1994b). Method detection limits for soil and aqueous media are included in Appendix B.

2. MONITORING EVENT RESULTS

2.1 WATER LEVEL GAUGING

Ground-water potentiometric elevations measured on 2 September 1997 (bi-monthly data) and 4 November 1997 (Monitoring Event 10 data) are provided in Table 2. The Field Record of Well Gauging forms completed during the well gauging events are provided in Appendix A. All 13 site monitoring wells were gauged during September and November 1997 in accordance with the procedures outlined in the LTMP (ABB-ES 1995).

Based on the water table elevation data, shallow overburden ground-water flow reflects land surface topography of the site area. The predominant direction of ground-water flow beneath the site is to the south, although significant variations occur in the vicinity of the streams located south of Neptune Drive. Figures 4 and 5 provide the interpreted ground-water flow directions for the subject site based on the 2 September and 4 November 1997 well gauging data, respectively.

The hydraulic gradient across the subject site is characterized as shallow at 0.9 percent (0.009 ft per foot) as measured parallel to the direction of ground-water flow between MW-NASB-081 and MW-NASB-076 during the 2 September 1997 monitoring event.

2.2 WATER QUALITY INDICATOR PARAMETERS

Water quality indicator parameters were measured during the collection of ground-water, surface water, and leachate seep samples according to the methods specified in the LTMP (ABB-ES 1995). The results of water quality indicator parameter monitoring are summarized in Tables 3 and 4 for ground-water samples and surface water and leachate seep samples, respectively. The completed Field Record of Well Gauging, Purging, and Sampling forms and Field Record of Surface Water and Sediment Sampling forms are provided in Appendix A.

Seven of 9 monitoring wells reached equilibrium of the water quality indicator parameters prior to sampling, although turbidity stabilized in excess of 10 nephelometric turbidity units (NTU) at 3 of these wells: MW-NASB-069 (33NTU), MW-NASB-074 (26 NTU), and MW-NASB-079 (22 NTU). One well (MW-NASB-080) was sampled after being purged dry, and turbidity and temperature did not stabilize to within 10 percent on 3 successive readings. The sample collected at MW-NASB-076 was taken prior to the stabilization of two water quality parameters (temperature and Eh), although other parameters had stabilized.

Water quality indicator parameter measurements were similar to prior sampling events (i.e., elevated turbidity measurements at wells MW-NASB-069, MW-NASB-074, MW-NASB-079, and MW-NASB-080).

2.3 GROUND WATER

Table 5 provides a summary of the VOC and TAL elements reported in ground-water samples collected at Site 9. Appendix C provides a summary of the tentatively identified VOC reported in ground water during this sampling event. Appendix D contains the laboratory Form I summary tables for the analyses performed. Data generated as a result of the November 1997 sampling event indicate that 6 VOC were detected at reportable concentrations in the ground-water samples. VOC were reported in 6 of 9 wells sampled. Fourteen TAL elements were reported in ground-water samples. TAL elements were reported in the 5 wells sampled for these analytes.

Notable results of ground-water sampling during Monitoring Event 10 include:

- Vinyl chloride, a constituent of concern, was reported in 5 of 9 wells at concentrations in excess of the corresponding State Maximum Exposure Guideline (0.15 μg/L) and/or Federal Maximum Contaminant Level (2 μg/L), including wells MW-NASB-069 (7 μg/L), MW-NASB-072 (7 μg/L), MW-NASB-075 (0.9J μg/L), MW-NASB-076 (2 μg/L), and MW-NASB-080 (9 μg/L).

- Manganese was reported above the corresponding State Maximum Exposure Guideline of 200 μg/L in 2 wells: MW-NASB-071 (288 μg/L) and MW-NASB-080 (536 μg/L).

- Thallium was reported above the corresponding State Maximum Exposure Guideline of 0.4 μg/L in 2 wells: MW-NASB-079 (1.0B* μg/L) and MW-NASB-080 (1.0B* μg/L).

2.4 SURFACE WATER

Table 6 provides a summary of the VOC detected in surface water sample SW-010 collected at Site 9. No tentatively identified VOC were reported in surface water sample SW-010. Appendix D contains the Form I summary tables for the analyses performed. Sample locations are provided on Figure 2.

Data generated as a result of the November 1997 sampling event indicate that 2 VOC (total 1,2-dichloroethene and trichloroethene) were detected at reportable concentrations (1J μg/L and 0.4J μg/L, respectively) in surface water sample SW-010.

2.5 SEDIMENT

Table 7 provides a summary of the compounds/analytes detected in sediment sample SED-010 collected at Site 9. Appendix C provides a summary of the tentatively identified compounds reported in sediment samples. Appendix D contains the Form I summary tables for the analyses performed. Sample locations are illustrated on Figure 2.

Data generated as a result of the November 1997 sampling event indicate that 1 VOC (total 1,2-dichloroethene) was reported at an estimated concentration of 5J μg/L. A total of 20 SVOC were reported in the 1 sediment sample. A majority of the SVOC reported in the sample were polycyclic aromatic hydrocarbons. Total concentrations of polycyclic aromatic hydrocarbons in sediment sample SED-010 were 27,740 μg/kg. Note that significantly higher concentrations of SVOC were reported in the duplicate compared to the primary sample at SW-010. This is attributed to the heterogenous nature of the sediment media being sampled, and is consistent with previous monitoring events.

2.6 LEACHATE STATION SEEP AND SEDIMENT

Table 8 provides a summary of the compounds/analytes detected in leachate station LT-901 seep and sediment samples collected at Site 9. Appendix D contains the Form I summary tables for the analyses performed on leachate samples.

No VOC were reported in the leachate station seep and sediment samples. Sample locations are provided on Figure 2. A total of 19 target analytes were reported in leachate seep sample. A total of 20 target analytes were reported in the leachate station sediment sample.

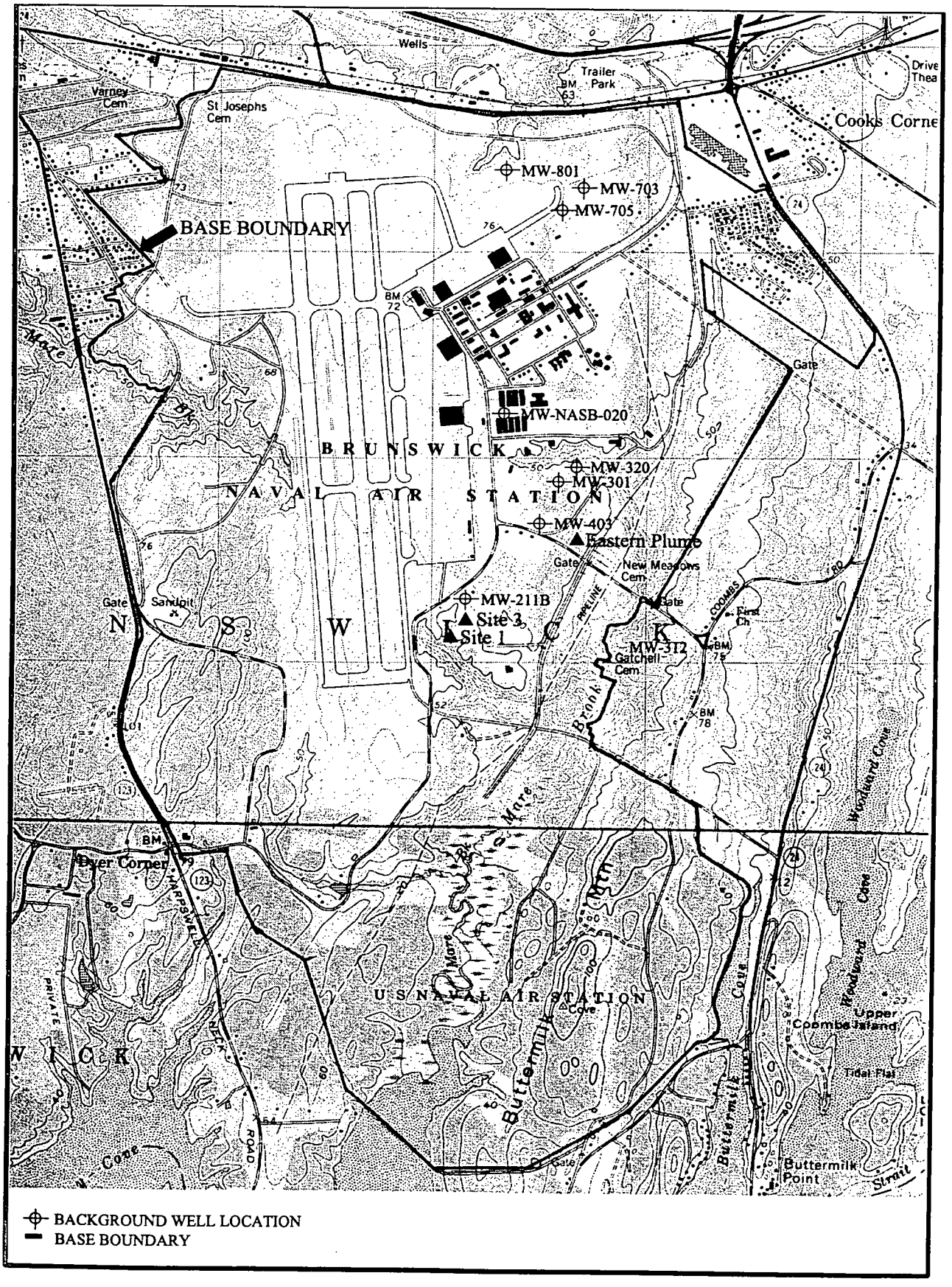
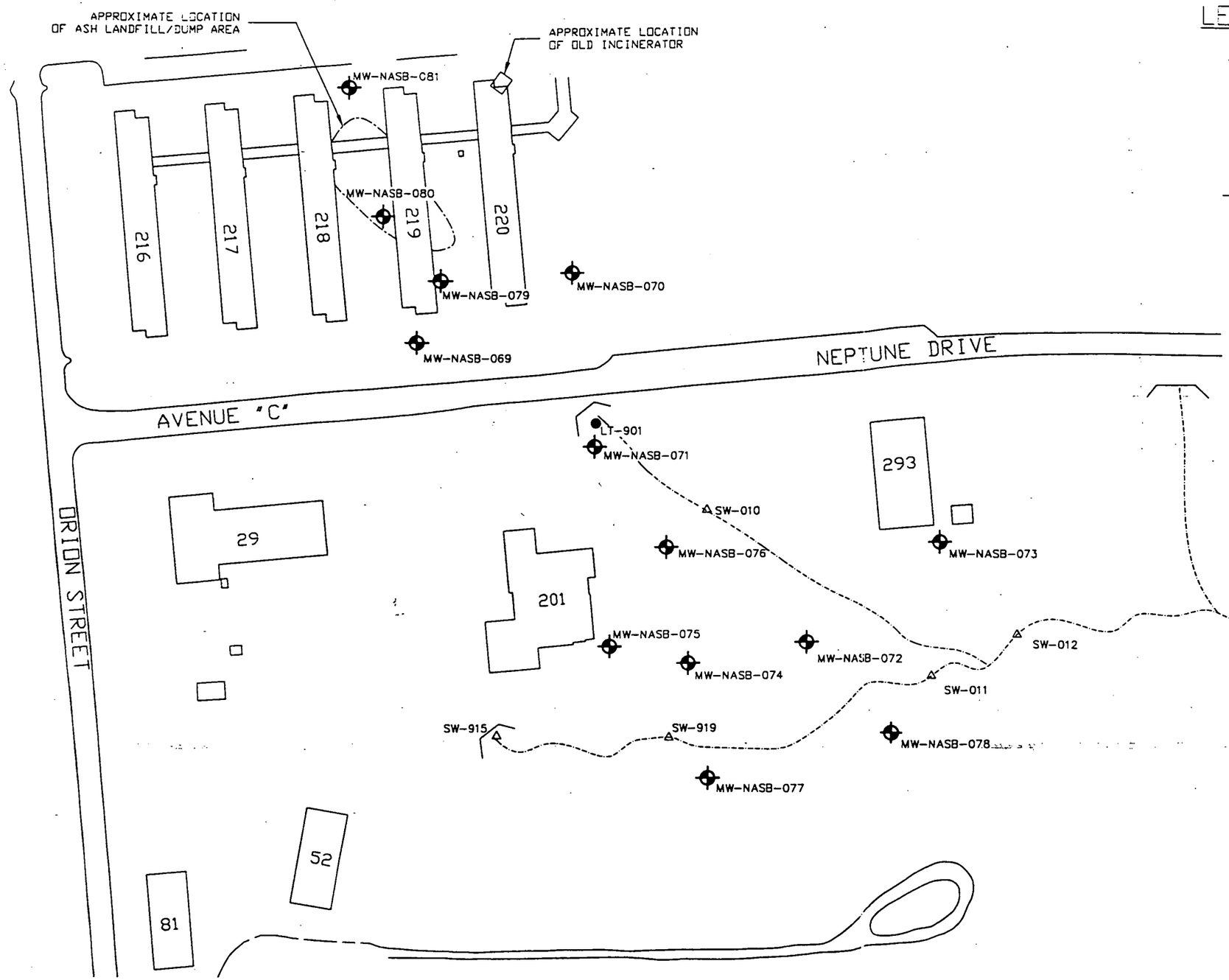


Figure 1. Site location map and background well locations, Naval Air Station Brunswick, Maine.



LEGEND

MW-NASB-069	MONITORING WELL
SW-010	SURFACE WATER/SEDIMENT SAMPLING LOCATION
LT-901	LEACHATE SAMPLING STATION
----------	NORTHERN/SOUTHERN UNNAMED STREAM PROFILE

NOTE: SITE PLAN TAKEN FROM THE INTEGRAPH VERSION 5 BASE-WIDE PLAN PROVIDED BY NAS BRUNSWICK PUBLIC WORKS DEPARTMENT ON 13 OCTOBER 1995.

120' 0 120'

APPROXIMATE SCALE

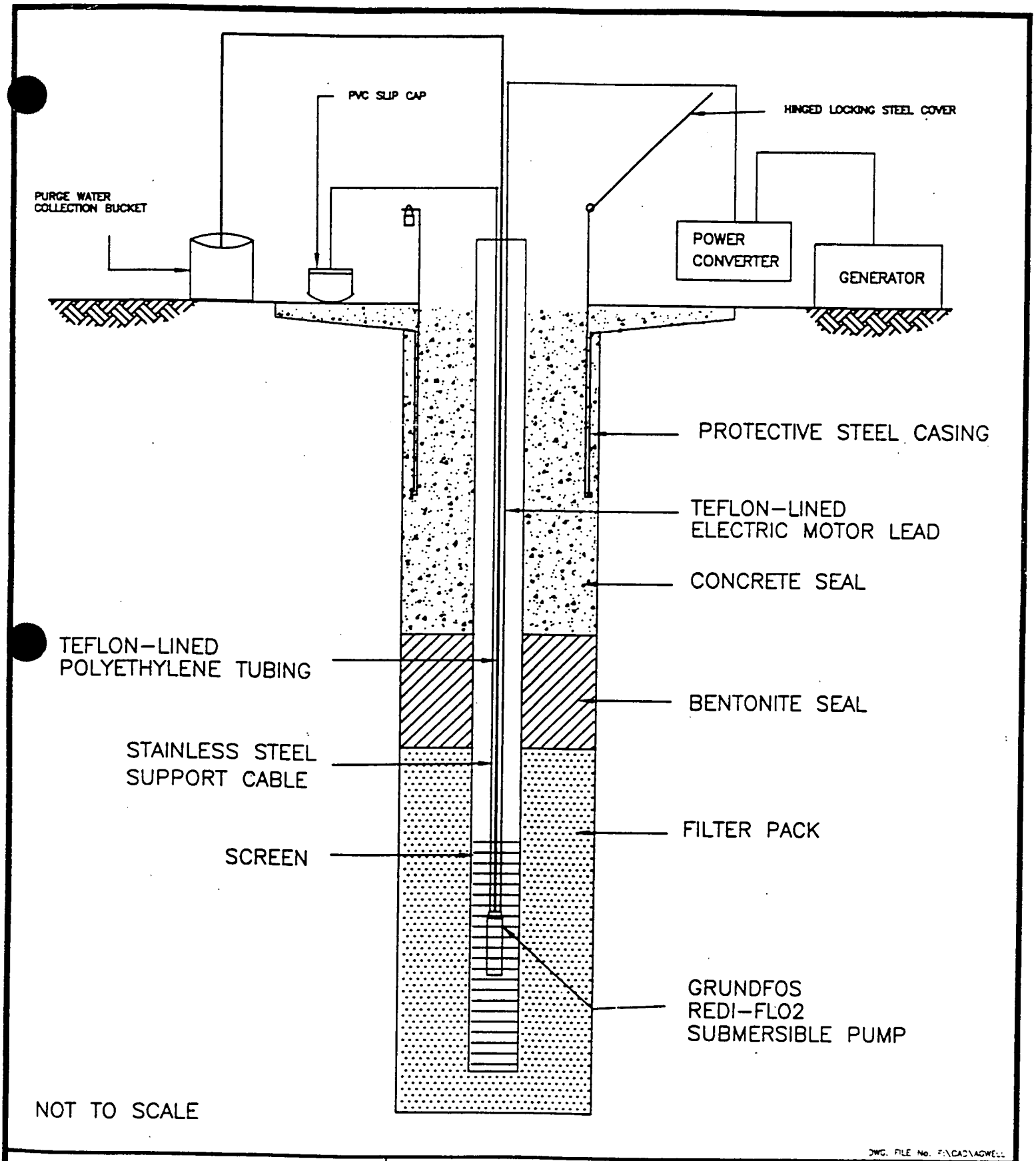
DWG. FILE No. F:\CAD\29600\47\S9EV2

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

SITE 9
(NEPTUNE DRIVE DISPOSAL SITE)
NAVAL AIR STATION
BRUNSWICK, MAINE

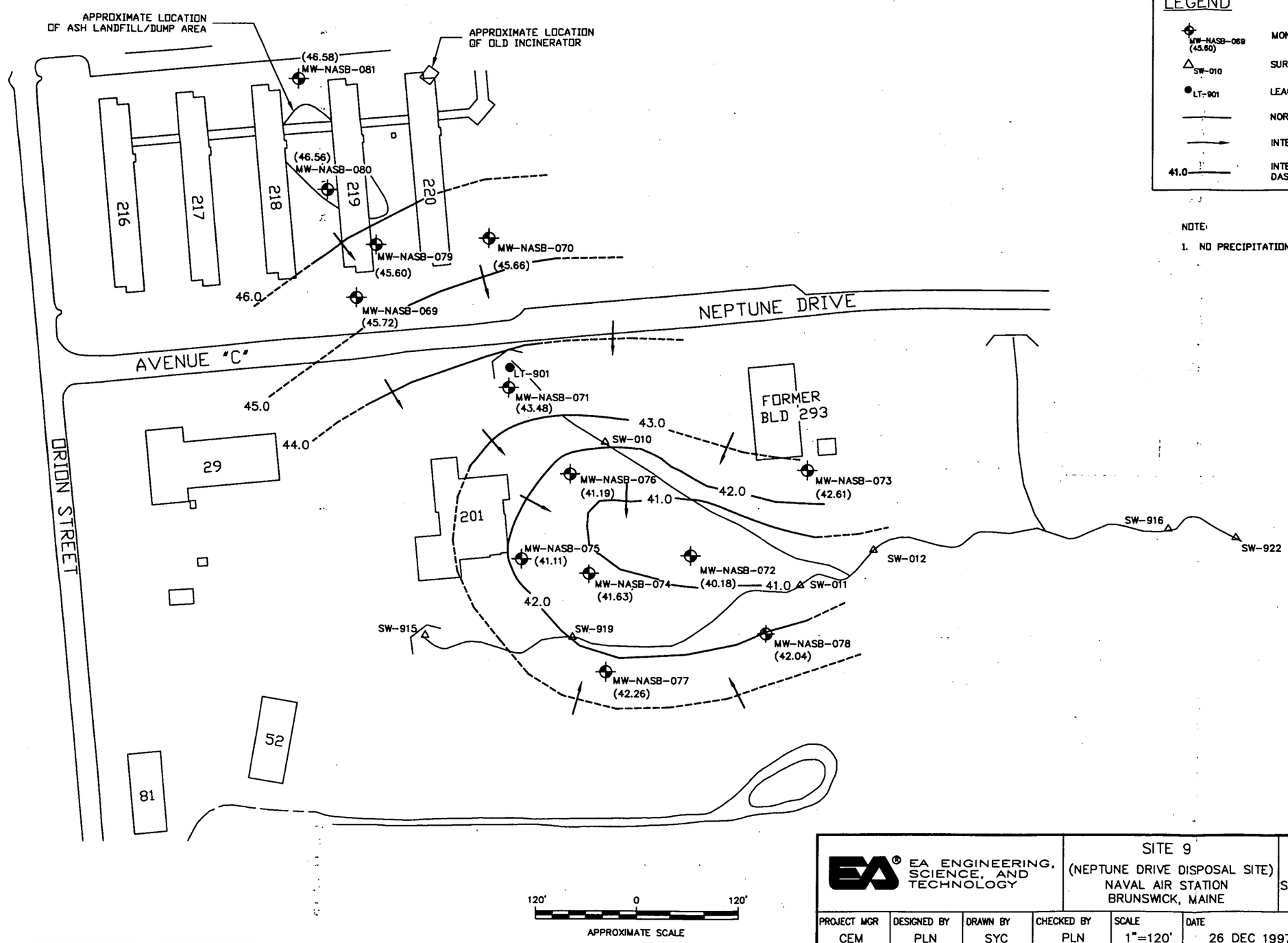
FIGURE 2
SITE PLAN

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
MSB		SY	MSB	1"=120'	8 DEC 95	29600.47	S9EV2



DWG. FILE No. F:\CAD\AGWELL

EA ENGINEERING, SCIENCE, AND TECHNOLOGY			SCHEMATIC OF GENERALIZED INSTALLATION OF DEDICATED SUBMERSIBLE PUMP SYSTEM IN A MONITORING WELL			FIGURE 3	
PROJECT MGR MSB	DESIGNED BY	DRAWN BY SY	CHECKED BY	SCALE N.T.S.	DATE 26 JUNE 1995	PROJECT NO 29600.47	FILE No. PUMP



LEGEND

MW-NASB-069 (45.60)	MONITORING WELL (WATER TABLE ELEVATION, FT MSL)
SW-010	SURFACE WATER/SEDIMENT SAMPLING LOCATION
LT-901	LEACHATE SAMPLING STATION
	NORTHERN/SOUTHERN UNNAMED STREAM PROFILE
	INTERPRETED DIRECTION OF GROUND-WATER FLOW
41.0	INTERPRETED POTENTIOMETRIC SURFACE DASHED WHERE INFERRED (CONTOUR INTERVAL = 1.0 FT)

NOTE:

1. NO PRECIPITATION OBSERVED DURING GAUGING EVENT

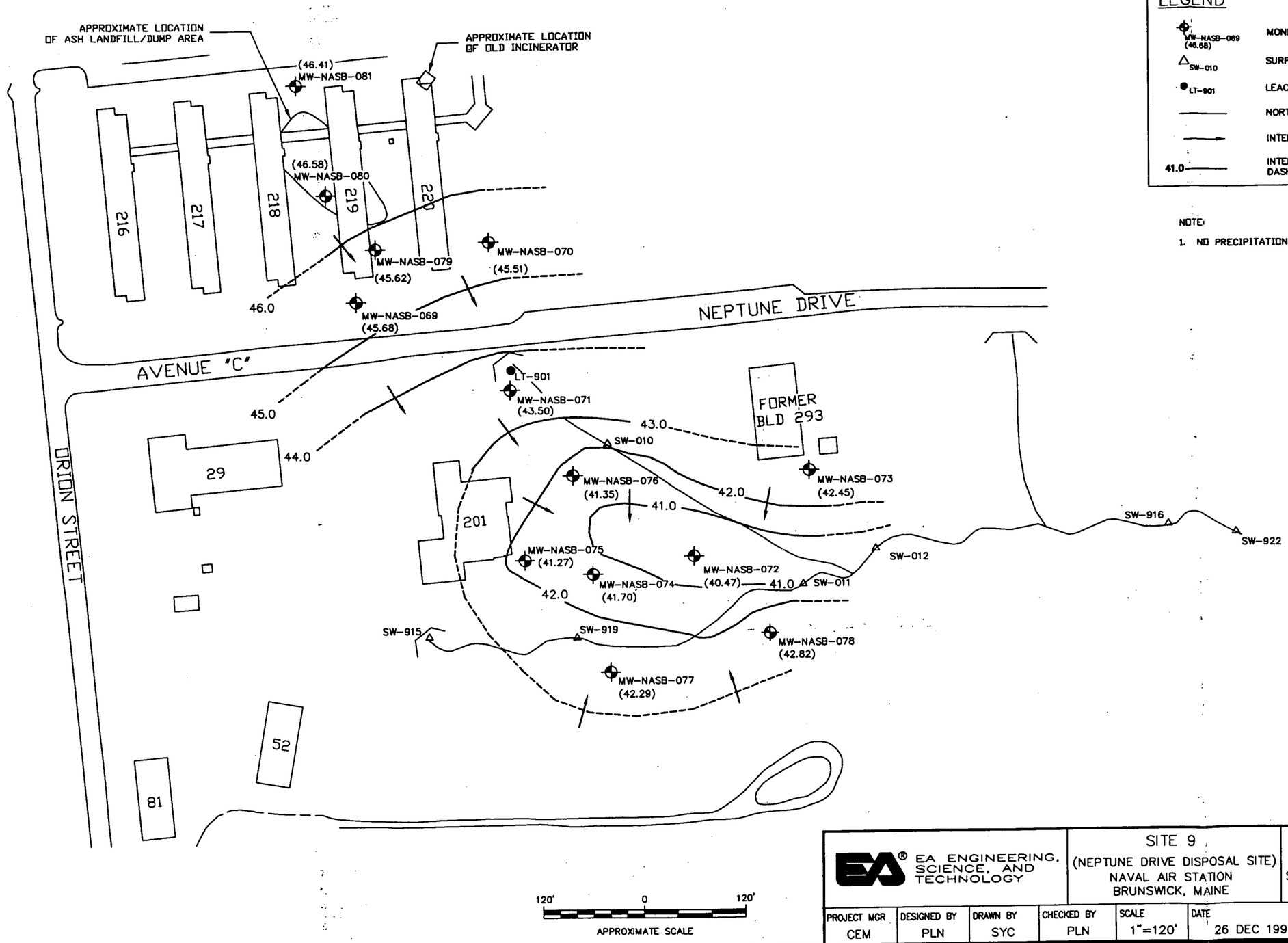
DWG. FILE No. F:\CAD\29600\47\S9SEP97

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

SITE 9
(NEPTUNE DRIVE DISPOSAL SITE)
NAVAL AIR STATION
BRUNSWICK, MAINE

FIGURE 4
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 2 SEPTEMBER 1997 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
CEM	PLN	SYC	PLN	1"=120'	26 DEC 1997	29600.47	S9SEP97



LEGEND

MW-NASB-069 (46.68)	MONITORING WELL (WATER TABLE ELEVATION, FT MSL)
SW-010	SURFACE WATER/SEDIMENT SAMPLING LOCATION
LT-901	LEACHATE SAMPLING STATION
	NORTHERN/SOUTHERN UNNAMED STREAM PROFILE
	INTERPRETED DIRECTION OF GROUND-WATER FLOW
41.0	INTERPRETED POTENTIOMETRIC SURFACE DASHED WHERE INFERRED (CONTOUR INTERVAL = 1.0 FT)

NOTE:

1. NO PRECIPITATION OBSERVED DURING GAUGING EVENT

DWG. FILE No. F:\CAD\29600\47\S9E10NV

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

SITE 9
(NEPTUNE DRIVE DISPOSAL SITE)
NAVAL AIR STATION
BRUNSWICK, MAINE

FIGURE 5
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 4 NOVEMBER 1997 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
CEM	PLN	SYC	PLN	1"=120'	26 DEC 1997	29600.47	S9E10NV

TABLE 1 SUMMARY OF LONG-TERM MONITORING PROGRAM AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Well Designation	Previous Well Designation	Monitoring Frequency	Sample Parameters				Event 10	
			TCL VOC	TCL SVOC	TAL Elements	Field Parameters[a]	Gauged	Sampled
Monitoring Wells								
MW-NASB-069	MW-901	Tri-Annual	X	NR	NR	X	X	X
MW-NASB-070	MW-902	Tri-Annual	NR	NR	NR	X	X[b]	NR
MW-NASB-071	MW-903	Tri-Annual	X	NR	X	X	X	X
MW-NASB-072	MW-904	Tri-Annual	X	NR	X	X	X	X
MW-NASB-073	MW-905	Tri-Annual	NR	NR	NR	X	X[b]	NR
MW-NASB-074	MW-906	Tri-Annual	X	NR	NR	X	X	X
MW-NASB-075	MW-907	Tri-Annual	X	NR	NR	X	X	X
MW-NASB-076	MW-908	Tri-Annual	X	NR	NR	X	X	X
MW-NASB-077	MW-909	Annual	X	NR	NR	X	X[b]	NR
MW-NASB-078	MW-910	Annual	X	NR	NR	X	X[b]	NR
MW-NASB-079	MW-914	Tri-Annual	X	NR	X	X	X	X
MW-NASB-080	MW-915	Tri-Annual	X	NR	X	X	X	X
MW-NASB-081	MW-916	Tri-Annual	X	NR	X	X	X	X

Sample Type/Location	Monitoring Frequency	Sample Parameters				Event 10	
		TCL VOC	TCL SVOC	TAL Elements	Field Parameters[a]	Gauged	Sampled
Leachate Station[c]							
LT-901 (SEEP)	Tri-Annual	X	NR	X	X	X	X
LT-901 (SED)	Tri-Annual	X	NR	X	NR	NR	X
Surface Water							
SW-010	Tri-Annual	X	NR	NR	X	X	X
SW-011	Tri-Annual	X	NR	NR	X	Flooded[d]	
SW-012	Tri-Annual	X	NR	NR	X	Flooded[d]	
SW-915	Tri-Annual	X	NR	NR	X	Flooded[d]	
SW-916	Annual	X	NR	NR	X	Flooded[d]	
SW-919	Tri-Annual	X	NR	NR	X	Flooded[d]	
SW-922	Tri-Annual	X	NR	NR	X	Flooded[d]	
Sediment							
SED-010	Tri-Annual	X	X	NR	NR	NR	X
SED-011	Tri-Annual	X	X	NR	NR	NR	Flooded[d]
SED-012	Tri-Annual	X	X	NR	NR	NR	Flooded[d]
SED-915	Tri-Annual	X	X	NR	NR	NR	Flooded[d]
SED-916	Annual	X	NR	NR	NR	NR	Flooded[d]
SED-919	Tri-Annual	X	X	NR	NR	NR	Flooded[d]
SED-922	Tri-Annual	X	NR	NR	NR	NR	Flooded[d]

(a) Determination of field parameters in accordance with EPA/600/4-79/020 including: pH (Method 150.1), temperature (Method 170.1), specific conductance (Method 180.1), and dissolved oxygen (Method 360.1). Includes water level and Eh measurement.
(b) Indicates water level measurement only.
(c) Sampling will occur if sufficient flow is available.
(d) Location flooded by surface water due to construction of impoundment ponds.

NOTE: TCL = Target Compound List; VOC = Volatile organic compounds; SVOC = Semivolatile organic compounds; TAL = Target Analyte List; NR = Analysis not required.

TABLE 2 MONITORING WELL GAUGING SUMMARY
SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Well Designation	Previous Well Designation	Well Riser Elevation (ft MSL)	Depth to Well Bottom (ft below top of PVC well riser)	Bi-Monthly Gauging Data (2 September 1997)		Event 10 Gauging Data (4 November 1997)	
				Depth to Water (ft below top of PVC well riser)	Water Table Elevation (ft MSL)	Depth to Water (ft below top of PVC well riser)	Water Table Elevation (ft MSL)
MW-NASB-069	MW-901	57.35	42.42	11.63	45.72	11.67	45.68
MW-NASB-070	MW-902	58.26	27.32	12.60	45.66	12.75	45.51
MW-NASB-071	MW-903	46.25	21.54	2.77	43.48	2.75	43.50
MW-NASB-072	MW-904	49.81	14.63	9.63	40.18	9.34	40.47
MW-NASB-073	MW-905	51.71	32.12	9.10	42.61	9.26	42.45
MW-NASB-074	MW-906	51.68	27.12	10.05	41.63	9.98	41.70
MW-NASB-075	MW-907	54.91	21.22	13.80	41.11	13.64	41.27
MW-NASB-076	MW-908	52.79	19.94	11.60	41.19	11.44	41.35
MW-NASB-077	MW-909	58.89	37.29	16.63	42.26	16.60	42.29
MW-NASB-078	MW-910	53.74	14.93	11.70	42.04	10.92	42.82
MW-NASB-079	MW-914	58.15	18.92	12.55	45.60	12.53	45.62
MW-NASB-080	MW-915	58.51	19.04	11.95	46.56	11.93	46.58
MW-NASB-081	MW-916	58.22	18.85	11.64	46.58	11.81	46.41

NOTE: MSL = Mean sea level; PVC = Polyvinyl chloride.

TABLE 3 SUMMARY OF WATER QUALITY INDICATOR PARAMETERS MEASURED IN GROUND-WATER SAMPLES COLLECTED ON 17-18 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Well Designation	Previous Well Designation	pH	Temperature (°C)	Conductivity (μmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Eh (mV)
Monitoring Wells							
MW-NASB-069	MW-901	6.10	15.7	374	0.20	33	200
MW-NASB-071	MW-903	6.00	14.1	269	0.17	5	24
MW-NASB-072	MW-904	6.12	15.4	210	0.48	5	130
MW-NASB-074	MW-906	6.31	15.2	309	0.25	24	280
MW-NASB-075	MW-907	6.17	17.6	233	0.58	5	181
MW-NASB-076	MW-908	6.16	17.0	224	0.67	3	-14
MW-NASB-079	MW-914	6.87	13.0	203	1.14	22	-105
MW-NASB-080	MW-915	6.67	19.2	426	0.30	333	-69
MW-NASB-081	MW-916	6.42	17.1	325	4.67	3	206

NOTE: NTU = Nephelometric turbidity unit.

TABLE 4 SUMMARY OF WATER QUALITY INDICATOR PARAMETERS MEASURED IN SURFACE WATER AND LEACHATE SEEP SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	pH	Temperature (°C)	Conductivity (μmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Eh (mV)
Surface Water						
SW- 010	6.42	6.24	178	8.75	3	100
Leachate Seep						
LT-901	6.38	6.94	188	5.02	287[a]	35

(a) Turbidity elevated due to low flow at leachate sampling station.

NOTE: NTU = Nephelometric turbidity unit.

TABLE 5 SUMMARY OF ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES COLLECTED ON 17-18 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound/Analyte	MW-NASB-069 MW-901	MW-NASB-071 MW-903	MW-NASB-072 MW-904	MW-NASB-074 MW-906	MW-NASB-075 MW-907	MW-NASB-076 MW-908	MW-NASB-076 DUP MW-908 DUP	MEG[a]	MCL[b]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
Total 1,2-Dichloroethene	9	(<1U)	0.5J	2	(<1U)	(<1U)	(<1U)	70	70
Vinyl chloride	**7**	(<1U)	**7**	(<1U)	**0.9J**	**2**	**3**	0.15	2
1,1-Dichloroethane	(<1U)	(<1U)	1J	(<1U)	(<1U)	(<1U)	(<1U)	70	---
Ethylbenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	700	700
Total xylenes	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	600	10,000
Trichloroethene	(<1U)	(<1U)	(<1U)	2	(<1U)	(<1U)	(<1U)	5	5
Chloroform	(<1U)	(<1U)	(<1U)	0.5J	(<1U)	(<1U)	(<1U)	---	100
Benzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	5	5
Toluene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	1,400	1,000

(a) MEG (Maximum Exposure Guideline) obtained from State of Maine Department of Human Services Maximum Exposure Guidelines, memorandum dated 23 October 1992. Dashes (---) indicate no MEG applicable.
(b) MCL (Maximum Contaminant Level) obtained from 40 CFR Parts 141 and 142 (U.S. EPA 1994). Dashes (---) indicate no MCL applicable.

NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below detection limit.
Only those analytes detected in at least one of the samples and the constituents of concern listed in the Long-Term Monitoring Plan (ABB-ES 1995) are shown on this table.
Concentrations in bold denote exceedance of MEG or MCL (primary levels).

Compound/Analyte	MW-NASB-069 MW-901	MW-NASB-071 MW-903	MW-NASB-072 MW-904	MW-NASB-074 MW-906	MW-NASB-075 MW-907	MW-NASB-076 MW-908	MW-NASB-076 DUP MW-908 DUP	MEG[a]	MCL[b]
TARGET ANALYTE LIST ELEMENTS BY EPA SW-846 6000/7000 SERIES METHODS (μg/L)									
Aluminum	NR	(<56.0U)	112B*	NR	NR	NR	NR	1,430	50-200[c]
Antimony	NR	(<1.0U)	(<1.0U)	NR	NR	NR	NR	2.8	6
Arsenic	NR	(<2.0U)	2.1B*	NR	NR	NR	NR	---	50
Barium	NR	(<4.0U)	4.7B*	NR	NR	NR	NR	1,500	2,000
Cadmium	NR	(<0.60U)	(<0.60U)	NR	NR	NR	NR	5	5
Calcium	NR	11,200	25,800	NR	NR	NR	NR	---	---
Chromium	NR	(<4.0U)	(<4.0U)	NR	NR	NR	NR	100	100
Iron	NR	7,470	172	NR	NR	NR	NR	---	300[c]
Magnesium	NR	5,140	6,900	NR	NR	NR	NR	---	---
Manganese	NR	**288**	144	NR	NR	NR	NR	200	50[c]
Mercury	NR	0.13B*	0.15B*	NR	NR	NR	NR	2	2
Potassium	NR	2,180	1,060	NR	NR	NR	NR	---	---
Selenium	NR	(<2.0U)	(<2.0U)	NR	NR	NR	NR	10	50
Silver	NR	(<1.0U)	1.1B*	NR	NR	NR	NR	50	100[c]
Sodium	NR	35,100	8,760	NR	NR	NR	NR	---	---
Thallium	NR	(<1.0U)	(<1.0U)	NR	NR	NR	NR	0.4	2

(c) Secondary MCL, based on taste, odor, or color.

NOTE: NR = Analysis not required.
B* = Analyte concentration is between the Instrument Detection Limit and the Contract Required Detection Limit.

Compound/Analyte	MW-NASB-079 MW-914	MW-NASB-080 MW-915	NW-NASB-080 DUP MW-915 DUP	MW-NASB-081 MW-916	QT- 007	MEG[a]	MCL[b]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Total 1,2-Dichloroethene	(<1U)	1	1	(<1U)	(<1U)	70	70
Vinyl chloride	(<1U)	9	9	(<1U)	(<1U)	0.15	2
1,1-Dichloroethane	(<1U)	1	1	(<1U)	(<1U)	70	---
Ethylbenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	700	700
Total xylenes	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	600	10,000
Trichloroethene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	5	5
Chloroform	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	---	100
Benzene	(<1U)	0.5J	(<1U)	(<1U)	(<1U)	5	5
Toluene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	1,400	1,000
TARGET ANALYTE LIST ELEMENTS BY EPA SW-846 6000/7000 SERIES METHODS (μg/L)							
Aluminum	279	127B*	121B*	105B*	NR	1,430	50-200[c]
Antimony	(<1.0U)	1.3B*	(<1.0U)	1.0B*	NR	2.8	6
Arsenic	(<2.0U)	(<2.0U)	(<2.0U)	(<2.0U)	NR	---	50
Barium	238	672	640	22.4B*	NR	1,500	2,000
Cadmium	(<0.60U)	(<0.60U)	(<0.60U)	(<0.60U)	NR	5	5
Calcium	25,800	60,600	60,400	38,400	NR	---	---
Chromium	(<4.0U)	(<4.0U)	(<4.0U)	11.2	NR	100	100
Iron	18,400	6,550	7,170	215	NR	---	300[c]
Magnesium	1,720	4,540	4,590	2,610	NR	---	---
Manganese	99.4	**536**	**572**	17.6	NR	200	50[c]
Mercury	0.10B*	(<0.10U)	0.18B*	0.19B*	NR	2	2
Potassium	3,490	7540	7,680	4,720	NR	---	---
Selenium	(<2.0U)	3.5B*	(<2.0U)	(<2.0U)	NR	10	50
Silver	(<1.0U)	(<1.0U)	(<1.0U)	(<1.0U)	NR	50	100[c]
Sodium	8,630	18,000	18,200	25,300	NR	---	---
Thallium	**1.0B***	**1.0B***	(<1.0U)	(<1.0U)	NR	0.4	2

NOTE: QT = Trip blank.

TABLE 6 SUMMARY OF ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SW-010	QT-006	QS-003	QD-001
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)				
Methylene chloride	(<1U)	(<1U)	3	3
Carbon disulfide	(<1U)	(<1U)	(<1U)	(<1U)
Toluene	(<1U)	(<1U)	(<1U)	(<1U)
Vinyl chloride	(<1U)	(<1U)	(<1U)	(<1U)
Total 1,2-Dichloroethene	1J	(<1U)	(<1U)	(<1U)
Trichloroethene	0.4J	(<1U)	(<1U)	(<1U)
Chloroform	(<1U)	(<1U)	18	16

NOTE: QT = Trip blank.
QS = Equipment rinsate blank.
QD = Source water blank. QD-001 was analyzed under a separate sample delivery group shipped on 7 November 1997.
U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below the detection limit.
Only those compounds detected in at least one of the samples, and the constituents of concern listed in the Long-Term Monitoring Plan (ABB-ES 1995), are shown on this table.

TABLE 7 SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SED-010	SED-010 DUP	QT-006 (μg/L)	QS-004 (μg/L)	QD-001 (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)					
1,1,1-Trichloroethane	(<6U)	(<6U)	(<1U)	0.5J	(<1U)
Total 1,2-Dichloroethene	5J	(<6U)	(<1U)	(<1U)	(<1U)
Chloroform	(<6U)	(<6U)	(<1U)	18	16
Methylene chloride	(<6U)	(<6U)	(<1U)	3	3
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (μg/kg)					
Acenaphthylene	240J	2,000	NR	(<10U)	(<10U)
Naphthalene	470J	270J	NR	(<10U)	(<10U)
2-Methylnaphthalene	140J	800	NR	(<10U)	(<10U)
Acenaphthene	720	1,700	NR	(<10U)	(<10U)
Dibenzofuran	370J	1,200	NR	(<10U)	(<10U)
Fluorene	640	4,000	NR	(<10U)	(<10U)
Phenanthrene	4,300	34,000D	NR	(<10U)	(<10U)
Anthracene	940	3,300	NR	(<10U)	(<10U)
Carbazole	550	2,100	NR	(<10U)	(<10U)
Fluoranthene	4,000	41,000D	NR	(<10U)	(<10U)
Pyrene	4,300	31,000D	NR	(<10U)	(<10U)
Benzo(a)anthracene	1,900	15,000D	NR	(<10U)	(<10U)
Chrysene	2,100	15,000D	NR	(<10U)	(<10U)
Bis(2-ethylhexyl)phthalate	140J	(<390U)	NR	(<10U)	8BJ
Benzo(b)fluoranthene	2,400	12,000D	NR	(<10U)	(<10U)
Benzo(k)fluoroethane	910	3,700	NR	(<10U)	(<10U)
Benzo(a)pyrene	2,000	8,800D	NR	(<10U)	(<10U)
Indeno(1,2,3-c,d)pyrene	1,200	3,800	NR	(<10U)	(<10U)
Dibenzo(a,h)anthracene	360J	1,300	NR	(<10U)	(<10U)
Benzo(g,h,i)perylene	1,500	4,500	NR	(<10U)	(<10U)

NOTE: QT = Trip blank. Samples associated with QT-006 were analyzed under a separate sample delivery group shipped the same day.
QS = Equipment rinsate blank. Samples associated with QS-004 were analyzed under a separate sample delivery group shipped the same day.
QD = Source water blank. Samples associated with QD-001 were analyzed under a separate sample delivery group shipped on 7 November 1997.
U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below concentration limit.
B = Compound detected in associated method blank.
D = This flag indicates an analysis at a secondary dilution factor.
NR = Analysis not required.
Only those compounds detected in at least one of the samples, and the constituents of concern listed in the Long-Term Monitoring Plan (ABB-ES 1995), are shown on this table.

TABLE 8 SUMMARY OF ANALYTICAL RESULTS FOR THE SEEP AND SEDIMENT SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Analyte	LT-901 (SEEP) (μg/L)	LT-901 (SEEP) DUP (μg/L)	LT-901 (SED) (mg/kg)	LT-901 (SED) DUP (mg/kg)	QT-006 (μg/L)	QS-003 (SEEP) (μg/L)	QS-004 (SED) (μg/L)	QD-001 (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD SW-8260								
Chloroform	(<1U)	(<1U)	(<7U)	(<7U)	(<1U)	18	18	16
Methylene chloride	(<1U)	(<1U)	(<7U)	(<7U)	(<1U)	3	3	3
1,1,1-Trichloroethane	(<1U)	(<1U)	(<7U)	(<7U)	(<1U)	(<1U)	0.5J	(<1U)
TARGET ANALYTE LIST ELEMENTS BY EPA SERIES METHODS SW-846 6000/7000/9000 (μg/L)								
Aluminum	16,200	18,600	4,770	3,370	NR	(<56.0U)	107B*	63.9B*
Antimony	4.5B*	5.2B*	0.29B*	0.42B*	NR	(<1.0U)	(<1.0U)	2.2B*
Arsenic	20.9	23.3	2.6	1.5	NR	(<2.0U)	(<2.0U)	4.4B*
Barium	178B*	199B*	13.2B*	9.7B*	NR	(<4.0U)	(<4.0U)	(<4.0U)
Beryllium	0.57B*	0.80B*	0.10B*	(<0.02U)	NR	(<0.20U)	(<0.20U)	(<0.20U)
Calcium	29,300	29,800	659	561	NR	298B*	902B*	(<22.0U)
Chromium	43.4	50.7	6.9	7.2	NR	(<4.0U)	(<4.0U)	(<4.0U)
Cobalt	9.6B*	11.2B*	1.5B*	(<0.87U)	NR	(<7.0U)	(<7.0U)	(<7.0U)
Copper	60.2	70.6	3.1	4.6	NR	(<5.0U)	241	(<5.0U)
Iron	90,100	100,000	7,160	3,780	NR	(<52.0U)	(<52.0U)	(<52.0U)
Lead	379	450	14.6	18.6	NR	1.1B*	2.0B*	(<1.0U)
Magnesium	7,350	7,940	1,280	1,110	NR	(<35.0U)	135B*	(<35.0U)
Manganese	551	547	58.1	31.1	NR	(<8.0U)	(<8.0U)	(<8.0U)
Mercury	(<0.10U)	0.12B*	(<0.06U)	0.08B*	NR	(<0.10U)	0.11B*	0.12B*
Nickel	27.9B*	37.1B*	5.6	4.8B*	NR	(<5.0U)	(<5.0U)	(<5.0U)
Potassium	5,710	6,070	601	402	NR	(<71.0U)	79.4B*	(<71.0U)
Selenium	(<2.0U)	(<2.0U)	0.53B*	0.26B*	NR	(<2.0U)	(<2.0U)	(<2.0U)
Silver	(<4.0U)	(<4.0U)	(<0.13U)	(<0.13U)	NR	(<4.0U)	(<4.0U)	2.3B*
Sodium	32,800	32,600	99.7B*	90.6B*	NR	885B*	1,370	(<81.0U)
Vanadium	81.5	95.2	10.4	4.7B*	NR	(<3.0U)	(<3.0U)	(<3.0U)
Zinc	495	601	13.2	24.9	NR	(<12.0U)	14.8B*	(<12.0U)

NOTE:
LT = Leachate sample.
QT = Trip blank.
QS = Equipment rinsate blank.
QD = Source water blank. Samples associated with QD-001 were analyzed under a separate sample delivery group shipped on 7 November 1997.
U = Not detected. Sample quantitation limits are shown as (<___U).
J = Estimated concentration below the detection limit.
NR = Analysis not required.
B* = Analyte concentration is between the Instrument Detection Limit and the Contract Required Detection Limit.
Only those analytes detected in at least one of the samples, and the constituents of concern listed in the Long-Term Monitoring Plan (ABB-ES 1995), are shown on this table.

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ABB Environmental Services, Inc. (ABB-ES). 1994a. Interim Record of Decision for the Ground-Water Operable Unit at Site 9. September.

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State of Maine Department of Human Services. 1992. Summary of State and Federal Drinking Water Guidelines. Revised September. Bureau of Health - Environmental Toxicology Program. 23 October.

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Appendix A

Field Monitoring and Sampling Forms

A.1 Field Record of Well Gauging Forms
A.2 Field Record of Well Gauging, Purging, and Sampling Forms
A.3 Field Record of Surface Water and Sediment Sampling Forms

Appendix A.1

Field Record of Well Gauging Forms

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Site 9

Project Name: LTMP Bimonthly Gauging September 1997	Project No: 29600.47	Date: 9/2/97
Weather/Temperature: overcast, 65°		
EA Personnel: SYC MDC	Equipment: TVA-1000, slope indicator	

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm) Air Ambient	VOCs Concentration (ppm) Well Mouth	Casing/Seal Condition	Protective Casing Elevation (ft)	PVC Casing Elevation (ft)	Depth to Water (ft)	Measured Well Depth (ft)	Water Table Elevation (ft)
MW-NASB 069	Y Y	Y	0	0	Good	--	57.35	11.63	42.42	45.72
MW-NASB 070	Y Y	Y	0	0	Good		58.26	12.60	27.32	45.66
MW-NASB 071	Y Y	Y	0	32	Good		46.25	2.77	21.54	43.48
MW-NASB 072	Y Y	Y	0	40	Good		49.81	9.63	14.63	40.18
MW-NASB 073	Y Y	Y	0	0	Good		51.71	9.10	32.12	42.61
MW-NASB 074	Y Y	Y	0	13	Good		51.68	10.05	27.12	41.63
MW-NASB 075	Y Y	Y	0	22	Good		54.91	13.80	21.22	41.11
MW-NASB 076	Y Y	Y	0	11	Good		52.79	11.60	19.94	41.19
MW-NASB 077	Y Y	Y	0	0	Good		58.89	16.63	37.29	42.26
MW-NASB 078	Y Y	Y	0	122	Good		53.74	11.70	14.93	42.04
MW-NASB 079	Y Y	Y	0	30	Good		58.15	12.55	18.92	45.60
MW-NASB 080	Y Y	Y	0	31	Good		58.51	11.95	19.04	46.56
MW-NASB 081	Y Y	Y	0	0	Good		58.22	11.64	18.85	46.58

NOTE: All measurements in feet mean sea level (MSL).

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EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name: LTMP Event 10 Site 9		Project No: 29600.47.7303	Date: 11/4/97
Weather/Temperature: overcast, 55°			
EA Personnel: KR SC		Equipment: Slope indicator, TVA-1000	

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm)		Casing/Seal Condition	Protective Casing Elevation (ft)	PVC Casing Elevation (ft)	Depth to Water (ft)	Measured Well Depth (ft)	Water Table Elevation (ft)
			Air Ambient	Well Mouth						
MW-NASB 069	Y Y	Y	0	0	Good	--	57.35	11.67	42.42	45.68
MW-NASB 070	Y Y	Y	0	0	Good		58.26	12.75	27.32	45.51
MW-NASB 071	Y Y	Y	0	20	Good		46.25	2.75	21.54	43.50
MW-NASB 072	Y Y	Y	0	30	Good		49.81	9.34	14.63	40.47
MW-NASB 073	Y Y	Y	0	0	Good		51.71	9.26	32.12	42.45
MW-NASB 074	Y Y	Y	0	10	Good		51.68	9.98	27.12	41.70
MW-NASB 075	Y Y	Y	0	20	Good		54.91	13.64	21.22	41.27
MW-NASB 076	Y Y	Y	0	10	Good		52.79	11.44	19.94	41.35
MW-NASB 077	Y Y	Y	0	0	Good		58.89	16.60	37.29	42.29
MW-NASB 078	Y Y	Y	0	130	Good		53.74	10.92	14.93	42.82
MW-NASB 079	Y Y	Y	0	20	Good		58.15	12.53	18.92	45.62
MW-NASB 080	Y Y	Y	0	30	Good		58.51	11.93	19.04	46.58
MW-NASB 081	Y Y	Y	0	0	Good		58.22	11.81	18.85	46.41

NOTE: All measurements in feet mean sea level (MSL).

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Appendix A.2

Field Record of Well Gauging, Purging, and Sampling Forms

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: NAS8-MW-069
WELL CONDITION: Good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: Locked
WEATHER: 35°F overcast

GAUGE DATE: 11/17/97
SOUNDING METHOD: Slope indicator
STICK UP/DOWN (ft): 2.45

GAUGE TIME: 1450
MEASUREMENT REF: Top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: Low flow
AMBIENT AIR VOCs (ppm) Start: 0.0 End: 0.0

PURGE TIME: 1455
FIELD PERSONNEL: MOL / CEM
WELL MOUTH VOCs (ppm): Start: 0.0 End: 0.0

WELL VOLUME

A. WELL DEPTH (ft): 42.42
B. DEPTH TO WATER (ft): 11.60
C. LIQUID DEPTH (ft) (A-B): 30.82
D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 18.65
F. THREE WELL VOLUMES (L) (E*3): 55.95

Parameter	Beginning	1	2	3	4	5
Time (min)	~~1500~~ 1455	1500	1505	1510	1515	1520
Depth to Water (ft)	11.60	11.69	11.74	11.65	11.65	11.65
Purge Rate (L/min)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (L)	0	1	2	3	4	5
pH	6.11	6.06	6.00	6.05	6.07	6.09
Temperature (°C)	12.7	13.2	15.0	14.0	14.3	15.1
Conductivity (µmhos/cm)	~~0.63~~ 340	382	360	372	384	376
Dissolved Oxygen (mg/L)	0.63	0.58	0.20	0.27	0.27	0.25
Turbidity (NTU)	209	96	77	52	45	36
Eh (mv)	271	276	253	236	229	218

TOTAL QUANTITY OF WATER REMOVED (L): 10.0L

SAMPLERS: CEM
SAMPLING TIME (START/END): 1543/1545
SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl
SAMPLE BOTTLE IDs: BN-10-S9-MW006
SAMPLE PARAMETERS: VOCs by 8260

COMMENTS AND OBSERVATIONS:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-071
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: P. sunny, cool, 35°F

GAUGE DATE: 11/17/97
SOUNDING METHOD: Slope indicator
STICK UP/DOWN (ft): 2.80

GAUGE TIME: 1345
MEASUREMENT REF: top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1354
FIELD PERSONNEL: KR/MC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 21.54
B. DEPTH TO WATER (ft): 2.70
C. LIQUID DEPTH (ft) (A-B): 18.84

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 11.40
F. THREE WELL VOLUMES (L) (E*3): 34.20

Parameter	Beginning	1	2	3	4	5
Time (min)	1357	1400	1403	1406	1409	1412
Depth to Water (ft)	2.70	3.25	3.29	3.29	3.30	3.30
Purge Rate (L/min)	1.6L	1.6L	1.6L	1.6L	1.6L	1.6L
Volume Purged (L)	4.8L	9.6L	14.4L	19.2L	24L	28.8L
pH	3.52	5.44	5.82	5.96	5.98	6.00
Temperature (°C)	13.64	13.94	14.05	14.09	14.10	14.10
Conductivity (μmhos/cm)	274	275	271	270	269	269
Dissolved Oxygen (mg/L)	0.20	0.29	0.25	0.18	0.17	0.17
Turbidity (NTU)	34	8	7	6	5	5
Eh (mv)	28	28	27	24	24	24

TOTAL QUANTITY OF WATER REMOVED (L): 35.2L

SAMPLERS: KR/MC
SAMPLING TIME (START/END): 1414 / 1416
SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, HNO3
SAMPLE BOTTLE IDs: BN-1059-MW005
SAMPLE PARAMETERS: VOCs by 8260, TAL Metals
COMMENTS AND OBSERVATIONS: Contaminated 35.2L of purge water, and ran thru treatment plant.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING (OVERFLOW PAGE)

Site Name: Site 9	Project No.: 29600.47	Date: 11/17/97
Well ID: NASB-mw-069	Field Personnel: sem/mpc	

Parameter	6	7	8	9	10	11
Time (min.)	1525	1530	1535	1540		
Depth to Water (ft)	11.65	11.65	11.65	11.65		
Purge Rate (L/min)	0.2	0.2	0.2	0.2		
Volume Purged (L)	6	7	8	9		
pH	6.10	6.10	6.10	6.10		
Temperature (°C)	15.3	15.4	15.7	15.7		
Conductivity (μmhos/cm)	372	372	368	374		
Dissolved Oxygen (mg/L)	0.24	0.23	0.21	0.20		
Turbidity (NTU)	36	33	33	33		
Eh (mv)	213	209	202	200		

Parameter	12	13	14	15	16	17
Time (min)						
Depth to Water (ft)						
Purge Rate (L/min)						
Volume Purged (L)						
pH						
Temperature (°C)						
Conductivity (μmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity (NTU)						
Eh (mv)						

COMMENTS AND OBSERVATIONS _____

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-72
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: 35°F overcast/sunny

GAUGE DATE: 11/17/97
SOUNDING METHOD: Slope indicator
STICK UP/DOWN (ft): 2.25

GAUGE TIME: 1245
MEASUREMENT REF: top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: Low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1250
FIELD PERSONNEL: MDC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 14.63
B. DEPTH TO WATER (ft): 9.40
C. LIQUID DEPTH (ft) (A-B): 5.23

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 3.16
F. THREE WELL VOLUMES (L) (E*3): 9.48

Parameter	Beginning	1	2	3	4	5
Time (min)	1252	1255	1300	1305	1310	1315
Depth to Water (ft)	9.40	9.58	9.55	9.55	9.55	9.55
Purge Rate (L/min)	0.2L	0.2L	0.2L	0.2L	0.2L	0.2L
Volume Purged (L)	0.4L	1.0L	2.0L	3.0L	4.0L	5.0L
pH	4.54	5.75	6.03	6.09	6.10	6.12
Temperature (°C)	10.32	12.62	14.49	15.02	15.34	15.40
Conductivity (μmhos/cm)	152	194	195	206	210	210
Dissolved Oxygen (mg/L)	0.97	0.85	0.67	0.60	0.57	0.48
Turbidity (NTU)	202	56	14	7.5	6.0	5.0
Eh (mv)	206	180	159	144	133	130

TOTAL QUANTITY OF WATER REMOVED (L): ~~[illegible]~~ 5.6L

SAMPLERS: MDC
SAMPLING TIME (START/END): 1315/1318
SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, HNO3
SAMPLE BOTTLE IDs: BN-10-S9-MW003
SAMPLE PARAMETERS: VOCs by 8260, TAL metals 6010/7000
COMMENTS AND OBSERVATIONS: Containerized 5.6L of purge water, and ran thru treatment plant.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-074
WELL CONDITION: good

PROJECT NUMBER: 2960047/7303
WELL LOCK STATUS: locked
WEATHER: p. sunny, cool, 35°F

GAUGE DATE: 11/17/97
SOUNDING METHOD: SI/pel indicator
STICK UP/DOWN (ft): 1.90

GAUGE TIME: 1055
MEASUREMENT REF: top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1105
FIELD PERSONNEL: KR/MC/CM
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 27.12
B. DEPTH TO WATER (ft): 9.99
C. LIQUID DEPTH (ft) (A-B): 17.13
D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 10.36
F. THREE WELL VOLUMES (L) (E*3): 31.08

Parameter	Beginning	1	2	3	4	5
Time (min)	1110	1115	1120	1125	1130	1135
Depth to Water (ft)	9.99	10.15	10.15	10.16	10.17	10.17
Purge Rate (L/min)	0.2	0.20	0.20	0.2L	0.2L	0.2L
Volume Purged (L)	1.0L	2.0L	3.0L	4.0L	5.0L	6.0L
pH	6.44	6.31	6.30	6.28	6.27	6.26
Temperature (°C)	10.2	11.40	13.70	14.1	14.6	14.7
Conductivity (μmhos/cm)	302	300	310	302	300	296
Dissolved Oxygen (mg/L)	1.28	0.40	.35	0.27	0.24	0.23
Turbidity (NTU)	900	450	208	110	92	75
Eh (mv)	~~[illegible]~~ 375	374	362	347	335	325

TOTAL QUANTITY OF WATER REMOVED (L): 13.2L

SAMPLERS: KR/MC/CM
SAMPLING TIME (START/END): 1207/1211
SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, ~~[illegible]~~ KR
SAMPLE BOTTLE IDs: BN-10-S9-MW002
SAMPLE PARAMETERS: VOCs, ~~[illegible]~~ KR

COMMENTS AND OBSERVATIONS: Purged flow cell @ 1115 to remove sediment. Emptied flow thru cell @ 1120 to remove sediment.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING (OVERFLOW PAGE)

Site Name: Site 9	Project No.: 29600.47/7307	Date: 11/17/97
Well ID: MW-NASB-074	Field Personnel: KR/mc/cm	

Parameter	6	7	8	9	10	11
Time (min.)	1140	1145	1150	1155	1200	1205
Depth to Water (ft)	10.19	10.19	10.15	10.17	10.17	10.17
Purge Rate (L/min)	0.2L	0.2L	.2L	.2	0.2L	0.2l
Volume Purged (L)	7.0L	8.0L	9.0	10.0 L	11.0 L	12.0l
pH	6.26	6.26	6.27	6.27	6.28	6.31
Temperature (°C)	14.9	14.2	14.8	14.8	14.90	15.20
Conductivity (μmhos/cm)	298	312	304	312	310	309
Dissolved Oxygen (mg/L)	0.27	0.25	0.24	0.24	0.25	0.25
Turbidity (NTU)	56	36	26	24	24	24
Eh (mv)	324	315	310	297	288	280

Parameter	12	13	14	15	16	17
Time (min)						
Depth to Water (ft)						
Purge Rate (L/min)						
Volume Purged (L)						
pH						
Temperature (°C)						
Conductivity (μmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity (NTU)						
Eh (mv)						

COMMENTS AND OBSERVATIONS _____

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-075
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: sunny, cool, 35°F

GAUGE DATE: 11/17/97
SOUNDING METHOD: slope indicator
STICK UP/DOWN (ft): 2.00

GAUGE TIME: 1010
MEASUREMENT REF: top of pvc
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1105
FIELD PERSONNEL: KR/MC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 21.22
B. DEPTH TO WATER (ft): 13.59
C. LIQUID DEPTH (ft) (A-B):

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 4.62
F. THREE WELL VOLUMES (L) (E*3): 13.86

Parameter	Beginning	1	2	3	4	5
Time (min)	1112	1117	1140	1145	1148	1151
Depth to Water (ft)	13.59			14.08	14.06	14.00
Purge Rate (L/min)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (L)	2.10L	3.6L		5.1L	6.0L	6.9L
pH	4.85			6.25	6.19	6.18
Temperature (°C)	16.80			16.30	17.47	17.62
Conductivity (μmhos/cm)	230	pump not working	pump not working	228	232	232
Dissolved Oxygen (mg/L)	1.50			0.89	0.67	0.63
Turbidity (NTU)	479			14	14	10
Eh (mv)	146			205	196	190

TOTAL QUANTITY OF WATER REMOVED (L): 11.1L

SAMPLERS: KR/MC
SAMPLING TIME (START/END): 1202 / 1205

SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI water

SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, ~~[illegible]~~ KR

SAMPLE BOTTLE IDs: BN-10-S9-MW001

SAMPLE PARAMETERS: VOCs, ~~[illegible]~~ KR

COMMENTS AND OBSERVATIONS: ~~[illegible]~~ KR
Containerized 11.1L of purge water, and ran thru treatment plant.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING (OVERFLOW PAGE)

Site Name: Site 9	Project No.: 29600.47/7303	Date: 11/17/97
Well ID: MW-NASB-075	Field Personnel: KR/MC	

Parameter	6	7	8	9	10	11
Time (min.)	1154	1157	1200			
Depth to Water (ft)	13.92	13.99	14.00			
Purge Rate (L/min)	0.3L	0.3L	0.3L			
Volume Purged (L)	7.8L	8.7L	9.6L			
pH	6.17	6.16	6.17			
Temperature (°C)	17.65	17.65	17.65			
Conductivity (μmhos/cm)	232	232	233			
Dissolved Oxygen (mg/L)	0.60	0.63	0.58			
Turbidity (NTU)	8	6	5			
Eh (mv)	186	183	181			

Parameter	12	13	14	15	16	17
Time (min)						
Depth to Water (ft)						
Purge Rate (L/min)						
Volume Purged (L)						
pH						
Temperature (°C)						
Conductivity (μmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity (NTU)						
Eh (mv)						

COMMENTS AND OBSERVATIONS _____

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: mw-NASB-016
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: 35°F, overcast

GAUGE DATE: 11/17/97
SOUNDING METHOD: slope indicator
STICK UP/DOWN (ft): 2.00

GAUGE TIME: 1420
MEASUREMENT REF: top of pvc
WELL DIAMETER (in.): 2"

PURGE DATE: 11/17/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1423
FIELD PERSONNEL: mc/cm
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 19.94
B. DEPTH TO WATER (ft): 11.50
C. LIQUID DEPTH (ft) (A-B): 8.44

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 5.11
F. THREE WELL VOLUMES (L) (E*3): 15.33

Parameter	Beginning	1	2	3	4	5
Time (min)	1425	1430	1435			
Depth to Water (ft)	11.50	11.51	11.53			
Purge Rate (L/min)	0.2L	0.2L	0.2L			
Volume Purged (L)	0.4L	1.4L	2.4L			
pH	6.11	6.12	6.16			
Temperature (°C)	13.4	14.0	17.0			
Conductivity (μmhos/cm)	210	216	224			
Dissolved Oxygen (mg/L)	0.65	0.46	0.67			
Turbidity (NTU)	4	4	3			
Eh (mv)	18	10	-14			

TOTAL QUANTITY OF WATER REMOVED (L): 3.8L

SAMPLERS: cm/mc
SAMPLING TIME (START/END): 1440/1442
SAMPLING DATE: 11/17/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl
SAMPLE BOTTLE IDs: BN-10-S9-mw004, BN-10-S9-mwXD1
SAMPLE PARAMETERS: VOCs by 8260

COMMENTS AND OBSERVATIONS: sampled early due to pump overheating. Containerized 3.8L of purge water, and ran thru treatment plant. Duplicate collected here, BN-10-S9-mwXD1 (VOCs only)

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-079
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: Sunny, cold, 35°F

GAUGE DATE: 11/18/97
SOUNDING METHOD: Slope indicator
STICK UP/DOWN (ft): 2.20

GAUGE TIME: 1355
MEASUREMENT REF: TOC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/18/97
PURGE METHOD: peristaltic pump
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1358
FIELD PERSONNEL: MC, SC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 18.92
B. DEPTH TO WATER (ft): 12.62
C. LIQUID DEPTH (ft) (A-B): 6.30
D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 3.81
F. THREE WELL VOLUMES (L) (E*3): 11.43

Parameter	Beginning	1	2	3	4	5
Time (min)	1401	1404	1408	1413	1418	1423
Depth to Water (ft)	12.65	12.66	12.68	12.70	12.69	12.69
Purge Rate (L/min)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (L)	0.6	1.2	2.0	3.0	4.0	5.0
pH	7.11	6.85	6.81	6.83	6.85	6.86
Temperature (°C)	13.18	11.87	12.37	12.90	12.85	12.99
Conductivity (μmhos/cm)	258	211	210	209	209	209
Dissolved Oxygen (mg/L)	0.47	0.55	0.66	2.04	1.79	1.60
Turbidity (NTU)	710	757	399	108	61	44
Eh (mv)	-168	-107	-100	-91	-96	-99

TOTAL QUANTITY OF WATER REMOVED (L): ~~[illegible]~~ 9.8L

SAMPLERS: MC, SC
SAMPLING TIME (START/END): 1445/1447
SAMPLING DATE: 11/18/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: HCL, nitric acid
SAMPLE BOTTLE IDs: BN-16-59-MW009
SAMPLE PARAMETERS: VOC, TAL Elements
COMMENTS AND OBSERVATIONS:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING (OVERFLOW PAGE)

Site Name: Site 9	Project No.: 29600.47	Date: 11/18/97
Well ID: MW-NASB-079	Field Personnel: MC, SC	

Parameter	6	7	8	9	10	11
Time (min.)	1426	1429	1432	1435	1438	1441
Depth to Water (ft)	12.69	12.69	12.70	12.70	12.70	12.70
Purge Rate (L/min)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (L)	5.6	6.2	6.8	7.4	8.0	8.6
pH	6.87	6.88	6.88	6.88	6.87	6.87
Temperature (°C)	13.03	12.95	12.85	12.97	13.09	13.03
Conductivity (μmhos/cm)	208	207	206	204	203	203
Dissolved Oxygen (mg/L)	1.49	1.40	1.28	1.21	1.17	1.14
Turbidity (NTU)	36	31	26	23	21	22
Eh (mv)	-102	-104	-105	-105	-105	-105

Parameter	12	13	14	15	16	17
Time (min)						
Depth to Water (ft)						
Purge Rate (L/min)						
Volume Purged (L)						
pH						
Temperature (°C)						
Conductivity (μmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity (NTU)						
Eh (mv)						

MMENTS AND OBSERVATIONS _____

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-WASB-080
WELL CONDITION: good

PROJECT NUMBER: 29600.47/7303
WELL LOCK STATUS: locked
WEATHER: sunny, cool, 35°F

GAUGE DATE: 11/18/97
SOUNDING METHOD: slope indicator
STICK UP/DOWN (ft): 2.05

GAUGE TIME: 1020
MEASUREMENT REF: Top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/18/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 1028
FIELD PERSONNEL: KR/SC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 19.04
B. DEPTH TO WATER (ft): 12.04
C. LIQUID DEPTH (ft) (A-B): 7.00

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 4.24
F. THREE WELL VOLUMES (L) (E*3): 12.72

Parameter	Beginning	1	2	3	4	5
Time (min)	1031	1036	1041	1044	1047	1050
Depth to Water (ft)	12.04	12.04	12.12	12.30	12.60	12.60
Purge Rate (L/min)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (L)	0.9L	2.4L	3.9L	4.8L	5.7L	6.6L
pH	5.40	6.48	6.60	6.64	6.66	6.67
Temperature (°C)	14.84	19.44	17.80	17.68	19.00	18.44
Conductivity (μmhos/cm)	366	424	420	411	424	418
Dissolved Oxygen (mg/L)	0.77	0.47	0.25	0.23	0.26	0.35
Turbidity (NTU)	170	67	54	88	138	160
Eh (mv)	-9	-43	-67	-69	-69	-68

TOTAL QUANTITY OF WATER REMOVED (L): ~~11.11~~ 10.5L

SAMPLERS: KR/SC
SAMPLING TIME (START/END): 1125/1130

SAMPLING DATE: 11/18/97
DECONTAMINATION FLUIDS USED: DI Water

SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, HNO3

SAMPLE BOTTLE IDs: BN-10-S9-MW008, BN-10-S9-MWXD2

SAMPLE PARAMETERS: VOCs by 8260, TAL Metals 6010/7000

COMMENTS AND OBSERVATIONS: Duplicate BN-10-S9-MWXD2 collected here. Containerized 10.5L of purge water, and ran thru treatment plant.

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FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING (OVERFLOW PAGE)

Site Name: Site 9	Project No.: 29600.47 7303	Date: 11/18/97	
Well ID: MW-NASB-080	Field Personnel: KR/SC		

Parameter	6	7 *	8	9	10	11
Time (min.)	1055	1058	pump off	1125		
Depth to Water (ft)	12.80	13.00		pump		
Purge Rate (L/min)	0.3L	0.3L		on		
Volume Purged (L)	8.1L	9.0L		to		
pH	6.69	6.67		sample		
Temperature (°C)	17.62	19.20				
Conductivity (μmhos/cm)	437	426				
Dissolved Oxygen (mg/L)	0.39	0.30				
Turbidity (NTU)	251	333				
Eh (mv)	-61	-69				

Parameter	12	13	14	15	16	17
Time (min)						
Depth to Water (ft)						
Purge Rate (L/min)						
Volume Purged (L)						
pH						
Temperature (°C)						
Conductivity (μmhos/cm)						
Dissolved Oxygen (mg/L)						
Turbidity (NTU)						
Eh (mv)						

COMMENTS AND OBSERVATIONS * water drew down to top of pump. turned off pump, let recharge for 20 minutes. Will sample then.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

SITE NAME: Site 9
WELL I.D.: MW-NASB-08I
WELL CONDITION: good

PROJECT NUMBER: 29600.47/2303
WELL LOCK STATUS: locked
WEATHER: p. sunny, cool, 35°F

GAUGE DATE: 11/18/97
SOUNDING METHOD: Slope indicator
STICK UP/DOWN (ft): 1.91

GAUGE TIME: 0915
MEASUREMENT REF: Top of PVC
WELL DIAMETER (in.): 2"

PURGE DATE: 11/18/97
PURGE METHOD: low flow
AMBIENT AIR VOCs (ppm) Start: 0 End: 0

PURGE TIME: 0918
FIELD PERSONNEL: KR/SC
WELL MOUTH VOCs (ppm): Start: 0 End: 0

WELL VOLUME

A. WELL DEPTH (ft): 18.85
B. DEPTH TO WATER (ft): 11.70
C. LIQUID DEPTH (ft) (A-B): 7.15

D. WELL VOLUME/FT (L): 0.605
E. WELL VOLUME (L) (C*D): 4.33
F. THREE WELL VOLUMES (L) (E*3): 12.99

Parameter	Beginning	1	2	3	4	5
Time (min)	0921	0924	0927	0930	0933	0936
Depth to Water (ft)	11.70	11.70	11.70	11.70	11.70	11.70
Purge Rate (L/min)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (L)	0.9L	1.8L	2.7L	3.6L	4.5L	5.4L
pH	4.01	5.59	6.17	6.32	6.39	6.42
Temperature (°C)	13.64	15.06	15.62	17.89	17.64	17.14
Conductivity (μmhos/cm)	290	302	311	323	328	325
Dissolved Oxygen (mg/L)	4.72	4.75	4.53	4.69	4.58	4.67
Turbidity (NTU)	29	16	7	6	4	3
Eh (mv)	284	260	243	225	212	206

TOTAL QUANTITY OF WATER REMOVED (L): 6.9L

SAMPLERS: KR/SC
SAMPLING TIME (START/END): 0938/0941
SAMPLING DATE: 11/18/97
DECONTAMINATION FLUIDS USED: DI Water
SAMPLE TYPE: Grab
SAMPLE PRESERVATIVES: 1:1 HCl, HNO_3
SAMPLE BOTTLE IDs: BN-10-59-MW007
SAMPLE PARAMETERS: VOCs by 8260, TAL Metals 6010/7000
COMMENTS AND OBSERVATIONS: MS/MSD done here.

Appendix A.3

Field Record of Surface Water and Sediment Sampling Forms

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FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9			Project Number: 29600.47/7303
Sample Location ID: SW/Sed 010			Date: 11/16/97
Sampling Time: 0945	Start: 0955 SW	End: 1000 SED.	Sample Team Members: KR/MC

SURFACE WATER INFORMATION

Type of Surface Water:
- (X) Stream
- ( ) River
- ( ) Pond/Lake
- ( ) Seep

Water Depth and Sample Location 8" KR

Depth of Sample from Top of Water 3" KR

Equipment Used for Collection:
- ( ) None, Grab into Bottle
- ( ) Bomb Sampler
- ( ) Pump
- (X) Dedicated jar

Decontamination Fluids Used:
- ( ) Isopropyl Alcohol
- ( ) ASTM Type II Water
- ( ) Deionized Water
- ( ) Hexane
- ( ) HNO_3 Solution
- ( ) Potable Water
- (X) None

Water Quality Parameters
- (X) Temperature 6.24 °C
- (X) Conductivity 178 µmhs/cm
- (X) ph 6.42 units
- (X) Dissolved oxygen 8.75 mg/L
- (X) Turibidity 3 NTU
- (X) Eh 100 mv

Velocity Measurements Obtained? (X) No ( ) Yes, See Flow Measurement Data Record _____

Field QC Data: ( ) Field Duplicate Collected, Duplicate ID _____; ( ) MS/MSD

Sample Location Sketch: ( ) Yes (X) No

Method Used: ( ) Winkler (X) Probe

SEDIMENT INFORMATION

Type of Sample Collected:
- (X) Discrete
- ( ) Composite

Sediment Type:
- ( ) Clay
- (X) Sand, granular
- ( ) Organic
- ( ) Gravel

Equipment Used for Collection:
- (X) Gravity Corer
- ( ) Stainless Steel Split Spoon
- ( ) Dredge
- ( ) Hand Spoon/Trowel
- ( ) Aluminum Pans
- ( ) Stainless Steel Bucket
- ( ) Stainless Steel Auger
- ( ) _____

Decontamination Fluids Used:
- ( ) Isopropyl Alcohol
- ( ) ASTM Type II Water
- ( ) Deionized Water
- ( ) Liquinox Solution
- ( ) Hexane
- ( ) HNO_3 Solution
- (X) Potable Water
- ( ) None

Sample Observations:
- (X) Odor None
- (X) Color medium brown
- ( ) _____

Field QC Data: (X) Field Duplicate Collected, Duplicate ID BN-10-S9-SDXD1 (X) MS/MSD

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	80mL	✓	BN-10-S9-SW001
✓		✓		24 oz	✓	BN-10-S9-SD001

NOTES/SKETCH

Duplicate, MS/MSD, sample

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FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9			Project Number: 29600.47/7303
Sample Location ID: SW/Sed 011			Date: 11/16/97
Sampling Time: NA	Start: NA	End:	Sample Team Members: KR/MC

SURFACE WATER INFORMATION

Type of Surface Water:
( ) Stream ( ) River
( ) Pond/Lake ( ) Seep

Water Depth and Sample Location _____ (ft)

Depth of Sample from Top of Water _____ (ft)

Equipment Used for Collection:
( ) None, Grab into Bottle
( ) Bomb Sampler
( ) Pump _____

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Hexane
( ) HNO_3 Solution
( ) Potable Water
( ) None

Water Quality Parameters
( ) Temperature _____ °C
( ) Conductivity _____ µmhs/cm
( ) ph _____ units
( ) Dissolved oxygen _____ mg/L
( ) Turibidity _____ NTU
( ) Eh _____ mv

Velocity Measurements Obtained? ( ) No ( ) Yes, See Flow Measurement Data Record _____

Field QC Data: ( ) Field Duplicate Collected
Duplicate ID _____
( ) MS/MSD

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

Type of Sample Collected:
( ) Discrete
( ) Composite

Sediment Type:
( ) Clay
( ) Sand
( ) Organic
( ) Gravel

Equipment Used for Collection:
( ) Gravity Corer
( ) Stainless Steel Split Spoon
( ) Dredge
( ) Hand Spoon/Trowel
( ) Aluminum Pans
( ) Stainless Steel Bucket
( ) Stainless Steel Auger
( ) _____

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Liquinox Solution
( ) Hexane
( ) HNO_3 Solution
( ) Potable Water
( ) None

Sample Observations:
( ) Odor _____
( ) Color _____
( ) _____

Field QC Data: ( ) Field Duplicate Collected
Duplicate ID _____
( ) MS/MSD

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs

NOTES/SKETCH

Sample not collected. Site location Flooded

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9			Project Number: 29600.47/7303
Sample Location ID: SW/Sed 012			Date: 11/16/97
Sampling Time: NA	Start: NA	End: NA	Sample Team Members: KR/MC

SURFACE WATER INFORMATION

Type of Surface Water:
( ) Stream ( ) River
( ) Pond/Lake ( ) Seep

Water Depth and Sample Location _____ (ft)

Depth of Sample from Top of Water _____ (ft)

Equipment Used for Collection:
( ) None, Grab into Bottle
( ) Bomb Sampler
( ) Pump _____

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Hexane
( ) HNO_3 Solution
( ) Potable Water
( ) None

Water Quality Parameters
( ) Temperature _____ °C
( ) Conductivity _____ µmhs/cm
( ) ph _____ units
( ) Dissolved oxygen _____ mg/L
( ) Turibidity _____ NTU
( ) Eh _____ mv

Velocity Measurements Obtained? ( ) No ( ) Yes, See Flow Measurement Data Record _____

Field QC Data: ( ) Field Duplicate Collected
Duplicate ID _____
( ) MS/MSD

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

Type of Sample Collected:
( ) Discrete
( ) Composite

Sediment Type:
( ) Clay
( ) Sand
( ) Organic
( ) Gravel

Equipment Used for Collection:
( ) Gravity Corer
( ) Stainless Steel Split Spoon
( ) Dredge
( ) Hand Spoon/Trowel
( ) Aluminum Pans
( ) Stainless Steel Bucket
( ) Stainless Steel Auger
( ) _____

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Liquinox Solution
( ) Hexane
( ) HNO_3 Solution
( ) Potable Water
( ) None

Sample Observations:
( ) Odor _____
( ) Color _____
( ) _____

Field QC Data: ( ) Field Duplicate Collected
Duplicate ID _____
( ) MS/MSD

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs

NOTES/SKETCH

Sample not collected. Site location flooded.

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9			Project Number: 29600.47/7303
Sample Location ID: LT-901			Date: 11/16/97
Sampling Time: 0923	~~Start~~: 0925 SW	~~End~~: 0930 SED	Sample Team Members: KR/MC

SURFACE WATER INFORMATION

Type of Surface Water:
( ) Stream ( ) River
( ) Pond/Lake (X) Seep

Water Depth and Sample Location 6" KR

Depth of Sample from Top of Water 3" KR

Equipment Used for Collection:
( ) None, Grab into Bottle
( ) Bomb Sampler
( ) Pump
(X) Dedicated jar

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Hexane
( ) HNO_3 Solution
( ) Potable Water
(X) None

Water Quality Parameters
(X) Temperature 6.94 °C
(X) Conductivity 188 µmhs/cm
(X) ph 6.38 units
(X) Dissolved oxygen 5.02 mg/L
(X) Turibidity 287 NTU
(X) Eh 35 mv

Velocity Measurements Obtained? (X) No ( ) Yes, See Flow Measurement Data Record _____

Field QC Data: (X) Field Duplicate Collected
Duplicate ID BN-10-S9-LTXD1
(X) MS/MSD

Sample Location Sketch:
( ) Yes
(X) No

Method Used:
( ) Winkler
(X) Probe

SEDIMENT INFORMATION

Type of Sample Collected:
(X) Discrete
( ) Composite

Sediment Type:
( ) Clay
(X) Sand
(X) Organic
( ) Gravel

Equipment Used for Collection:
(X) Gravity Corer
( ) Stainless Steel Split Spoon
( ) Dredge
( ) Hand Spoon/Trowel
( ) Aluminum Pans
( ) Stainless Steel Bucket
( ) Stainless Steel Auger
( ) _____

Decontamination Fluids Used:
( ) Isopropyl Alcohol
( ) ASTM Type II Water
( ) Deionized Water
( ) Liquinox Solution
( ) Hexane
( ) HNO_3 Solution
(X) Potable Water
( ) None

Sample Observations:
(X) Odor H_2S odor
(X) Color medium brown
( ) _____

Field QC Data: (X) Field Duplicate Collected
Duplicate ID BN-10-S9-SDXD2
(X) MS/MSD

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	3.3L	✓	BN-10-S9-LT001
✓		✓		24 oz	✓	BN-10-S9-LTSD1

NOTES/SKETCH

sample, duplicate, ms/msd

Appendix B

Analytical Data Quality Review

APPENDIX B - CONTENTS

Page

B.1 INTRODUCTION B-1

B.1.1 Field Sampling Program Quality Control B-3
B.1.2 Laboratory Analytical Quality Control Program B-4

B.2 SAMPLE HOLDING TIMES B-4
B.3 PRECISION B-4

B.3.1 Volatile Organic Compounds B-4
B.3.2 Semivolatile Organic Compounds B-5
B.3.3 Target Analyte List Metals B-5

B.4 ACCURACY B-5

B.4.1 Volatile Organic Compounds B-5
B.4.2 Semivolatile Organic Compounds B-6
B.4.3 Target Analyte List Metals B-8

B.5 COMPLETENESS B-8
B.6 FIELD QUALITY CONTROL BLANKS B-9
B.7 DUPLICATE FIELD SAMPLES B-11
B.8 METHOD DETECTION LIMITS FOR SOIL AND WATER SAMPLES B-14

APPENDIX B

ANALYTICAL DATA QUALITY REVIEW

B.1 INTRODUCTION

This project utilized both field and analytical laboratory quality control measures to ensure that the data quality objectives presented in the project-specific Quality Assurance Project Plan (QAPP) contained in the Long-Term Monitoring Plan (LTMP) (ABB-ES 1994b) were met.

The sampling program consisted of 11 (of which 3 are field duplicates) aqueous samples (ground water, surface water, and leachate seep) and 4 (of which 2 are field duplicates) sediment samples collected from Site 9. The laboratory was provided with 2 aqueous and 2 sediment sample delivery groups (SDG) which included 6 aqueous quality control samples (3 trip blanks, 2 rinsate blanks, and 1 source water blank). Sample duplicates, rinsate blanks, and trip blanks were collected at the frequency required by the QAPP.

Analytical quality control was reviewed for compliance against data quality objectives for precision and accuracy for each sample and analysis type, including field quality control blanks (i.e., trip blanks) and field sample duplication. Analytical precision was based upon the mean relative percent difference (RPD) of the matrix spike/matrix spike duplicates (MS/MSD) for organic analysis and the RPD of the laboratory duplicates for inorganic analysis. Accuracy was based upon the reported spike recoveries for the laboratory control standards (LCS), MS/MSD and system monitoring compound (SMC) recoveries (for organic analysis), and LCS and MS recoveries (for inorganic analysis).

The ability of the laboratory to extract compounds is confirmed by the LCS recoveries. MS/MSD and SMC recoveries measure the effect of the sample matrix on sample preparation and measurement methodology. During the MS/MSD process, known quantities of target compounds are spiked into the sample matrix for the MS/MSD and recoveries are used to measure potential bias due to matrix effects. SMC, which are structurally similar to the targeted analytes, are used to evaluate the recovery of the target compounds which are then used as indicators for all of the analytes. The accuracy of the LCS spike recoveries is used in conjunction with the MS/MSD when evaluating organic analyses.

Field completeness was quantified by comparing the number of samples specified in the LTMP to the number of samples actually collected during Monitoring Event 10. Data completeness was quantified by reviewing the number of usable results to the number results reported.

For clarity, the following definitions are defined for use throughout Appendix B:

- **Instrument Detection Limit (IDL)**—Defined as the lowest concentration level that can be determined to be statistically different from instrument background noise (instrument blank).

- **Method Detection Limit**—The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample for a given matrix. The method detection limits for sediment and aqueous media are summarized in Tables B-1 and B-2, respectively.

- **Contract Required Detection Limit/Contract Required Quantitation Limit (CRDL/CRQL)**—Minimum level of detection acceptable under the contract Statement of Work in order to ensure regulatory compliance. This terminology is widely accepted in the industry as defined by the U.S. Environmental Protection Agency (EPA) contract laboratory protocols and is a standard list of inorganic analyte concentrations and organic compound concentrations on which laboratory flags and data validation qualifiers are based. These published concentrations are meant to be above the laboratory IDL in order to ensure a level of confidence. The published CRDLs/CRQLs are specific to the Contract Laboratory Program methodology but are often used throughout industry methods. The data user should be aware that stated CRDLs/CRQLs are generic for a method and are affected for each sample by sample size, concentration, percent solids, and dilution factors.

- **Practical Quantitation Limit**—Defined as the lowest level that can be reasonably achieved within specified units of precision and accuracy during routine laboratory operating conditions.

The following sections summarize the data quality review for Monitoring Event 10 at Site 9.

Below is a summary table of the findings for the data quality review performed and discussed in detail in this appendix.

Data Quality Review		Holding Time	Field Blank Cont.	Precision		Accuracy			Completeness	
				Laboratory	Field	SMC	MS/MSD	LCS	Analytical	Field
Aqueous Matrix	VOA	✓	✓B	✓	✓J	✓	✓	✓	100% ✓J	85% ✓
	Metals	✓	✓B	✓	✓J	NA	✓J	✓		
	BNAs	✓	✓B	✓	✓	✓	✓J	✓J		
Sediment Matrix	VOA	✓	✓B	✓	✓J	✓J	✓	✓		
	Metals	✓	✓B	✓	✓	NA	✓J	✓		
	BNAs	✓	✓B	✓	✓J	✓	✓J	✓		

NOTE: ✓ = The data are usable as reported based on the data quality review of this quality measurement.
✓J = The data are usable, however, some analyte concentrations should be considered estimates of the true concentrations.
✓B = The data have been affected by field blank/laboratory contamination; false-positives may exist.
✘ = Some analyte concentrations are not usable.
NA = The quality measurement does not apply to this matrix or analytical methodology.

Based on the data quality review described herein, all data are defined as usable, however, the data user should be aware of the non-homogeneous matrix for the single sediment sample collected (SED-10). Based on the review of the organic and inorganic results for precision of the field duplicate, and accuracy of the MS/MSD, the data user should consider the results reported for SED-10 as estimations of the true concentration for all organic and inorganic compounds/analytes.

Minor sample biases for both organic and inorganic results are identified and a detailed description of holding time issues (Section B.2), field/laboratory blank contamination (Section B.6), precision issues (Section B.3), accuracy issues (Sections B.4), and analytical and field completeness (Section B.5) are provided below.

B.1.1 Field Sampling Program Quality Control

Field duplicate samples were collected for each matrix (i.e., sediment and ground/surface water) and analyzed for the same parameters as the environmental samples to determine field sampling precision. The potential for cross-contamination of volatile organics during sample storage and shipment was monitored by trip blanks which were shipped with each sample cooler containing aqueous samples. The trip blanks were analyzed for volatile organic compounds (VOC) by EPA SW-846, Method 8260B. To document the effectiveness of decontamination protocols, rinsate blank samples were taken by running de-ionized water through decontaminated sampling equipment and into the appropriate sample containers, and analyzing for the same parameters as the samples. In addition, a source water blank was analyzed to assess the chemical quality of the water used in the decontamination sequence. The source water blank was also associated with samples collected at Sites 1 and 3 and Eastern Plume under a separate SDG.

B.1.2 Laboratory Analytical Quality Control Program

Ground water, surface water, sediment, and seep samples were collected for analysis of Target Compound List (TCL) VOC plus a library search of 15 tentatively identified compounds by EPA Method 8260B. Leachate station seep, sediment samples, and specific ground-water samples (MW-071, MW-072, MW-080, MW-081) were also collected for analysis of Target Analyte List (TAL) elements by inductively coupled plasma (EPA Method 6010A), graphite furnace (EPA Method 7841 [thallium]), and mercury by cold vapor atomic adsorption (EPA Method 7471A/7470M[1]). Arsenic, selenium, and chromium were analyzed by inductively coupled plasma (EPA Method 6010) rather than graphite furnace atomic adsorption (EPA 7000 series methods) as specified in LTMP (ABB-ES 1994); the precision and accuracy objectives and reporting requirements identified in the LTMP were met. The sediment sample was further analyzed for the presence of TCL semivolatile organic compounds (SVOC) plus a library search of 20 tentatively identified compounds by EPA Method 8270B. The quality control measures specified in the SW-846 methodology (MS/MSD, SMC, LCS, and laboratory duplicates), as well as those in the QAPP, were used by the laboratory to establish proper analytical quality control.

B.2 SAMPLE HOLDING TIMES

Holding times (from date of sample collection to date of sample preparation/analysis) were compared against the maximum holding times identified in the quality control requirements of the referenced analytical methods.

B.3 PRECISION

B.3.1 Volatile Organic Compounds

Five VOC were used to quantify the MS/MSD RPD. The control limits identified in the QAPP were used to evaluate the data. The MS/MSD were performed on Samples MW-NASB-081, SED-010, and LT-901. There were no surface water samples designated for MS/MSD analyses, therefore, the data Reviewer could not evaluate the affects of this matrix on analytical precision. The leachate seep and monitoring well sample MS/MSD RPD were within the established control limits, therefore, the data are considered to be usable based on the review of analytical precision.

The sediment sample MS/MSD RPD were within the established control limits, therefore, analytical precision was determined to be acceptable and the usability of the data is unaffected.

1. To use a microwave digestion versus water bath.

B.3.2 Semivolatile Organic Compounds

Eleven SVOC were used to quantify the MS/MSD RPD. The aqueous and sediment control limits identified in the QAPP were the same as those reported by the laboratory. The MS/MSD were performed on SED-10 and a rinsate blank (S9-QS004). The aqueous quality control only applies to the rinsate sample (S9-QS004) associated with the sediment samples collected at Site 9, therefore, the laboratory was compliant in their choice of MS/MSD sample even though it is not acceptable to perform MS/MSD on rinsate samples. The aqueous MS/MSD RPDs were within the established precision control limits, therefore, the data are usable as reported based on the review of MS/MSD precision.

The sediment MS/MSD RPD were within the established control limits, therefore, the analytical precision was determined to be acceptable and sediment data are considered to be usable based on the review of analytical precision.

B.3.3 Target Analyte List Metals

All 23 analytes were used to quantify the laboratory duplicate RPD. There were no control limits identified in the QAPP for aqueous or sediment duplicate RPD for TAL metals, therefore, the laboratory control limits were used. The laboratory replicated the analyses of Samples S9-LT-901 sediment, S9-LT-901 SEEP, and MW-NASB-081. The aqueous laboratory duplicate precision measurements were within the laboratory control limits, therefore, the aqueous metals data are considered usable based on the review of analytical precision.

The sediment laboratory duplicate RPDs were within the laboratory control limits, however, calcium, chromium, and copper were flagged by the laboratory for exceedance of precision criteria. The laboratory software incorrectly applied aqueous limits to the soil samples, thereby causing the data to be flagged. The usability of the data is not affected as the RPD met the soil acceptance criteria. The sediment laboratory duplicate precision measurements were within the laboratory control limits, therefore, the sediment metals data are considered usable, based on the review of analytical precision.

B.4 ACCURACY

B.4.1 Volatile Organic Compounds

Three SMCs are normally used to measure the ability of the laboratory to purge the target analytes from the environmental samples, however, the laboratory reported an additional SMC. The SMC control limits for the aqueous and sediment samples identified in the QAPP and reported by the laboratory were identical for the first three SMC. The fourth SMC, dibromofluoromethane, was not listed in the QAPP, therefore, laboratory limits were used to evaluate the data.

The surface water, leachate seep, and monitoring well SMC recoveries were within established control limits. The aqueous analyses accuracy as measured by SMC were determined to be acceptable and analytical results are usable based on the review of analytical accuracy.

The fourth SMC recovery (70 percent) in sediment Sample SED-10 was below the lower control limit (74 percent). Appropriately, the analysis was repeated as MS/MSD samples. Both matrix spike samples indicated the same SMC exceedance. Based on the laboratory narrative, this sample also had internal standard recoveries which were below the lower control limit. The data user should be aware that this matrix may have significant matrix interference and that the analytical results should be considered to be estimates of the true values.

Five VOC were used to quantify MS/MSD recoveries against laboratory established control limits. The recovery limits reported by the laboratory were the same as those identified in the QAPP. The samples chosen for MS/MSD are identified in Section B.3.1. The leachate seep, monitoring well sample, and leachate seep sediment MS/MSD recoveries were within the established control limits. The aqueous and sediment analyses accuracy as measured by MS/MSD recoveries were determined to be acceptable and the analytical results are usable based on the review of analytical accuracy.

Five VOC were used to quantify the LCS recoveries against laboratory established control limits (Appendix D). No LCS recovery limits are stated in the QAPP. All aqueous and sediment LCS recoveries were within laboratory established control limits, confirming purging efficiency.

B.4.2 Semivolatile Organic Compounds

Six SMC were used to measure the ability of the laboratory to extract the target compounds from the environmental samples. The aqueous and sediment sample SMC recoveries were within the established control limits. All semivolatile data are usable as reported based on the review of analytical accuracy for SMC.

Eleven compounds were used to quantify the MS/MSD recoveries. The control limits stated in the QAPP were the same as those reported by the laboratory. MS/MSD analyses were analyzed at the correct frequency for each matrix. The samples chosen for MS/MSD are listed in Section B.3.2. The aqueous MS/MSD (rinsate sample) recoveries were within the established control limits, with the exception of n-nitroso-di-n-propylamine (39 percent), which is below the lower control limit (41 percent) in the MSD. The MS recovery (49 percent) for the compound was compliant. The data Reviewer does not feel that the exceedance of the lower control limit is excessive, and the discrepancy between MS and MSD recoveries for this single compound may be related to a single incident of laboratory spiking technique, rather than the ability of the laboratory to accurately extract the compound. The results of the aqueous rinsate blank are usable as reported based on the accuracy of the MSD.

For the sediment MS/MSD, the recoveries were compliant with the established control limits with the exception of phenol (93 and 91 percent), 2,4-dinitrophenol (99 percent), and pyrene (172 percent) in Sample S9-SED-010 which exceeded the upper control limits. The high recovery should not be considered to be significant for the acid compounds since the recoveries exceeded the upper control limit (90 percent) by 3 percent. The data user should note that the control limits are bias low. The base/neutral MSD recoveries for 2,4-dinitrotoluene and pyrene indicate a possible matrix interference causing a high bias for base/neutral compounds that elute later in the chromatogram. However, MS recoveries for these compounds and all other base/neutral compounds do not support this theory. Based on the review of the MS and MSD chromatograms, it is evident that the sample is non-homogeneous and the recoveries of MS/MSD should really not be compared as the sample matrix was significantly different between the two samples. The later eluting MS compound recoveries in the MSD sample indicate matrix interference as typical in the presence of alkanes, which was apparent in the chromatogram. LCS recoveries (see below) indicate the laboratory's analytical system to be in control. Based on the recoveries for the MSD, the data Reviewer feels that the accuracy of the later eluting compounds may be affected by the sample matrix. These compounds should be considered estimates of the true concentration in Sample SED-10. The sediment data are usable as reported with the qualification mentioned above, based on the review of analytical accuracy

The data user should also be aware that the laboratory narrative states that one or more internal standards, used to quantitate compound concentrations within Sample SED-10, had low recoveries. Even though the internal standard recoveries were not compliant with method requirements, the data Reviewer does not feel that the low recoveries were significantly low enough to define the data for Sample SED-10 as unusable. The low recoveries were present for Sample SED-10, the associated MS/MSD, and the field duplicate of Sample SED-10. In all cases, the laboratory narrative reports that internal standard recoveries were below method requirements. This indicates matrix interference and not laboratory non-conformance.

Eleven SVOC were used to quantify the LCS recoveries against laboratory established control limits. No LCS recovery limits are stated in the QAPP. The aqueous LCS recoveries were within laboratory established control limits with the exceptions of n-nitroso-di-n-propylamine (40 percent) which exceeded the lower control limit (53 percent). The low recovery of the single base/neutral extractable compound is not supported by the other similar base/neutral compounds, however, it is indicative of a possible low bias for this compound. The exceedance of the control limit is not significant enough to cause the data to be unusable; however, the fact that the same compound was determined to be non-compliant for the aqueous MS/MSD analysis may indicate a more general analytical issue such as a problematic calibration or inaccurate LCS stock source. Based on the accuracy of surrogates and all other MS/MSD spikes, the data Reviewer feels that all the aqueous semivolatile data are usable as reported, however, the analytical results for n-nitroso-di-n-propylamine should be considered bias low for the aqueous rinsate sample.

The solid LCS recoveries were within established control limits and all data are usable as reported based on the review of LCS accuracy.

B.4.3 Target Analyte List Metals

Nineteen TAL analytes were used to quantify MS recoveries for aqueous and sediment samples. Calcium, magnesium, potassium, and sodium are not required as spiking compounds due to the potential for these compounds to be present in the environmental samples at high concentrations. All of the MS samples were analyzed at the correct frequency and the accuracy control limits used to evaluate the data were taken from the QAPP.

The laboratory performed MS spikes on those samples identified in Section B.3.2. The groundwater and leachate station seep MS recoveries were within the established control limits of 75-125 percent for all compounds with the exception of thallium (71.3 percent) in Sample MW-NASB-081. The recoveries of the leachate SEEP sample were compliant. Thallium should be considered to be bias low in Sample MW-NASB-081 due to matrix interference. All other aqueous data are usable as reported based on the review of the MS accuracy.

The sediment MS recoveries for Sample LT-901 SED were within the established control limits, with the exceptions of antimony (48 percent) and copper (50.1 percent) which were below the lower control limit of 75 percent. Therefore, analytical results for antimony and copper in sediment Sample LT-901 should be considered biased low. All other sediment data are usable as reported based on the review of MS accuracy.

All 23 TAL analytes were used to quantify LCS recoveries against laboratory established control limits. There were no LCS recoveries presented in the QAPP. Both aqueous and solid LCS recoveries were compliant. All aqueous and sediment data are usable based on the review of the LCS accuracy.

B.5 COMPLETENESS

Eleven of the planned 13 aqueous field samples were collected, resulting in a field completeness level of 84.6 percent. The 2 samples not collected, SW-11 and SW-12, were not sampled due to excessive flooding of the area. It should be noted that following completion of the surface water impoundments at Site 9, the requirements for surface water and sediment sampling at sample stations SW/SED-915, SW/SED-916, SW/SED-919, and SW/SED-922 were removed from the LTMP.

The field quality control blanks (e.g., trip blanks) were collected at the proper frequency. A total of 3 trip blanks were collected for Site 9. There were 2 rinsate blanks collected; 1 associated with the sediment samples and 1 was associated with the surface water/seep samples. In addition to the 2 rinsate samples, 1 source water blank reported for Sites 1 and 3 was submitted in compliance with the QAPP.

Analytical completeness was quantitated by reviewing the number of acceptable analytical results to the total number of analytical results. All samples were submitted to the laboratory within holding time and analyzed successfully, resulting in 100 percent analytical completeness. Analytical completeness met and exceeded the requirements of the QAPP.

B.6 FIELD QUALITY CONTROL BLANKS

Field quality control rinsate blanks were collected to evaluate the potential for contamination that may have been introduced during the field sampling activities. Trip blanks are indicators for cross-contamination of VOC during sample shipment. In both cases, where contamination exists, environmental samples should be reviewed for possible false-positives.

The field quality control blanks collected for this site included 3 trip blanks and 2 equipment rinsate blanks and 1 source water blank. Two rinsate blanks (QS-003 and QS-004) were collected during the surface water/sediment sampling program. Rinsate blanks were not required for the ground-water samples since dedicated pumping systems were used to collect the samples. The source water blank (QD-001) associated with this event was collected under a separate SDG associated with Sites 1 and 3, and Eastern Plume.

The 3 trip blanks were free of contamination.

The analytical results for 2 rinsate blanks associated with the surface water and sediment samples (including samples collected at LT-901) collected at Site 9, and the associated source water blank, are shown in the following table:

Analyte	Units	QS-003	QS-004	QD-001
1,1,1-Trichloroethane	µg/L	(<1U)	0.5J	(<1U)
Chloroform	µg/L	18	18	16
Methylene chloride	µg/L	3	3	3
Bis(2-ethylhexyl)phthalate	µg/L	ND	(<10U)	8BJ
Aluminum	µg/L	(<56.0U)	107B*	63.9B*
Antimony	µg/L	(<1.0U)	(<1.0U)	2.2B*
Arsenic	µg/L	(<2.0U)	(<2.0U)	4.4B*
Calcium	µg/L	298B*	902B*	(<22.0U)
Copper	µg/L	(<5.0U)	241	(<5.0U)
Lead	µg/L	1.1B*	2.0B*	(<1.0U)
Magnesium	µg/L	(<35.0U)	135B*	(<35.0U)
Mercury	µg/L	(<0.1U)	0.11B*	0.12B*
Potassium	µg/L	(<71.0U)	79.4B*	(<71.0U)
Silver	µg/L	(<4.0U)	(<4.0U)	2.3B*
Sodium	µg/L	885B*	1,370	(<81.0U)
Zinc	µg/L	(<12.0U)	14.8B*	(<12.0U)

NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below detection limit.
B* = Analyte concentration is between the IDL and the CRDL.
ND = Analysis for this compound was not performed for this sample.

Methylene chloride (a common laboratory contaminant) was identified in 2 rinsate blanks at concentrations at or near the method detection limit. Chloroform was also detected in both rinsate blanks, however, the concentration was well above the detection limit; 1,1,1-trichloroethane was detected in rinsate Sample QS-004 only, associated with the sediment samples. The appearance of methylene chloride and chloroform in the source water blank indicates that both chloroform and methylene chloride were a contaminant of the rinse water and not a result of poor decontamination procedures. All associated environmental samples were unaffected by the methylene chloride, chloroform, and 1,1,1-trichloroethane contamination as none of the compounds were detected in any of the associated samples.

The semivolatile compound bis(2-ethylhexyl)phthalate was detected in the source water blank; however, based on the review of the method blank, this positive hit should be considered to be a false-positive due to laboratory contamination. Though the compound was detected in the method blank associated with the analysis of the source water blank, bis(2-ethylhexyl)phthalate did not appear in the method blanks associated with the semivolatile analysis of the single sediment sample. The data user should note that, based on the latest EPA Region I data validation guidelines, actions are not taken on solid samples for aqueous field blank contamination.

The analysis of TAL metals for the rinsate blank associated with Sample LT-901 sediment indicated the presence of the following contaminants: aluminum, calcium, copper, lead, magnesium, mercury, potassium, sodium, and zinc. Of these analytes, aluminum and mercury were also present in the source water, indicating that these analytes are constituents of the source water and not necessarily an indicator of poor decontamination procedures. The above listed contaminants affect the usability of the data as follows: calcium, copper, sodium, mercury, and zinc results have the potential to be false-positives; based on rinsate blank contamination, analytes antimony and arsenic, though undetected in the rinsate sample associated with the Sample LT-901 sediment, may potentially be false-positives due to contamination introduced by the source water. Contaminants aluminum, lead, magnesium, and potassium did not affect the usability of Sample LT-901 sediment as the concentrations of these analytes in the sample exceeded 5X the rinsate blank concentration.

The analysis of TAL metals for the rinsate blank associated with the aqueous Sample LT-901 SEEP indicated the presence of the following contaminants: calcium, lead, and sodium. None of these analytes were detected in the source water blank and, therefore, are not constituents of the source water but a result of the decontamination procedure. Calcium, lead, and sodium contamination did not affect the usability of Sample LT-901 SEEP as all of the analytes were detected at concentrations greater than 5X the rinsate blank concentration. Analytes aluminum, antimony, mercury, and arsenic, though undetected in the rinsate sample associated with the Sample LT-901 SEEP, may potentially be false-positives due to contamination introduced by the source water, with the exception of aluminum, which has a sample concentration greater than 5X the source water concentration.

Silver was detected in the source water blank, however, both sediment and SEEP rinsate blanks as well as the associated LT-901 sediment and SEEP samples were non-detect for these compounds, therefore, the usability of the silver data is unaffected.

B.7 DUPLICATE FIELD SAMPLES

Duplicate field samples were collected during the monitoring well ground-water sampling program, leachate seep sampling program, and the sediment sampling program. The sample locations of the field duplicated samples were not identified to the laboratory. The precision measurements for all analytes reported above the CRQL/CRDL are defined in the tables below.

The following tables show the duplicate ground-water samples and their results which are associated with SDG S9MW001:

Analyte	Units	MW-NASB-076	MW-NASB-076 DUP	RPD %
Vinyl chloride	µg/L	2	3	**40**

All precision requirements were met for both VOC and TAL metals with the exception of vinyl chloride. The concentration of vinyl chloride in MW-NASB-076 should be considered an estimation of the true concentration based on the exceedance of RPD criteria for field duplicates. All other compounds/analytes are usable as reported based on the review of field duplicate precision.

Analyte	Units	MW-NASB-080	MW-NASB-080 DUP	RPD %	Difference
Total 1,2-Dichloroethene	µg/L	1	1	0	---
Vinyl chloride	µg/L	9	9	0	---
1,1-Dichloroethane	µg/L	1	1	0	---
Aluminum	µg/L	127B*	121B*	NA	6
Antimony	µg/L	1.3B*	(<1.0U)	NA	0.8
Barium	µg/L	672	640	NA	32
Chromium	µg/L	60,600	60,400	0.33	NR
Iron	µg/L	6,550	7,170	9	NR
Magnesium	µg/L	4,540	4,590	NA	50
Manganese	µg/L	536	572	6.5	NR
Mercury	µg/L	(<0.10U)	0.18B*	NA	0.16
Potassium	µg/L	7,540	7,680	1.8	NR
Selenium	µg/L	3.5B*	(<2.0U)	NA	2.5
Sodium	µg/L	18,000	18,200	1.1	NR
Thallium	µg/L	1.0B*	(<1.0U)	NA	0.5

NOTE: B* = Analyte concentration is between the IDL and the CRDL.
U = Not detected. Sample quantitation limits are shown as (<____U).
NA = Not applicable; the analyte concentration does not exceed 5X the CRDL and, therefore, the difference measurement is applied.
NR = Not required; the analyte concentration exceeds 5X the CRDL and, therefore, the RPD was applied.
Dashes (---) indicate this column does not apply to organic analysis.

All precision requirements were met for the both organic and inorganic results for the duplicate analysis of Sample MW-NASB-080. All results are usable as reported based on the review of the field duplicate precision.

The following table shows the leachate seep sample duplicate results associated with SDG S9QS003:

Analyte	Units	LT-901 (SEEP)	LT-901 (SEEP) DUP	RPD %	Difference
Aluminum	µg/L	16,200	18,600	13.8	NR
Antimony	µg/L	4.5B*	5.2B*	NA	0.7
Arsenic	µg/L	20.9	23.3	NA	2.4
Barium	µg/L	178B*	199B*	NA	21
Beryllium	µg/L	0.57B*	0.80B*	NA	0.23
Calcium	µg/L	29,300	29,800	1.7	NR
Chromium	µg/L	43.4	50.7	NA	7.3
Cobalt	µg/L	9.6B*	11.2B*	NA	1.6
Copper	µg/L	60.2	70.6	NA	49
Iron	µg/L	90,100	100,000	10.4	NR
Lead	µg/L	379	450	NA	71
Magnesium	µg/L	7,350	7,940	7.7	NR
Manganese	µg/L	551	547	0.7	NR
Mercury	µg/L	(<0.10U)	0.12B*	NA	0.07
Nickel	µg/L	27.9B*	37.1B*	NA	9.2
Potassium	µg/L	5,710	6,070	6.1	NR
Sodium	µg/L	32,800	32,600	0.6	NR
Vanadium	µg/L	81.5	95.2	NA	13.7
Zinc	µg/L	495	601	19.3	NR

NOTE: B* = Analyte concentration is between the IDL and the CRDL.
U = Not detected. Sample quantitation limits are shown as (<____U).
NA = Not applicable; the analyte concentration does not exceed 5X the CRDL and, therefore, the difference measurement is applied.
NR = Not required; the analyte concentration exceeds 5X the CRDL and, therefore, the RPD was applied.
Dashes (---) indicate this column does not apply to organic analysis.

All precision requirements were met for the both organic and inorganic results for the duplicate analysis of Sample LT-901(SEEP). All results are usable as reported based on the review of the field duplicate precision.

The following table shows the leachate station sediment sample duplicate results associated with SDG S9LTSD1:

Analyte	Units	LT-901 (SED)	LT-901 (SED) DUP	RPD %	Difference
Aluminum	mg/Kg	4,770	3,370	34.4	NR
Antimony	mg/Kg	0.29B*	0.42B*	NA	0.13
Arsenic	mg/Kg	2.6	1.5	NA	1.1
Barium	mg/Kg	13.2B*	9.7B*	NA	3.5
Beryllium	mg/Kg	0.10B*	(<0.02U)	NA	0.09
Calcium	mg/Kg	659	561	NA	98
Chromium	mg/Kg	6.9	7.2	NA	0.3
Cobalt	mg/Kg	1.5B*	(<0.87U)	NA	1.1
Copper	mg/Kg	3.1	4.6	NA	1.5
Iron	mg/Kg	7,160	3,780	**61.8**	NR
Lead	mg/Kg	14.6	18.6	NA	4
Magnesium	mg/Kg	1,280	1,110	NA	170
Manganese	mg/Kg	58.1	31.1	NA	27
Mercury	mg/Kg	(<0.06U)	0.08B*	NA	0.05
Nickel	mg/Kg	5.6	4.8B*	NA	0.8
Potassium	mg/Kg	601	402	NA	199
Selenium	mg/Kg	0.53B*	0.26B*	NA	0.27
Sodium	mg/Kg	99.7B*	90.6B*	NA	9.1
Vanadium	mg/Kg	10.4	4.7B*	NA	5.7
Zinc	mg/Kg	13.2	24.9	NA	11.7

NOTE: B* = Analyte concentration is between the IDL and the CRDL.
U = Not detected. Sample quantitation limits are shown as (<____U).
NA = Not applicable; the analyte concentration does not exceed 5X the CRDL and, therefore, the difference measurement is applied.
NR = Not required; the analyte concentration exceeds 5X the CRDL and, therefore, the RPD was applied.

All precision requirements were met for the duplicate analysis of Sample LT-901 (sediment) with the exception of iron. The analytical result for iron should be considered an estimate of the true concentration based on the exceedance of precision criteria for field duplicates. All other analytical data are usable as reported for Sample LT-901 (sediment) based on the review of field duplicate precision.

The following table shows the duplicate sample results associated with sediment SDG S9SD001:

Analyte	Units	SED-010	SED-010 DUP	RPD %
Total 1,2-Dichloroethene	µg/Kg	5J	(<6U)	36
Acenaphthylene	µg/Kg	240J	2,000	**157**
Naphthalene	µg/Kg	470J	270J	**54**
2-Methylnaphthalene	µg/Kg	140J	800	**140**
Acenaphthene	µg/Kg	720	1,700	**81**
Dibenzofuran	µg/Kg	370J	1,200	**106**
Fluorene	µg/Kg	640	4,000	**145**
Phenanthrene	µg/Kg	4,300	34,000D	**155**
Anthracene	µg/Kg	940	3,300	**111**
Carbazole	µg/Kg	550	2,100	**117**
Fluoranthene	µg/Kg	4,000	41,000D	**164**
Pyrene	µg/Kg	4,300	31,000D	**151**
Benzo(a)anthracene	µg/Kg	1,900	15,000D	**155**
Chrysene	µg/Kg	2,100	15,000D	**151**
Bis(2-ethylhexyl)phthalate	µg/Kg	140J	(<390U)	**33**
Benzo(b)fluoranthene	µg/Kg	2,400	12,000D	**133**
Benzo(k)fluoroethane	µg/Kg	910	3,700	**121**
Benzo(a)pyrene	µg/Kg	2,000	8,800D	**126**
Indeno(1,2,3-c,d)pyrene	µg/Kg	1,200	3,800	**104**
Dibenzo(a,h)anthracene	µg/Kg	360J	1,300	**113**
Benzo(g,h,i)perylene	µg/Kg	1,500	4,500	**100**

NOTE: J = Estimated concentration below detection limit.
D = This flag indicates an analysis at a secondary dilution factor.
U = Not detected. Sample quantitation limits are shown as (<____U).

Due to the gross exceedance of the field duplicate precision criteria for Sample SED-010 and its field duplicate (Sample SED-010 DUP), the data user should be aware that the sample results indicate the sample matrix to be non-homogeneous. This is supported by the analytical results for percent moisture which deviates for the sample and its duplicate by 21 percent and the alkane hump which is clearly defined in the chromatogram of Sample SED-010, but which is not apparent in the chromatogram of Sample SED-010 DUP. The data user should be aware that the analytical results are at best a description of each individual sample and that the higher results of the SED-010 DUP should be used during data evaluation.

B.8 METHOD DETECTION LIMITS FOR SOIL AND WATER SAMPLES

Tables B-1 and B-2 provide the method detection limit for solid samples and aqueous samples, respectively. The method detection limit represents the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample for a given matrix.

TABLE B-1 METHOD DETECTION LIMITS FOR SEDIMENT SAMPLES

Parameter	Units	Method Detection Limit[a]	Date
SEMIVOLATILE ORGANICS GC/MS (SW-846 3540/8270B)			
Acenaphthene	µg/kg	140	24 JUL 96
Acenaphthylene	µg/kg	97	24 JUL 96
Anthracene	µg/kg	120	24 JUL 96
Benzidine	µg/kg	59	24 JUL 96
Benzo[a]anthracene	µg/kg	93	24 JUL 96
Benzo[b]fluoranthene	µg/kg	92	24 JUL 96
Benzo[k]fluoranthene	µg/kg	94	24 JUL 96
Benzo[a]pyrene	µg/kg	93	24 JUL 96
Benzo[ghi]perylene	µg/kg	120	24 JUL 96
Benzoic acid	µg/kg	200	24 JUL 96
Benzyl alcohol	µg/kg	82	24 JUL 96
Bis(2-chloroethyl) ether	µg/kg	110	24 JUL 96
Bis(2-chloroethoxy)methane	µg/kg	100	24 JUL 96
Bis(2-ethylhexyl) phthalate	µg/kg	94	24 JUL 96
4-Bromophenyl phenyl ether	µg/kg	120	24 JUL 96
Butylbenzylphthalate	µg/kg	89	24 JUL 96
Carbazole	µg/kg	110	24 JUL 96
4-Chloroaniline	µg/kg	85	24 JUL 96
4-Chloro-3-methylphenol	µg/kg	96	24 JUL 96
2-Chloronaphthalene	µg/kg	120	24 JUL 96
2-Chlorophenol	µg/kg	110	24 JUL 96
2-Chlorophenol-d4	µg/kg	97	24 JUL 96
4-Chlorophenyl phenyl ether	µg/kg	130	24 JUL 96
Chrysene	µg/kg	110	24 JUL 96
Cyclohexanone	µg/kg	88	24 JUL 96
Dibenzo[a,h]anthracene	µg/kg	130	24 JUL 96
Dibenzofuran	µg/kg	130	24 JUL 96
Di-n-butyl phthalate	µg/kg	150	24 JUL 96
1,2-Dichlorobenzene	µg/kg	110	24 JUL 96
1,2-Dichlorobenzene-d4	µg/kg	110	24 JUL 96
1,3-Dichlorobenzene	µg/kg	110	24 JUL 96
1,4-Dichlorobenzene	µg/kg	99	24 JUL 96
3,3'-Dichlorobenzidine	µg/kg	71	24 JUL 96
2,4-Dichlorophenol	µg/kg	82	24 JUL 96
Diethyl phthalate	µg/kg	88	24 JUL 96
4,6-Dinitro-2-Methylphenol	µg/kg	240	24 JUL 96
2,4-Dimethylphenol	µg/kg	92	24 JUL 96
Dimethyl phthalate	µg/kg	84	24 JUL 96
2,4-Dinitrophenol	µg/kg	190	24 JUL 96

(a) Determined according to the procedure specified in 40 CFR 136, Appendix B.

Parameter	Units	Method Detection Limit[a]	Date
SEMIVOLATILE ORGANICS GC/MS (SW-846 3540/8270B) (Continued)			
2,4-Dinitrotoluene	µg/kg	110	24 JUL 96
2,6-Dinitrotoluene	µg/kg	110	24 JUL 96
1,2-Diphenylhydrazine	µg/kg	93	24 JUL 96
Di-n-octyl phthalate	µg/kg	85	24 JUL 96
Fluoranthene	µg/kg	150	24 JUL 96
2-Fluorobiphenyl	µg/kg	550	24 JUL 96
2-Fluorophenol	µg/kg	710	10 FEB 95
Fluorene	µg/kg	150	24 JUL 96
Hexachlorobenzene	µg/kg	110	24 JUL 96
Hexachlorobutadiene	µg/kg	110	24 JUL 96
Hexachloroethane	µg/kg	110	24 JUL 96
Hexachlorocyclopentadiene	µg/kg	95	24 JUL 96
Indeno[1,2,3-cd]pyrene	µg/kg	110	24 JUL 96
Isophorone	µg/kg	100	24 JUL 96
2-Methylnaphthalene	µg/kg	110	24 JUL 96
2-Methylphenol	µg/kg	91	24 JUL 96
3+4-Methylphenol	µg/kg	100	24 JUL 96
4-Methylphenol	µg/kg	100	24 JUL 96
Naphthalene	µg/kg	100	24 JUL 96
2-Nitroaniline	µg/kg	96	24 JUL 96
3-Nitroaniline	µg/kg	91	24 JUL 96
4-Nitroaniline	µg/kg	77	24 JUL 96
Nitrobenzene	µg/kg	100	24 JUL 96
Nitrobenzene-d_5	µg/kg	430	24 JUL 96
2-Nitrophenol	µg/kg	100	24 JUL 96
4-Nitrophenol	µg/kg	87	24 JUL 96
N-Nitrosodiphenylamine	µg/kg	87	24 JUL 96
N-Nitrosodimethylamine	µg/kg	86	24 JUL 96
N-Nitroso-di-n-propylamine	µg/kg	99	24 JUL 96
2,2'-Oxybis(1-chloropropane)	µg/kg	230	24 JUL 96
Pentachlorophenol	µg/kg	140	24 JUL 96
Phenanthrene	µg/kg	130	24 JUL 96
Phenol	µg/kg	89	24 JUL 96
Phenol-d4	µg/kg	650	24 JUL 96
Pyrene	µg/kg	76	24 JUL 96
Pyridine	µg/kg	210	24 JUL 96
Terphenyl-d_4	µg/kg	280	24 JUL 96
2,4,6-Tribromophenol	µg/kg	460	24 JUL 96
1,2,4-Trichlorobenzene	µg/kg	100	24 JUL 96
2,4,5-Trichlorophenol	µg/kg	99	24 JUL 96
2,4,6-Trichlorophenol	µg/kg	92	24 JUL 96

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - CAPILLARY COLUMN (SW-846 5030/8260)			
Acetone	µg/kg	3	27 FEB 97
Acetonitrile	µg/kg	18	27 FEB 97
Acrolein	µg/kg	12	27 FEB 97
Allyl chloride	µg/kg	3	27 FEB 97
Acrylonitrile	µg/kg	14	27 FEB 97
Benzene	µg/kg	1	27 FEB 97
Bromobenzene	µg/kg	1	27 FEB 97
Bromochloromethane	µg/kg	0.8	27 FEB 97
Bromodichloromethane	µg/kg	0.9	27 FEB 97
Bromofluorobenzene	µg/kg	0.8	27 FEB 97
Bromoform	µg/kg	1	27 FEB 97
Bromomethane	µg/kg	3	27 FEB 97
2-Butanone	µg/kg	4	27 FEB 97
sec-Butylbenzene	µg/kg	1	27 FEB 97
n-Butylbenzene	µg/kg	1	27 FEB 97
tert-Butylbenzene	µg/kg	0.9	27 FEB 97
Carbon disulfide	µg/kg	2	27 FEB 97
Carbon tetrachloride	µg/kg	1	27 FEB 97
Chlorobenzene	µg/kg	0.9	27 FEB 97
Chloroethane	µg/kg	1	27 FEB 97
2-Chloroethylvinyl ether	µg/kg	4	27 FEB 97
Chloroform	µg/kg	1	27 FEB 97
1-Chlorohexane	µg/kg	2	27 FEB 97
Chloromethane	µg/kg	2	27 FEB 97
Chloroprene	µg/kg	1	09 JAN 95
2-Chlorotoluene	µg/kg	0.9	27 FEB 97
4-Chlorotoluene	µg/kg	2	27 FEB 97
Dibromochloromethane	µg/kg	0.8	27 FEB 97
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	2	27 FEB 97
1,2-Dibromoethane (EDB)	µg/kg	0.9	27 FEB 97
Dibromofluoromethane	µg/kg	1	27 FEB 97
Dibromomethane	µg/kg	1	27 FEB 97
1,2-Dichlorobenzene	µg/kg	0.9	27 FEB 97
1,3-Dichlorobenzene	µg/kg	1	27 FEB 97
1,4-Dichlorobenzene	µg/kg	1	27 FEB 97
trans 1,4-dichloro2-Butene	µg/kg	4	27 FEB 97
Dichlorodifluoromethane	µg/kg	2	27 FEB 97
1,1-Dichloroethane	µg/kg	1	27 FEB 97
1,2-Dichloroethane	µg/kg	1	27 FEB 97
1,2-Dichloroehtan-d4	µg/kg	0.8	27 FEB 97
1,1-Dichloroethene	µg/kg	2	27 FEB 97
cis-1,2-Dichloroethene	µg/kg	1	27 FEB 97

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - CAPILLARY COLUMN (SW-846 5030/8260) (Continued)			
trans-1,2-Dichloroethene	µg/kg	2	27 FEB 97
1,2-Dichloropropane	µg/kg	4	27 FEB 97
1,3-Dichloropropane	µg/kg	1	27 FEB 97
2,2-Dichloropropane	µg/kg	2	27 FEB 97
1,1-Dichloropropene	µg/kg	1	27 FEB 97
cis-1,3-Dichloropropene	µg/kg	0.8	27 FEB 97
trans-1,3-Dichloropropene	µg/kg	0.8	27 FEB 97
Diisopropyl ether	µg/kg	2	27 FEB 97
Ethylbenzene	µg/kg	2	27 FEB 97
Ethyl acetate	µg/kg	2	27 FEB 97
Ethyl ether	µg/kg	2	27 FEB 97
Ethyl methacrylate	µg/kg	2	27 FEB 97
Hexachlorobutadiene	µg/kg	1	27 FEB 97
2-Hexanone	µg/kg	4	27 FEB 97
Iodomethane	µg/kg	0.8	27 FEB 97
Isobutyl alchol	µg/kg	40	27 FEB 97
Isopropylbenzene	µg/kg	1	27 FEB 97
p-Isopropyltoluene	µg/kg	0.9	27 FEB 97
Methacrylonitrile	µg/kg	3	27 FEB 97
Methylene chloride	µg/kg	1	27 FEB 97
Methyl methacrylate	µg/kg	2	27 FEB 97
4-Methyl-2-Pentanone	µg/kg	5	27 FEB 97
Methyl tertiary-butyl ether	µg/kg	2	27 FEB 97
Naphthalene	µg/kg	2	27 FEB 97
2-Nitropropane	µg/kg	3	27 FEB 97
Pentachloroethane	µg/kg	2	27 FEB 97
Propionitrile	µg/kg	20	27 FEB 97
n-Propylbenzene	µg/kg	1	27 FEB 97
Styrene	µg/kg	0.8	27 FEB 97
1,1,1,2-Tetrachloroethane	µg/kg	1	27 FEB 97
1,1,2,2-Tetrachloroethane	µg/kg	1	27 FEB 97
Tetrachloroethene	µg/kg	2	27 FEB 97
Tetrahydrofuran	µg/kg	4	27 FEB 97
Toluene-d_8	µg/kg	1	27 FEB 97
Toluene	µg/kg	1	27 FEB 97
1,2,3-Trichlorobenzene	µg/kg	1	27 FEB 97
1,2,4-Trichlorobenzene	µg/kg	1	27 FEB 97
1,1,1-Trichloroethane	µg/kg	1	27 FEB 97
1,1,2-Trichloroethane	µg/kg	1	27 FEB 97
Trichloroethene	µg/kg	0.9	27 FEB 97
Trichlorofluoromethane	µg/kg	2	27 FEB 97
1,2,3-Trichloropropane	µg/kg	1	27 FEB 97

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - CAPILLARY COLUMN (SW-846 5030/8260) (Continued)			
1,1,2-Trichlorotrifluoroethane	µg/kg	3	27 FEB 97
1,2,3-Trimethylbenzene	µg/kg	2	27 FEB 97
1,2,4-Trimethylbenzene	µg/kg	1	27 FEB 97
1,3,5-Trimethylbenzene	µg/kg	1	27 FEB 97
Vinyl chloride	µg/kg	2	27 FEB 97
Vinyl acetate	µg/kg	1	27 FEB 97
m&p-Xylenes	µg/kg	2	27 FEB 97
o-Xylene	µg/kg	1	27 FEB 97
Xylenes (total)	µg/kg	2	27 FEB 97
METALS - COLD VAPOR			
Mercury	mg/kg	0.10	16 MAY 96
METALS - FURNACE (SW-846 3050/7000 SERIES)			
Antimony	mg/kg	0.2	16 MAY 96
Arsenic	mg/kg	0.2	16 MAY 96
Beryllium	mg/kg	0.1	16 MAY 96
Cadmium	mg/kg	0.1	16 MAY 96
Chromium	mg/kg	0.2	16 MAY 96
Copper	mg/kg	0.2	16 MAY 96
Lead	mg/kg	0.1	16 MAY 96
Nickel	mg/kg	0.2	16 MAY 96
Selenium	mg/kg	0.1	16 MAY 96
Silver	mg/kg	0.1	16 MAY 96
Thallium	mg/kg	0.3	16 MAY 96
METALS - ICP (SW-846 3050/6010A)			
Aluminum	mg/kg	6.5	10 APR 97
Antimony	mg/kg	2.4	10 APR 97
Arsenic	mg/kg	2.9	10 APR 97
Barium	mg/kg	2.2	16 MAY 96
Beryllium	mg/kg	0.056	10 APR 97
Boron	mg/kg	1.1	10 APR 97
Cadmium	mg/kg	0.4	16 MAY 96
Calcium	mg/kg	7.9	16 MAY 96
Chromium	mg/kg	0.41	10 APR 97
Cobalt	mg/kg	0.65	10 APR 97
Copper	mg/kg	0.51	10 APR 97
Iron	mg/kg	5.3	16 MAY 96
Lead	mg/kg	5.1	10 APR 97
Lithium	mg/kg	0.22	10 APR 97
Magnesium	mg/kg	8.5	16 MAY 96
Manganese	mg/kg	0.6	16 MAY 96
Molybdenum	mg/kg	0.49	10 APR 97
Nickel	mg/kg	0.50	10 APR 97

Parameter	Units	Method Detection Limit[a]	Date
METALS - ICP (SW-846 3050/6010A) (Continued)			
Potassium	mg/kg	6.3	10 APR 97
Selenium	mg/kg	4.4	10 APR 97
Silver	mg/kg	0.43	16 MAY 96
Sodium	mg/kg	8.1	10 APR 97
Strontium	mg/kg	0.1	16 MAY 96
Thallium	mg/kg	5.6	10 APR 97
Tin	mg/kg	2.4	16 MAY 96
Titanium	mg/kg	2.0	16 MAY 96
Vanadium	mg/kg	0.8	16 MAY 96
Zinc	mg/kg	1.2	10 APR 97
METALS - TRACE ICP (SW-846 3050/6010A)			
Antimony	mg/kg	0.13	10 APR 97
Arsenic	mg/kg	0.20	10 APR 97
Barium	mg/kg	0.61	10 APR 97
Beryllium	mg/kg	0.064	10 APR 97
Cadmium	mg/kg	0.056	10 APR 97
Chromium	mg/kg	0.0068	10 APR 97
Copper	mg/kg	0.23	10 APR 97
Lead	mg/kg	0.10	10 APR 97
Nickel	mg/kg	0.15	10 APR 97
Selenium	mg/kg	0.2	10 APR 97
Silver	mg/kg	0.11	10 APR 97
Thallium	mg/kg	0.37	10 APR 97

TABLE B-2 METHOD DETECTION LIMITS FOR AQUEOUS SAMPLES

Parameter	Units	Method Detection Limit[a]	Date
SEMIVOLATILE ORGANICS GC/MS (SW-846 3520/8270B)			
Acenaphthene	µg/L	3.0	26 JUL 96
Acenaphthylene	µg/L	4.0	26 JUL 96
Anthracene	µg/L	4.0	26 JUL 96
Benzidine	µg/L	18.0	09 AUG 96
Benzo[a]anthracene	µg/L	3.0	26 JUL 96
Benzo[b]fluoranthene	µg/L	4.0	26 JUL 96
Benzo[k]fluoranthene	µg/L	3.0	26 JUL 96
Benzo[a]pyrene	µg/L	4.0	26 JUL 96
Benzo[ghi]perylene	µg/L	5.0	26 JUL 96
Benzoic acid	µg/L	4.0	26 JUL 96
Benzyl alcohol	µg/L	4.0	26 JUL 96
Bis(2-chloroethyl) ether	µg/L	4.0	26 JUL 96
Bis(2-chloroethoxy)methane	µg/L	4.0	26 JUL 96
Bis(2-ethylhexyl) phthalate	µg/L	7.0	08 MAR 95
4-Bromophenyl phenyl ether	µg/L	5.0	26 JUL 96
Butylbenzylphthalate	µg/L	4.0	09 AUG 96
Carbazole	µg/L	5.0	26 JUL 96
4-Chloroaniline	µg/L	5.0	26 JUL 96
4-Chloro-3-methylphenol	µg/L	4.0	26 JUL 96
2-Chloronaphthalene	µg/L	3.0	26 JUL 96
2-Chlorophenol	µg/L	3.0	26 JUL 96
2-Chlorophenol-d^4	µg/L	4.0	08 MAR 95
4-Chlorophenyl phenyl ether	µg/L	4.0	26 JUL 96
Chrysene	µg/L	3.0	26 JUL 96
Cyclohexanone	µg/L	5.0	26 JUL 96
Dibenzo[a,h]anthracene	µg/L	4.0	26 JUL 96
Dibenzofuran	µg/L	4.0	26 JUL 96
Di-n-butyl phthalate	µg/L	4.0	09 AUG 96
1,2-Dichlorobenzene	µg/L	2.0	26 JUL 96
1,2-Dichlorobenzene-d^4	µg/L	4.0	08 MAR 95
1,3-Dichlorobenzene	µg/L	3.0	26 JUL 96
1,4-Dichlorobenzene	µg/L	3.0	26 JUL 96
3,3'-Dichlorobenzidine	µg/L	4.0	26 JUL 96
2,4-Dichlorophenol	µg/L	3.0	26 JUL 96
Diethyl phthalate	µg/L	3.0	09 AUG 96
4,6-Dinitro-2-Methylphenol	µg/L	6.0	26 JUL 96
2,4-Dimethylphenol	µg/L	3.0	26 JUL 96
Dimethyl phthalate	µg/L	3.0	09 AUG 96
2,4-Dinitrophenol	µg/L	6.0	26 JUL 96
2,4-Dinitrotoluene	µg/L	4.0	26 JUL 96

(a) Determined according to 40 CFR 136 Appendix B.

Parameter	Units	Method Detection Limit[a]	Date
SEMIVOLATILE ORGANICS GC/MS (SW-8463520/ 8270B) (Continued)			
2,6-Dinitrotoluene	μg/L	4.0	26 JUL 96
1,2-Diphenylhydrazine	μg/L	5.0	26 JUL 96
Di-n-octyl phthalate	μg/L	4.0	26 JUL 96
Fluoranthene	μg/L	5.0	26 JUL 96
2-Fluorobiphenyl	μg/L	4.0	08 MAR 95
Fluorene	μg/L	4.0	26 JUL 96
2-Fluorophenol	μg/L	4.0	08 MAR 95
Hexachlorobenzene	μg/L	6.0	26 JUL 96
Hexachlorobutadiene	μg/L	4.0	26 JUL 96
Hexachloroethane	μg/L	3.0	26 JUL 96
Hexachlorocyclopentadiene	μg/L	2.0	09 AUG 96
Indeno[1,2,3-cd]pyrene	μg/L	4.0	26 JUL 96
Isophorone	μg/L	4.0	26 JUL 96
2-Methylnaphthalene	μg/L	3.0	26 JUL 96
2-Methylphenol	μg/L	4.0	26 JUL 96
4-Methylphenol	μg/L	4.0	26 JUL 96
3+4-Methylphenol	μg/L	4.0	26 JUL 96
Naphthalene	μg/L	3.0	26 JUL 96
2-Nitroaniline	μg/L	5.0	26 JUL 96
3-Nitroaniline	μg/L	4.0	26 JUL 96
4-Nitroaniline	μg/L	4.0	26 JUL 96
Nitrobenzene	μg/L	4.0	26 JUL 96
Nitrobenzene-d_5	μg/L	4.0	08 MAR 95
2-Nitrophenol	μg/L	3.0	26 JUL 96
4-Nitrophenol	μg/L	5.0	26 JUL 96
N-Nitrosodiphenylamine	μg/L	4.0	26 JUL 96
N-Nitrosodimethylamine	μg/L	4.0	26 JUL 96
N-Nitroso-di-n-propylamine	μg/L	4.0	26 JUL 96
2,2'-Oxybis(1-chloropropane)	μg/L	4.0	26 JUL 96
Pentachlorophenol	μg/L	5.0	26 JUL 96
Phenanthrene	μg/L	5.0	26 JUL 96
Phenol	μg/L	4.0	26 JUL 96
Pyrene	μg/L	4.0	26 JUL 96
Pyridine	μg/L	4.0	09 AUG 96
Terphenyl-d_{14}	μg/L	2.0	08 MAR 95
2,4,6-Tribromophenol	μg/L	3.0	08 MAR 95
1,2,4-Trichlorobenzene	μg/L	3.0	26 JUL 96
2,4,5-Trichlorophenol	μg/L	3.0	26 JUL 96
2,4,6-Trichlorophenol	μg/L	3.0	26 JUL 96

Parameter	Units	Method Detection Limit[a]	Date
PESTICIDES AND PCBs GC/ECD - ORGANOCHLORINE COMPOUNDS (SW-846 3520/8080)			
Aldrin	µg/L	0.011	15 SEP 97
α-BHC	µg/L	0.015	10 SEP 97
β-BHC	µg/L	0.030	15 SEP 97
δ-BHC	µg/L	0.030	10 SEP 97
γ-BHC (Lindane)	µg/L	0.039	15 SEP 97
α-Chlordane	µg/L	0.031	15 SEP 97
γ-Chlordane	µg/L	0.028	15 SEP 97
Chlordane (Technical)	µg/L	0.22	19 JAN 96
4,4'-DDD	µg/L	0.038	10 SEP 97
4,4'-DDE	µg/L	0.056	15 SEP 97
4,4'-DDT	µg/L	0.045	10 SEP 97
Dieldrin	µg/L	0.036	10 SEP 97
Endosulfan I	µg/L	0.019	10 SEP 97
Endosulfan II	µg/L	0.052	15 SEP 97
Endosulfan sulfate	µg/L	0.061	15 SEP 97
Endrin	µg/L	0.042	10 SEP 97
Endrin aldehyde	µg/L	0.067	15 SEP 97
Endrin ketone	µg/L	0.066	15 SEP 97
Heptachlor	µg/L	0.027	10 SEP 97
Heptachlor epoxide	µg/L	0.028	15 SEP 97
Methoxychlor	µg/L	0.216	10 SEP 97
Toxaphene	µg/L	2.126	11 SEP 97
Aroclor 1016	µg/L	0.530	09 SEP 97
Aroclor 1221	µg/L	0.51	23 JUL 96
Aroclor 1232	µg/L	0.55	23 JUL 96
Aroclor 1242	µg/L	0.69	23 JUL 96
Aroclor 1248	µg/L	0.73	23 JUL 96
Aroclor 1254	µg/L	0.31	23 JUL 96
Aroclor 1260	µg/L	0.13	12 JUL 96
Aroclor 5432	µg/L	1.1	20 JUN 96
Aroclor 5460	µg/L	1.3	20 JUN 96
VOLATILE ORGANICS GC/MS - 5 mL PURGE - CAPILLARY COLUMN (SW-846 5030/8260)			
Acetone	µg/L	2.0	15 NOV 96
Allyl chloride	µg/L	0.4	15 NOV 96
Benzene	µg/L	0.3	15 NOV 96
Bromobenzene	µg/L	0.9	15 NOV 96
Bromochloromethane	µg/L	0.3	15 NOV 96
Bromodichloromethane	µg/L	0.3	15 NOV 96

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - 5 mL PURGE - CAPILLARY COLUMN (SW-846 5030/8260) (Continued)			
Bromofluorobenzene	µg/L	0.3	15 NOV 96
Bromoform	µg/L	0.3	15 NOV 96
Bromomethane	µg/L	0.7	15 NOV 96
2-Butanone	µg/L	2.0	15 NOV 96
sec-Butylbenzene	µg/L	0.4	15 NOV 96
n-Butylbenzene	µg/L	0.5	15 NOV 96
tert-Butylbenzene	µg/L	0.4	15 NOV 96
Carbon disulfide	µg/L	0.4	15 NOV 96
Carbon tetrachloride	µg/L	0.4	15 NOV 96
Chlorobenzene	µg/L	0.3	15 NOV 96
Chloroethane	µg/L	0.4	15 NOV 96
2-Chloroethylvinyl ether	µg/L	0.9	15 NOV 96
Chloroform	µg/L	0.3	15 NOV 96
1-Chlorohexane	µg/L	0.5	15 NOV 96
Chloromethane	µg/L	0.4	15 NOV 96
2-Chlorotoluene	µg/L	0.3	15 NOV 96
4-Chlorotoluene	µg/L	0.4	15 NOV 96
Dibromochloromethane	µg/L	0.3	15 NOV 96
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.5	15 NOV 96
1,2-Dibromoethane (EDB)	µg/L	0.2	15 NOV 96
Dibromofluoromethane	µg/L	0.3	15 NOV 96
Dibromomethane	µg/L	0.3	15 NOV 96
1,2-Dichlorobenzene	µg/L	0.3	15 NOV 96
1,3-Dichlorobenzene	µg/L	0.3	15 NOV 96
1,4-Dichlorobenzene	µg/L	0.3	15 NOV 96
trans 1,4-dichloro2-Butene	µg/L	5.0	15 NOV 96
Dichlorodifluoromethane	µg/L	0.5	15 NOV 96
1,1-Dichloroethane	µg/L	0.3	15 NOV 96
1,2-Dichloroethane	µg/L	0.4	15 NOV 96
1,2-Dichloroehtane-d_4	µg/L	0.2	15 NOV 96
1,1-Dichloroethene	µg/L	0.4	15 NOV 96
cis-1,2-Dichloroethene	µg/L	0.3	15 NOV 96
trans-1,2-Dichloroethene	µg/L	0.4	15 NOV 96
1,2-Dichloropropane	µg/L	0.4	15 NOV 96
1,3-Dichloropropane	µg/L	0.3	15 NOV 96
2,2-Dichloropropane	µg/L	0.5	15 NOV 96
1,1-Dichloropropene	µg/L	0.5	15 NOV 96
cis-1,3-Dichloropropene	µg/L	0.3	15 NOV 96
trans-1,3-Dichloropropene	µg/L	0.3	15 NOV 96

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - 5 mL PURGE - CAPILLARY COLUMN (SW-846 5030/8260) (Continued)			
Ethylbenzene	µg/L	0.4	15 NOV 96
Ethyl acetate	µg/L	0.7	15 NOV 96
Ethyl ether	µg/L	0.3	15 NOV 96
Ethyl methacrylate	µg/L	0.3	15 NOV 96
Hexachlorobutadiene	µg/L	0.4	15 NOV 96
Iodomethane	µg/L	0.4	15 NOV 96
Isobutyl alchol	µg/L	0.3	15 NOV 96
Isopropylbenzene	µg/L	0.4	15 NOV 96
p-Isopropyltoluene	µg/L	0.4	15 NOV 96
Methacrylonitrile	µg/L	0.5	15 NOV 96
Methylene chloride	µg/L	0.3	15 NOV 96
Methyl methacrylate	µg/L	0.3	15 NOV 96
4-Methyl-2-Pentanone	µg/L	1.6	15 NOV 96
Methyl tertiary-butyl ether	µg/L	0.4	15 NOV 96
Naphthalene	µg/L	0.6	15 NOV 96
Pentachloroethane	µg/L	0.3	15 NOV 96
n-Propylbenzene	µg/L	0.4	15 NOV 96
Styrene	µg/L	0.3	15 NOV 96
1,1,1,2-Tetrachloroethane	µg/L	0.3	15 NOV 96
1,1,2,2-Tetrachloroethane	µg/L	0.3	15 NOV 96
Tetrachloroethene	µg/L	0.4	15 NOV 96
Toluene-d_8	µg/L	0.3	15 NOV 96
Toluene	µg/L	0.4	15 NOV 96
1,2,3-Trichlorobenzene	µg/L	0.4	15 NOV 96
1,2,4-Trichlorobenzene	µg/L	0.4	15 NOV 96
1,1,1-Trichloroethane	µg/L	0.4	15 NOV 96
1,1,2-Trichloroethane	µg/L	0.3	15 NOV 96
Trichloroethene	µg/L	0.3	15 NOV 96
Trichlorofluoromethane	µg/L	0.5	15 NOV 96
1,2,3-Trichloropropane	µg/L	0.5	15 NOV 96
1,1,2-Trichlorotrifluoroethane	µg/L	0.5	15 NOV 96
1,2,3-Trimethylbenzene	µg/L	0.3	15 NOV 96
1,2,4-Trimethylbenzene	µg/L	0.3	15 NOV 96
1,3,5-Trimethylbenzene	µg/L	0.4	15 NOV 96
Vinyl chloride	µg/L	0.5	15 NOV 96
Vinyl acetate	µg/L	0.8	15 NOV 96
m&p-Xylenes	µg/L	0.7	15 NOV 96
o-Xylene	µg/L	0.4	15 NOV 96

Parameter	Units	Method Detection Limit[a]	Date
SEMIVOLATILE ORGANICS HPLC - PAHS (SW-846 3520/8310)			
Pyrethrin I	µg/L	0.53	19 FEB 97
Pyrethrin II	µg/L	0.16	19 FEB 97
Pyrethrin (total)	µg/L	0.70	19 FEB 97
Rotenone	µg/L	0.34	19 FEB 97
INORGANIC NON-METALS/GENERAL ORGANICS			
Cyanide	mg/L	0.007	25 JUL 97
METALS - COLD VAPOR (SW-846 7470S)			
Mercury	µg/L	0.10	24 APR 97
METALS - FURNACE (SW-846 7000 SERIES)			
Antimony	µg/L	1.0	24 APR 97
Arsenic	µg/L	1.0	24 APR 97
Beryllium	µg/L	1.0	14 MAR 96
Cadmium	µg/L	1.0	24 APR 97
Chromium	µg/L	2.0	14 MAR 96
Copper	µg/L	1.4	24 APR 97
Lead	µg/L	1.4	24 APR 97
Nickel	µg/L	2.0	14 MAR 96
Selenium	µg/L	1.0	24 APR 97
Silver	µg/L	1.0	24 APR 97
Thallium	µg/L	1.4	24 APR 97
METALS - ICP (SW-846 3010/6010)			
Aluminum	µg/L	65.3	10 APR 97
Antimony	µg/L	24.1	10 APR 97
Arsenic	µg/L	29.2	10 APR 97
Barium	µg/L	17.0	08 NOV 94
Beryllium	µg/L	1.0	10 APR 97
Boron	µg/L	10.8	10 APR 97
Cadmium	µg/L	5.0	08 NOV 94
Calcium	µg/L	46.0	08 NOV 94
Chromium	µg/L	4.1	10 APR 97
Cobalt	µg/L	6.5	10 APR 97
Copper	µg/L	5.1	10 APR 97
Iron	µg/L	63.0	08 NOV 94
Lead	µg/L	51.3	10 APR 97
Lithium	µg/L	2.2	10 APR 97
Magnesium	µg/L	48.0	08 NOV 94
Manganese	µg/L	6.0	08 NOV 94
Molybdenum	µg/L	4.9	10 APR 97
Nickel	µg/L	5.0	10 APR 97
Potassium	µg/L	55.0	08 NOV 94
Selenium	µg/L	43.9	10 APR 97
Silicon	µg/L	63.0	08 NOV 94
Silver	µg/L	4.3	10 APR 97

Parameter	Units	Method Detection Limit[a]	Date
METALS - ICP (SW-846 3010/6010) (Continued)			
Sodium	μg/L	81.0	10 APR 97
Strontium	μg/L	1.0	08 NOV 94
Thallium	μg/L	55.9	10 APR 97
Tin	μg/L	25.0	08 NOV 94
Titanium	μg/L	2.0	08 NOV 94
Vanadium	μg/L	7.0	08 NOV 94
Zinc	μg/L	12.2	10 APR 97
METALS - TRACE ICP (SW-846 6010)			
Antimony	μg/L	1.3	10 APR 97
Arsenic	μg/L	2.0	10 APR 97
Barium	μg/L	6.1	10 APR 97
Beryllium	μg/L	1.0	10 APR 97
Cadmium	μg/L	1.0	10 APR 97
Chromium	μg/L	1.0	10 APR 97
Copper	μg/L	2.3	10 APR 97
Lead	μg/L	1.0	10 APR 97
Nickel	μg/L	1.5	10 APR 97
Selenium	μg/L	2.0	10 APR 97
Silver	μg/L	1.1	10 APR 97
Thallium	μg/L	3.7	10 APR 97

Appendix C

Summary Tables for Analyses of Tentatively Identified Compounds

TABLE C-1 SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS REPORTED IN GROUND-WATER SAMPLES COLLECTED ON 17-18 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Analyte	Retention Time (min)	MW-NASB-069	MW-NASB-071	MW-NASB-072	MW-NASB-074	MW-NASB-075	MW-NASB-076
		MW-901	MW-903	MW-904	MW-906	MW-907	MW-908
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Unknown	15.08				1J		
Unknown	15.39				1J		
Cyclotetrasiloxane, octameth	22.21				1JN		6JN
Cyclotetrasiloxane,	22.21			1JN			
Cyclotetrasiloxane, octameth	22.22	5JN	6JN				

Analyte	Retention Time (min)	MW-NASB-076 DUP	MW-NASB-079	MW-NASB-080	MW-NASB-080 DUP	MW-NASB-081	
		MW-908	MW-914	MW-915	MW-915	MW-916	QT-007
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Unknown	15.08						
Unknown	15.39						
Cyclotetrasiloxane, octameth	22.21	3JN		5JN	1JN		
Cyclotetrasiloxane,	22.21						
Cyclotetrasiloxane, octameth	22.22					7JN	

NOTE: QT = Trip blank.
J = Estimated concentration below the detection limit.
JN = Presumptive identification; estimated values.
Only those analytes detected in at least one of the samples are shown in this table.

TABLE C-2 SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS REPORTED IN SEDIMENT SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9 NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	Retention Time (min)	SED-010	SED-010 DUP	QT-006	QS-004	QD-001
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)						
Unknown	3.93					10J
2-Cyclohexen-1-ol	5.28	250JN				
2-Cyclohexen-1-one	5.93	380JN				
Unknown C3H3CL3	6.16				6J	
Unknown dimethylnaphthalene	12.30		1,900J			
Unknown trimethylnaphthalene	13.82		1,700J			
Unknown trimethylnaphthalene	13.99		1,600J			
Unknown methyl-9H-Fluorene	15.21		2,500J			
Unknown methyl-9H-Fluorene	15.26		1,800J			
Dibenzothiophene	15.76	240JN	1,600JN			
9H-Fluorene, 2,3-dimethyl-	16.24		1,700JN			
Unknown methyldibenzothiophe	16.66		2,200JN			
Unknown C15H12 PAH	17.01	270J				
Unknown C15H12 PAH	17.02		5,200J			
Unknown C15H12 PAH	17.06	420J				
Unknown C15H12 PAH	17.08		5,400J			
Unknown C15H10 PAH	17.22	640J				
Unknown PAH	17.22		6,600J			
Unknown C15H12 PAH	17.28		4,000J			
9,10-Anthracenedione	17.64	530JN				
9,10-Anthracenedione	17.66		5,500JN			
Unknown C16H14 PAH	17.98		1,600J			
Unknown C16H14 PAH	18.14		4,000J			
Unknown C16H14 PAH	18.20		2,900J			
Unknown C16H14 PAH	18.32		2,900J			
Unknown C16H14 PAH	18.59		1,500J			
Unknown C17H12 PAH	19.57	410J				
Unknown C17H12 PAH	19.71	340J				

NOTE: QT = Trip blank. Samples associated with QT-006 were analyzed under a separate delivery group shipped on the same day.
QS = Source water blank. Samples associated with QS-004 were analyzed under a separate sample delivery group shipped on the same day.
QD = Source water blank. Samples associated with QD-001 were analyzed under a separate sample delivery group shipped on 7 November 1997.
J = Estimated concentration below concentration limit.
JN = Presumptive identification; estimated values.
Only those analytes detected in at least one of the samples are shown on this table.

Compound	Retention Time (min)	SED-010	SED-010 DUP	QT-006	QS-004	QD-001
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg) (Continued)						
Unknown MW 230	20.59	310J				
Unknown	20.81	300J				
Unknown MW 228	20.89	610J				
Unknown hydrocarbon	22.52	360J				
Unknown MW 256	22.82	390J				
Unknown C20H12 PAH	23.53		1,800J			
Unknown hydrocarbon	23.72	740J				
Unknown C20H12 PAH	23.82	1,700J				
Unknown C20H12 PAH	23.83		5,000J			
Unknown	24.98	3,400J				
Coronene	25.36	2,300JN				
Unknown PAH	25.68		1,500J			
Unknown	26.25	1,300J				

TABLE C-3 SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS REPORTED IN LEACHATE STATION SEEP AND SEDIMENT SAMPLES COLLECTED ON 16 NOVEMBER 1997 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Analyte	Retention Time (min)	LT-901 (SEEP) (μg/L)	LT-901 (SEEP) DUP (μg/L)	LT-901 SED	LT-901 (SED) DUP	QT-006 (μg/L)	QS-003 (SEEP) (μg/L)	QS-004 (SED) (μg/L)	QD-001 (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
Cyclotetrasiloxane, octameth	22.21		2JN						

NOTE: QT = Trip blank.
QS = Equipment rinsate blank.
QD = Source water blank. Samples associated with QD-001 were analyzed under a separate sample delivery group shipped on 7 November 1997.
J = Estimated concentration below detection limit.
Only those analytes detected in at least one of the samples are shown on this table.

Appendix D

Analytical Report Data Tables

D.1 Ground-Water Samples Site 9
D.2 Surface Water Samples Site 9
D.3 Sediment Samples Site 9
D.4 Leachate Seep and Sediment Samples Site 9
D.5 MS/MSD Recovery Reports

Appendix D.1

Ground-Water Samples
Site 9

APPENDIX D.1

SAMPLE KEY - SITE 9
NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	Sample Station
Monitoring Wells	
S9-MW006	MW-NASB-069
S9-MW005	MW-NASB-071
S9-MW003	MW-NASB-072
S9-MW002	MW-NASB-074
S9-MW001	MW-NASB-075
S9-MW004	MW-NASB-076
S9-MWXD1	MW-NASB-076 (DUP)
S9-MW009	MW-NASB-079
S9-MW008	MW-NASB-080
S9-MWXD2	MW-NASB-080 (DUP)
S9-MW007	MW-NASB-081
Trip Blank	
S9-QT007	QT-007

L12861, 971817

Company Name:	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 291600.47	Phone: 914-565-8100
Dept.: 2192 Task: 7303	Project Name: NAS Brunswick LTMP Event 10
Sample Storage Location: F6/10A	ATO Number: 5308
Page of	Report #. 971822

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Report Deliverables: 1 2 3 (4) (D) E

EDD: (Yes)/No Summary Tables

DUE TO CLIENT: Hardcopy 12/19/97

EDD - 1/2/98

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TIC	TAL metals 6010/7000		EA Labs Accession Number	Remarks
11/17/97	1202	X		BN-10-S9-MW001	2	X			9714035	LPM: ~~EA~~ David Brennan
11/17/97	1207	X		BN-10-S9-MW002	2	X			9714036	Project Summary No.: EAL-PS-064
11/17/97	1315	X		BN-10-S9-MW003	3	X	X		9714037	VOC 8260 plus
11/17/97	1440	X		BN-10-S9-MW004	2	X			9714038	library Search
11/17/97	1414	X		BN-10-S9-MW005	3	X	X		9714039	TAL metals refer to
11/17/97	1543	X		BN-10-S9-MW006	2	X			9714040	Table 7-1 QAPP
11/18/97	0938	X		BN-10-S9-MW007MS	2		X	MS/MSD for metals	9714041	
11/18/97	1125	X		BN-10-S9-MW008	3	X	X		9714042	
11/17/97	—	X		BN-10-S9-MWXD1	2	X			9714043	Sample SDG Starts
11/18/97	—	X		BN-10-S9-MWXD2	3	X	X		9714044	with BN-10-S9-MW001
11/18/97	0938	X		BN-10-S9-MW007MS/MSD	6	X		MS/MSD for VOCs	9714041	and ends w/
11/17/97	1202	X		BN-10-S9-QT007	2	X			9714045	Sample
11/18/97	1445	X		BN-10-S9-MW009	3	X	X		9714046	BN-10-S9-MW009

Summary Package to Sue Chase in Brunswick

Temp blank w/ cooler

612867

COC 1924

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Ruozzi	11/18/97 1500	Karen A. Ruozzi	11/18/97 1530		

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		Archer	11/19/97 1000	8006075722 67	Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. 2-0 C pH: ☑ Yes ☐ No Comments: C-2 Custody Seals Intact ☑ Yes ☐ No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager *Shaded Areas for Lab Use Only*

120020

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714040

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4790.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	7	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	9	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714040

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4790.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714040

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4790.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.22	5	JN
2.				
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Cont 12/23/97

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW005

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714039

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4789.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec.. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW005

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714039

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4789.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW005

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714039

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4789.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.22	6	J
2.				
3.				
4.				
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Cmt 12/23/97

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14039

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN 10S9MW005

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	56.0	U		P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	11200			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	7470			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	5140			P
7439-96-5	Manganese	288			P
7439-97-6	Mercury	0.13	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2180			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	35100			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714037

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4787.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	7	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	J
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	0.5	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714037

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4787.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

030036

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714037

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4787.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octamethyl	22.21	1	JN
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14037

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN10S9MW003

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	112	B		P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.1	B		P
7440-39-3	Barium	4.7	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	25800			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	172			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	6900			P
7439-96-5	Manganese	144			P
7439-97-6	Mercury	0.15	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	1060			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.1	B		P
7440-23-5	Sodium	8760			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW002

Lab Name: EA LABORATORIES Contract:

Lab Code: EA ENG Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: #9714036

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4786.D

Level: (low/med) Date Received: 11/9/97

% Moisture: not dec. Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	2	
67-66-3	Chloroform	0.5	J
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	2	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW002

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714036

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4786.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

030022

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW002

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714036

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4786.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	1	JN
2.	unknown	15.03	1	J
3.	unknown	15.39	1	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714035

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4785.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	0.9	J
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

030011

FORM I VOA

3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714035

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4785.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714035

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4785.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714038

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4788.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	2	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714038

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4788.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714038

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4788.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	6	JN
2.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714043

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4795.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	3	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714043

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4795.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714043

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4795.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	3	J N
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW009

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714046

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4797.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW009

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714046

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4797.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec.. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW009

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714046

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4797.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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C30137

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14046

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN 10S9MW009

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	279			P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	238			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	25800			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	18400			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	1720			P
7439-96-5	Manganese	99.4			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	3490			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	8630			P
7440-28-0	Thallium	1.0	B	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MW008

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714042

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4794.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	9	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	0.5	J
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW008

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714042

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4794.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW008

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714042

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4794.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	5	JN
2.				
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14042

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN 10S9MW008

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	127	B		P
7440-36-0	Antimony	1.3	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	672			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	60600			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	6550			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	4540			P
7439-96-5	Manganese	536			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	7540			P
7782-49-2	Selenium	3.5	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	18000			P
7440-28-0	Thallium	1.0	B	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714044

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4796.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	9	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714044

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4796.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

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FORM I VOA

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714044

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4796.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	1	JN
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14044

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN 10S9MWXD2

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	121	B		P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	640			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	60400			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	7170			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	4590			P
7439-96-5	Manganese	572			P
7439-97-6	Mercury	0.18	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	7680			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	18200			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4791.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4791.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4791.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.22	7	J N
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Cmrt 12/23/97

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14041

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix: WATER

Client ID: BN10S9MW007

Percent Solids: 0.0

Date Received: 11/19/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	105	B		P
7440-36-0	Antimony	1.0	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	22.4	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	38400			P
7440-47-3	Chromium	11.2			P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	215			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	2610			P
7439-96-5	Manganese	17.6			P
7439-97-6	Mercury	0.19	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	4720			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	25300			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QT007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714045

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4784.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

C30126

FORM I VOA

3/90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QT007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714045

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4784.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA

030127

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9QT007

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714045

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4784.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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C30128

Appendix D.2

Surface Water Samples
Site 9

APPENDIX D.2

SAMPLE KEY - SITE 9
NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	Sample Station
Surface Water Sample	
S9-SW001	SW-010
Trip Blank	
S9-QT006	QT-006
Equipment Rinsate Blank	
S9-QS003	QS-003
Source Water Blank	
S1-QD001	QD-001

L12859, 971722

Company Name: EA Engineering

Project Manager or Contact: Peter Nimmer

Phone: 914-565-8100

Project No. 29600047

Project Name: LTMP Event 10

Dept.: 2192 Task: 7303

Sample Storage Location: F2/VOA

ATO Number: 5308

Page of

Report #: 971815

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Report Deliverables: 1 2 3 (4) (D) E

EDD: (Yes)/No Summary Tables

DUE TO CLIENT: Monday 12/18/97

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs by 8260 + TICs	TAL metals 6010/7000	SVOCs by 8270 + TICs	EA Labs Accession Number	Remarks
11/16/97	0755	X		BN-10-S9-QS003	3	X	X		971403	LPM: Mary E Aspell
11/16/97	0800	X		BN-10-S9-QS004	5	X	X	X	971404	Dustin Brenton
11/16/97	0955	X		BN-10-S9-SW001	2	X			971405	VOCs by 8260
11/16/97	0925	X		BN-10-S9-LT001 MS/MSD	6	X			971406	plus library
11/16/97	0925	X		BN-10-S9-LT001 MS	2		X		971407	search. TAL
11/16/97	—	X		BN-10-S9-LTXD1	3	X	X		971408	metals refer to
11/16/97	0755	X		BN-10-S9-QT001	2	X			971409	Table 7-1 in
									—	QAPP.
										SDG BN-10-S9-QS003
										starts w/
										BN-10-S9-QS003
										and ends w/
										BN-10-S9-LTXD1
										L12859
										Project Summary EAL-B-0641
										temp blank w/
										cooler.
										CC001916

971403 971404 971405 971406 971407 971408 971409 11/17/97

Samples by: (Signature) Karen A. Rudzik — Date/Time 11/16/97 1000

Relinquished by: (Signature) Karen A. Rudzik — Date/Time 11/17/97 1530

Received by: (Signature) — Date/Time

Relinquished by: (Signature) — Date/Time

Received by Laboratory: (Signature) Joseph Blue — Date/Time 11/18/97 0930

Airbill Number: 8006075722 56

Cooler Temp. 2 C pH: Yes No Comments: C-2.

Custody Seals Intact Yes No

Sample Shipped by: (Circle) Fed Ex. Puro. UPS Hand Carried Other:

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

Shaded Areas for Lab Use Only

971079

Company Name: EA Engineering	Project Manager or Contact: Pete Nimmer Phone: 914-565-8600
Project No. 29600 47	Project Name: NAS Brunswick LTMP Event 10
Dept.: 2192 Task: 7303	
Sample Storage Location: K8-K10	ATO Number: 5308
Page 1 of 1	Report #: 971722

Parameters/Method Numbers for Analysis

Report Deliverables: 1 2 3 (4) (5) E

EDD: (Yes) No Summary Table

DUE TO CLIENT: 12/7/97 - Hardcopy

12/21/97 - GDD

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260 +TICS	TALMetals 6010/7000	SVOCS 8270+TICS	EA Labs Accession Number	Remarks
11/6/97	0720	X		BN-10-S1-QD001	5	X	X	X	9713210	LPM: M&A/DFB
11/6/97	0705	X		BN-10-S1-QS001	3	X	X		9713211	Project Summary No.: EAL-PS-044
11/6/97	0715	X		BN-10-S1-QS002	3	X	X		9713212	VOAS by 8260 plus
11/6/97	0800	X		BN-10-S1-SW001	3	X	X		9713213	library search
11/6/97	0855	X		BN-10-S1-SW002	3	X	X		9713214	TAL Elements
11/6/97	0925	X		BN-10-S1-SW003	3	X	X		9713215	refer to Table 7-1 in
11/6/97	0935	X		BN-10-S1-SW004	3	X	X		9713216	QAPP
11/6/97	0955	X		BN-10-S1-SW005	3	X	X		9713217	
11/6/97	1005	X		BN-10-S1-SW006	3	X	X		9713218	BN-10-S1-QD001 SDG
11/6/97	1025	X		BN-10-S1-SW007 MS/MSD	6	X			9713219	is start and sample
11/6/97	1025	X		BN-10-S1-SW007 MS	2		X		↓	BN-10-S1-QT001
11/6/97	—	X		BN-10-S1-SWXQ1	3	X	X		9713220	end SDG
11/6/97	1050	X		BN-10-S1-LTSW5	3	X	X		9713221	
11/6/97	1125	X		BN-10-S1-LTSW4 KR	3	X	X		9713222	Summary package
11/6/97	1150	X		BN-10-S1-LTSW3	3	X	X		9713223	Form I's plus COC
										Send to Brunswick, ME
11/6/97	—	X		BN-10-S1-LTXQ1	3	X	X		9713224	Full data package to
11/6/97	0705	X		BN-10-S1-QT001	2	X			9713225	Newburgh.
										COC 1825
				* MS/MSD on sample BN10-S1-SW007						Temp blank w/ cooler

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A Murphy	11/6/97 1215	Karen A Murphy	11/6/97 1530		
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle) Fed Ex. Purol. UPS Hand Carried Other:
			11/7/97 1000		

Cooler Temp._____C pH: ☐ Yes ☐ No Comments: Custody Seals Intact ☐ Yes ☐ No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager Shaded Area for Lab Use Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9SW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714015

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4767.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	J
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	0.4	J
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714015

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4767.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9SW001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714015

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4767.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Cod : EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA 3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	18	
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
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7.				
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30.				

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	16	
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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Appendix D.3

Sediment Samples
Site 9

APPENDIX D.3

SAMPLE KEY - SITE 9
NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	Sample Station
Sediment Samples	
S9-SD001	SED-010
S9-SDXD1	SED-010 (DUP)
Trip Blank	
S9-QT006	QT-006
Rinsate Blank	
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Company Name: EA Engineering

Project Manager or Contact: Peter Nimmer
Phone: (914) 565-8100

Project No. 29600-47
Dept.: 2192 Task: 03303

Project Name: NAS Brunswick LTMP Event 10

Sample Storage Location: F3/VOA

ATO Number: 5308

Page of

Report #. 971816

Report Deliverables: 1 2 3 (4) (D) E

EDD: (Yes)/No Summary Tables

DUE TO CLIENT: Hardcopy 12/18/97

EDD - 1/2/98

LPM: Mary E. Aspa

Project Summary No.: EAL-VS-064

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs by 8260+TICs	SVOCs by 8270+TICs										EA Labs Accession Number	Remarks
11/14/97	1000		X	BN-10-S9-SD001 MS/MSD	4	X	X			MS/MSD			971401/9				971402~~0~~	
11/14/97	—		X	BN-10-S9-SDXD1	2	X	X										971402~~0~~	

VOCs by 8260 plus library search. SVOCs refer to QAPP Table 7-1.

SDG BN-10-S9-SD001 starts w/ sample BN-10-S9-SD001 and ends w/ sample BN-10-S9-SDXD1

Triplicate BN-10-S9-G TOC included w/ cooler L12860

temp blank w/ cooler.

Sampled by: (Signature) Karen A. Rupp — Date/Time 11/14/97 1015

Relinquished by: (Signature) Karen A. Rupp — Date/Time 11/14/97 1530

Received by: (Signature) — Date/Time

Relinquished by: (Signature) — Date/Time

Received by Laboratory: (Signature) Joseph Blue — Date/Time 11/18/97 930

Airbill Number: 8006075722 56

Sample Shipped by: (Circle) Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. 2 C pH: Yes No Comments: C-2

Custody Seals Intact Yes No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

Shaded Areas for Lab Use Only

G71742 / L12759

C2001

L12859, 97.122

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Company Name: EA Engineering
Project No. 2960047
Dept.: 2192 Task: 7303
Sample Storage Location: F2/VOA

Project Manager or Contact: Peter Nimmer
Phone: 914-565-8100
Project Name: LTMP Event 10
ATO Number: 5308

Page of
Report #: 971015

Report Deliverables: 1 2 3 (4) (D) E
EDD: (Yes)/No Summary Tables
DUE TO CLIENT: Monday 12/18/97

Parameters/Method Numbers for Analysis

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs by 8260 + TICs	TAL Metals 6010/7000	SVOCs by 8270 + TICs	EA Labs Accession Number	Remarks
11/16/97	0755	X		BN-10-S9-QS003	3	X	X		9714013	LPM: Mary E Asper / Dwight Brunton
11/16/97	0800	X		BN-10-S9-QS004	5	X	X	X	9714014	
11/16/97	0955	X		BN-10-S9-SWP01	2	X			9714015	VOCs by 8260
11/16/97	0925	X		BN-10-S9-LTP01 MS/MSD	6	X			9714016	plus library
11/16/97	0925	X		BN-10-S9-LTQ01 MS	2		X		9714017	search, TAL
11/16/97	—	X		BN-10-S9-LTXD1	3	X	X		9714018	metals refer to
11/16/97	0755	X		BN-10-S9-QTQ01	2	X			9714019	Table 7-1 in
									—	QAPP.
										SDG BN-10-S9-QS003
										starts w/
										BN-10-S9-QS003
										and ends w/
										BN-10-S9-LTXD1
										L12859
										Project Summary EAI-B-06
										temp blank w/
										cooler.
										CC000916

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rupp	11/16/97 1000	Karen A. Rupp	11/17/97 1530		
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	
		Joseph Blue	11/18/97	8006075722 56	

Cooler Temp. 2 C pH: Yes No Comments: C-2. Custody Seals Intact Yes No

Sample Shipped by: (Circle) Fed Ex. Puro. UPS Hand Carried Other:

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

Shaded Areas for Lab Use Only

971079

Company Name:	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 29600 47	Phone: 914-565-8600
Dept.: 2192 Task: 7303	Project Name: NAS Brunswick LTMP Event 10
Sample Storage Location: K8-K10	ATO Number: 5308
Page 1 of 1	Report #: 971722

Parameters/Method Numbers for Analysis

Report: 1 2 3 (4) 5 6

EDD: (Yes) No Summary Table

DUE TO CLIENT: 12/7/97 - Hard

12/21/97 - EDD

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260 +TICS	TAL Metals 6010/7000	SVOCs 8270+TICS	EA Labs Accession Number	Remarks
11/6/97	0720	X		BN-10-S1-QD001	5	X	X	X	9713210	LPM: M & A/DFB
11/6/97	0705	X		BN-10-S1-QS001	3	X	X		9713211	Project Summary No.: EAL-PS-0029
11/6/97	0715	X		BN-10-S1-QS002	3	X	X		9713212	VOAS by 8260 plus
11/6/97	0800	X		BN-10-S1-SW001	3	X	X		9713213	library search
11/6/97	0855	X		BN-10-S1-SW002	3	X	X		9713214	TAL Elements
11/6/97	0925	X		BN-10-S1-SW003	3	X	X		9713215	refer to Table 7-1 in
11/6/97	0935	X		BN-10-S1-SW004	3	X	X		9713216	QAPP
11/6/97	0955	X		BN-10-S1-SW005	3	X	X		9713217	
11/6/97	1005	X		BN-10-S1-SW006	3	X	X		9713218	BN-10-S1-QD001 SDG
11/6/97	1025	X		BN-10-S1-SW007 MS/MSD	6	X			9713219	is start and sample
11/6/97	1025	X		BN-10-S1-SW007 MS	2		X		↓	BN-10-S1-QT001
11/6/97	—	X		BN-10-S1-SWXD1	3	X	X		9713220	end SDG
11/6/97	1050	X		BN-10-S1-LTSW5	3	X	X		9713221	
11/6/97	1125	X		BN-10-S1-LTSW4 KR	3	X	X		9713222	Summary package
11/6/97	1150	X		BN-10-S1-LTSW3	3	X	X		9713223	Form I's plus COC
										Send to Brunswick, ME
11/6/97	—	X		BN-10-S1-LTXD1	3	X	X		9713224	Full data package to
11/6/97	0705	X		BN-10-S1-QT001	2	X			9713225	Newburgh.
										COC 1825
				* MS/MSD on sample BN10-S1-SW007						Temp blank w/ cooler

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A Quigley	11/6/97 1215	Karen A Quigley	11/6/97 1530		
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		[illegible]	12/7/97 1000		Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. ____ C pH: ☐ Yes ☐ No Comments: Custody Seals Intact ☐ Yes ☐ No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory technique.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager *Shaded Areas for Lab Use Only*

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4615.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	8	U
75-01-4	Vinyl Chloride	8	U
74-83-9	Bromomethane	8	U
75-00-3	Chloroethane	8	U
67-64-1	Acetone	16	U
75-35-4	1,1-Dichloroethene	8	U
75-09-2	Methylene Chloride	8	U
75-15-0	Carbon Disulfide	8	U
75-34-3	1,1-Dichloroethane	8	U
78-93-3	2-Butanone	16	U
540-59-0	1,2-Dichloroethene (total)	~~8~~ ~~3~~ 5	~~U~~ J
67-66-3	Chloroform	8	U
71-55-6	1,1,1-Trichloroethane	8	U
56-23-5	Carbon Tetrachloride	8	U
107-06-2	1,2-Dichloroethane	8	U
71-43-2	Benzene	8	U
79-01-6	Trichloroethene	5	J
78-87-5	1,2-Dichloropropane	8	U
75-27-4	Bromodichloromethane	8	U
108-10-1	4-Methyl-2-Pentanone	16	U
10061-01-5	cis-1,3-Dichloropropene	8	U
108-88-3	Toluene	8	U
10061-02-6	trans-1,3-Dichloropropene	8	U
79-00-5	1,1,2-Trichloroethane	8	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	8	U
124-48-1	Chlorodibromomethane	8	U
108-90-7	Chlorobenzene	8	U
100-41-4	Ethylbenzene	8	U
1330-20-7	Xylenes (total)	8	U
100-42-5	Styrene	8	U
75-25-2	Bromoform	8	U
79-34-5	1,1,2,2-Tetrachloroethane	8	U

OK 12/23/97

FORM I VOA 3/90

030011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4615.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	8	U
541-73-1	1,3-Dichlorobenzene	8	U
106-46-7	1,4-Dichlorobenzene	8	U

FORM I VOA 3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9SD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4615.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5979

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	520	U
111-44-4	bis-(2-Chloroethyl) ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	520	U
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-Di-n-propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	bis(2-Chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	520	U
91-20-3	Naphthalene	470	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-methylphenol	520	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	2700	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	240	J
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	720	
51-28-5	2,4-Dinitrophenol	2700	U
100-02-7	4-Nitrophenol	2700	U
132-64-9	Dibenzofuran	370	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5979

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	520	U
606-20-2	2,6-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-phenylether	520	U
86-73-7	Fluorene	640	
100-01-6	4-Nitroaniline	2700	U
534-52-1	4,6-Dinitro-2-methylphenol	2700	U
86-30-6	N-Nitrosodiphenylamine	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	2700	U
85-01-8	Phenanthrene	4300	
120-12-7	Anthracene	940	
86-74-8	Carbazole	550	
84-74-2	Di-n-butyl phthalate	520	U
206-44-0	Fluoranthene	4000	
129-00-0	Pyrene	4300	
85-68-7	Butylbenzyl phthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benz[a]anthracene	1900	
117-81-7	bis(2-Ethylhexyl)phthalate	140	J
218-01-9	Chrysene	2100	
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo[b]fluoranthene	2400	
207-08-9	Benzo[k]fluoranthene	910	
50-32-8	Benzo[a]pyrene	2000	
193-39-5	Indeno[1,2,3-cd]pyrene	1200	
53-70-3	Dibenz[ah]anthracene	360	J
191-24-2	Benzo[ghi]perylene	1500	

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-SD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5979

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 20

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.822-67-3----	2-Cyclohexen-1-ol	5.28	250	JN
2.930-68-7----	2-Cyclohexen-1-one	5.93	380	JN
3.498-07-7----	1,6-Anhydro-.beta.-D-glucopy	12.86	290	BJN
4.132-65-0----	Dibenzothiophene	15.76	240	JN
5.----------	Unknown C15H12 PAH	17.01	270	J
6.----------	Unknown C15H12 PAH	17.06	420	J
7.----------	Unknown C15H10 PAH	17.22	640	J
8.84-65-1-----	9,10-Anthracenedione	17.64	530	JN
9.----------	Unknown C17H12 PAH	19.57	410	J
10.----------	Unknown C17H12 PAH	19.71	340	J
11.----------	Unknown MW 230	20.59	310	J
12.----------	Unknown	20.81	300	J
13.----------	Unknown MW 228	20.89	610	J
14.----------	Unknown hydrocarbon	22.52	360	J
15.----------	Unknown MW 256	22.82	390	J
16.----------	Unknown hydrocarbon	23.72	740	J
17.----------	Unknown C20H12 PAH	23.82	1700	J
18.----------	Unknown	24.98	3400	J
19.191-07-1----	Coronene	25.36	2300	JN
20.----------	Unknown	26.25	1300	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4618.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 15 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
67-64-1	Acetone	12	U
75-35-4	1,1-Dichloroethene	6	U
75-09-2	Methylene Chloride	6	U
75-15-0	Carbon Disulfide	6	U
75-34-3	1,1-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
124-48-1	Chlorodibromomethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
1330-20-7	Xylenes (total)	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4618.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 15 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	6	U
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4618.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 15 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5978

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	390	U
111-44-4	bis-(2-Chloroethyl) ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-Oxybis(1-chloropropane)	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	bis(2-Chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	270	J
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	800	
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	390	U
208-96-8	Acenaphthylene	2000	
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	1700	
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	1200	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5978

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	390	U
606-20-2	2,6-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	4000	
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	18000	E
120-12-7	Anthracene	3300	
86-74-8	Carbazole	2100	
84-74-2	Di-n-butyl phthalate	390	U
206-44-0	Fluoranthene	18000	E
129-00-0	Pyrene	23000	E
85-68-7	Butylbenzyl phthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benz[a]anthracene	13000	E
117-81-7	bis(2-Ethylhexyl)phthalate	390	U
218-01-9	Chrysene	14000	E
117-84-0	Di-n-octyl phthalate	390	U
205-99-2	Benzo[b]fluoranthene	10000	E
207-08-9	Benzo[k]fluoranthene	3700	
50-32-8	Benzo[a]pyrene	7400	E
193-39-5	Indeno[1,2,3-cd]pyrene	3800	
53-70-3	Dibenz[ah]anthracene	1300	
191-24-2	Benzo[ghi]perylene	4500	

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5978

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 21

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.----------	Unknown dimethylnaphthalene	12.30	1900	J
2.----------	Unknown trimethylnaphthalene	13.82	1700	J
3.----------	Unknown trimethylnaphthalene	13.99	1600	J
4.----------	Unknown methyl-9H-Fluorene	15.21	2500	J
5.----------	Unknown methyl-9H-Fluorene	15.26	1800	J
6.132-65-0----	Dibenzothiophene	15.76	1600	JN
7.4612-63-9---	9H-Fluorene, 2,3-dimethyl-	16.24	1700	JN
8.----------	Unknown methyldibenzothiophe	16.66	2200	J
9.----------	Unknown C15H12 PAH	17.02	5200	J
10.----------	Unknown C15H12 PAH	17.08	5400	J
11.----------	Unknown PAH	17.22	6600	J
12.----------	Unknown C15H12 PAH	17.28	4000	J
13.84-65-1-----	9,10-Anthracenedione	17.66	5500	JN
14.----------	Unknown C16H14 PAH	17.98	1600	J
15.----------	Unknown C16H14 PAH	18.14	4000	J
16.----------	Unknown C16H14 PAH	18.20	2900	J
17.----------	Unknown C16H14 PAH	18.32	2900	J
18.----------	Unknown C16H14 PAH	18.59	1500	J
19.----------	Unknown C20H12 PAH	23.53	1800	J
20.----------	Unknown C20H12 PAH	23.83	5000	J
21.----------	Unknown PAH	25.68	1500	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SDXD1 DL

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020DL

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6009

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	3900	U
111-44-4	bis-(2-Chloroethyl) ether	3900	U
95-57-8	2-Chlorophenol	3900	U
541-73-1	1,3-Dichlorobenzene	3900	U
106-46-7	1,4-Dichlorobenzene	3900	U
95-50-1	1,2-Dichlorobenzene	3900	U
95-48-7	2-Methylphenol	3900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3900	U
106-44-5	4-Methylphenol	3900	U
621-64-7	N-Nitroso-Di-n-propylamine	3900	U
67-72-1	Hexachloroethane	3900	U
98-95-3	Nitrobenzene	3900	U
78-59-1	Isophorone	3900	U
88-75-5	2-Nitrophenol	3900	U
105-67-9	2,4-Dimethylphenol	3900	U
111-91-1	bis(2-Chloroethoxy)methane	3900	U
120-83-2	2,4-Dichlorophenol	3900	U
120-82-1	1,2,4-Trichlorobenzene	3900	U
91-20-3	Naphthalene	3900	U
106-47-8	4-Chloroaniline	3900	U
87-68-3	Hexachlorobutadiene	3900	U
59-50-7	4-Chloro-3-methylphenol	3900	U
91-57-6	2-Methylnaphthalene	880	J
77-47-4	Hexachlorocyclopentadiene	3900	U
88-06-2	2,4,6-Trichlorophenol	3900	U
95-95-4	2,4,5-Trichlorophenol	20000	U
91-58-7	2-Chloronaphthalene	3900	U
88-74-4	2-Nitroaniline	20000	U
131-11-3	Dimethylphthalate	3900	U
208-96-8	Acenaphthylene	2100	J
99-09-2	3-Nitroaniline	20000	U
83-32-9	Acenaphthene	1700	J
51-28-5	2,4-Dinitrophenol	20000	U
100-02-7	4-Nitrophenol	20000	U
132-64-9	Dibenzofuran	1300	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SDXD1 DL

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020 DL

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6009

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	3900	U
606-20-2	2,6-Dinitrotoluene	3900	U
84-66-2	Diethylphthalate	3900	U
7005-72-3	4-Chlorophenyl-phenylether	3900	U
86-73-7	Fluorene	4800	
100-01-6	4-Nitroaniline	20000	U
534-52-1	4,6-Dinitro-2-methylphenol	20000	U
86-30-6	N-Nitrosodiphenylamine	3900	U
101-55-3	4-Bromophenyl-phenylether	3900	U
118-74-1	Hexachlorobenzene	3900	U
87-86-5	Pentachlorophenol	20000	U
85-01-8	Phenanthrene	34000	
120-12-7	Anthracene	3600	J
86-74-8	Carbazole	2500	J
84-74-2	Di-n-butyl phthalate	3900	U
206-44-0	Fluoranthene	41000	
129-00-0	Pyrene	31000	
85-68-7	Butylbenzyl phthalate	3900	U
91-94-1	3,3'-Dichlorobenzidine	3900	U
56-55-3	Benz[a]anthracene	15000	
117-81-7	bis(2-Ethylhexyl)phthalate	3900	U
218-01-9	Chrysene	15000	
117-84-0	Di-n-octyl phthalate	3900	U
205-99-2	Benzo[b]fluoranthene	12000	
207-08-9	Benzo[k]fluoranthene	3600	J
50-32-8	Benzo[a]pyrene	8800	
193-39-5	Indeno[1,2,3-cd]pyrene	4300	
53-70-3	Dibenz[ah]anthracene	1400	J
191-24-2	Benzo[ghi]perylene	4700	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA 3/90

030063

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	18	
71-55-6	1,1,1-Trichloroethane	0.5	J
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA 3/90

030022

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5949

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis-(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5949

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benz[a]anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[ah]anthracene	10	U
191-24-2	Benzo[ghi]perylene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-QS004

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5949

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 3

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.123-42-2----	2-Pentanone, 4-hydroxy-4-met	4.55	13	ABJN
2.----------	Unknown	4.83	5	BJ
3.----------	Unknown C3H3Cl3	6.16	6	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	16	
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

EPA SAMPLE NO.

BN10S1QD001

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S1-QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9713210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5715

Level: (low/med) LOW Date Received: 11/07/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/12/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/02/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis-(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S1-QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9713210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5715

Level: (low/med) LOW Date Received: 11/07/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/12/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/02/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benz[a]anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	8	BJ
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[ah]anthracene	10	U
191-24-2	Benzo[ghi]perylene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S1-QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9713210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B5715

Level: (low/med) LOW Date Received: 11/07/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/12/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/02/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 3

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.----------	Unknown	3.93	10	J
2.123-42-2----	2-Pentanone, 4-hydroxy-4-met	4.72	40	AJN
3.----------	Unknown	5.01	6	BJ

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-SDXD1 DL

Lab Name: EA LABS Contract:

Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714020 DL

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6009

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 15 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

Number TICS found: 21

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.----------	Unknown dimethylnaphthalene	12.27	2600	J
2.----------	Unknown trimethylnaphthalene	13.78	2400	J
3.----------	Unknown methyl-9H-Fluorene	15.16	3200	J
4.----------	Unknown methyldibenzothiophe	16.60	2500	J
5.----------	Unknown C15H12 PAH	16.96	7300	J
6.----------	Unknown C15H12 PAH	17.02	8600	J
7.----------	Unknown PAH	17.17	10000	J
8.----------	Unknown C15H12 PAH	17.23	6400	J
9.84-65-1-----	9,10-Anthracenedione	17.60	7900	JN
10.----------	Unknown C16H14 PAH	18.09	5900	J
11.----------	Unknown C16H14 PAH	18.15	4300	J
12.----------	Unknown C16H14 PAH	18.20	2700	J
13.----------	Unknown C16H14 PAH	18.27	2800	J
14.----------	Unknown C17H12 PAH	19.53	4200	J
15.----------	Unknown C17H12 PAH	19.66	2500	J
16.----------	Unknown C17H12 PAH	19.72	2900	J
17.82-05-3-----	7H-Benz[de]anthracen-7-one	20.55	3000	JN
18.----------	Unknown benzo[b]naphthothiop	20.77	2400	J
19.----------	Unknown C20H12 PAH	23.47	3000	J
20.----------	Unknown C20H12 PAH	23.77	6700	J
21.----------	Unknown PAH	25.62	2400	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

Appendix D.4

Leachate Seep and Sediment Samples
Site 9

APPENDIX D.4

SAMPLE KEY - SITE 9
NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	Sample Station
LT-901 (Seep) Samples	
S9-LT001	LT-901
S9-LTXD1	LT-901 (DUP)
LT-901 (Sediment) Samples	
S9-LTSD1	LT-901
S9-SDXD2	LT-901 (DUP)
Trip Blank	
S9-QT006	QT-006
Rinsate Blanks	
S9-QS003	QS-003
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

L12760, 971723

Company Name:	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 2960047	Phone: 914-565-8100
Dept.: 2192 Task: 7303	Project Name: NAS Brunswick LTMP Event 16
Sample Storage Location: F3/VOA	ATO Number: 5308
Page 1 of 1	Report #. 971817 ~~971816~~ 0.93 11/16/97

Parameter/Method Numbers for Analysis

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TIC	TAL Metals 6010/7000												EA Labs Accession Number	Remarks
11/16/97	0930		X	BN-10-S9-LTSD1 MS/MSD	2	X													971402	LPM: NAEA David Brennan
11/16/97	0930		X	BN-10-S9-LTSD1 MS	2		X												↓	Project Summary No.: EAL-PS-064
11/16/97	—		X	BN-10-S9-SDXD2	2	X	X												971402	VOC 8260 plus library search TAL metals refer to Table 7-1 in QAPP
																				L12861 sample SDG starts w/ BN-10-S9-LTSD1 and ends w/ BN-10-S9-SDXD2
																				Tripblank, BN-10-S9-QT006 included in cooler.
																				temp blank w/cooler

QC this sample

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Report Deliverables: 1 2 3 (4) (D) E

EDD: (Yes) No Summary Tables

DUE TO CLIENT: Hardcopy 12/18/97

EDD - 1/2/98

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rupczyk	11/16/97 0945	Karen A. Rupczyk	11/17/97 1530		
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		Jorge Blue	11/18/97 930	8006075725 6	Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. 2 C pH: ☑ Yes ☐ No Comments: C-2. Custody Seals Intact ☑ Yes ☐ No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager *Shaded Areas for Lab Use Only*

100280

L12759, 971722

Chain of Custody Record

EA Laboratories
19 Loveton Circle
Sparks, MD 21152
Telephone: (410) 771-4920
Fax: (410) 771-4407

Company Name: EA Engineering
Project No. 29600047
Dept.: 2192 Task: 7303
Sampl Storage Location: F2/VOA

Project Manager or Contact: Peter Nimmer
Phone: 914-565-8100
Project Name: LTMP Event 10
ATO Number: 5308

Page of Report #: 971815

Report Deliverables: 1 2 3 (4) (D) E
EDD: (Yes)/No Summary Tables
DUE TO CLIENT: Monday 12/18/97

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs by 8260 + TICs	TAL Metals 6010/7000	SVOCs by 8270 + TICs	EA Labs Accession Number	Remarks
11/16/97	0755	X		BN-10-S9-QS003	3	X	X		9714013	LPM: Mary E Asher
11/16/97	0800	X		BN-10-S9-QS004	5	X	X	X	9714014	Dwight Brenton
11/16/97	0955	X		BN-10-S9-SWP01	2	X			9714015	VOCs by 8260
11/16/97	0925	X		BN-10-S9-LTD01 MS/MSD	6	X			9714016	plus library
11/16/97	0925	X		BN-10-S9-LTQ01 MS	2		X		~~9714017~~	search, TAL
11/16/97	—	X		BN-10-S9-LTXD1	3	X	X		~~9714018~~	metals refer to
11/16/97	0755	X		BN-10-S9-QTQ01	2	X			~~9714019~~	Table 7-1 in
									—	QAPP.
										SDG BN-10-S9-QS003
										starts w/
										BN-10-S9-QS003
										and ends w/
										BN-10-S9-LTXD1
										L12859
										Project Summary EAL-B-06
										temp blank w/
										cooler:
										CC000191G

9714013 9714014 9714015 9714016 9714017 9714018 11/16/97

Samples by: (Signature) Karen A. Ruszyk — Date/Time 11/16/97 1000
Relinquished by: (Signature) Karen A. Ruszyk — Date/Time 11/17/97 1530
Received by: (Signature) — Date/Time
Relinquish d by: (Signature) — Date/Time
Received by Laboratory: (Signature) Joseph Blue — Date/Time 11/18/97 930
Airbill Number: 8006075722 56
Sample Shipped by: (Circle) Fed Ex. Puro. UPS Hand Carried Other:

Cool r Temp. 2 C pH: Yes No Comments: C-2
Custody Seals Intact Yes No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

Shaded Areas for Lab Use Only

971079

Company Name: EA Engineering	Project Manager or Contact: Pete Nimmer Phone: 914-565-8600
Project No. 29600 47 Dept.: 2192 Task: 7303	Project Name: NAS Brunswick LTMP Event 10
Sample Storage Location: K8-K10/PA	ATO Number: 5308
Page 1 of 1	Report #: 971722

Parameters/Method Numbers for Analysis

Report Delivery: 1 2 3 4 5 6 7 8

EDD: Yes/No Summary Table

DUE TO CLIENT: 12/7/97 - Hardcopy

12/21/97 - EDD

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260 +TICS	TAL Metals 6010/7000	SVOCs 8270+TICS								EA Labs Accession Number	Remarks
11/6/97	0720	X		BN-10-S1-QD001	5	X	X	X								9713220	LPM: MEA/DFB
11/6/97	0705	X		BN-10-S1-QS001	3	X	X									9713221	Project Summary No.: EAL-PS-024
11/6/97	0715	X		BN-10-S1-QS002	3	X	X									9713222	VOAS by 8260 plus
11/6/97	0800	X		BN-10-S1-SW001	3	X	X									9713223	library search
11/6/97	0855	X		BN-10-S1-SW002	3	X	X									9713224	TAL Elements
11/6/97	0925	X		BN-10-S1-SW003	3	X	X									9713225	refer to Table 7-1 in
11/6/97	0935	X		BN-10-S1-SW004	3	X	X									9713226	QAPP
11/6/97	0955	X		BN-10-S1-SW005	3	X	X									9713227	
11/6/97	1005	X		BN-10-S1-SW006	3	X	X									9713228	BN-10-S1-QD001 SDG
11/6/97	1025	X		BN-10-S1-SW007 MS/MSD	6	X										9713229	is start and sample
11/6/97	1025	X		BN-10-S1-SW007 MS	2		X									↓	BN-10-S1-QT001
11/6/97	—	X		BN-10-S1-SWXQ1	3	X	X									9713220	end SDG
11/6/97	1050	X		BN-10-S1-LTSW5	3	X	X									9713221	
11/6/97	1125	X		BN-10-S1-LTSW4 KR	3	X	X									9713222	Summary package
11/6/97	1150	X		BN-10-S1-LTSW3	3	X	X									9713223	Form I's plus COC
																	Send to Brunswick, ME
11/6/97	—	X		BN-10-S1-LTXQ1	3	X	X									9713224	Full data package to
11/6/97	0705	X		BN-10-S1-QT001	2	X										9713225	Newburgh.
																	COC 00001825
				* MS/MSD on sample BN10-S1-SW007													Temp blank w/ cooler

Sampled by: (Signature) Sam A Cupyk	Date/Time 11/6/97 1215	Relinquished by: (Signature) Sam A Cupyk	Date/Time 11/6/97 1530
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time 11/7/97 1000

Received by: (Signature) | Date/Time

Airbill Number:

Sample Shipped by: (Circle) Fed Ex. Purol. UPS Hand Carried Other:

Cooler Temp. ____ C pH: ☐ Yes ☐ No Comments: Custody Seals Intact ☐ Yes ☐ No

NOTE: Please indicate method number for analyses requested. This will help clarify any questions with laboratory techniques.

WHITE—EA Laboratories YELLOW—EA Laboratories PINK—Project Manager

Shaded Areas for Lab Use Only

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9LT001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4768.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LT001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4768.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

FORM I VOA 3/90

030044

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9LT001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4768.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
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29.				
30.				

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14016

Laboratory: EA LABORATORIES

SDG No.: T13322

Matrix: WATER

Client ID: BN-10-S9-LT001

Percent Solids: 0.0

Date Received: 11/18/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16200		N	P
7440-36-0	Antimony	4.5	B		P
7440-38-2	Arsenic	20.9			P
7440-39-3	Barium	178	B		P
7440-41-7	Beryllium	0.57	B		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	29300		N	P
7440-47-3	Chromium	43.4			P
7440-48-4	Cobalt	9.6	B		P
7440-50-8	Copper	60.2		*N	P
7439-89-6	Iron	90100		N	P
7439-92-1	Lead	379		N	P
7439-95-4	Magnesium	7350			P
7439-96-5	Manganese	551			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	27.9	B		P
7440-09-7	Potassium	5710		N	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	32800			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	81.5			P
7440-66-6	Zinc	495			P

PC 12/18/97

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9LTXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714017

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4771.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714017

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4771.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9LTXD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714017

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4771.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 556-67-2	Cyclotetrasiloxane, octameth	22.21	2	JN
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14017

Laboratory: EA LABORATORIES

SDG No.: T13322

Matrix: WATER

Client ID: BN-10-S9-LTXD1

Percent Solids: 0.0

Date Received: 11/18/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18600		N	P
7440-36-0	Antimony	5.2	B		P
7440-38-2	Arsenic	23.3			P
7440-39-3	Barium	199	B		P
7440-41-7	Beryllium	0.80	B		P
7440-43-9	Cadmium	0.60	U	N	P
7440-70-2	Calcium	29800		N	P
7440-47-3	Chromium	50.7			P
7440-48-4	Cobalt	11.2	B		P
7440-50-8	Copper	70.6		* J	P
7439-89-6	Iron	100000		N	P
7439-92-1	Lead	450		N	P
7439-95-4	Magnesium	7940		N	P
7439-96-5	Manganese	547			P
7439-97-6	Mercury	0.12	B		CV
7440-02-0	Nickel	37.1	B		P
7440-09-7	Potassium	6070		N	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	32600		N	P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	95.2			P
7440-66-6	Zinc	601			P

PL 12/18/97

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4619.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	7	U
75-01-4	Vinyl Chloride	7	U
74-83-9	Bromomethane	7	U
75-00-3	Chloroethane	7	U
67-64-1	Acetone	14	U
75-35-4	1,1-Dichloroethene	7	U
75-09-2	Methylene Chloride	7	U
75-15-0	Carbon Disulfide	7	U
75-34-3	1,1-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
107-06-2	1,2-Dichloroethane	7	U
71-43-2	Benzene	7	U
79-01-6	Trichloroethene	7	U
78-87-5	1,2-Dichloropropane	7	U
75-27-4	Bromodichloromethane	7	U
108-10-1	4-Methyl-2-Pentanone	14	U
10061-01-5	cis-1,3-Dichloropropene	7	U
108-88-3	Toluene	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
79-00-5	1,1,2-Trichloroethane	7	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
124-48-1	Chlorodibromomethane	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
1330-20-7	Xylenes (total)	7	U
100-42-5	Styrene	7	U
75-25-2	Bromoform	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4619.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	7	U
541-73-1	1,3-Dichlorobenzene	7	U
106-46-7	1,4-Dichlorobenzene	7	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4619.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
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EA LABORATORIES
FORM 1
METALS ANALYSIS DATA SHEET

Laboratory: EA Laboratories

Sample ID: BN10S9LTSD1

SDG No: T13226

Lab Id: 9714021

Matrix: SOIL

Date Received: 11/18/97

Percent Solids: 70.11

Results for Total Metals

Concentration Units (ug/L or mg/kg dry): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4770			P
7440-36-0	Antimony	0.29	B	N	P
7440-38-2	Arsenic	2.6			P
7440-39-3	Barium	13.2	B		P
7440-41-7	Beryllium	0.10	B		P
7440-43-9	Cadmium	0.08	U		P
7440-70-2	Calcium	659		N*	P
7440-47-3	Chromium	6.9		*	P
7440-48-4	Cobalt	1.5	B		P
7440-50-8	Copper	3.1		N*	P
7439-89-6	Iron	7160			P
7439-92-1	Lead	14.6			P
7439-95-4	Magnesium	1280		N	P
7439-96-5	Manganese	58.1			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	5.6			P
7440-09-7	Potassium	601		N	P
7782-49-2	Selenium	0.53	B		P
7440-22-4	Silver	0.13	U		P
7440-23-5	Sodium	99.7	B		P
7440-28-0	Thallium	0.14	U		F
7440-62-2	Vanadium	10.4			P
7440-66-6	Zinc	13.2			P

P= ICP
F= GFAA
CV=Cold Vapor

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714022

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4622.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 25 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	7	U
75-01-4	Vinyl Chloride	7	U
74-83-9	Bromomethane	7	U
75-00-3	Chloroethane	7	U
67-64-1	Acetone	13	U
75-35-4	1,1-Dichloroethene	7	U
75-09-2	Methylene Chloride	7	U
75-15-0	Carbon Disulfide	7	U
75-34-3	1,1-Dichloroethane	7	U
78-93-3	2-Butanone	13	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
107-06-2	1,2-Dichloroethane	7	U
71-43-2	Benzene	7	U
79-01-6	Trichloroethene	7	U
78-87-5	1,2-Dichloropropane	7	U
75-27-4	Bromodichloromethane	7	U
108-10-1	4-Methyl-2-Pentanone	13	U
10061-01-5	cis-1,3-Dichloropropene	7	U
108-88-3	Toluene	7	U
10061-02-6	trans-1,3-Dichloropropene	7	U
79-00-5	1,1,2-Trichloroethane	7	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	7	U
124-48-1	Chlorodibromomethane	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
1330-20-7	Xylenes (total)	7	U
100-42-5	Styrene	7	U
75-25-2	Bromoform	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714022

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4622.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 25 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	7	U
541-73-1	1,3-Dichlorobenzene	7	U
106-46-7	1,4-Dichlorobenzene	7	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714022

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4622.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 25 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
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EA LABORATORIES
FORM 1
METALS ANALYSIS DATA SHEET

Laboratory: EA Laboratories

Sample ID: BN10S9SDVD2

SDG No: T13226

Lab Id: 9714022

Matrix: SOIL

Date Received: 11/18/97

Percent Solids: 75.09

Results for Total Metals

Concentration Units (ug/L or mg/kg dry): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3370			P
7440-36-0	Antimony	0.42	B	N	P
7440-38-2	Arsenic	1.5			P
7440-39-3	Barium	9.7	B		P
7440-41-7	Beryllium	0.02	U		P
7440-43-9	Cadmium	0.08	U		P
7440-70-2	Calcium	561		N*	P
7440-47-3	Chromium	7.2		*	P
7440-48-4	Cobalt	0.87	U		P
7440-50-8	Copper	4.6		N*	P
7439-89-6	Iron	3780			P
7439-92-1	Lead	18.6			P
7439-95-4	Magnesium	1110		N	P
7439-96-5	Manganese	31.1			P
7439-97-6	Mercury	0.08	B		CV
7440-02-0	Nickel	4.8	B		P
7440-09-7	Potassium	402		N	P
7782-49-2	Selenium	0.26	B		P
7440-22-4	Silver	0.13	U		P
7440-23-5	Sodium	90.6	B		P
7440-28-0	Thallium	0.13	U		F
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	24.9			P

P= ICP
F= GFAA
CV=Cold Vapor

040004

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	1	U
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9QT006

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714018

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4764.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	18	
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Cod : EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9QS003

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714013

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4765.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER
T14013

Laboratory: EA LABORATORIES

SDG No.: T13322

Matrix: WATER

Client ID: BN-10-S9-QS003

Percent Solids: 0.0

Date Received: 11/18/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	56.0	U	N	P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U	N	P
7440-70-2	Calcium	298	B	N	P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U	*N	P
7439-89-6	Iron	52.0	U	N	P
7439-92-1	Lead	1.1	B	N	P
7439-95-4	Magnesium	35.0	U	N	P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	71.0	U	N	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	885	B	N	P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

PC 12/15/97

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	18	
71-55-6	1,1,1-Trichloroethane	0.5	J
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9QS004

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714014

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4766.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T14014

aboratory: EA LABORATORIES

SDG No.: T13322

Matrix: WATER

Client ID: BN-10-S9-QS004

Percent Solids: 0.0

Date Received: 11/18/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	107	B	N	P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U	N	P
7440-70-2	Calcium	902	B	N	P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	241		*N	P
7439-89-6	Iron	52.0	U	N	P
7439-92-1	Lead	2.0	B	N	P
7439-95-4	Magnesium	135	B	N	P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.11	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	79.4	B	N	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	1370		N	P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	14.8	B		P

12/18/97

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
= "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	5	U
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	16	
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
124-48-1	Chlorodibromomethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
1330-20-7	Xylenes (total)	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S1QD001

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

EPA SAMPLE NO.

BN10S1QD001

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9713210

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B4319.D

Level: (low/med) _____ Date Received: 11/7/97

% Moisture: not dec. _____ Date Analyzed: 11/18/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
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EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T13210

Laboratory: EA LABORATORIES

SDG No.: T13210

Matrix: WATER

Client ID: BN-10-S1-QD001

Percent Solids: 0.0

Date Received: 11/07/97

Results for: TOTAL metals

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	63.9	B		P
7440-36-0	Antimony	2.2	B		P
7440-38-2	Arsenic	4.4	B		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	22.0	U		P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	52.0	U		P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	35.0	U		P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.12	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	71.0	U		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	2.3	B	N	P
7440-23-5	Sodium	81.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

M = "P" ICP SW6010
M = "F" Graphite Furnace AA As by SW7060, Pb by SW7421, Se by SW7740, Tl by SW7841, Sb by 7041
M = "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

Appendix D.5

MS/MSD Recovery Reports

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4616.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound	ug/Kg	Q
74-87-3	Chloromethane	74	
75-01-4	Vinyl Chloride	68	
74-83-9	Bromomethane	57	
75-00-3	Chloroethane	80	
67-64-1	Acetone	170	
75-35-4	1,1-Dichloroethene	60	
75-09-2	Methylene Chloride	71	
75-15-0	Carbon Disulfide	54	
75-34-3	1,1-Dichloroethane	74	
78-93-3	2-Butanone	170	
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	71	
71-55-6	1,1,1-Trichloroethane	69	
56-23-5	Carbon Tetrachloride	65	
107-06-2	1,2-Dichloroethane	69	
71-43-2	Benzene	71	
79-01-6	Trichloroethene	69	
78-87-5	1,2-Dichloropropane	70	
75-27-4	Bromodichloromethane	62	
108-10-1	4-Methyl-2-Pentanone	130	
10061-01-5	cis-1,3-Dichloropropene	60	
108-88-3	Toluene	64	
10061-02-6	trans-1,3-Dichloropropene	54	
79-00-5	1,1,2-Trichloroethane	68	
591-78-6	2-Hexanone	180	
127-18-4	Tetrachloroethene	50	
124-48-1	Chlorodibromomethane	76	
108-90-7	Chlorobenzene	68	
100-41-4	Ethylbenzene	67	
1330-20-7	Xylenes (total)	200	
100-42-5	Styrene	63	
75-25-2	Bromoform	71	
79-34-5	1,1,2,2-Tetrachloroethane	100	

FORM I VOA 3/90

030089

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9SD001MS

Lab Nam : EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4616.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	71	
541-73-1	1,3-Dichlorobenzene	69	
106-46-7	1,4-Dichlorobenzene	68	

FORM I VOA 3/90

030090

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9SD001MS

Lab Nam : EA LABORATORIES Contract: _____

Lab Cod : EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4616.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001ms

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019ms

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5980

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	4800	
111-44-4	bis-(2-Chloroethyl) ether	520	U
95-57-8	2-Chlorophenol	4600	
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	3900	
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-Di-n-propylamine	4900	
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	bis(2-Chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	4700	
91-20-3	Naphthalene	160	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-methylphenol	5000	
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	2700	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	230	J
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	4900	
51-28-5	2,4-Dinitrophenol	2700	U
100-02-7	4-Nitrophenol	3900	
132-64-9	Dibenzofuran	160	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001 ms

Lab Name: EA LABS Contract:

L[redacted] Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019 ms

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5980

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	4700	
606-20-2	2,6-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-phenylether	520	U
86-73-7	Fluorene	340	J
100-01-6	4-Nitroaniline	2700	U
534-52-1	4,6-Dinitro-2-methylphenol	2700	U
86-30-6	N-Nitrosodiphenylamine	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	4100	
85-01-8	Phenanthrene	2600	
120-12-7	Anthracene	420	J
86-74-8	Carbazole	280	J
84-74-2	Di-n-butyl phthalate	4600	
206-44-0	Fluoranthene	3600	
129-00-0	Pyrene	9400	E
85-68-7	Butylbenzyl phthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benz[a]anthracene	1800	
117-81-7	bis(2-Ethylhexyl)phthalate	140	J
218-01-9	Chrysene	1900	
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo[b]fluoranthene	1900	
207-08-9	Benzo[k]fluoranthene	700	
50-32-8	Benzo[a]pyrene	1400	
193-39-5	Indeno[1,2,3-cd]pyrene	920	
53-70-3	Dibenz[ah]anthracene	260	J
191-24-2	Benzo[ghi]perylene	1100	

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-SD001 ms

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019 ms

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B5980

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4617.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound	ug/Kg	Q
74-87-3	Chloromethane	75	
75-01-4	Vinyl Chloride	64	
74-83-9	Bromomethane	56	
75-00-3	Chloroethane	82	
67-64-1	Acetone	200	
75-35-4	1,1-Dichloroethene	59	
75-09-2	Methylene Chloride	69	
75-15-0	Carbon Disulfide	50	
75-34-3	1,1-Dichloroethane	74	
78-93-3	2-Butanone	190	
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	72	
71-55-6	1,1,1-Trichloroethane	68	
56-23-5	Carbon Tetrachloride	64	
107-06-2	1,2-Dichloroethane	71	
71-43-2	Benzene	71	
79-01-6	Trichloroethene	67	
78-87-5	1,2-Dichloropropane	70	
75-27-4	Bromodichloromethane	63	
108-10-1	4-Methyl-2-Pentanone	140	
10061-01-5	cis-1,3-Dichloropropene	59	
108-88-3	Toluene	65	
10061-02-6	trans-1,3-Dichloropropene	53	
79-00-5	1,1,2-Trichloroethane	72	
591-78-6	2-Hexanone	200	
127-18-4	Tetrachloroethene	48	
124-48-1	Chlorodibromomethane	80	
108-90-7	Chlorobenzene	70	
100-41-4	Ethylbenzene	69	
1330-20-7	Xylenes (total)	210	
100-42-5	Styrene	61	
75-25-2	Bromoform	75	
79-34-5	1,1,2,2-Tetrachloroethane	120	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4617.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	74	
541-73-1	1,3-Dichlorobenzene	71	
106-46-7	1,4-Dichlorobenzene	69	

FORM I VOA 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714019MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4617.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 36 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001 msd

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019 msd

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6010

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	4700	
111-44-4	bis-(2-Chloroethyl) ether	520	U
95-57-8	2-Chlorophenol	4600	
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	3700	
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-Di-n-propylamine	4900	
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	bis(2-Chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	4500	
91-20-3	Naphthalene	470	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-methylphenol	5000	
91-57-6	2-Methylnaphthalene	250	J
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	2700	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	520	U
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	5600	
51-28-5	2,4-Dinitrophenol	2700	U
100-02-7	4-Nitrophenol	4300	
132-64-9	Dibenzofuran	740	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-SD001 msd

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019 msd

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6010

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	5200	
606-20-2	2,6-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-phenylether	520	U
86-73-7	Fluorene	1400	
100-01-6	4-Nitroaniline	2700	U
534-52-1	4,6-Dinitro-2-methylphenol	2700	U
86-30-6	N-Nitrosodiphenylamine	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	3800	
85-01-8	Phenanthrene	8800	E
120-12-7	Anthracene	1800	
86-74-8	Carbazole	2000	
84-74-2	Di-n-butyl phthalate	4100	
206-44-0	Fluoranthene	12000	E
129-00-0	Pyrene	13000	E
85-68-7	Butylbenzyl phthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benz[a]anthracene	6800	
117-81-7	bis(2-Ethylhexyl)phthalate	120	J
218-01-9	Chrysene	6900	
117-84-0	Di-n-octyl phthalate	520	U
205-99-2	Benzo[b]fluoranthene	7300	
207-08-9	Benzo[k]fluoranthene	2500	
50-32-8	Benzo[a]pyrene	5400	
193-39-5	Indeno[1,2,3-cd]pyrene	2800	
53-70-3	Dibenz[ah]anthracene	910	
191-24-2	Benzo[ghi]perylene	3100	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-SD001 MSD

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9714019 MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B6010

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: 36 decanted: (Y/N) N Date Extracted: 11/25/97

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/17/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4769.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	9	
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	9	
75-00-3	Chloroethane	11	
67-64-1	Acetone	19	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	8	
75-15-0	Carbon Disulfide	11	
75-34-3	1,1-Dichloroethane	9	
78-93-3	2-Butanone	19	
540-59-0	1,2-Dichloroethene (total)	18	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	9	
71-43-2	Benzene	10	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	10	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	17	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	9	
591-78-6	2-Hexanone	20	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	8	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	30	
100-42-5	Styrene	8	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	11	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4769.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
106-46-7	1,4-Dichlorobenzene	9	

FORM I VOA 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4769.D

Lev I: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T14016S

Laboratory: EA LABORATORIES

SDG No.: T13322

Matrix (soil/water): WATER
% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		19275.0000		16200.0000		2000.00	153.8		P
Antimony	75-125	461.0927		4.5239	B	500.00	91.3		P
Arsenic	75-125	2103.3291		20.8575		2000.00	104.1		P
Barium	75-125	2136.1000		177.7600	B	2000.00	97.9		P
Beryllium	75-125	50.5790		0.5652	B	50.00	100.0		P
Cadmium	75-125	47.5736		0.6000	U	50.00	95.1		P
Calcium	75-125	40582.0000		29337.0000		10000.00	112.4		P
Chromium	75-125	247.7600		43.3830		200.00	102.2		P
Cobalt	75-125	525.0000		9.6204	B	500.00	103.1		P
Copper	75-125	322.6800		60.1650		250.00	105.0		P
Iron		94013.0000		90072.0000		1000.00	394.1		P
Lead	75-125	870.7371		378.9126		500.00	98.4		P
Magnesium	75-125	17372.0000		7346.9000		10000.00	100.3		P
Manganese	75-125	1082.2000		550.8500		500.00	106.3		P
Mercury	75-125	3.7900		0.1000	U	4.00	94.8		CV
Nickel	75-125	540.0000		27.9480	B	500.00	102.4		P
Potassium	75-125	15641.0000		5713.4000		10000.00	99.3		P
Selenium	75-125	1974.4763		2.0000	U	2000.00	98.7		P
Silver	75-125	502.3923		4.0000	U	500.00	100.5		P
Sodium	75-125	43456.0000		32830.0000		10000.00	106.3		P
Thallium	75-125	22.1100		1.0000	U	25.00	88.4		F
Vanadium	75-125	590.0200		81.4520		500.00	101.7		P
Zinc	75-125	1011.8000		495.3200		500.00	103.3		P

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4770.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	9	
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	11	
67-64-1	Acetone	19	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	9	
75-15-0	Carbon Disulfide	11	
75-34-3	1,1-Dichloroethane	9	
78-93-3	2-Butanone	20	
540-59-0	1,2-Dichloroethene (total)	18	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	10	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	11	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	18	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	9	
591-78-6	2-Hexanone	21	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	31	
100-42-5	Styrene	8	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	12	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4770.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	9	
541-73-1	1,3-Dichlorobenzene	9	
106-46-7	1,4-Dichlorobenzene	9	

FORM I VOA 3/90

030143

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9LT001MSD

Lab Nam : EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 9714016MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4770.D

Level: (low/med) _____ Date Received: 11/18/97

% Moisture: not dec. _____ Date Analyzed: 11/27/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004 ms

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014ms

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5950

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	82	
111-44-4	bis-(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	82	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	77	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	49	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	82	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	72	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	78	
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	70	
132-64-9	Dibenzofuran	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004ms

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014ms

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5950

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
121-14-2	2,4-Dinitrotoluene	87	
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	76	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	53	
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	82	
85-68-7	Butylbenzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benz[a]anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[ah]anthracene	10	U
191-24-2	Benzo[ghi]perylene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-QS004 ms

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014 ms

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5950

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004 MSD

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014 MSD

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5951

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	80	
111-44-4	bis-(2-Chloroethyl) ether	10	U
95-57-8	2-Chlorophenol	75	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	73	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	39	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	76	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	70	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	73	
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	73	
132-64-9	Dibenzofuran	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN10S9-QS004mso

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014 mso

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5951

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
121-14-2	2,4-Dinitrotoluene	88	
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	74	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butyl phthalate	55	
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	77	
85-68-7	Butylbenzyl phthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benz[a]anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[ah]anthracene	10	U
191-24-2	Benzo[ghi]perylene	10	U

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN10S9-QS004msD

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9714014msD

Sample wt/vol: 500 (g/mL) ML Lab File ID: SC3B5951

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: _____ decanted: (Y/N) N Date Extracted: 11/21/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/15/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTSD1MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4620.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	70	
75-01-4	Vinyl Chloride	71	
74-83-9	Bromomethane	60	
75-00-3	Chloroethane	80	
67-64-1	Acetone	150	
75-35-4	1,1-Dichloroethene	56	
75-09-2	Methylene Chloride	63	
75-15-0	Carbon Disulfide	61	
75-34-3	1,1-Dichloroethane	64	
78-93-3	2-Butanone	140	
540-59-0	1,2-Dichloroethene (total)	120	
67-66-3	Chloroform	62	
71-55-6	1,1,1-Trichloroethane	59	
56-23-5	Carbon Tetrachloride	55	
107-06-2	1,2-Dichloroethane	62	
71-43-2	Benzene	64	
79-01-6	Trichloroethene	58	
78-87-5	1,2-Dichloropropane	64	
75-27-4	Bromodichloromethane	54	
108-10-1	4-Methyl-2-Pentanone	110	
10061-01-5	cis-1,3-Dichloropropene	55	
108-88-3	Toluene	61	
10061-02-6	trans-1,3-Dichloropropene	50	
79-00-5	1,1,2-Trichloroethane	60	
591-78-6	2-Hexanone	140	
127-18-4	Tetrachloroethene	46	
124-48-1	Chlorodibromomethane	63	
108-90-7	Chlorobenzene	63	
100-41-4	Ethylbenzene	60	
1330-20-7	Xylenes (total)	190	
100-42-5	Styrene	57	
75-25-2	Bromoform	60	
79-34-5	1,1,2,2-Tetrachloroethane	77	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9LTSD1MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4620.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	59	
541-73-1	1,3-Dichlorobenzene	60	
106-46-7	1,4-Dichlorobenzene	60	

FORM I VOA

3/90

030089

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9LTSD1MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4620.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
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EA LABORATORIES
FORM 5
SPIKE SAMPLE RECOVERY

Lab Name: EA Laboratories

Client ID BN10S9LTSD1

SDG No: T13226

Matrix (soil/water): SOIL

EA SAMPLE ID 9714021S

%Solids: 70.11

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)		Spike Added (SA)	%R	Q	M
Aluminum	75-125	6340.7935	4773.4000		273.33	573.5		P
Antimony	75-125	37.9219	0.2900	B	66.63	56.5	N	P
Arsenic	75-125	218.2381	2.6300		266.50	80.9		P
Barium	75-125	247.6090	13.1800	B	266.50	88.0		P
Beryllium	75-125	6.0729	0.1000	B	6.66	89.6		P
Cadmium	75-125	5.7505	0.0800	U	6.66	86.3		P
Calcium	75-125	1765.1125	658.9200		1366.61	80.9		P
Chromium	75-125	30.1789	6.8800		26.66	87.4		P
Cobalt	75-125	60.1366	1.4500	B	66.63	88.1		P
Copper	75-125	35.2188	3.1100		34.17	94.0		P
Iron		6436.0745	7162.5800		133.25	-545.2		P
Lead	75-125	66.9802	14.6300		66.63	78.6		P
Magnesium	75-125	2863.1830	1284.9200		1366.61	115.5		P
Manganese	75-125	115.2084	58.1100		66.63	85.7		P
Mercury	75-125	2.5048	0.06000	U	2.51	99.7		CV
Nickel	75-125	64.6699	5.6100		66.63	88.6		P
Potassium	75-125	1836.8797	600.7100		1332.52	92.8		P
Selenium	75-125	214.5541	0.5300	B	266.50	80.3		P
Silver	75-125	55.7544	0.1300	U	66.63	83.7		P
Sodium	75-125	1378.6258	93.7300	B	1332.52	96.4		P
Thallium	75-125	3.1264	0.1400	U	3.36	93.0		F
Vanadium	75-125	70.4583	10.3500		66.63	90.2		P
Zinc	75-125	76.4673	13.2200		68.33	92.6		P

040033

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTSD1MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4621.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	72	
75-01-4	Vinyl Chloride	72	
74-83-9	Bromomethane	61	
75-00-3	Chloroethane	81	
67-64-1	Acetone	160	
75-35-4	1,1-Dichloroethene	58	
75-09-2	Methylene Chloride	66	
75-15-0	Carbon Disulfide	59	
75-34-3	1,1-Dichloroethane	67	
78-93-3	2-Butanone	150	
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	64	
71-55-6	1,1,1-Trichloroethane	60	
56-23-5	Carbon Tetrachloride	52	
107-06-2	1,2-Dichloroethane	65	
71-43-2	Benzene	64	
79-01-6	Trichloroethene	57	
78-87-5	1,2-Dichloropropane	63	
75-27-4	Bromodichloromethane	54	
108-10-1	4-Methyl-2-Pentanone	120	
10061-01-5	cis-1,3-Dichloropropene	53	
108-88-3	Toluene	59	
10061-02-6	trans-1,3-Dichloropropene	52	
79-00-5	1,1,2-Trichloroethane	62	
591-78-6	2-Hexanone	160	
127-18-4	Tetrachloroethene	43	
124-48-1	Chlorodibromomethane	65	
108-90-7	Chlorobenzene	63	
100-41-4	Ethylbenzene	61	
1330-20-7	Xylenes (total)	180	
100-42-5	Styrene	55	
75-25-2	Bromoform	61	
79-34-5	1,1,2,2-Tetrachloroethane	86	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN10S9LTSD1MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Cod : EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4621.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	58	
541-73-1	1,3-Dichlorobenzene	60	
106-46-7	1,4-Dichlorobenzene	61	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN10S9LTSD1MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 9714021MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B4621.D

Level: (low/med) LOW Date Received: 11/18/97

% Moisture: not dec. 30 Date Analyzed: 11/21/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4792.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	8	
75-01-4	Vinyl Chloride	10	
74-83-9	Bromomethane	7	
75-00-3	Chloroethane	10	
67-64-1	Acetone	16	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	9	
75-15-0	Carbon Disulfide	12	
75-34-3	1,1-Dichloroethane	10	
78-93-3	2-Butanone	20	
540-59-0	1,2-Dichloroethene (total)	19	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	11	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	11	
79-01-6	Trichloroethene	10	
78-87-5	1,2-Dichloropropane	11	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	18	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	11	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	10	
591-78-6	2-Hexanone	21	
127-18-4	Tetrachloroethene	8	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	11	
1330-20-7	Xylenes (total)	32	
100-42-5	Styrene	10	
75-25-2	Bromoform	9	
79-34-5	1,1,2,2-Tetrachloroethane	12	

FORM I VOA

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4792.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
106-46-7	1,4-Dichlorobenzene	10	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW007MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4792.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T14041S

Laboratory: EA LABORATORIES

SDG No.: T14037

Matrix (soil/water): WATER
% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2066.4000		105.2000	B	2000.00	98.1		P
Antimony	75-125	506.4857		1.0320	B	500.00	101.1		P
Arsenic	75-125	1910.1356		2.0000	U	2000.00	95.5		P
Barium	75-125	1990.8000		22.4460	B	2000.00	98.4		P
Beryllium	75-125	48.9690		0.2000	U	50.00	97.9		P
Cadmium	75-125	45.3445		0.6000	U	50.00	90.7		P
Calcium	75-125	49223.0000		38416.0000		10000.00	108.1		P
Chromium	75-125	210.6200		11.1890		200.00	99.7		P
Cobalt	75-125	485.0500		7.0000	U	500.00	97.0		P
Copper	75-125	247.0600		5.0000	U	250.00	98.8		P
Iron	75-125	1210.4000		214.9700		1000.00	99.5		P
Lead	75-125	462.0713		1.0000	U	500.00	92.4		P
Magnesium	75-125	12545.0000		2613.7000		10000.00	99.3		P
Manganese	75-125	518.1900		17.5940		500.00	100.1		P
Mercury	75-125	4.4900		0.1900	B	4.00	107.5		CV
Nickel	75-125	494.5000		5.0000	U	500.00	98.9		P
Potassium	75-125	14983.0000		4717.3000		10000.00	102.7		P
Selenium	75-125	1829.9630		2.0000	U	2000.00	91.5		P
Silver	75-125	461.1172		1.0000	U	500.00	92.2		P
Sodium	75-125	36586.0000		25284.0000		10000.00	113.0		P
Thallium	75-125	17.8300		1.0000	U	25.00	71.3	N	F
Vanadium	75-125	499.3800		3.0000	U	500.00	99.9		P
Zinc	75-125	487.5800		12.0000	U	500.00	97.5		P

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4793.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	11	
75-01-4	Vinyl Chloride	12	
74-83-9	Bromomethane	10	
75-00-3	Chloroethane	12	
67-64-1	Acetone	17	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	8	
75-15-0	Carbon Disulfide	11	
75-34-3	1,1-Dichloroethane	9	
78-93-3	2-Butanone	19	
540-59-0	1,2-Dichloroethene (total)	19	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	10	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	11	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	18	
10061-01-5	cis-1,3-Dichloropropene	9	
108-88-3	Toluene	10	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	9	
591-78-6	2-Hexanone	20	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	31	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	11	

FORM I VOA

3/90

C 30215

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN10S9MW007MSD

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4793.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
106-46-7	1,4-Dichlorobenzene	9	

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN10S9MW007MS

Lab Name: EA LABORATORIES Contract: _____

Lab Code: EA ENG Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9714041MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B4793.D

Level: (low/med) _____ Date Received: 11/9/97

% Moisture: not dec. _____ Date Analyzed: 11/28/97

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
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