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Final Report

Monitoring Event 11 - March 1998
Site 9: Neptune Drive Disposal Site
Naval Air Station, Brunswick, Maine

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

U.S. NAVAL AIR STATION
BRUNSWICK, MAINE

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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June 1998
296.0047

296.0047

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Pete Minny for 6/4/98

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Date

June 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 11 - March 1998, 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.

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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 2
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 6
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, 6 January 1998 well gauging data, Site 9 (Neptune Drive Disposal Site), Naval Air Station, Brunswick, Maine.
5	Interpreted potentiometric surface elevations, 3 March 1998 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 16-17 March 1998 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 13 March 1998 at Site 9, Naval Air Station, Brunswick, Maine.
5	Summary of analytical results for ground-water samples collected on 16-17 March 1998 at Site 9, Naval Air Station, Brunswick, Maine.
6	Summary of analytical results for surface water samples collected on 13 March 1998 at Site 9, Naval Air Station, Brunswick, Maine.
7	Summary of analytical results for sediment samples collected on 13 March 1998 at Site 9, Naval Air Station, Brunswick, Maine.
8	Summary of analytical results for the seep and sediment samples collected on 13 March 1998 at Site 9, Naval Air Station, Brunswick, Maine.

1. PROJECT ACTIVITIES

1.1 INTRODUCTION

Under Contract No. N62472-92-D-1296, Contract Task Order 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 March 1998 monitoring/sampling event (Monitoring Event 11). A discussion of temporal trends and other observations based on data collected during tri-annual monitoring (March, June, and November 1998) will be presented in the Annual Report for 1998.

1.2 MEASUREMENT OF WATER LEVEL ELEVATIONS

Water level measurements were obtained during Monitoring Event 11 on 3 March 1998 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 6 March 1998. 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 16-17 March 1998 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 each of the 9 wells specified in the LTMP during the March 1998 sampling event using the low flow sampling technique.

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 nephelometric turbidity units (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 was 1.6 L/minute. Each of the 9 monitoring wells at Site 9 reached equilibrium of the water quality indicator parameters prior to sampling, although turbidity stabilized in excess of 10 NTU at 1 of these wells: MW-NASB-079 (15 NTU).

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 the 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 13 March 1998, in accordance with the general methodologies established in the LTMP (ABB-ES 1994b). Due to the presence of two surface water impoundments, 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 and, therefore, these samples were not collected. One location (SW/SED-916) is sampled annually, but was not sampled during Monitoring Event 11. Leachate station seep and sediment samples were collected at the foot of the drain located south of Site 9 (Figure 2) as scheduled. 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 3 March 1998 by a civil engineer in accordance with the LTMP (ABB-ES 1995). Snow cover was present at the time of the inspection, limiting visual inspection for stressed vegetation and/or signs of adverse impact. 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. One monitoring well, MW-NASB-073, had a broken lock tab and was subsequently repaired. All other 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 March 1998 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 6 January 1998 (bi-monthly data) and 3 March 1998 (Monitoring Event 11 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 January and March 1998 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, which is consistent with previous sampling events. 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 6 January and 3 March 1998 well gauging data, respectively.

The hydraulic gradient across the subject site is characterized as shallow at 1.0 percent (0.010 ft per foot) as measured parallel to the direction of ground-water flow between MW-NASB-081 and MW-NASB-076 during the 3 March 1998 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.

Each of the 9 monitoring wells reached equilibrium of the water quality indicator parameters prior to sampling, although turbidity stabilized in excess of 10 NTU at 1 of these wells: MW-NASB-079 (15 NTU).

Lower turbidity and conductivity values and higher dissolved oxygen values were observed in ground-water samples during Monitoring Event 11 (March 1998) as compared to Monitoring Event 10 (November 1997). These results are likely attributed to the colder temperatures associated with the March sampling event.

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 March 1998 sampling event indicate that 9 VOC were detected at reportable concentrations in the ground-water samples. VOC were reported in 5 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 11 include:

- Vinyl chloride, a constituent of concern, was reported in 4 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 (19 μg/L), MW-NASB-072 (7 μg/L), MW-NASB-076 (2 μg/L), and MW-NASB-080 (0.9J μg/L).

- Manganese was reported above the corresponding State Maximum Exposure Guideline of 200 μg/L in 1 well: MW-NASB-071 (263 μg/L).

- Chromium was reported above the corresponding State Maximum Exposure Guideline (100 μg/L) in 1 well: MW-NASB-079 (133 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 March 1998 sampling event indicate that 2 VOC (total 1,2-dichloroethene and vinyl chloride) were detected at reportable concentrations (0.7J μg/L and 1J 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 March 1998 sampling event indicate that 1 VOC (acetone) was reported at an estimated concentration of 19J μg/L, however, acetone is a common laboratory artifact. 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, likely attributed to stormwater runoff over asphalt paved areas. Total concentrations of polycyclic aromatic hydrocarbons in sediment sample SED-010 were 28,520 μg/kg. Note that significantly higher concentrations of SVOC were reported in the primary sample as compared to the duplicate 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 sample. One VOC (acetone) was reported in the leachate seep sediment, although acetone is a common laboratory artifact. Sample locations are provided on Figure 2. A total of 18 target analytes were reported in the leachate seep sample. A total of 19 target analytes were reported in the leachate station sediment sample.

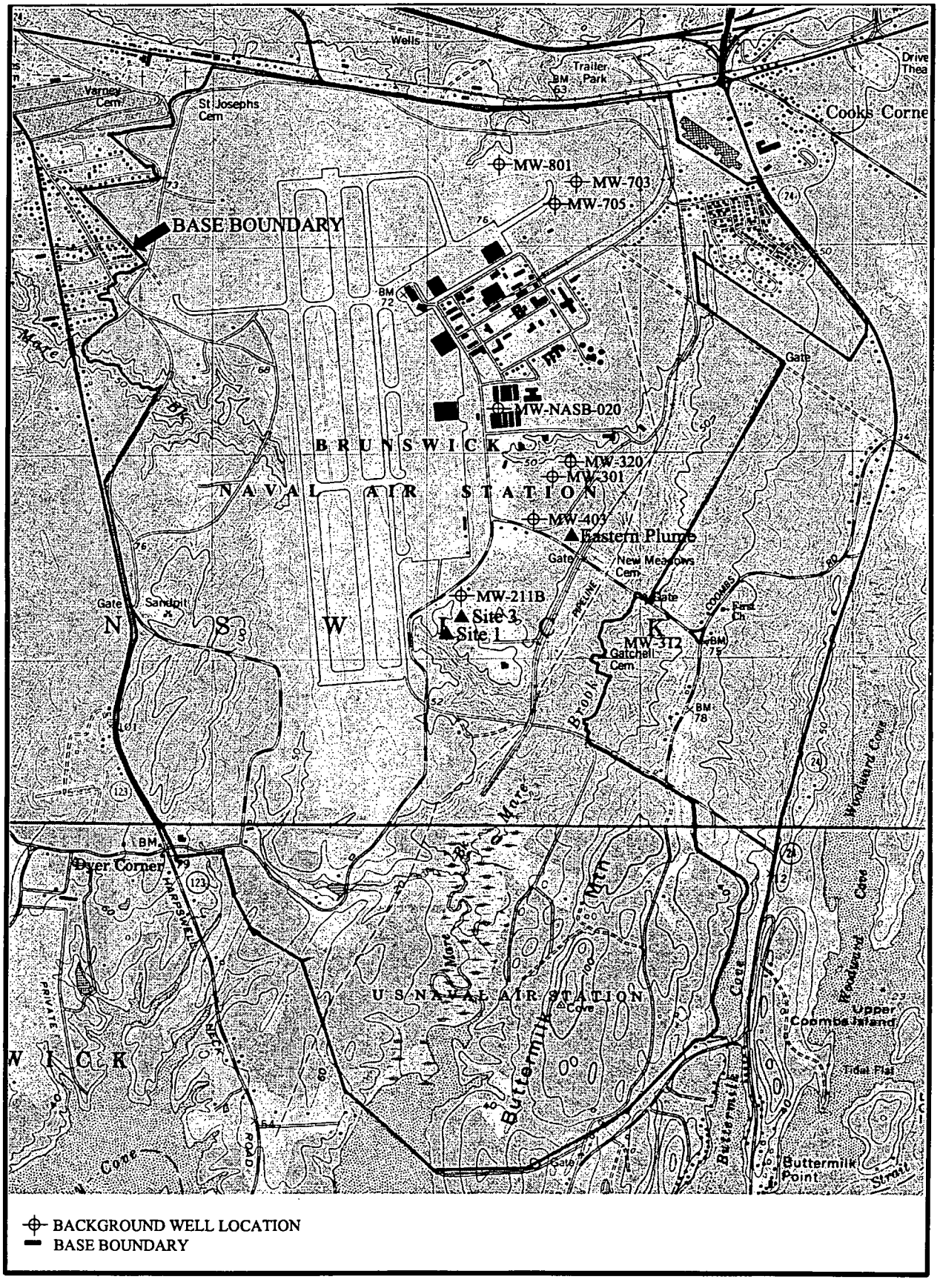
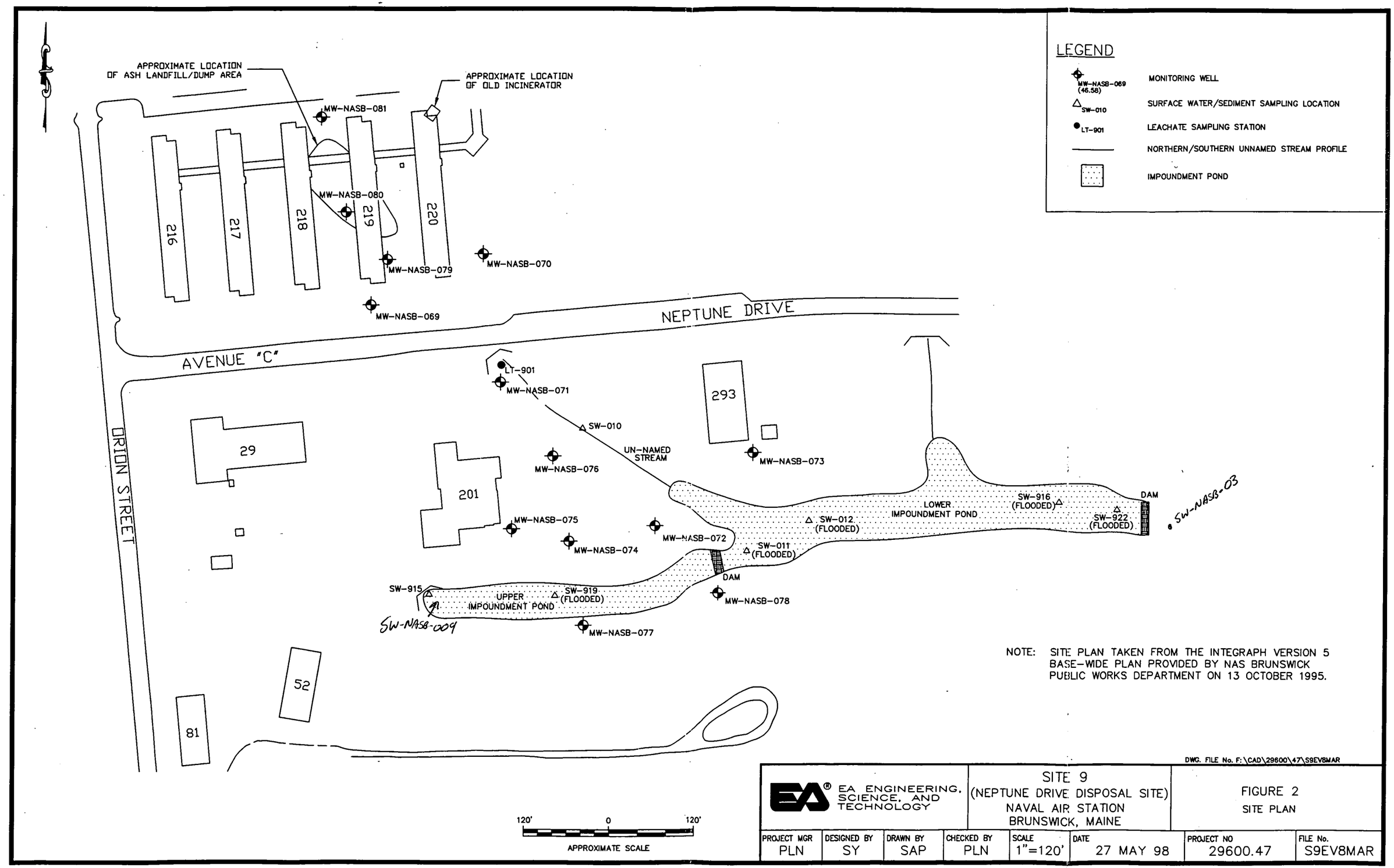


Figure 1. Site location map and background well locations, Naval Air Station Brunswick, Maine.



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

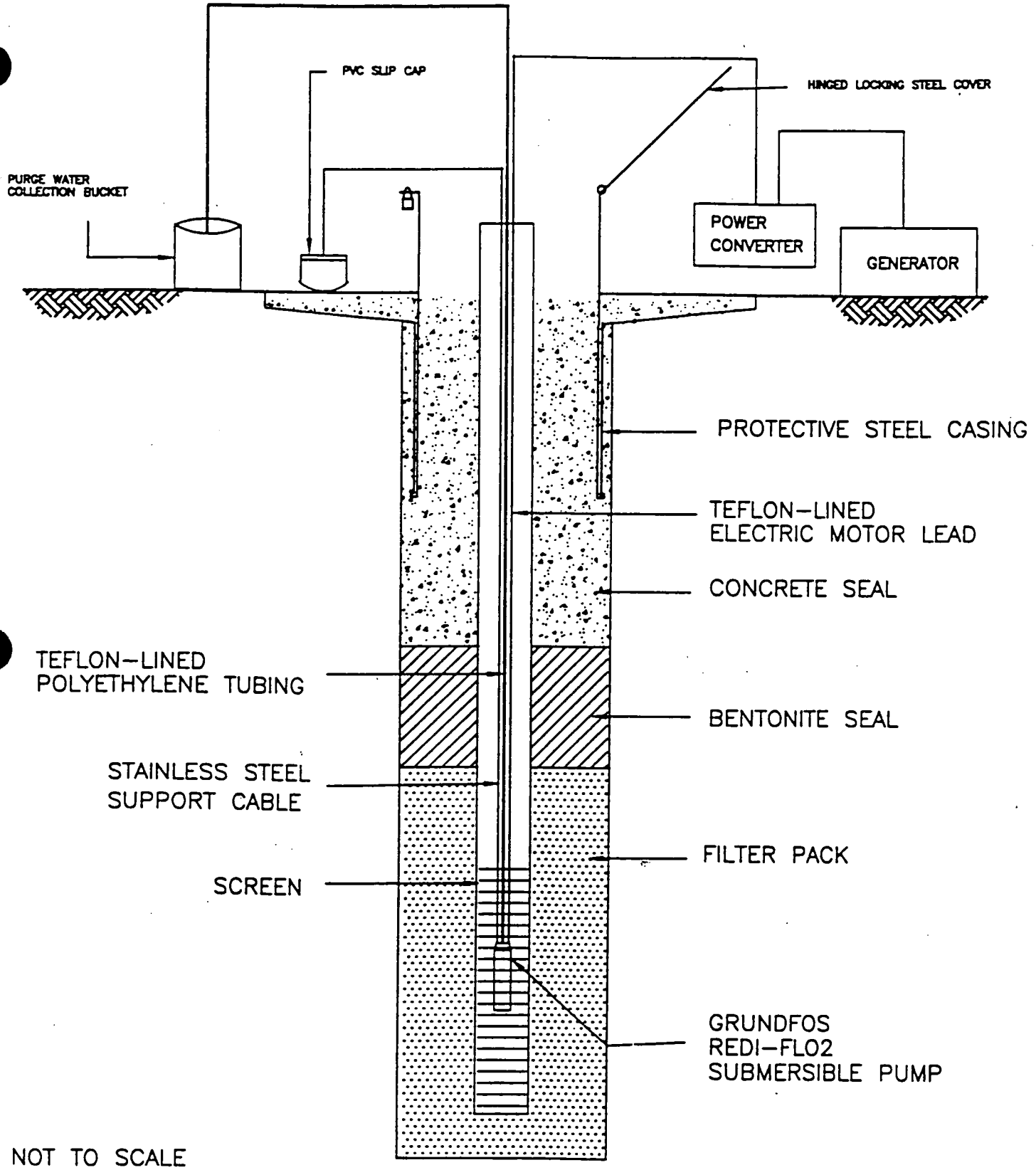
DWG. FILE No. F:\CAD\29600\47\S9EV8MAR

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

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

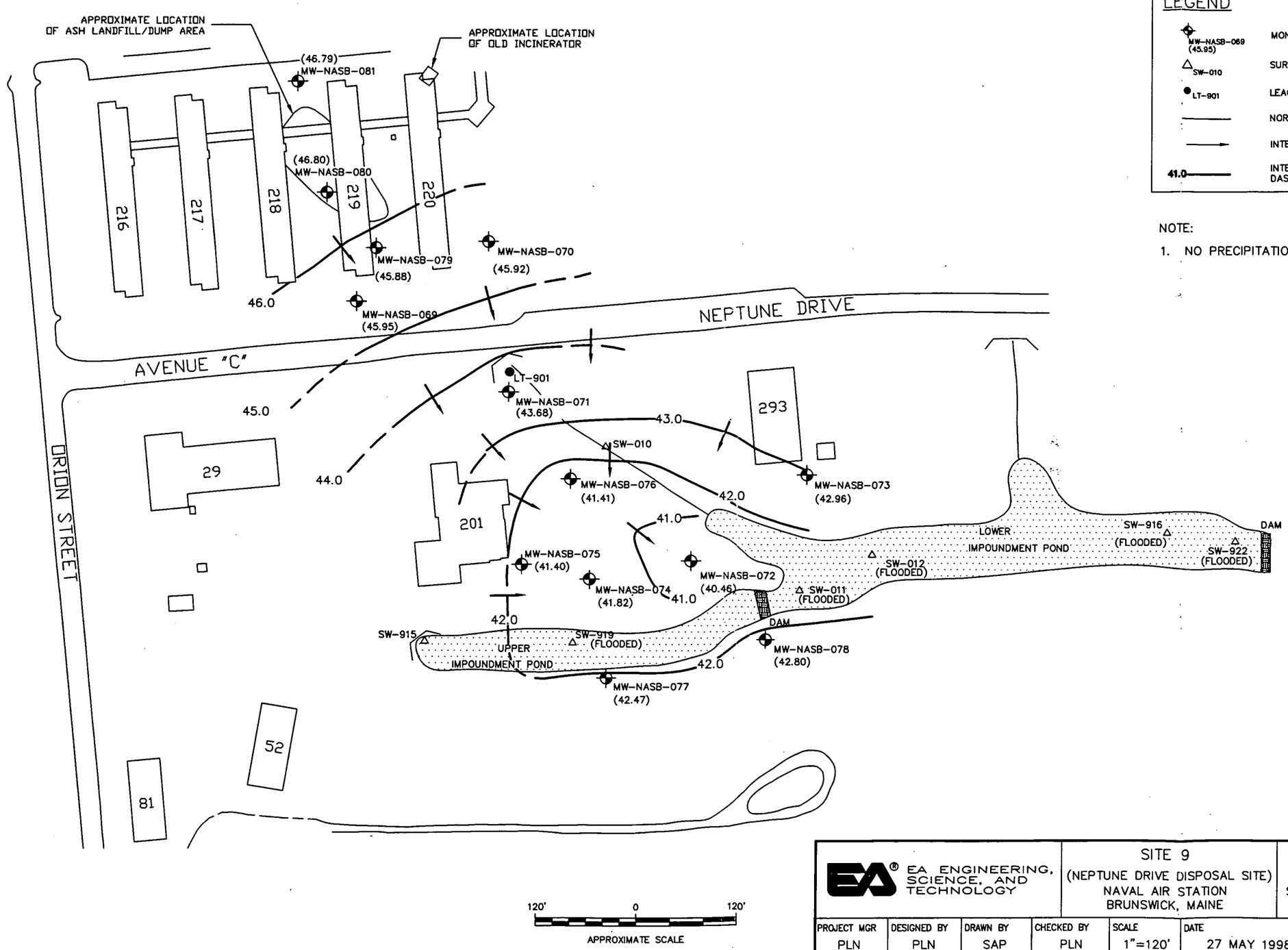
FIGURE 2
SITE PLAN

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
PLN	SY	SAP	PLN	1"=120'	27 MAY 98	29600.47	S9EV8MAR



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 (45.95)	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

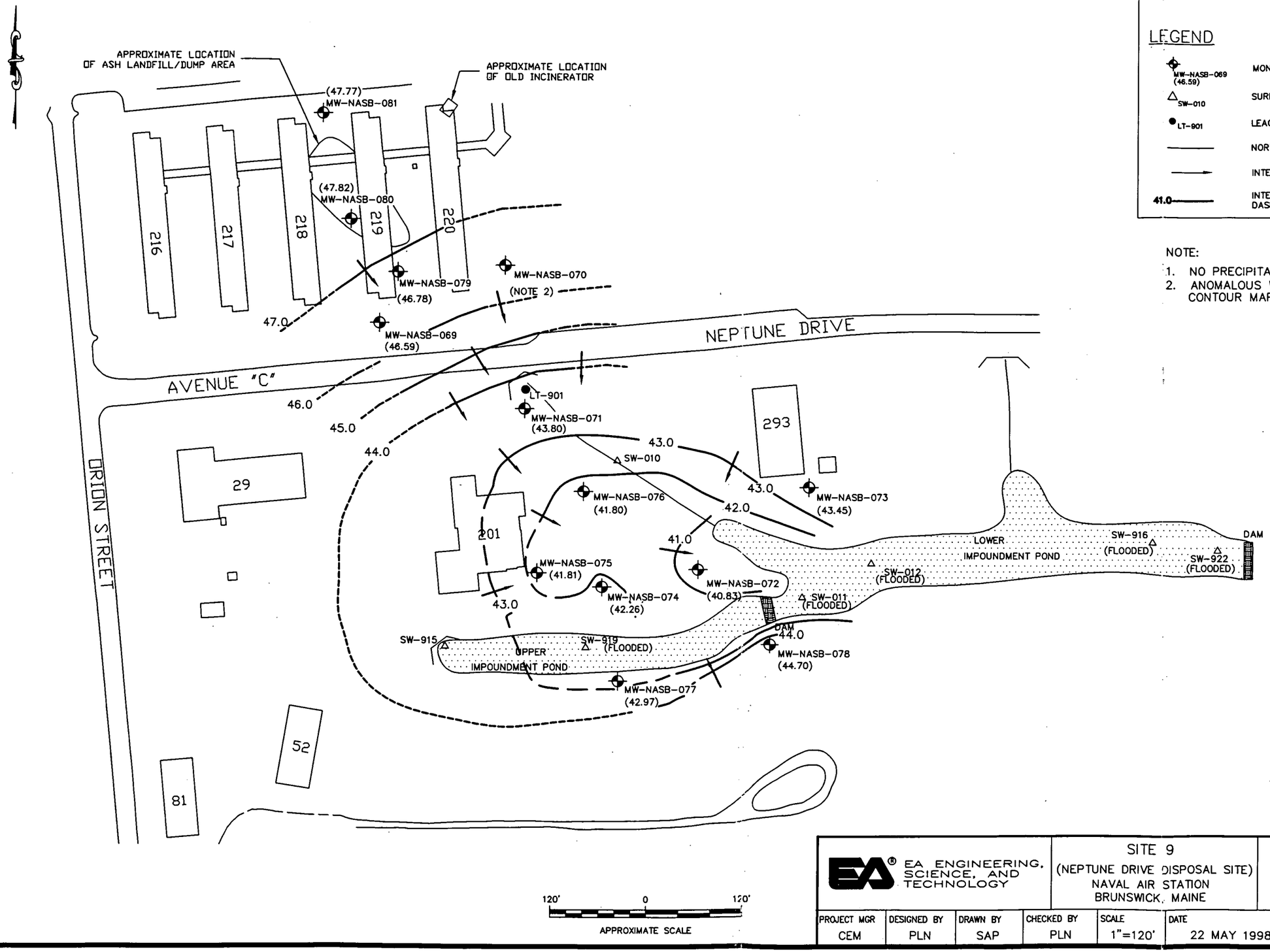
DWG. FILE No. F:\CAD\29600\47\S9JAN98

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

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

FIGURE 4
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 6 JANUARY 1998 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
PLN	PLN	SAP	PLN	1"=120'	27 MAY 1998	29600.47	S9JAN98



LEGEND

MW-NASB-069 (46.59)	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
2. ANOMALOUS WATER ELEVATION, NOT USED DURING CONTOUR MAP GENERATION.

DWG. FILE No. F:\CAD\29600\47\S9MAR98

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

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

FIGURE 5
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 3 MARCH 1998 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
CEM	PLN	SAP	PLN	1"=120'	22 MAY 1998	29600.47	S9MAR98

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 11	
			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 11	
		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 covered with surface water due to construction of impoundments.

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 (6 January 1998)		Event 11 Gauging Data (3 March 1998)	
				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	11.40	45.95	10.76	46.59
MW-NASB-070	MW-902	58.26	27.32	12.34	45.92	21.97	36.29
MW-NASB-071	MW-903	46.25	21.54	2.57	43.68	2.45	43.80
MW-NASB-072	MW-904	49.81	14.63	9.35	40.46	8.98	40.83
MW-NASB-073	MW-905	51.71	32.12	8.75	42.96	8.26	43.45
MW-NASB-074	MW-906	51.68	27.12	9.86	41.82	9.42	42.26
MW-NASB-075	MW-907	54.91	21.22	13.51	41.40	13.10	41.81
MW-NASB-076	MW-908	52.79	19.94	11.38	41.41	10.99	41.80
MW-NASB-077	MW-909	58.89	37.29	16.42	42.47	15.92	42.97
MW-NASB-078	MW-910	53.74	14.93	10.94	42.80	9.04	44.70
MW-NASB-079	MW-914	58.15	18.92	12.27	45.88	11.37	46.78
MW-NASB-080	MW-915	58.51	19.04	11.71	46.80	10.69	47.82
MW-NASB-081	MW-916	58.22	18.85	11.43	46.79	10.45	47.77

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

TABLE 3 SUMMARY OF WATER QUALITY INDICATOR PARAMETERS MEASURED IN GROUND-WATER SAMPLES COLLECTED ON 16-17 MARCH 1998 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	6.07	15.4	331	1.80	1	74
MW-NASB-071	MW-903	6.21	13.9	2.41	0.59	0	-13
MW-NASB-072	MW-904	6.32	10.6	107	3.74	0	147
MW-NASB-074	MW-906	6.27	14.1	230	0.88	6	26
MW-NASB-075	MW-907	6.20	17.8	225	1.68	3	126
MW-NASB-076	MW-908	6.04	16.6	227	2.83	0	7
MW-NASB-079	MW-914	6.77	17.1	164	2.42	15	-27
MW-NASB-080	MW-915	6.56	17.0	245	1.59	1	-34
MW-NASB-081	MW-916	6.37	15.7	305	4.12	0	125

NOTE: NTU = Nephelometric turbidity unit.

TABLE 4 SUMMARY OF WATER QUALITY INDICATOR PARAMETERS MEASURED IN SURFACE WATER AND LEACHATE SEEP SAMPLES COLLECTED ON 13 MARCH 1998 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	6.58	4.2	172	8.72	2	181
Leachate Seep						
LT-901	6.52	5.0	136	2.91	38	167

NOTE: NTU = Nephelometric turbidity unit.

TABLE 5 SUMMARY OF ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES COLLECTED ON 16-17 MARCH 1998 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-072 DUP MW-904 DUP	MW-NASB-074 MW-906	MW-NASB-075 MW-907	MW-NASB-076 MW-908	MEG[a]	MCL[b]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
Total 1,2-Dichloroethene	25	(<1U)	0.2J	0.2J	2	(<1U)	(<1U)	70	70
Vinyl chloride	**19**	(<1U)	**2**	**2**	(<1U)	(<1U)	**2**	0.15	2
1,1-Dichloroethane	(<1U)	(<1U)	(<1U)	(<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	0.3J	(<1U)	(<1U)	(<1U)	2	(<1U)	(<1U)	5	5
Chloroform	(<1U)	(<1U)	(<1U)	(<1U)	0.5J	(<1U)	(<1U)	---	100
Acetone	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	--	---
Tetrachloroethane	(<1U)	(<1U)	(<1U)	(<1U)	0.4J	(<1U)	(<1U)	70	---
1,2-Dichlorobenzene	(<1U)	(<1U)	(<1U)	(<1U)	0.3J	(<1U)	(<1U)	600	600
1,4-Dichlorobenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	0.1J	27	75
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-072 DUP MW-904 DUP	MW-NASB-074 MW-906	MW-NASB-075 MW-907	MW-NASB-076 MW-908	MEG[a]	MCL[b]
TARGET ANALYTE LIST ELEMENTS BY EPA SW-846 6000/7000 SERIES METHODS (μg/L)									
Aluminum	NR	131B*	255	177B*	NR	NR	NR	1,430	50-200[c]
Antimony	NR	2.4B*	(<1.0U)	(<1.0U)	NR	NR	NR	2.8	6
Arsenic	NR	27.2	(<2.0U)	(<2.0U)	NR	NR	NR	---	50
Barium	NR	10.6B*	6.5B*	(<4.0U)	NR	NR	NR	1,500	2,000
Cadmium	NR	(<0.60U)	(<0.60U)	(<0.60U)	NR	NR	NR	5	5
Calcium	NR	10,100	14,600	11,000	NR	NR	NR	---	---
Chromium	NR	(<4.0U)	(<4.0U)	(<4.0U)	NR	NR	NR	100	100
Copper	NR	(<2.0U)	4.6B*	3.2B*	NR	NR	NR	---	1,300[c]
Iron	NR	22,200	268	219	NR	NR	NR	---	300[c]
Lead	NR	4.1	1.7B*	1.1B*	NR	NR	NR	---	15[d]
Magnesium	NR	4,530	3,730	2,770	NR	NR	NR	---	---
Manganese	NR	**263**	91.5	76.2	NR	NR	NR	200	50[c]
Nickel	NR	(<5.0U)	(<5.0U)	(<5.0U)	NR	NR	NR	100	100
Potassium	NR	2,200	673B*	488B*	NR	NR	NR	---	---
Selenium	NR	2.2B*	(<2.0U)	(<2.0U)	NR	NR	NR	10	50
Sodium	NR	35,600	5,860	4,720	NR	NR	NR	---	---
Zinc	NR	(<12.0U)	(<12.0U)	(<12.0U)	NR	NR	NR	---	5,000[c]

(c) Secondary MCL; based on taste, odor, or color.
(d) Action level.

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	NW-NASB-079 DUP MW-914 DUP	MW-NASB-080 MW-915	MW-NASB-081 MW-916	QT- 006	MEG[a]	MCL[b]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Total 1,2-Dichloroethene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	70	70
Vinyl chloride	(<1U)	(<1U)	**0.9J**	(<1U)	(<1U)	0.15	2
1,1-Dichloroethane	(<1U)	(<1U)	0.4J	(<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
Acetone	(<5U)	(<5U)	(<5U)	(<5U)	4JB	---	---
Tetrachloroethane	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	70	---
1,2-Dichlorobenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	600	600
1,4-Dichlorobenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	27	75
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	1,830	2,360	137B*	83.2B*	NR	1,430	50-200[c]
Antimony	2.5B*	1.1B*	(<1.0U)	1.4B*	NR	2.8	6
Arsenic	(<2.0U)	5.1B*	(<2.0U)	(<2.0U)	NR	---	50
Barium	121B*	172B*	600	27.0B*	NR	1,500	2,000
Cadmium	(<0.60U)	(<0.60U)	(<0.60U)	(<0.60U)	NR	5	5
Calcium	13,400	17,300	41,400	42,000	NR	---	---
Chromium	**133**	(<4.0U)	(<4.0U)	(<4.0U)	NR	100	100
Copper	11.4	2.8B*	64.4	(<2.0U)	NR	---	1,300[c]
Iron	14,200	22,400	1,440	(<52.0U)	NR	---	300[c]
Lead	3.3	5.4	(<1.0U)	1.3B*	NR	---	15[d]
Magnesium	1,040	1,320	2,360	2,990	NR	---	---
Manganese	68.4	80.8	152	(<8.0U)	NR	200	50[c]
Nickel	82.0	(<5.0U)	(<5.0U)	(<5.0U)	NR	100	100
Potassium	1,500	2,000	4,150	3,750	NR	---	---
Selenium	(<2.0U)	7.6	(<2.0U)	3.4B*	NR	10	50
Sodium	3,450	5,170	8,190	22,400	NR	---	---
Zinc	13.4B*	16.9B*	16.0B*	(<12.0U)	NR	---	5,000[c]

NOTE: QT = Trip blank.
B = Compound detected in associated method blank.

TABLE 6 SUMMARY OF ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES COLLECTED ON 13 MARCH 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SW-010	QT-005	QS-004	QD-001
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)				
Methylene chloride	(<1U)	(<1U)	5	6
Carbon disulfide	(<1U)	(<1U)	(<1U)	(<1U)
Toluene	(<1U)	(<1U)	(<1U)	(<1U)
Vinyl chloride	1	(<1U)	(<1U)	(<1U)
Total 1,2-Dichloroethene	0.7J	(<1U)	(<1U)	(<1U)
Trichloroethene	(<1U)	(<1U)	(<1U)	(<1U)
1,1,1-Trichloroethane	(<1U)	(<1U)	0.4J	(<1U)
Acetone	(<5U)	(<5U)	(<5U)	4J
Chloroform	(<1U)	(<1U)	(<1U)	(<1U)

NOTE: QT = Trip blank.
QS = Equipment rinsate blank.
QD = Source water blank. QD-001 was analyzed under a separate sample delivery group shipped on 6 March 1998.
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 13 MARCH 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SED-010	SED-010 DUP	QT-005 (μg/L)	QS-003 (μg/L)	QD-001 (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)					
1,1,1-Trichloroethane	(<7U)	(<7U)	(<1U)	(<1U)	(<1U)
Total 1,2-Dichloroethene	(<7U)	(<7U)	(<1U)	(<1U)	(<1U)
Acetone	19	(<14U)	(<5U)	(<5U)	4J
Methylene chloride	(<7U)	(<7U)	(<1U)	5	6
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (μg/kg)					
Acenaphthylene	(<490U)	(<460U)	NR	(<10U)	(<10U)
Naphthalene	120J	(<460U)	NR	(<10U)	(<10U)
2-Methylnaphthalene	(<490U)	(<460U)	NR	(<10U)	(<10U)
Acenaphthene	460J	(<460U)	NR	(<10U)	(<10U)
Dibenzofuran	290J	(<460U)	NR	(<10U)	(<10U)
Fluorene	560	(<460U)	NR	(<10U)	(<10U)
Phenanthrene	3,800	190J	NR	(<10U)	(<10U)
Anthracene	590	(<460U)	NR	(<10U)	(<10U)
Carbazole	700	(<460U)	NR	(<10U)	(<10U)
Fluoranthene	4,400	320J	NR	(<10U)	(<10U)
Pyrene	4,700	270J	NR	(<10U)	(<10U)
Benzo(a)anthracene	1,800	120J	NR	(<10U)	(<10U)
Chrysene	3,100	(<460U)	NR	(<10U)	(<10U)
Bis(2-ethylhexyl)phthalate	270J	(<460U)	NR	(<10U)	(<10U)
Benzo(b)fluoranthene	3,100	200J	NR	(<10U)	(<10U)
Benzo(k)fluoroethane	1,100	(<460U)	NR	(<10U)	(<10U)
Benzo(a)pyrene	2,000	130J	NR	(<10U)	(<10U)
Indeno(1,2,3-c,d)pyrene	1,300	(<460U)	NR	(<10U)	(<10U)
Dibenzo(a,h)anthracene	390J	(<460U)	NR	(<10U)	(<10U)
Benzo(g,h,i)perylene	1,100	(<460U)	NR	(<10U)	(<10U)

NOTE: QT = Trip blank. Samples associated with QT-005 were analyzed under a separate sample delivery group shipped the same day.
QS = Equipment rinsate blank. Samples associated with QS-003 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 6 March 1998.
U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below concentration limit.
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 13 MARCH 1998 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-005 (μg/L)	QS-003 (SEEP) (μg/L)	QS-004 (SED) (μg/L)	QD-001 (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD SW-8260								
Acetone	(<5U)	(<5U)	19	(<13U)	(<5U)	(<5U)	(<5U)	4J
Methylene chloride	(<1U)	(<1U)	(<6U)	(<7U)	(<1U)	5	5	6
1,1,1-Trichloroethane	(<1U)	(<1U)	(<6U)	(<7U)	(<1U)	(<1U)	0.4J	(<1U)
TARGET ANALYTE LIST ELEMENTS BY EPA SERIES METHODS SW-846 6000/7000/9000 (μg/L)								
Aluminum	20,900	15,200	3,310	4,810	NR	(<56.0U)	(<56.0U)	(<56.0U)
Antimony	2.5B*	1.0B*	0.54B*	0.46B*	NR	(<1.0U)	(<1.0U)	1.4B*
Arsenic	4.6B*	4.1B*	3.3	2.4	NR	(<2.0U)	(<2.0U)	2.2B*
Barium	286	236	15.1B*	18.6B*	NR	(<6.0U)	(<6.0U)	(<4.0U)
Beryllium	(<0.20U)	(<0.20U)	(<0.02U)	0.04B*	NR	(<0.20U)	(<0.20U)	(<0.20U)
Calcium	27,400	24,900	782	705	NR	(<22.0U)	(<22.0U)	22.8B*
Chromium	32.5	22.6	5.8	6.3	NR	(<4.0U)	(<4.0U)	(<4.0U)
Cobalt	7.5B*	(<7.0U)	3.2B*	2.8B*	NR	(<7.0U)	(<7.0U)	(<7.0U)
Copper	36.5	26.3	6.8	4.9	NR	(<5.0U)	(<5.0U)	(<5.0U)
Iron	211,000	173,000	8,570	7,420	NR	(<52.0U)	(<52.0U)	(<52.0U)
Lead	226	193	80.2	23.2	NR	1.2B*	1.3B*	1.1B*
Magnesium	6,820	5,410	975	1,430	NR	(<35.0U)	(<35.0U)	(<35.0U)
Manganese	852	733	47.9	70.7	NR	(<8.0U)	(<8.0U)	(<8.0U)
Mercury	(<0.10U)	(<0.10U)	(<0.05U)	0.05B*	NR	(<0.10U)	(<0.10U)	0.15B*
Nickel	25.3B*	24.8B*	6.1	5.5	NR	(<5.0U)	(<5.0U)	(<5.0U)
Potassium	4,950	4,170	408	641	NR	(<71.0U)	(<71.0U)	(<71.0U)
Selenium	7.6	7.9	0.86	0.60B*	NR	2.0B*	(<2.0U)	3.0B*
Silver	(<1.0U)	(<1.0U)	0.15B*	0.15B*	NR	(<1.0U)	(<1.0U)	(<1.0U)
Sodium	19,800	19,100	121	150	NR	(<81.0U)	7,210	93.8B*
Vanadium	53.2	38.2B*	14.4	10.3	NR	(<3.0U)	(<3.0U)	(<3.0U)
Zinc	349	263	36.3	21.5	NR	(<12.0U)	(<12.0U)	(<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 6 March 1998.
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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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

Project Name/Site Name: LTMP Bimonthly Gauging January 1998 Site 9

Project No. 29600.47

Weather/Temperature: rainy 40°

Date: 1/6/98

EA Personnel: SYC, BDA

Equipment: Solinst water level 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	*	*	Good		57.35	11.40	42.42	45.95
MW-NASB 070	Y Y	Y	*	*	Good		58.26	12.34	27.32	45.92
MW-NASB 071	Y Y	Y	*	*	Good		46.25	2.57	21.54	43.68
MW-NASB 072	Y Y	Y	*	*	Good		49.81	9.35	14.63	40.46
MW-NASB 073	Y Y	N	*	*	lock tab on cap broke		51.71	8.75	32.12	42.96
MW-NASB 074	Y Y	Y	*	*	Good		51.68	9.86	27.12	41.82
MW-NASB 075	Y Y	Y	*	*	Good		54.91	13.51	21.22	41.40
MW-NASB 076	Y Y	Y	*	*	Good		52.79	11.38	19.94	41.41
MW-NASB 077	Y Y	Y	*	*	Good		58.89	16.42	37.29	42.47
MW-NASB 078	Y Y	Y	*	*	Good		53.74	10.94	14.93	42.80
MW-NASB 079	Y Y	Y	*	*	Good		58.15	12.27	18.92	45.88
MW-NASB 080	Y Y	Y	*	*	Good		58.51	11.71	19.04	46.80
MW-NASB 081	Y Y	Y	*	*	Good		58.22	11.43	18.85	46.79

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

* unable to do VOC readings due to rain

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Bimonthly Gauging January 1998 Building 95

Project No. 29600.47

Weather/Temperature: rainy, 40°

Date: 1/6/98

EA Personnel: BDA, SYC

Equipment: Solinst water level 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 065	Y Y	Y	*	*	Good		74.29	4.67	15.50	69.62
MW-NASB 066	Y Y	Y	*	*	Good		78.79	5.45	19.79	73.34
MW-NASB 067	Y Y	Y	*	*	Good		74.30	4.60	15.00	69.70
MW-NASB 068	Y Y	Y	*	*	Good		74.86	5.49	15.00	69.37

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

* unable to do VOC readings due to rain

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Bimonthly Gauging January Site 7

Project No. 29600.47

Weather/Temperature: rainy, 40°

Date: 1/6/98

EA Personnel: SYC, BDA

Equipment: Solinst water level 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 091	Y Y	Y	*	*	Good		76.29	15.81	20.54	60.48
MW-NASB 092	Y Y	Y	*	*	Good		77.24	7.97	12.40	69.27
MW-NASB 093	Y Y	Y	*	*	Good		77.67	7.91	18.95	69.76
MW-NASB 094	Y Y	Y	*	*	Good		77.30	7.98	12.40	69.32
MW-NASB 095	Y Y	Y	*	*	Good		79.15	9.62	16.88	69.53
MW-NASB 096	Y Y	Y	*	*	Good		73.56	5.51	11.00	68.05

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

* unable to use PID due to rain

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Bimonthly Gauging January 1998 Old Fuel Farm	Project No. 29600.47
Weather/Temperature: rainy, 40°	Date: 1/6/98
EA Personnel: SYC, BDA	Equipment: Solinst interface meter

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm) Air Ambient	VOCs Concentration (ppm) Well Mouth	Casing/Seal Condition	Protective Casing Elevation (ft MSL)	PVC Casing Elevation (ft MSL)	Depth to Water (ft)	Depth to LNAPL (ft MSL)	LNAPL Thickness (ft MSL)	Measured Well Depth (ft)	Water Table Elevation[a] (ft MSL)
MW-NASB 205	Y Y	Y	*	*	Good		71.39	7.28			9.50	64.11
MW-NASB 206	Y Y	Y	*	*	Good		59.01	5.23			11.30	53.78
MW-NASB 207	Y Y	Y	*	*	Good		66.22	6.22			17.65	60.00
MW-NASB 208	Y Y	Y	*	*	Good		74.70	11.42			13.00	63.28
MW-NASB 209	Y Y	Y	*	*	Good		75.29	8.38			11.45	66.91
MW-NASB 210	Y Y	Y	*	*	Good		77.55	8.25			16.20	69.30
MW-NASB 211	Y Y	Y	*	*	Good		75.55	7.93			9.88	67.62
MW-NASB 213	Y Y	Y	*	*	Good		76.81	7.55			11.57	69.26
MW-NASB 051	Y Y	Y	*	*	Good		73.20	5.62			16.15	67.58
MW-NASB 049	Y Y	Y	*	*	Good		66.97	5.81			12.23	61.16
MW-NASB 058	Y Y	Y	*	*	Good		69.80	6.22			16.30	63.58
MW-NASB 043	Y Y	Y	*	*	Good		73.88	DRY			9.00	———
MW-NASB 061R	Y Y	Y	*	*	Good		75.52	5.09			12.90	70.43
MW-NASB 044	Y Y	Y	*	*	Good		73.18	3.59			15.32	69.59
MW-NASB 002	Y Y	Y	*	*	Good		80.70	9.35			16.80	71.35

(a) Based on an assumed specific gravity of 0.___ for LNAPL.

NOTE: LNAPL = Light, non-aqueous phase liquid; MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile organic compounds.

* Unable to do VOC readings due to rain

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EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Bimonthly Gauging January 1998 Old Fuel Farm	Project No. 29600.47
Weather/Temperature: rainy, 40°	Date: 1/6/98
EA Personnel: SYC BDA	Equipment: Solinst interface meter

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm)		Casing/Seal Condition	Protective Casing Elevation (ft MSL)	PVC Casing Elevation (ft MSL)	Depth to Water (ft)	Depth to LNAPL (ft MSL)	LNAPL Thickness (ft MSL)	Measured Well Depth (ft)	Water Table Elevation[a] (ft MSL)
			Air Ambient	Well Mouth								
MW-NASB 056R	Y Y	Y	*	*	Good		75.28	blocked			14.50	—
MW-NASB 054	Y Y	Y	*	*	Good		75.49	6.74			16.15	68.75

(a) Based on an assumed specific gravity of 0.___ for LNAPL.

NOTE: LNAPL = Light, non-aqueous phase liquid; MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile organic compounds.

* unable to do VOC readings due to rain

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EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Event 11 March 1998 Site 9	Project No. 29600.47
Weather/Temperature: Sunny, 50°	Date: ~~3/4/98~~ 3/3/98
EA Personnel: KR, SP	Equipment: Slope indicator, TVA-1000

Well N .	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	0.0	Good		57.35	10.76	42.42	46.59
MW-NASB 070	Y Y	Y	0.0	0.0	Good		58.26	21.97	27.32	36.29
MW-NASB 071	Y Y	Y	0.0	0.0	Good		46.25	2.45	21.54	43.80
MW-NASB 072	Y Y	Y	0.0	0.0	Good		49.81	8.98	14.63	40.83
MW-NASB 073	Y Y	N	0.0	0.0	Good		51.71	8.26	32.12	43.45
MW-NASB 074	Y Y	Y	0.0	0.0	Good		51.68	9.42	27.12	42.26
MW-NASB 075	Y Y	Y	0.0	0.0	Good		54.91	13.10	21.22	41.81
MW-NASB 076	Y Y	Y	0.0	0.0	Good		52.79	10.99	19.94	41.80
MW-NASB 077	Y Y	Y	0.0	0.0	Good		58.89	15.92	37.29	42.97
MW-NASB 078	Y Y	Y	0.0	0.0	Good		53.74	9.04	14.93	44.70
MW-NASB 079	Y Y	Y	0.0	0.0	Good		58.15	11.37	18.92	46.78
MW-NASB 080	Y Y	Y	0.0	0.0	Good		58.51	10.69	19.04	47.82
MW-NASB 081	Y Y	Y	0.0	0.0	Good		58.22	10.45	18.85	47.77

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

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Event 11 March 1998 Building 95

Project No. 29600.47

Weather/Temperature: Sunny, 50°

Date: 3/2/98

EA Personnel: SYC, MDC

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 065	Y Y	Y	0	0	Good		74.29	2.85	15.50	71.44
MW-NASB 066	Y Y	Y	0	0	Good		78.79	6.85	19.79	71.94
MW-NASB 067	Y Y	Y	0	0	Good		74.30	3.00	15.00	71.30
MW-NASB 068	Y Y	Y	0	0	Good		74.86	3.90	15.00	70.96

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

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Event 11 March 1998 Site 7	Project No. 29600.47
Weather/Temperature: Sunny, 50°	Date: 3/2/98
EA Personnel: SYC MDC	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 091	Y Y	Y	0	0	Good		76.29	14.45	20.54	61.84
MW-NASB 092	Y Y	Y	0	0	Good		77.24	4.78	12.40	72.46
MW-NASB 093	Y Y	Y	0	0	Good		77.67	5.00	18.95	72.67
MW-NASB 094	Y Y	Y	0	0	Good		77.30	4.95	12.40	72.35
MW-NASB 095	Y Y	Y	0	0	Good		79.15	6.52	16.88	72.63
MW-NASB 096	Y Y	Y	0	0	Good		73.56	3.03	11.00	70.53

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

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Event 11 March 1998 Old Fuel Farm	Project No. 29600.47
Weather/Temperature: Sunny, 50°	Date: 3/2/98
EA Personnel: KC, SAP, MDC, SYC	Equipment: Solinst interface meter, TVA-1000

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm)		Casing/Seal Condition	Protective Casing Elevation (ft MSL)	PVC Casing Elevation (ft MSL)	Depth to Water (ft)	Depth to LNAPL (ft MSL)	LNAPL Thickness (ft MSL)	Measured Well Depth (ft)	Water Table Elevation[a] (ft MSL)
			Air Ambient	Well Mouth								
MW-NASB 205	Y	Y	0	0	Good		71.39	6.85	ND	ND	9.90	64.54
MW-NASB 206	Y	Y	0	0	Good		59.01	4.68	ND	ND	11.30	54.33
MW-NASB 207	Y	Y	0	0	Good		66.22	5.70	ND	ND	17.65	60.52
MW-NASB 208	Y	Y	0	0	Good		74.70	9.60	ND	ND	13.00	65.10
MW-NASB 209	Y	Y	0	0	Good		75.29	7.63	ND	ND	11.45	67.66
MW-NASB 210	Y	Y	0	0	Good		77.55	7.02	ND	ND	16.20	70.53
MW-NASB 211	Y	Y	0	0.22	Good		75.55	7.00	ND	ND	9.88	68.53
MW-NASB 213	Y	Y	0	0.15	Good		76.81	5.99	ND	ND	11.57	70.82
MW-NASB 051	Y	Y	0	0	Good		73.20	3.86	ND	ND	16.15	69.34
MW-NASB 049	Y	Y	0	0	Good		66.97	5.56	ND	ND	12.23	61.41
MW-NASB 058	Y	Y	0	0	Good		69.80	8.78	ND	ND	16.30	61.02
MW-NASB 043	Y	Y	0	0.54	Good		73.88	6.74	ND	ND	9.00	67.14
MW-NASB 061R	Y	Y	0	0	Good		75.52	3.70	ND	ND	12.90	71.82
MW-NASB 044	Y	Y	0	0	Good		73.18	8.88	ND	ND	15.32	64.30
MW-NASB 062	Y	Y	0	0	Good		80.70	7.75	ND	ND	16.80	72.95

(a) Based on an assumed specific gravity of 0.___ for LNAPL.

NOTE: LNAPL = Light, non-aqueous phase liquid; MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile rganic compounds. ND = not detected

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name/Site Name: LTMP Event 11 March 1998 Old Fuel Farm	Project No. 29600.47
Weather/Temperature: Sunny, 50°	Date: 3/2/98
EA Personnel: KC, SAP	Equipment: Solinst interface meter, TVA-1000

Well No.	Labeled/ Capped	Well Locked	VOCs Concentration (ppm)		Casing/Seal Condition	Protective Casing Elevation (ft MSL)	PVC Casing Elevation (ft MSL)	Depth to Water (ft)	Depth to LNAPL (ft MSL)	LNAPL Thickness (ft MSL)	Measured Well Depth (ft)	Water Table Elevation[a] (ft MSL)
			Air Ambient	Well Mouth								
MW-NASB 056R	Y	Y	—	—	Blocked		75.28	—	—	—	14.50	—
MW-NASB 054	Y	Y	0	0	Good		75.49	5.32	ND	ND	16.15	70.17

(a) Based on an assumed specific gravity of 0.___ for LNAPL.

NOTE: LNAPL = Light, non-aqueous phase liquid; MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile rganic compounds. ND - not detected

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	Project Number:	29600.97/7501
Well ID:	MW-NASB-069	Well Lock Status:	locked
Well Condition:	good	Weather:	sunny, mild, 40°F

Gauge Date:	03/17/98	Gauge Time:	0845
Sounding Method:	Slope indicator	Measurement Ref:	top of PVC
Stick Up/Down (ft):	2.45	Well Diameter (in.):	2"

Purge Date:	03/17/98	Purge Time:	0849
Purge Method:	low flow	Field Personnel:	KR / JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	42.42	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	9.92	C. Well Volume (L)	19.66
E. Liquid Depth (ft) (A-B)	32.50	E. Three Well Volumes	58.98

Parameter	Beginning	1	2	3	4	5
Time (min.)	0853	0856	0859	0902	0905	0908
Depth to Water (ft)	9.92	10.02	10.03	10.03	10.02	10.02
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	1.2L	2.1L	3.0L	3.9L	4.8L	5.7L
pH	5.72	5.93	6.00	6.02	6.04	6.05
Temperature (°C)	12.53	13.80	14.40	14.63	14.92	15.02
Conductivity (μmhos/cm)	291	312	319	320	322	325
Dissolved Oxygen (mg/L)	2.86	3.89	2.71	2.65	2.35	1.94
Turbidity (NTU)	18	15	8	7	6	3
eH (mV)	86	80	78	77	76	76

Total Quantity of Water Removed (L):	11.4L		
Samplers:	KR / JH	Sampling Time (Start/End):	0925 / 0927
Sampling Date:	~~03~~ 03/17/98	Decontamination Fluids Used:	DI Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl
Sample Bottle IDs:	BN-11-S9-MW006		
Sample Parameters:	VOCs by 8260		

Comments and Observations: * Containerized 11.4L of purge water, and ran thru treatment plant.

pH check ✓

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 29600.47/7501 Date: 03/17/98
Well ID: MW-NASB-069 Field Personnel: KR/JH

Parameter	6	7	8	9	10	11
Time (min.)	0911	0914	0917	0920	0923	
Depth to Water (ft)	10.02	10.02	10.02	10.02	10.02	
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	
Volume Purged (gal)	6.6L	7.5L	8.4L	9.3L	10.2L	
pH	6.05	6.06	6.06	6.07	6.07	
Temperature (°C)	15.08	15.16	15.22	15.29	15.38	
Conductivity (μmhos/cm)	327	327	328	331	331	
Dissolved Oxygen (mg/L)	1.75	2.05	1.90	1.86	1.80	
Turbidity (NTU)	3	3	1	1	1	
eH (mV)	76	75	75	74	74	

Parameter	12	13	14	15	16	17
Time (min.)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
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	Project Number:	29600.47.17501
Well ID:	MW-NASB-071	Well Lock Status:	locked
Well Condition:	good	Weather:	overcast, cold, 35°F

Gauge Date:	03/16/98	Gauge Time:	1458
Sounding Method:	slope indicator	Measurement Ref:	top of PVC
Stick Up/Down (ft):	2.80	Well Diameter (in.):	2"

Purge Date:	03/16/98	Purge Time:	1503
Purge Method:	low flow	Field Personnel:	KR/JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	21.54	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	1.66	C. Well Volume (L)	12.03
E. Liquid Depth (ft) (A-B)	19.88	E. Three Well Volumes	36.09

Parameter	Beginning	1	2	3	4	5
Time (min.)	1506	1509	1512	1515	1518	1521
Depth to Water (ft)	1.66	2.14	2.17	2.19	2.19	2.19
Purge Rate (gpm)	1.6L	1.6L	1.6L	1.6L	1.6L	1.6L
Volume Purged (gal)	4.8L	9.6L	14.4L	19.2L	24.0L	28.8L
pH	6.08	6.17	6.20	6.21	6.21	6.22
Temperature (°C)	12.87	13.49	13.65	13.71	13.74	13.77
Conductivity (μmhos/cm)	245	246	245	243	246	244
Dissolved Oxygen (mg/L)	1.22	0.88	0.61	0.51	0.56	0.58
Turbidity (NTU)	36	9	1	0	0	0
eH (mV)	3	-1	-4	-6	-8	-9

Total Quantity of Water Removed (L):	60.8L		
Samplers:	KR/JH	Sampling Time (Start/End):	1538/1541
Sampling Date:	03/16/98	Decontamination Fluids Used:	DI Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl, HNO_3
Sample Bottle IDs:	BN-11-S9-MW004		
Sample Parameters:	VOCs by 8260, TAL metals by 6010		

Comments and Observations: * Containerized 60.8L of purge water, and ran thru treatment plant. * Control box was set @ lowest possible setting, the flow rate was 1.6L/min
pH check

EA Engineering, Science, and Technology

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

Site Name:	Site 9	Project Number:	29600.47/7501	Date:	03/16/98
Well ID:	MW-NASB-001	Field Personnel:	KR/JH		

Parameter	6	7	8	9	10	11
Time (min.)	1524	1527	1530	1533	1536	
Depth to Water (ft)	2.19	2.19	2.19	2.20	2.20	
Purge Rate (gpm)	1.6L	1.6L	1.6L	1.6L	1.6L	
Volume Purged (gal)	33.6L	38.4L	43.2L	48.0L	52.8L	
pH	6.21	6.21	6.21	6.21	6.21	
Temperature (°C)	13.82	13.84	13.85	13.88	13.90	
Conductivity (μmhos/cm)	247	244	243	242	241	
Dissolved Oxygen (mg/L)	0.58	0.59	0.59	0.58	0.59	
Turbidity (NTU)	0	0	0	0	0	
eH (mV)	-10	-11	-12	-13	-13	

Parameter	12	13	14	15	16	17
Time (min.)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
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	Project Number:	29600.47/7501
Well ID:	MW-NASB-072	Well Lock Status:	locked
Well Condition:	good	Weather:	P sunny, cold, 35°F

Gauge Date:	03/16/98	Gauge Time:	1410
Sounding Method:	slope indicator	Measurement Ref:	top of pvc
Stick Up/Down (ft):	2.25	Well Diameter (in.):	2"

Purge Date:	03/16/98	Purge Time:	1412
Purge Method:	low flow	Field Personnel:	KR / JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	14.63	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	8.80	C. Well Volume (L)	3.53
E. Liquid Depth (ft) (A-B)	5.83	E. Three Well Volumes	10.59

Parameter	Beginning	1	2	3	4	5
Time (min.)	1416	1420	1423	1426	1429	1432
Depth to Water (ft)	8.80	8.93	8.91	8.91	8.91	8.91
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	1.2L	2.4L	3.3L	4.2L	5.1L	6.0L
pH	6.07	6.25	6.30	6.33	6.32	6.32
Temperature (°C)	6.95	8.37	9.56	10.17	10.44	10.59
Conductivity (μmhos/cm)	66	75	100	105	106	107
Dissolved Oxygen (mg/L)	8.75	5.77	4.56	3.86	3.68	3.74
Turbidity (NTU)	78	10	5	2	1	0
eH (mV)	157	147	145	145	145	147

Total Quantity of Water Removed (L):	7.8L		
Samplers:	KR / JH	Sampling Time (Start/End):	1434 / 1438
Sampling Date:	03/16/98	Decontamination Fluids Used:	DI Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl, HNO3
Sample Bottle IDs:	BN-11-59-MW003		
Sample Parameters:	VOCs by 8260, TAL metals by 6010		

Comments and Observations: *Containerized 7.8L of water, and ran thru treatment plant.

*Collected duplicate sample here, BN-11-59-MWXD1

pH check ✓

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47/7501
Well ID:	MW-NASB-074	Well Lock Status:	locked
Well Condition:	good	Weather:	sunny, cool, 30°F

Gauge Date:	3/16/98	Gauge Time:	0935
Sounding Method:	Slope indicator	Measurement Ref:	Top of PVC
Stick Up/Down (ft):	1.90	Well Diameter (in.):	2"

Purge Date:	3/16/98	Purge Time:	0939
Purge Method:	low flow	Field Personnel:	KR/JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	27.12	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	9.12	C. Well Volume (L)	10.89
E. Liquid Depth (ft) (A-B)	18.00	E. Three Well Volumes	32.67

Parameter	Beginning	1	2	3	4	5
Time (min.)	0944	0948	0952	0956	1000	1004
Depth to Water (ft)	9.12	9.31	9.55	9.66	9.49	9.48
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	1.5L	2.7L	3.9L	5.1L	6.3L	7.5L
pH	6.27	5.77	5.35	5.84	6.12	6.25
Temperature (°C)	11.12	12.11	13.18	13.19	13.27	13.69
Conductivity (μmhos/cm)	239	227	213	217	229	232
Dissolved Oxygen (mg/L)	8.56	2.83	7.34	2.96	1.52	1.66
Turbidity (NTU)	215	216	213	473	356	129
eH (mV)	18	-12	27	35	24	23

Total Quantity of Water Removed (L):	34.5L		
Samplers:	KR/JH	Sampling Time (Start/End):	1132 / 1139
Sampling Date:	3/16/98	Decontamination Fluids Used:	Di Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl
Sample Bottle IDs:	BN-11-59-MW002		
Sample Parameters:	VOCs by 8260		

Comments and Observations: Turbidity kept increasing, everytime pump moved.

pH check ✓

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 29600.47/7501 Date: 03/16/98
Well ID: MW-NASB-074 Field Personnel: KR/JH

Parameter	6	7	8	9	10	11
Time (min.)	1008	1012	1016	1020	1024	1028
Depth to Water (ft)	9.48	9.48	9.48	9.48	9.48	9.62
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	8.7L	9.9L	11.1L	12.3L	13.5L	14.7L
pH	6.29	6.31	6.33	6.32	6.33	5.87
Temperature (°C)	13.71	13.84	14.10	13.97	13.94	13.77
Conductivity (μmhos/cm)	233	233	236	234	235	233
Dissolved Oxygen (mg/L)	1.29	1.46	0.98	0.92	0.87	0.57
Turbidity (NTU)	52	45	339	155	143	351
eH (mV)	22	21	12	17	15	20

Parameter	12	13	14	15	16	17 *
Time (min.)	1032	1036	1040	1044	1048	1051
Depth to Water (ft)	9.56	9.55	9.42	9.40	9.41	9.41
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	15.9L	17.1L	18.3L	19.5L	20.7L	21.6L
pH	6.16	6.22	6.24	6.29	6.26	6.28
Temperature (°C)	13.76	13.58	14.01	14.21	14.40	14.32
Conductivity (μmhos/cm)	232	231	230	233	235	234
Dissolved Oxygen (mg/L)	0.63	0.57	1.01	0.76	0.70	0.61
Turbidity (NTU)	55	66	27	23	22	217
eH (mV)	25	25	28	25	29	20

Comments and Observations: * pump moved in well, turbidity increased.

EA Engineering, Science, and Technology

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

Site Name: Site 9	Project Number: 29600.97.7501	Date: 03/16/98	
Well ID: MW-NASB-07	Field Personnel: KR/JH		

Parameter	6	7	8	9	10	11
Time (min.)	1055	1059	1103	1107	1111	1115
Depth to Water (ft)	9.41	9.41	9.41	9.44	9.44	9.44
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	22.8L	24.0L	25.2L	26.4L	27.6L	28.8L
pH	6.31	6.30	6.28	6.26	6.27	6.28
Temperature (°C)	14.26	14.14	14.12	14.21	14.07	14.05
Conductivity (μmhos/cm)	234	233	234	233	233	234
Dissolved Oxygen (mg/L)	0.94	0.56	0.78	0.85	0.82	0.80
Turbidity (NTU)	201	200	60	41	47	36
eH (mV)	13	14	21	28	26	23

Parameter	12	13	14	15	16	17
Time (min.)	1119	1122	1125	1128	1131	
Depth to Water (ft)	9.44	9.44	9.44	9.44	9.44	
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	
Volume Purged (gal)	30.0L	30.9L	31.8L	32.7L	33.6L	
pH	6.29	6.28	6.27	6.26	6.27	
Temperature (°C)	14.09	14.15	14.08	14.10	14.4	
Conductivity (μmhos/cm)	232	232	230	231	230	
Dissolved Oxygen (mg/L)	0.76	0.92	0.87	0.90	0.88	
Turbidity (NTU)	13	10	8	6	6	
eH (mV)	21	23	25	27	26	

Comments and Observations:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47/7501
Well ID:	MW-NASB-075	Well Lock Status:	locked
Well Condition:	good	Weather:	sunny, cool, 30°F

Gauge Date:	3/16/98	Gauge Time:	0830
Sounding Method:	sight indicator	Measurement Ref:	Top of PVC
Stick Up/Down (ft):	2.00	Well Diameter (in.):	2"

Purge Date:	3/16/98	Purge Time:	0840
Purge Method:	low flow	Field Personnel:	KR, JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	21.22	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	12.65	C. Well Volume (L)	5.18
E. Liquid Depth (ft) (A-B)	8.57	E. Three Well Volumes	15.54

Parameter	Beginning	1	2	3	4	5
Time (min.)	0844	0848	0851	0855	0858	0901
Depth to Water (ft)	12.65	12.80	12.83	12.83	12.83	12.82
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	1.2L	2.4L	3.3L	4.5L	5.4L	6.3L
pH	6.26	6.26	6.24	6.23	6.22	6.21
Temperature (°C)	11.49	13.99	15.62	16.47	16.99	17.22
Conductivity (μmhos/cm)	182	217	219	220	222	224
Dissolved Oxygen (mg/L)	1.70	3.19	3.30	2.39	2.20	1.93
Turbidity (NTU)	35	24	19	14	9	6
eH (mV)	189	156	147	140	137	134

Total Quantity of Water Removed (L):	10.5L		
Samplers:	KR/JH	Sampling Time (Start/End):	0912/0915
Sampling Date:	3/16/98	Decontamination Fluids Used:	DI water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl
Sample Bottle IDs:	VOCs by 8260		
Sample Parameters:	BN-11-S9-MW001		

Comments and Observations: + Containerized 10.5L of purge water, and ran thru treatment plant.

pH check ✓

EA Engineering, Science, and Technology

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

Site Name:	Site 9	Project Number:	29600.97.7501	Date:	3/16/98
Well ID:	MW-NASB-075	Field Personnel:	KR / JH		

Parameter	6	7	8	9	10	11
Time (min.)	0904	0907	0910			
Depth to Water (ft)	12.82	12.82	12.82			
Purge Rate (gpm)	0.3L	0.3L	0.3L			
Volume Purged (gal)	7.2L	8.1L	9.0L			
pH	6.21	6.20	6.20			
Temperature (°C)	17.42	17.69	17.84			
Conductivity (μmhos/cm)	226	226	225			
Dissolved Oxygen (mg/L)	1.60	1.58	1.68			
Turbidity (NTU)	6	4	3			
eH (mV)	132	128	126			

Parameter	12	13	14	15	16	17
Time (min.)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
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	Project Number:	29600.97/7501
Well ID:	MW-NASB-07G	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, mild, 40°F

Gauge Date:	03/17/98	Gauge Time:	0800
Sounding Method:	Slope indicator	Measurement Ref:	top of PVC
Stick Up/Down (ft):	2.00	Well Diameter (in.):	2"

Purge Date:	03/17/98	Purge Time:	0808
Purge Method:	low flow	Field Personnel:	KR/JH
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	19.94	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.79	C. Well Volume (L)	5.54
E. Liquid Depth (ft) (A-B)	9.15	E. Three Well Volumes	16.62

Parameter	Beginning	1	2	3	4	5
Time (min.)	0811	0814	0817	0820	0823	0826
Depth to Water (ft)	10.79	10.87	10.88	10.87	10.85	10.85
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	0.9L	1.8L	2.7L	3.6L	4.5L	5.4L
pH	6.06	6.06	6.06	6.05	6.05	6.04
Temperature (°C)	10.23	12.33	14.49	15.70	16.03	16.59
Conductivity (μmhos/cm)	201	211	220	223	225	227
Dissolved Oxygen (mg/L)	4.97	4.15	3.51	3.09	2.94	2.83
Turbidity (NTU)	2	0	0	0	0	0
eH (mV)	37	20	14	7	7	7

Total Quantity of Water Removed (L):	6.3L		
Samplers:	KR/JH	Sampling Time (Start/End):	0827/0829
Sampling Date:	03/17/98	Decontamination Fluids Used:	DI Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl
Sample Bottle IDs:	BN-11-59-MW005		
Sample Parameters:	VOCs by 8260		

Comments and Observations: * Containerized 6.3L of purge water, and ran thru treatment plant.

pH check ✓

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47.7501
Well ID:	MW-NASR-079	Well Lock Status:	Locked
Well Condition:	GOOD	Weather:	Sunny 40°

Gauge Date:	3/17/98	Gauge Time:	903
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.20	Well Diameter (in.):	2"

Purge Date:	3/17/98	Purge Time:	903
Purge Method:	Low Flow	Field Personnel:	SAP
Ambient Air VOCs (ppm):	0	Well Mouth VOCs (ppm):	0

WELL VOLUME

A. Well Depth (ft):	18.92	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.76	C. Well Volume (L)	4.94
E. Liquid Depth (ft) (A-B)	~~8.16~~ 8.16	E. Three Well Volumes	14.82

Parameter	Beginning	1	2	3	4	5
Time (min.)	903	908	~~90~~ 913	918	921	924
Depth to Water (ft)	10.86	10.92	10.92	10.92	10.92	10.95
Purge Rate (~~gpm~~) Lpm	0.3	0.3	~~3.0~~ 0.3	~~3.0~~ 0.3	~~3.0~~ 0.3	~~3.0~~ 0.3
Volume Purged (~~gal~~) L	0	1.5	3.0	4.5	6.0	7.5
pH	5.65	6.72	6.92	6.81	6.85	6.86
Temperature (°C)	11.32	11.91	14.46	13.28	14.44	14.79
Conductivity (μmhos/cm)	143	108	121	100	130	152
Dissolved Oxygen (mg/L)	1.23	0.39	0.54	1.99	1.56	1.59
Turbidity (NTU)	419	474	159	65.8	45.7	33.7
eH (mV)	78.2	14	-34.1	-27.5	-29.0	-33.5

Total Quantity of Water Removed (L):	30.5		
Samplers:	SAP	Sampling Time (Start/End):	1025/1028
Sampling Date:	3/17/98	Decontamination Fluids Used:	DI
Sample Type:	Grab	Sample Preservatives:	HCl, HNO3
Sample Bottle IDs:	BN-11-S9-MW007, BN-11-S9-MWXD2		
Sample Parameters:	VOC metals		

Comments and Observations: Duplicate Sample, BN-11-S9-MWXD2 collected here.

pH Test OK

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 29600.47.7501 Date: 3/17/98
Well ID: MW-NASB-079 Field Personnel: SAF

Parameter	6	7	8	9	10	11
Time (min.)	927	930	933	936	939	942
Depth to Water (ft)	10.97	10.97	10.97	10.97	10.97	10.97
Purge Rate (~~gpm~~) Lpm	0.3	0.3	0.3	0.3	0.3	0.3
Volume Purged (~~gal~~) L	9.0	10.5	12.0	13.5	15.0	16.5
pH	6.86	6.85	6.87	6.64	6.78	6.82
Temperature (°C)	14.72	14.72	14.64	14.05	14.22	14.44
Conductivity (μmhos/cm)	125	168	113	109	110	108
Dissolved Oxygen (mg/L)	1.69	1.80	1.84	3.47	2.40	2.22
Turbidity (NTU)	26	24	36	36	33	18 ~~31~~
eH (mV)	-31.2	-29.0	-36.2	-19.8	-20.3	-31

Parameter	12	13	14	15	16	17
Time (min.)	945	948	951	956 *	~~954~~ ~~955~~ 1000	1004
Depth to Water (ft)	10.97	10.97	10.97	10.97	10.97	10.97
Purge Rate (~~gpm~~) Lpm	0.3	0.3	0.3	0.3	0.2	0.2
Volume Purged (~~gal~~) L	18.0	19.5	21.0	22.5	22.5	24.5
pH	6.81	6.84	6.82	6.23	6.79	6.80
Temperature (°C)	14.34	14.63	14.22	14.64	15.53	15.39
Conductivity (μmhos/cm)	113	114	114	124	148	113
Dissolved Oxygen (mg/L)	2.26	2.30	2.47	2.83	2.31	2.33
Turbidity (NTU)	14	16	14	106	29	20
eH (mV)	-24	-33	-29	-24	-23	-31

Comments and Observations: *Had to stop pump to plug in lap top.

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 206.00.97.7561 Date: 3/17/92
Well ID: MW-NASB-079 Field Personnel: SAP

Parameter	6	7	8	9	10	11
Time (min.)	1007	1010	1013	1016	1019	1022
Depth to Water (ft)	10.97	10.97	10.97	10.97	10.97	10.97
Purge Rate (~~gpm~~) Lpm	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (~~gal~~) L	25.5	26.5	27.5	28.5	29.5	30.5
pH	6.80	6.86	6.77	6.78	6.77	6.77
Temperature (°C)	15.89	16.44	17.09	17.09	17.10	17.11
Conductivity (μmhos/cm)	122	132	166	160	163	164
Dissolved Oxygen (mg/L)	2.34	2.39	2.39	2.39	2.42	2.42
Turbidity (NTU)	13	15	15	15	15	15
eH (mV)	-31	-22	-22	-28	-26	-27

Parameter	12	13	14	15	16	17
Time (min.)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
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	Project Number:	29600.47/7501
Well ID:	MW-NASB-080	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, cool, 35°F

Gauge Date:	03/17/98	Gauge Time:	0945
Sounding Method:	Slope indicator	Measurement Ref:	Top of PVC
Stick Up/Down (ft):	2.05	Well Diameter (in.):	2"

Purge Date:	03/17/98	Purge Time:	1037
Purge Method:	low flow	Field Personnel:	KR/SP
Ambient Air VOCs (ppm):	0.0	Well Mouth VOCs (ppm):	0.0

WELL VOLUME

A. Well Depth (ft):	19.04	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.10	C. Well Volume (L)	5.41
E. Liquid Depth (ft) (A-B)	8.94	E. Three Well Volumes	16.23

Parameter	Beginning	1	2	3	4	5
Time (min.)	1040	1044	1047	1050	1053	1056
Depth to Water (ft)	10.10	10.32	10.35	10.29	10.31	10.31
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	0.9L	2.1L	3.0L	3.9L	4.8L	5.7L
pH	2.55	4.98	5.82	6.19	6.36	6.42
Temperature (°C)	8.47	10.61	12.35	13.68	14.00	14.03
Conductivity (μmhos/cm)	194	202	207	214	217	217
Dissolved Oxygen (mg/L)	4.38	4.74	4.26	4.01	3.51	3.10
Turbidity (NTU)	16	6	6	3	0	1
eH (mV)	176	125	84	51	35	26

Total Quantity of Water Removed (L):	22.8L		
Samplers:	KR/SP	Sampling Time (Start/End):	1150/1153
Sampling Date:	03/17/98	Decontamination Fluids Used:	DI Water
Sample Type:	Grab	Sample Preservatives:	1:1 HCl, HNO3
Sample Bottle IDs:	BN-11-S9-MW008		
Sample Parameters:	VOCs by 8260, TAL Metals by 6010		

Comments and Observations: * Containerized 22.8L of purge water, and ran thru treatment plant * Had to keep adjusting flow rate on pump to keep pumping 0.3L/min.

pH check ✓

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 29600.47/7501 Date: 03/07/98
Well ID: MW-NASB-080 Field Personnel: KR/SP

Parameter	6	7	8	9	10	11
Time (min.)	1059	1102	1105	1108	1112	1115
Depth to Water (ft)	10.21	10.25	10.22	10.20	10.19	10.19
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	6.6L	7.5L	8.4L	9.3L	10.5L	11.4L
pH	6.47	6.48	6.50	6.51	6.52	6.52
Temperature (°C)	13.90	14.99	16.25	17.18	17.66	18.47
Conductivity (μmhos/cm)	219	218	222	228	226	231
Dissolved Oxygen (mg/L)	2.99	4.50	4.61	3.30	3.48	3.38
Turbidity (NTU)	2	3	3	4	1	2
eH (mV)	18	11	9	-2	-4	-17

Parameter	12	13	14	15	16	17
Time (min.)	1118	1121	1124	1127	1130	1133
Depth to Water (ft)	10.19	10.19	10.19	10.19	10.19	10.19
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	0.3L
Volume Purged (gal)	12.3L	13.2L	14.1L	15.0L	15.9L	16.8L
pH	6.53	6.53	6.54	6.54	6.54	6.55
Temperature (°C)	18.97	19.28	19.07	18.91	18.59	18.55
Conductivity (μmhos/cm)	236	233	239	250	249	241
Dissolved Oxygen (mg/L)	3.90	2.91	1.97	2.20	1.88	1.60
Turbidity (NTU)	4	3	3	3	3	2
eH (mV)	-19	-21	-25	-29	-31	-30

Comments and Observations:

EA Engineering, Science, and Technology

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

Site Name: Site 9 Project Number: 29600.47/7501 Date: 03/17/98
Well ID: MW-NASB-080 Field Personnel: KR/SP

Parameter	6	7	8	9	10	11
Time (min.)	1136	1139	1142	1145	1148	
Depth to Water (ft)	10.08	10.09	10.09	10.09	10.09	
Purge Rate (gpm)	0.3L	0.3L	0.3L	0.3L	0.3L	
Volume Purged (gal)	17.7L	18.6L	19.5L	20.4L	21.3L	
pH	6.55	6.56	6.56	6.56	6.56	
Temperature (°C)	18.25	18.05	17.54	17.30	16.97	
Conductivity (μmhos/cm)	242	243	246	245	245	
Dissolved Oxygen (mg/L)	1.93	1.77	1.65	1.55	1.59	
Turbidity (NTU)	2	3	2	2	1	
eH (mV)	-30	-30	-31	-32	-34	

Parameter	12	13	14	15	16	17
Time (min.)						
Depth to Water (ft)						
Purge Rate (gpm)						
Volume Purged (gal)						
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:	MW-NASB081	Project Number:	29600.87.7501
Well ID:	Site 9	Well Lock Status:	Locked
Well Condition:	Good	Weather:	Sunny 40°

Gauge Date:	3/17/98	Gauge Time:	1305
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	1.91	Well Diameter (in.):	2"

Purge Date:	3/17/98	Purge Time:	1307
Purge Method:	Low Flow	Field Personnel:	SAP/KR
Ambient Air VOCs (ppm):	0	Well Mouth VOCs (ppm):	0

WELL VOLUME

A. Well Depth (ft):	18.85	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	9.82	C. Well Volume (L)	5.46
E. Liquid Depth (ft) (A-B)	9.03	E. Three Well Volumes	~~13.8~~ 16.38

Parameter	Beginning	1	2	3	4	5
Time (min.)	1307	1312	1317	1320	1323	
Depth to Water (ft)	9.89	9.89	9.87	9.87	9.78	
Purge Rate (~~gpm~~) Lpm	0.4	0.4	0.4	0.4	0.4	
Volume Purged (~~gal~~) L	0	2.0	4.0	5.2	6.4	
pH	5.23	6.18	6.34	6.35	6.37	
Temperature (°C)	13.90	14.03	15.62	15.68	15.67	
Conductivity (μmhos/cm)	284	292	302	303	305	
Dissolved Oxygen (mg/L)	5.57	5.78	4.38	4.38	~~5.9~~ 4.12	
Turbidity (NTU)	23	4	2	1	0	
eH (mV)	165	139	127	126	125	

Total Quantity of Water Removed (L):	6.4		
Samplers:	SAP	Sampling Time (Start/End):	~~1325~~ 1325/1328
Sampling Date:	3/17/98	Decontamination Fluids Used:	DI
Sample Type:	Grab	Sample Preservatives:	HCl HNO_3
Sample Bottle IDs:	BN-11-59-MW009 MS/MSD		
Sample Parameters:	VOC 8260 TAL Elements		
Comments and Observations:			

Appendix A.3

Field Record of Surface Water and Sediment Sampling Forms

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9	Project Number: 29600.47/7501
Sample Location ID: SW/Sed 010	Date: 3/13/98
Sampling Time: 0945-1000 ~~Start~~: 0945 (SW) ~~End~~: 1000 (Sed)	Sample Team Members: KR/JH

SURFACE WATER INFORMATION

Type of Surface Water:
- [x] Stream
- ( ) River
- ( ) Pond/Lake
- ( ) Seep

Water Depth and Sample Location 8" (ft)

Depth of Sample from Top of Water 6" (ft)

Equipment Used for Collection:
- [x] None, Grab into Bottle (dedicated jar)
- ( ) Bomb Sampler
- ( ) Pump _____

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

Water Quality Parameters
- [x] Temperature 4.17 °C
- [x] Conductivity 172 µmhs/cm
- [x] ph 6.58 units
- [x] Dissolved oxygen 8.72 mg/L
- [x] Turibidity 2 NTU
- [x] Eh 181 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
- [x] Deionized Water
- ( ) Liquinox Solution
- ( ) Hexane
- ( ) HNO_3 Solution
- [x] Potable Water
- ( ) None

Sample Observations:
- [x] Odor None
- [x] Color Light to medium brown
- ( ) _____

Field QC Data: [x] Field Duplicate Collected, Duplicate ID BN-11-S9-SDX01; [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
✓	✓		✓	0.1L	✓	BN-11-S9-SW001
✓		✓		24 oz	✓	BN-11-S9-SD001

NOTES/SKETCH

pH check ✓

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FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Site 9			Project Number: 29600.47/7501
Sample Location ID: LT-901			Date: 3/13/98
Sampling Time: 1030-1045	Start: 1030 SW	End: 1045 Sed	Sample Team Members: KR/JH

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 4" (ft) 1a

Depth of Sample from Top of Water 2" (ft)

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

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

Water Quality Parameters
(X) Temperature 4.96 °C
(X) Conductivity 136 µmhs/cm
(X) ph 6.52 units
(X) Dissolved oxygen 2.91 mg/L
(X) Turibidity 38 NTU
(X) Eh 167 mv

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

Field QC Data: (X) Field Duplicate Collected
Duplicate ID _____
(X) MS/MSD BN-11-S9-SWXD1 (X) No

Sample Location Sketch:
( ) Yes
( ) 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
(X) Deionized Water
( ) Liquinox Solution
( ) Hexane
( ) HNO_3 Solution
(X) Potable Water
( ) None

Sample Observations:
(X) Odor Organic odor
(X) Color Medium to dark brown
( ) _____

Field QC Data: (X) Field Duplicate Collected
Duplicate ID BN-11-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
✓	✓		✓	3.48L	✓	BN-11-S9-LT001
✓		✓		24oz	✓	BN-11-S9-LTSD1

NOTES/SKETCH

pH check ✓

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-5

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

B.4 ACCURACY B-6

B.4.1 Volatile Organic Compounds B-6
B.4.2 Semivolatile Organic Compounds B-6
B.4.3 Target Analyte List Metals B-7

B.5 COMPLETENESS B-8
B.6 FIELD QUALITY CONTROL BLANKS B-8
B.7 DUPLICATE FIELD SAMPLES B-10
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 16 aqueous samples (ground water, surface water, and leachate seep of which 3 are field duplicates) and 6 sediment samples collected from Site 9 (of which 2 are field duplicates). The laboratory was provided with 2 aqueous and 2 sediment sample delivery groups (SDG) which included 5 aqueous quality control samples (2 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 11. Data completeness was quantified by reviewing the number of usable results to the number of results reported.

For clarity, the following definitions are given 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 11 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	✓	✓J	✓	100% ✓J	86.7% ✓
	Metals	✓	✓B	✓	✓J	NA	✓	✓		
	BNAs	✓	✓B	✓	✓J	✓	✓J	✓J		
Sediment Matrix	VOA	✓	✓B	✓	✓J	✓	✓J	✓		
	Metals	✓	✓B	✓	✓J	NA	✓J	✓		
	BNAs	✓J	✓B	✓J	✓J	✓	✓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 organic and inorganic compounds and 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 (Section 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, and 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. The holding times were met for all method and sample matrixes with the exception of semivolatile organic analyses for SED-10 and SED-10DUP. The following table summarizes the affected samples:

Sample	Method Holding Time for SVOCs	Exceedance of Acceptance Criteria
SED-10	7 days	3 days
SED-10 DUP	7 days	3 days

None of the holding time exceedances were excessive, therefore, the usability of the data is unaffected. However, the concentrations of detected compounds (naphthalene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthracene, carbazole, fluoranthane, pyrene, benzo[a]anthracene, chrysene, bis[2-ethylhexyl]phthalate, benzo[b]fluoranthene, benzo[k]fluroethane, benzo[a]pyrene, indeno[1,2,3-c,d]pyrene, dibenzo[a,h]anthracene, and benzo[g,h,i]perylene) in sample SED-10 should be considered biased low estimates. In sample SED-10 DUP, concentrations of detected compounds (phenanthrene, fluoranthene, pyrene, and benzo[a]pyrene) should be considered biased low estimates.

1. To use a microwave digestion versus water bath.

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 and LT-901. There were no surface water samples designated for MS/MSD analyses, therefore, surface water was not evaluated for 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 was within the established control limits, therefore, analytical precision was determined to be acceptable and the usability of the data is unaffected.

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 was performed on SED-10. 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 for SVOC were within the established control limits with the exception of acenaphthene (39 percent) and pyrene (54 percent). A potential high bias could be applied to the results for these two compounds.

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 LT-901 DUP sediment, 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, magnesium, potassium, and zinc 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, monitoring well sediment, and leachate sediment SMC recoveries were within established control limits. Both aqueous and sediment analyses accuracy as measured by SMC were determined to be acceptable, and analytical results are usable based on the review of analytical accuracy.

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 with the exception of monitoring well sample MW-NASB-081. The MS/MSD recoveries for chlorobenzene were 73 and 73 percent, respectively, which were nominally below the lower control limit (75 percent). This is not considered to be a significant bias. Chlorobenzene was not detected in the samples, therefore, the results are usable as reported. The sediment analyses accuracy as measured by MS/MSD recoveries was 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. There were no MS/MSD analyses performed on the surface water matrix. The aqueous results are usable as reported.

The sediment sample MS/MSD recoveries were within the established control limits, with the exception of acenaphthene (140 percent), 2-4 dinitrotoluene (97 and 101 percent), and pyrene (416 and 179 percent) in SED-10 which exceeded their respective control limits. The high recoveries of acenaphthene and pyrene suggest a potential high bias for these compounds. The low recovery for 2-4 dinitrotoluene suggests a potential low bias; however, since this compound was not detected in the sediment samples, the data are usable as reported.

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 exception of phenol (95 percent) which exceeded the upper control limit (91 percent). The high recovery of the single acid extractable compound is not supported by the other similar acid compounds, however, it is indicative of a possible high bias for this compound.

The solid LCS recoveries were within established control limits with the exception of 1,2,4-trichlorobenzene (40 percent) which exceeded the lower control limit (50 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.

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. The recoveries of the leachate seep sample were compliant. All 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 (70 percent) and lead (71.1 percent) which were below the lower control limit of 75 percent. Therefore, analytical results for antimony and lead 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

Thirteen of the planned 15 aqueous field samples were collected, resulting in a field completeness level of 86.7 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, surface water and sediment sampling at sample stations SW/SED-915, SW/SED-916, SW/SED-919, and SW/SED-922 were suspended indefinitely.

The field quality control blanks (e.g., trip blanks) were collected at the proper frequency. A total of 2 trip blanks were collected for Site 9. There were 2 rinsate blanks collected: 1 associated with the sediment samples and 1 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. Usable analytical data were available for all analytes/compounds for all field samples, therefore, total analytical completeness is 100 percent.

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 2 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.

Trip blanks associated with Site 9 were analyzed for VOC. The results of the 2 trip blanks are shown in the following table:

Compounds	Units	QT-005	QT-006
Acetone	μg/L	(<5U)	4JB

NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below detection limit.
B = Method blank contamination.

The trip blank contamination noted in QT-006 did not affect the usability of any data as acetone was not detected in the associated samples. The data user should note that the method blank associated with Sample QT-006 contained acetone at a concentration of 5 μg/L. Therefore, the result for acetone in Sample QT-006 should be considered a false-positive.

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 (Equipment Rinsate)	QS-004 (Surface Water Rinsate)	QD-001 (Source Water)
1,1,1-Trichloroethane	μg/L	(<1U)	0.4J	(<1U)
Methylene chloride	μg/L	5	5	6
Acetone	μg/L	(<5U)	(<5U)	4J
Antimony	μg/L	(<1.0U)	(<1.0U)	1.4B*
Arsenic	μg/L	(<2.0U)	(<2.0U)	2.2B*
Calcium	μg/L	(<22.0U)	(<22.0U)	22.8B*
Lead	μg/L	1.2B*	1.3B*	1.1B*
Mercury	μg/L	(<0.1U)	(<0.1U)	0.15B*
Selenium	μg/L	2.0B*	(<2.0U)	3.0B*
Sodium	μg/L	(<81.0U)	7,210	93.8B*

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.

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

The analysis of TAL metals for the rinsate blank associated with Sample LT-901 sediment indicated the presence of the following contaminants: lead and sodium. Of these analytes, lead and sodium 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: sodium results have the potential to be false-positives; based on rinsate blank contamination, analytes calcium, mercury, selenium, 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 lead and calcium did not affect the usability of Sample LT-901 sediment as the concentrations of these analytes in the sample exceeded 5 times 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: lead and selenium. Both these analytes, lead and selenium, 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. Lead contamination did not affect the usability of Sample LT-901 SEEP as the analyte was detected at concentrations greater than 5 times the rinsate blank concentration. Analytes antimony, calcium, sodium, 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 calcium and sodium, which have a sample concentration greater than 5 times the source water concentration.

B.7 DUPLICATE FIELD SAMPLES

Field duplicate samples are used to evaluate the overall precision for both the field and laboratory, and the homogeneity of the sample matrix. Typically, these results have more variability than laboratory precision measurements with the extremes being noted in soil matrices. Based on EPA Region I criteria for evaluating field duplicates, the following guidelines were used to review the field duplicates taken during the sampling event. The overall precision of organic compounds was evaluated as the RPD (non-detects were defined as one-half the reporting limit) and were considered acceptable at an RPD of less than 30 percent for water samples and 50 percent for soil samples. Overall precision for inorganic analytes was evaluated by reviewing the difference of the field duplicate for analytes with concentrations less than 5 times the reporting limit (the difference cannot be greater than ±2 times the reporting limit for water samples or cannot be greater than ±4 times reporting limit for soil samples), and by the RPD (less than 30 percent for water samples and 50 percent for soil samples) for the analytes greater than 5 times the reporting limit. Non-detects were defined as one-half the reporting limit for difference measurements. The reporting limits used to evaluate the data are based on those presented in the QAPP.

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-072	MW-NASB-072 DUP	RPD %	Difference
1,2 Dichloroethane	µg/L	0.2J	0.2J	0	---
Vinyl chloride	µg/L	2	2	0	---
Aluminum	µg/L	255	177B*	NA	78
Barium	µg/L	6.5B*	(<4U)	NA	4.5
Calcium	µg/L	14,600	11,000	28	NR
Copper	µg/L	4.6B*	3.2B*	NA	1.4
Iron	µg/L	268	219	NA	49
Lead	µg/L	1.7B*	1.1B*	NA	0.6
Magnesium	µg/L	3,730	2,770	NA	960
Manganese	µg/L	91.5	76.5	18	NR
Potassium	µg/L	673	488	NA	185
Sodium	µg/L	5,860	4,720	NA	1,140

NOTE: J = Estimated concentration below detection limit.
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 5 times the CRDL and, therefore, the difference measurement is applied.
NR = Not required; the analyte concentration exceeds 5 times the CRDL and, therefore, the RPD was applied.

All precision requirements were met for the field duplicate analyses; the results are usable as reported.

Analyte	Units	MW-NASB-079	MW-NASB-079 DUP	RPD %	Difference
Aluminum	µg/L	1,830	2,360	25	NR
Antimony	µg/L	2.5B*	1.1B*	NA	1.4
Arsenic	µg/L	(<2.0U)	5.1B*	NA	4.1
Barium	µg/L	121B*	172B*	NA	51
Calcium	µg/L	13,400	17,300	25	NR
Chromium	µg/L	133	(<4.0U)	NA	**131**
Copper	µg/L	11.4	2.8B*	NA	8.6
Iron	µg/L	14,200	22,400	**45**	NR
Lead	µg/L	3.3	5.4	NA	2.1
Magnesium	µg/L	1,040	1,320	NA	280
Manganese	µg/L	68.4	80.8	NA	12.4
Nickel	µg/L	82.0	(<5.0U)	NA	79.5
Potassium	µg/L	1,500	2,000	NA	500
Selenium	µg/L	(<2.0U)	7.6	NA	6.6
Sodium	µg/L	3,450	5,170	NA	1,720
Zinc	µg/L	13.4B*	16.9B*	NA	3.5

NOTE: NR = Not required; the analyte concentration exceeds 5 times the CRDL and, therefore, the RPD was applied.
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 5 times the CRDL and, therefore, the difference measurement is applied.

All precision requirements were met for both organic and inorganic results for the duplicate analysis of Sample MW-NASB-079 with the exception of chromium and iron. The analytical results for chromium and 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 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	20,900	15,000	**33**	NR
Antimony	µg/L	2.5B*	1.0B*	NA	1.5
Arsenic	µg/L	4.6B*	4.1B*	NA	0.5
Barium	µg/L	286	236	NA	50
Calcium	µg/L	27,400	24,000	13	NR
Chromium	µg/L	32.5	22.6	NA	9.9
Cobalt	µg/L	7.5B*	(<7.0U)	NA	4
Copper	µg/L	36.5	26.3	NA	10.2
Iron	µg/L	211,000	173,000	20	NR
Lead	µg/L	226	193	NA	33
Magnesium	µg/L	6,820	5,410	23	NR
Manganese	µg/L	852	733	15	NR
Nickel	µg/L	25.3B*	24.8B*	NA	0.5
Potassium	µg/L	4,950	4,170	NA	780
Selenium	µg/L	7.6	7.9	NA	0.3
Sodium	µg/L	19,800	19,100	3	NR
Vanadium	µg/L	53.2	38.2B*	NA	15
Zinc	µg/L	349	263	28	NR

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

All precision requirements were met for both VOC and TAL metals with the exception of aluminum. The concentration of aluminum in LT-901 (seep) should be considered estimations of the true concentrations 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.

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	3,310	4,810	37	NR
Antimony	mg/Kg	0.54B*	0.46B*	NA	0.08
Arsenic	mg/Kg	3.3	2.4	NA	0.9
Barium	mg/Kg	15.1B*	18.6B*	NA	3.5
Beryllium	mg/Kg	(<0.02U)	0.04B*	NA	0.03
Calcium	mg/Kg	782	705	NA	77
Chromium	mg/Kg	5.8	6.3	NA	0.5
Cobalt	mg/Kg	3.2B*	2.8B*	NA	0.5
Copper	mg/Kg	6.8	4.9	NA	1.9
Iron	mg/Kg	8,520	7,420	14	NR
Lead	mg/Kg	80.2	23.2	NA	57
Magnesium	mg/Kg	975	1,430	NA	455
Manganese	mg/Kg	47.9	70.7	NA	22.8
Mercury	mg/Kg	(<0.05U)	0.05B*	NA	0.03
Nickel	mg/Kg	6.1	5.5	NA	0.6
Potassium	mg/Kg	408	641	NA	233
Selenium	mg/Kg	0.86	0.60	NA	0.26
Silver	mg/Kg	0.15	0.15	NA	0
Sodium	mg/Kg	121	150	NA	29
Vanadium	mg/Kg	14.4	10.3	NA	4.1
Zinc	mg/Kg	349	263	28	NR

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

All precision requirements were met for the field duplicate analyses; the results are usable as reported.

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

Analyte	Units	SED-010	SED-010 DUP	RPD %
Acetone	µg/Kg	19	(<14U)	**92**
Naphthalene	µg/Kg	120J	(<460U)	**63**
Acenaphthane	µg/Kg	460J	(<460U)	**67**
Dibenzofuran	µg/Kg	290J	(<460U)	22
Fluorene	µg/Kg	560	(<460U)	**83**
Phenanthrene	µg/Kg	3,800	190J	**181**
Anthracene	µg/Kg	590	(<460U)	**88**
Carbazole	µg/Kg	700	(<460U)	**101**
Fluoranthene	µg/Kg	4,400	320J	**173**
Pyrene	µg/Kg	4,200	270J	**176**
Benzo(a)anthracene	µg/Kg	1,800	120J	**175**
Chrysene	µg/Kg	3,100	(<460U)	**172**
Bis(2-ethylhexyl)phthalate	µg/Kg	270J	(<460U)	16
Benzo(b)fluoranthene	µg/Kg	3,100	200J	**176**
Benzo(k)fluoroethane	µg/Kg	1,100	(<460U)	**131**
Benzo(a)pyrene	µg/Kg	2,000	130J	**176**
Indeno(1,2,3-c,d)pyrene	µg/Kg	1,300	(<460U)	**140**
Dibenzo(a,h)anthracene	µg/Kg	390J	(<460U)	**52**
Benzo(g,h,i)perylene	µg/Kg	1,100	(<460U)	**72**

NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below detection limit.
Results in bold indicate an exceedance of the precision requirements.

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 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 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	0.1	11 JUL 97
Arsenic	mg/kg	0.1	11 JUL 97
Cadmium	mg/kg	0.1	11 JUL 97
Copper	mg/kg	0.1	11 JUL 97
Lead	mg/kg	0.1	11 JUL 97
Selenium	mg/kg	0.1	11 JUL 97
Silver	mg/kg	0.1	11 JUL 97
Thallium	mg/kg	0.1	11 JUL 97
METALS - ICP (SW-846 3050/6010A)			
Aluminum	mg/kg	6.5	11 JUL 97
Antimony	mg/kg	2.4	11 JUL 97
Arsenic	mg/kg	2.9	11 JUL 97
Barium	mg/kg	0.8	11 JUL 97
Beryllium	mg/kg	0.1	11 JUL 97
Boron	mg/kg	1.1	11 JUL 97
Cadmium	mg/kg	0.3	11 JUL 97
Calcium	mg/kg	3.9	11 JUL 97
Chromium	mg/kg	0.4	11 JUL 97
Cobalt	mg/kg	0.7	11 JUL 97
Copper	mg/kg	0.5	11 JUL 97
Iron	mg/kg	5.3	11 JUL 97
Lead	mg/kg	5.1	11 JUL 97
Lithium	mg/kg	0.2	11 JUL 97
Magnesium	mg/kg	3.5	11 JUL 97
Manganese	mg/kg	0.2	11 JUL 97
Molybdenum	mg/kg	0.5	11 JUL 97
Nickel	mg/kg	0.5	11 JUL 97

Parameter	Units	Method Detection Limit[a]	Date
METALS - ICP (SW-846 3050/6010A) (Continued)			
Potassium	mg/kg	7.1	11 JUL 97
Selenium	mg/kg	4.4	11 JUL 97
Silver	mg/kg	0.4	11 JUL 97
Sodium	mg/kg	8.1	11 JUL 97
Strontium	mg/kg	0.1	11 JUL 97
Thallium	mg/kg	5.6	11 JUL 97
Tin	mg/kg	3.4	11 JUL 97
Titanium	mg/kg	0.4	11 JUL 97
Vanadium	mg/kg	0.3	11 JUL 97
Zinc	mg/kg	1.2	11 JUL 97
METALS - TRACE ICP (SW-846 3050/6010A)			
Antimony	mg/kg	0.1	11 JUL 97
Arsenic	mg/kg	0.2	11 JUL 97
Barium	mg/kg	0.6	11 JUL 97
Beryllium	mg/kg	0.06	11 JUL 97
Cadmium	mg/kg	0.07	11 JUL 97
Chromium	mg/kg	0.07	11 JUL 97
Copper	mg/kg	0.2	11 JUL 97
Lead	mg/kg	0.1	11 JUL 97
Nickel	mg/kg	0.2	11 JUL 97
Selenium	mg/kg	0.2	11 JUL 97
Silver	mg/kg	0.1	11 JUL 97
Thallium	mg/kg	0.4	11 JUL 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
VOLATILE ORGANICS GC/MS - 5 mL PURGE - CAPILLARY COLUMN (SW-846 5030/8260)			
Acetone	µg/L	3.0	28 JAN 98
Allyl chloride	µg/L	0.4	28 JAN 98
Benzene	µg/L	0.3	28 JAN 98
Bromobenzene	µg/L	0.2	28 JAN 98
Bromochloromethane	µg/L	0.2	28 JAN 98
Bromodichloromethane	µg/L	0.4	28 JAN 98
Bromofluorobenzene	µg/L	0.3	15 NOV 96
Bromoform	µg/L	0.2	28 JAN 98
Bromomethane	µg/L	0.7	28 JAN 98
2-Butanone	µg/L	0.4	28 JAN 98
sec-Butylbenzene	µg/L	0.4	28 JAN 98
n-Butylbenzene	µg/L	0.4	28 JAN 98
tert-Butylbenzene	µg/L	0.3	28 JAN 98
Carbon disulfide	µg/L	0.4	28 JAN 98
Carbon tetrachloride	µg/L	0.4	28 JAN 98
Chlorobenzene	µg/L	0.2	28 JAN 98
Chloroethane	µg/L	0.6	28 JAN 98
2-Chloroethylvinyl ether	µg/L	0.9	28 JAN 98
Chloroform	µg/L	0.2	28 JAN 98
1-Chlorohexane	µg/L	0.2	28 JAN 98
Chloromethane	µg/L	0.7	28 JAN 98
2-Chlorotoluene	µg/L	0.3	28 JAN 98
4-Chlorotoluene	µg/L	0.3	28 JAN 98
Dibromochloromethane	µg/L	0.2	28 JAN 98
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.3	28 JAN 98
1,2-Dibromoethane (EDB)	µg/L	0.3	28 JAN 98
Dibromofluoromethane	µg/L	0.3	15 NOV 96
Dibromomethane	µg/L	0.5	28 JAN 98
1,2-Dichlorobenzene	µg/L	0.2	28 JAN 98
1,3-Dichlorobenzene	µg/L	0.3	28 JAN 98
1,4-Dichlorobenzene	µg/L	0.3	28 JAN 98
trans 1,4-dichloro2-Butene	µg/L	0.3	28 JAN 98
Dichlorodifluoromethane	µg/L	0.7	28 JAN 98
1,1-Dichloroethane	µg/L	0.4	28 JAN 98
1,2-Dichloroethane	µg/L	0.2	28 JAN 98
1,2-Dichloroehtane-d_4	µg/L	0.2	15 NOV 96
1,1-Dichloroethene	µg/L	0.6	28 JAN 98
cis-1,2-Dichloroethene	µg/L	0.2	28 JAN 98
trans-1,2-Dichloroethene	µg/L	0.5	28 JAN 98
1,2-Dichloropropane	µg/L	0.4	28 JAN 98
1,3-Dichloropropane	µg/L	0.2	28 JAN 98

Parameter	Units	Method Detection Limit[a]	Date
VOLATILE ORGANICS GC/MS - 5 mL PURGE - CAPILLARY COLUMN (SW-846 5030/8260) (Continued)			
2,2-Dichloropropane	µg/L	0.4	28 JAN 98
1,1-Dichloropropene	µg/L	0.4	28 JAN 98
cis-1,3-Dichloropropene	µg/L	0.4	28 JAN 98
trans-1,3-Dichloropropene	µg/L	0.3	28 JAN 98
Ethylbenzene	µg/L	0.3	28 JAN 98
Ethyl acetate	µg/L	0.3	28 JAN 98
Ethyl ether	µg/L	0.3	28 JAN 98
Ethyl methacrylate	µg/L	0.3	28 JAN 98
Hexachlorobutadiene	µg/L	0.4	28 JAN 98
Iodomethane	µg/L	0.3	28 JAN 98
Isobutyl alchol	µg/L	0.3	15 NOV 96
Isopropylbenzene	µg/L	0.4	28 JAN 98
p-Isopropyltoluene	µg/L	0.3	28 JAN 98
Methacrylonitrile	µg/L	0.6	28 JAN 98
Methylene chloride	µg/L	0.5	28 JAN 98
Methyl methacrylate	µg/L	0.2	28 JAN 98
4-Methyl-2-Pentanone	µg/L	1.2	28 JAN 98
Methyl tertiary-butyl ether	µg/L	0.3	28 JAN 98
Naphthalene	µg/L	0.2	28 JAN 98
Pentachloroethane	µg/L	0.2	28 JAN 98
n-Propylbenzene	µg/L	0.3	28 JAN 98
Styrene	µg/L	0.3	28 JAN 98
1,1,1,2-Tetrachloroethane	µg/L	0.2	28 JAN 98
1,1,2,2-Tetrachloroethane	µg/L	0.2	28 JAN 98
Tetrachloroethene	µg/L	0.3	28 JAN 98
Toluene-d_8	µg/L	0.3	15 NOV 96
Toluene	µg/L	0.5	28 JAN 98
1,2,3-Trichlorobenzene	µg/L	0.3	28 JAN 98
1,2,4-Trichlorobenzene	µg/L	0.4	28 JAN 98
1,1,1-Trichloroethane	µg/L	0.3	28 JAN 98
1,1,2-Trichloroethane	µg/L	0.4	28 JAN 98
Trichloroethene	µg/L	0.4	28 JAN 98
Trichlorofluoromethane	µg/L	0.7	28 JAN 98
1,2,3-Trichloropropane	µg/L	0.7	28 JAN 98
1,1,2-Trichlorotrifluoroethane	µg/L	0.4	28 JAN 98
1,2,3-Trimethylbenzene	µg/L	0.2	28 JAN 98
1,2,4-Trimethylbenzene	µg/L	0.3	28 JAN 98
1,3,5-Trimethylbenzene	µg/L	0.4	28 JAN 98
Vinyl chloride	µg/L	0.6	28 JAN 98
Vinyl acetate	µg/L	0.3	28 JAN 98
m&p-Xylenes	µg/L	0.6	28 JAN 98
o-Xylene	µg/L	0.2	28 JAN 98

Parameter	Units	Method Detection Limit[a]	Date
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	11 JUL 97
Arsenic	µg/L	1.0	11 JUL 97
Cadmium	µg/L	1.0	11 JUL 97
Copper	µg/L	1.0	11 JUL 97
Lead	µg/L	1.0	11 JUL 97
Selenium	µg/L	1.0	11 JUL 97
Silver	µg/L	1.0	11 JUL 97
Thallium	µg/L	1.0	11 JUL 97
METALS - ICP (SW-846 3010/6010)			
Aluminum	µg/L	65	11 JUL 97
Antimony	µg/L	24	11 JUL 97
Arsenic	µg/L	29	11 JUL 97
Barium	µg/L	8.0	11 JUL 97
Beryllium	µg/L	1.0	11 JUL 97
Boron	µg/L	11.0	11 JUL 97
Cadmium	µg/L	3.0	11 JUL 97
Calcium	µg/L	39.0	11 JUL 97
Chromium	µg/L	4.0	11 JUL 97
Cobalt	µg/L	7.0	11 JUL 97
Copper	µg/L	5.0	11 JUL 97
Iron	µg/L	53	11 JUL 97
Lead	µg/L	51	11 JUL 97
Lithium	µg/L	2.0	11 JUL 97
Magnesium	µg/L	35	11 JUL 97
Manganese	µg/L	2.0	11 JUL 97
Molybdenum	µg/L	5.0	11 JUL 97
Nickel	µg/L	5.0	11 JUL 97
Potassium	µg/L	71	11 JUL 97
Selenium	µg/L	44	11 JUL 97
Silicon	µg/L	105	11 JUL 97
Silver	µg/L	4.0	11 JUL 97
Sodium	µg/L	81.0	11 JUL 97
Strontium	µg/L	1.0	11 JUL 97
Thallium	µg/L	56	11 JUL 97
Tin	µg/L	34	11 JUL 97
Titanium	µg/L	4.0	11 JUL 97
Vanadium	µg/L	3.0	11 JUL 97
Zinc	µg/L	12	11 JUL 97

Parameter	Units	Method Detection Limit[a]	Date
METALS - TRACE ICP (SW-846 6010)			
Antimony	μg/L	1.0	11 JUL 97
Arsenic	μg/L	2.0	11 JUL 97
Barium	μg/L	6.0	11 JUL 97
Beryllium	μg/L	0.6	11 JUL 97
Cadmium	μg/L	0.6	11 JUL 97
Chromium	μg/L	0.7	11 JUL 97
Copper	μg/L	2.0	11 JUL 97
Lead	μg/L	1.0	11 JUL 97
Nickel	μg/L	2.0	11 JUL 97
Selenium	μg/L	2.0	11 JUL 97
Silver	μg/L	1.0	11 JUL 97
Thallium	μg/L	4.0	11 JUL 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 16-17 MARCH 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Analyte	Retention Time (min)	MW-NASB-069	MW-NASB-071	MW-NASB-072	MW-NASB-072 DUP	MW-NASB-074	MW-NASB-075
		MW-901	MW-903	MW-904	MW-904	MW-906	MW-907
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Unknown	11.80					2J	
Pentane,2,3,4-trimethyl	14.83					2JN	
Pentane,2,3,3-trimethyl	15.18					1JN	
Cyclotetresiloxane,octameth	21.88						

Analyte	Retention Time (min)	MW-NASB-076	MW-NASB-079	MW-NASB-079 DUP	MW-NASB-080	MW-NASB-081	
		MW-908	MW-914	MW-914	MW-915	MW0-916	QT-006
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)							
Unknown	11.80						
Pentane,2,3,4-trimethyl	14.83						
Pentane,2,3,3-trimethyl	15.18						
Cyclotetresiloxane,octameth	21.88		0.6JN				

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 SURFACE WATER SAMPLES COLLECTED ON 13 MARCH 1998 AT SITE 9 NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	Retention Time (min)	SW-010	QT-005	QS-004	QD-001
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)					
Unknown	5.54			0.5J	
Cyclotetrasiloxane, octameth	21.88		2JN		

NOTE: QT = Trip blank. Samples associated with QT-005 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 6 March 1998.
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.

TABLE C-3 SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS REPORTED IN SEDIMENT SAMPLES COLLECTED ON 13 MARCH 1998 AT SITE 9 NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	Retention Time (min)	SED-010	SED-010 DUP	QT-005	QS-003	QD-001
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)						
Unknown	5.56				0.6J	
Cyclotetrasiloxane, octameth	21.88			2JN		
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (μg/kg)						
2-Cyclohexen-1-o1	6.05		210JN			
2-Cyclohexen-1-one	6.72		220JN			
Cyclopentasiloxane,	9.37		190JN			
4H-Cyclopenta[def]phenanthre	18.21	720JN				
9,10-Anthracenedione	18.64	990JN				
Phytol	19.40	470JN				
11H-Benzo[a]fluorene	20.60	430JN				
C17H12 isomer	20.82	420J				
Unknown	23.10	490J				
Unknown	23.50	1,900J				
Unknown hydrocarbon	24.13	920J				
Unknown	24.43	3,000J				
Unknown hydrocarbon	24.86	5,900J				
C20H12 PAH isomer	25.13	1,400J				
Unknown hydrocarbon	25.68	430J				
Unknown	26.11	4,700J				
Unknown hydrocarbon	26.66	5,800J				
Unknown	26.74	2,800J				
Unknown hydrocarbon	29.14	740J				
.gamma.-Sitosterol	29.93	3,100JN				
Unknown	30.03	4,500J				

NOTE: QT = Trip blank. Samples associated with QT-005 were analyzed under a separate delivery group shipped on the same day.
QS = Source water blank. Samples associated with QS-003 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 6 March 1998.
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.

TABLE C-4 SUMMARY OF TENTATIVELY IDENTIFIED COMPOUNDS REPORTED IN LEACHATE STATION SEEP AND SEDIMENT SAMPLES COLLECTED ON 13 MARCH 1998 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-005 (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)									
Unknown	5.54							0.5J	
Unknown	5.56						0.6J		
Cyclotetrasiloxane,octameth	21.88					2JN			
Cyclotetrasiloxane,octameth	21.92		0.6JN						

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 6 March 1998.
J = Estimated concentration below detection limit.
JN = Presumptive identification; estimated values.
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-MW004	MW-NASB-071
S9-MW003	MW-NASB-072
S9-MWXD1	MW-NASB-072 (DUP)
S9-MW002	MW-NASB-074
S9-MW001	MW-NASB-075
S9-MW005	MW-NASB-076
S9-MW007	MW-NASB-079
S9-MWXD2	MW-NASB-079 (DUP)
S9-MW008	MW-NASB-080
S9-MW009	MW-NASB-081
Trip Blank	
S9-QT006	QT-006

980342 L13412

Company: EA Brunswick	Project Manager or Contact: Pete Nimmer Phone: 914-565-8100
Project No.: 2960047	Project Name: LTMP Event 11
Sample Storage Location: N6 / VOA	ATO Number:
Page ___ of ___	Job ID: 980428

Chain-of-Custody Record

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

Reports/Deliverables Only: Level 4D, Quattro Pro Summary Tables
Hardcopy Due 4/17/98, EDD Due 5/1/98

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 + Library Search	TAL Elements 6010/7000	EA Labs Accession Number	Remarks
03/16/98	0912	X		BN1 1 S9 MW001	3	X		~~9800~~ 9803383	Dave Brennan
03/16/98	1132	X		BN-11-S9-MW002	3	X		9803384	EAL-PS-DL4
03/16/98	1434	X		BN-11-S9-MW003	4	X	X	9803385	VOC 8260 plus library
03/16/98	1538	X		BN-11-S9-MW004	4	X	X	9803386	Search
03/16/98	—	X		BN-11-S9-MWXD1	4	X	X	9803387	
03/16/98	0912	X		BN-11-S9-QT006	3	X		9803388	TAL Elements refer to
03/17/98	0827	X		BN-11-S9-MW005	3	X		9803389	Table 7-1 in QAPP
03/17/98	0925	X		BN-11-S9-MW006	3	X		9803390	
03/17/98	1025	X		BN-11-S9-MW007	4	X	X	9803391	
03/17/98	1150	X		BN-11-S9-MW008	4	X	X	9803392	Temp blank in cooler
03/17/98	1325	X		BN-11-S9-MW009 MS/MSD	9	X		9803393	
03/17/98	1325	X		BN-11-S9-MW009 MS	2		X	↓	These samples
03/17/98	—	X		BN-11-S9-MWXD2	4	X	X	9803394	Start and end SDG#
									BN-11-S9-MW001
									L13501
									Summary Package to
									Sue Chase in Brunswick
									COC, Form I's, TICs
									COC000266
									MS/MSD on 9803393

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rubzyk	03/17/98 1345	Karen A. Rubzyk	03/17/98 1600		
Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time		
		Susan Alfonzo	3/18/98 10:15		

Sample Shipped by: (Circle): Fed. Ex. Puro. UPS
Other:
Air Bill Number: 8006372 65693

Cooler Temp.: 2-2 C | pH: ☐ Yes ☐ N | Comments: temp 2.2°C

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

EA.0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

100020

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MW006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803390

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5997.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	19	
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)	25	
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	0.3	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.

BN11S9MW006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803390

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5997.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803386

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5994.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

03005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803386

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5994.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030052

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03386

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11 -S9-MW004

Percent Solids: 0.0

Date Received: 03/18/98

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	131	B		P
7440-36-0	Antimony	2.4	B		P
7440-38-2	Arsenic	27.2			P
7440-39-3	Barium	10.6	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	10100			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	22200			P
7439-92-1	Lead	4.1			P
7439-95-4	Magnesium	4530			P
7439-96-5	Manganese	263			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2200			P
7782-49-2	Selenium	2.2	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	35600		pc 4/28/99	P
7440-28-0	Thallium	1.0	U	NW	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

040004

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803385

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5993.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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)	0.2	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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803385

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5993.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03385

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11-S9-MW003

Percent Solids: 0.0

Date Received: 03/18/98

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	255			P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	6.5	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	14600			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	4.6	B		P
7439-89-6	Iron	268			P
7439-92-1	Lead	1.7	B		P
7439-95-4	Magnesium	3730			P
7439-96-5	Manganese	91.5			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	673	B		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5860			P
7440-28-0	Thallium	1.0	U	NP 4/24/98	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
= "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

040003

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803387

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5995.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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)	0.2	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.

BN11S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803387

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5995.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030081

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03387

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11 -S9-MWXD1

Percent Solids: 0.0

Date Received: 03/18/98

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	177	B		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	11000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	3.2	B		P
7439-89-6	Iron	219			P
7439-92-1	Lead	1.1	B		P
7439-95-4	Magnesium	2770			P
7439-96-5	Manganese	76.2			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	488	B		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	4720			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

040005

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MW002

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803384

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5992.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	0.4	J
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

030025

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: BN11S9MW002

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803384

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5992.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	0.3	J
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803383

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5991.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030016

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803383

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5991.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803389

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5996.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030081

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803389

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5996.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	0.1	J

03008

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MW007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803391

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5998.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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.

BN11S9MW007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803391

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5998.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

03010

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03391

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11 -S9-MW007

Percent Solids: 0.0

Date Received: 03/18/98

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	1830			P
7440-36-0	Antimony	2.5	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	121	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	13400			P
7440-47-3	Chromium	133			P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	11.4			P
7439-89-6	Iron	14200			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	1040			P
7439-96-5	Manganese	68.4			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	82.0			P
7440-09-7	Potassium	1500			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	3450			P
7440-28-0	Thallium	1.0	U	N Authority	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	13.4	B		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

040006

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803394

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6007.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

03017

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803394

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6007.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030133

FORM I VOA

3/90

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03394

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11-S9-MWXD2

Percent Solids: 0.0

Date Received: 03/18/98

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	2360			P
7440-36-0	Antimony	1.1	B		P
7440-38-2	Arsenic	5.1	B		P
7440-39-3	Barium	172	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	17300			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	2.8	B		P
7439-89-6	Iron	22400			P
7439-92-1	Lead	5.4			P
7439-95-4	Magnesium	1320			P
7439-96-5	Manganese	80.8			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2000			P
7782-49-2	Selenium	7.6			P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	5170			P
7440-28-0	Thallium	1.0	U	N 4/20/99	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	16.9	B		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

040009

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW008

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803392

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6006.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	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	0.4	J
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW008

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803392

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6006.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03392

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11 -S9-MW008

Percent Solids: 0.0

Date Received: 03/18/98

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	137	B		P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	600			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	41400			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	64.4			P
7439-89-6	Iron	1440			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	2360			P
7439-96-5	Manganese	152			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	4150			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	8190			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	16.0	B		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

040007

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW009

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5999.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030123

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW009

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5999.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

030124

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03393

Laboratory: EA LABORATORIES

SDG No.: T03385

Matrix: WATER

Client ID: BN-11 -S9-MW009

Percent Solids: 0.0

Date Received: 03/18/98

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	83.2	B		P
7440-36-0	Antimony	1.4	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	27.0	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	42000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	52.0	U		P
7439-92-1	Lead	1.3	B		P
7439-95-4	Magnesium	2990			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	3750			P
7782-49-2	Selenium	3.4	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	22400			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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9QT006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803388

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5990.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	4	JB
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.

BN11S9QT006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803388

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5990.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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.

BN11S9MW006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803390

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5997.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec.. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803386

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5994.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803385

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5993.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803387

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5995.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW002

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803384

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5992.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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

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

Number TICs found: 2

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	11.80	2	J
2. 565-75-3	Pentane, 2,3,4-trimethyl-	14.83	2	JN
3. 560-21-4	Pentane, 2,3,3-trimethyl-	15.18	1	JN
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803383

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5991.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803389

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5996.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803391

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5998.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	21.88	0.6	JN
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CMW 4/17/98

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803394

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6007.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
BN11S9MW008

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803392

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6006.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW009

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5999.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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030125

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9QT006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803388

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5990.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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030073

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 Samples	
S9-SW001	SW-010
Trip Blank	
EP-QT005	QT-005
Equipment Rinsate Blank	
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

Chain-of-Custody Record

Company Name: EA Engineering

Project Manager or Contact: Pete Nimmer
Phone: 914 565-8100

Project No.: 29600.47

Project Name: LTMP Event 11

Sample Storage Location: J8

ATO Number:

Page of

Job ID: 980394.

EA Labs
19 Loveton Circle
Sparks, MD 21152
Telephone (410) 771-4920
FAX (410) 771-4407

Reports/Deliverables Only: Level 4D + Quattro Summary Table
Hardcopy Due: 4/13/98 EDD Due: 4/27/98

Parameters/Method Numbers for Analysis*

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 / preserved HCL	VOC 8260 / preserved Na_2SO_3	TAL Elements (6010)	EA Labs Accession Number	Remarks
3/13/98	1121	X		BN11EPR1001	4	X		X	9803088	Dave Brennan
3/13/98	1051	X		BN11EPR1002	3	X			9803089	VOC by 8260 plus library Search
3/13/98	1046	X		BN11EPR1003	3	X			9803090	
3/13/98	1028	X		BN11EPR1004	3	X			9803091	TAL Elements refer to
				~~BN11EPR1005~~		~~X~~		~~SAP~~	~~9803092~~	Table 7-1 QAPP (SW-846, 6010, 7470)
				~~BN11EPR1006~~		~~X~~		~~SAP~~	~~9803093~~	
3/13/98	1125	X		BN11EPTE001 MS/MSD	9		X	X	9803094	Temp blank in cooler
3/13/98	—	X		BN11EPTEXP1	4		X	X	9803095	
3/13/98	1028	X		BN11EPQT005	3	X			9803096	Samples on this COC are
3/13/98	1125	X		BN11EPTE001 MS/MSD	2			X	~~9803097~~	all included in one SDG
									9803094	# BN11EPR1001
										QC on 9803094
										9803094 and 9803095 VOCs
										are preserved w/ Na_2SO_3
										EAL-PS-064
										L13482
										CR0002589

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Sherry A Pullar	3/13/98 1343	Sherry A Pullar	3/13/98 1343		
Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Sample Shipped by: (Circle)	
		(1)	3/14/98 10:30	8000637265919	F d. Ex. Puro. UPS

Cooler Temp.: 2.2 °C pH: ☑ Yes ☐ No Comments:

Other:

Air Bill Number:

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

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

L13411, 980346

980394

Chain-of-Custody Record

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

EA Brunswick

Project Manager or Contact: Peter Nimmer
Phone: 914-565-8100

Project No.: 29600.47

Project Name: LTMPEVENT

Sample Storag Location: M9 NOT

ATO Number:

Page | of |

Job ID: 980346

Reports/Deliverables Only: 4D+Quattro summary tables Due 4/7/98 EDDS 4/21/98

LPM: DFB

Remarks: EAL-PS-064

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 plus library search	TAL Elements SW846 6010/7000	SVOC 8270 plus TIC	EA Labs Accession Number	Remarks
3/6/98	0705	X		BN11S1Q0001	5	X	X	X	9802614	Dave Brennan
3/6/98	0710	X		BN11S1QS001	3	X	X		9802615	
3/6/98	0715	X		BN11S1QS002	3	X	X		9802616	VOC 8260 plus library search
3/6/98	0840	X		BN11S1SW001	3	X	X		9802617	SVOC 8270 plus library search
3/6/98	1120	X		BN11S1SW002	3	X	X		9802618	TAL Elements refer to
3/6/98	1135	X		BN11S1SW003	3	X	X		9802619	Table 7-1 QAPP (SW846, 6010, 7470)
3/6/98	1145	X		BN11S1SW004	3	X	X		9802620	
3/6/98	1205	X		BN11S1SW005	3	X	X		9802621	Temp blank in cooler
3/6/98	1225	X		BN11S1SW006	3	X	X		9802622	
3/6/98	1245	X		BN11S1SW007MS/MSD	6	X	X	X	9802623	SDG# BN11S1QS001
3/6/98	—	X		BN11S1SWXQ1	3	X	X		9802624	Includes all Samples on
3/6/98	1300	X		BN11S1LTSW1	3	X	X		9802625	this COC
3/6/98	1405	X		BN11S1LTSW2	3	X	X		9802626	
3/6/98	1245	X		BN11S1SW007MS	2		X		~~9802627~~	e 3/7/98
3/6/98	—	X		BN11S1LTXQ1	3	X	X		9802628	Summary Package Forms
3/6/98	0705	X		BN11S1QTD02	2	X			9802629	and coc to Brunswick.
				MS/MSD for 9802623						Full Package send to
				9802627 skipped to match appropriate MS/MSD						Newburgh:
				sample. 3/7/98.						OOC000252
										L13411

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Ruchlyk	3/6/98 1430	Karen A. Ruchlyk	3/6/98 1700		
Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Sample Shipped by: (Circle)	
		[illegible]	3/7/98 1230	Fed. Ex. 8006372 6538	Puro. UPS

Cooler Temp.: 2.8° C pH: ☑ Yes ☐ No Comments: C-2

Other:

Air Bill Number:

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

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

L13409

12000

EA Engineering

Project Manager or Contact: Peter Nimmer
Phone (914) 565-8100

Project: 29600.47/7501/2192

Project Name: LTMP Event 11

Sample Storage Location: F8

ATO Number:

Page | of | Job ID: 980399

L13411, 980346

Parameters/Method Numbers for Analysis*

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260 + library search	TAL Elements SW846	SVOCs 8270 + TICs	EA Labs Accession Number	Remarks
03/13/98	0800	X		BN-11-S9-QS003	6	X	X	X	9803098	LPM: David Brennan
03/13/98	0810	X		BN-11-S9-QS004	4	X	X		9803099	EAL-PS-064
03/13/98	0945	X		BN-11-S9-SW001	3	X			9803100	VOCs by 8260
03/13/98	1030	X		BN-11-S9-LT001 MS/MSD	9	X			9803101	plus library search
03/13/98	—	X		BN-11-S9-SWXD1	4	X	X		9803102	
03/13/98	1030	X		BN-11-S9-LT001 MS	2		X		~~9803103~~ 9803101	TAL metals refer to Table D-1 in QAPP.
				MS/MSD on 9803101						SVOCs by 8270 plus library search
										All samples on this COC are SDG # BN-11-S9-QS003 (begins and ends)
				L13461						
									data found in report 980394	Tripblank BN-11-S9-QT001 included w/ VOC samples
				COC 0002583						Temp blank in cooler

Sampled by: (Signature) Karen A. Rudzy | Date/Time 3/13/98 1100 | Relinquished by: (Signature) Karen A. Rudzy | Date/Time 3/13/98 1600 | Received by: (Signature) | Date/Time

Relinquished by: (Signature) | Date/Time | Received by: (Signature) | Date/Time | Airbill Number: 8806372657 19

Cooler Temp: 2 °C | pH: ☐ Yes ☑ No | Comments: | 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

Chain of Custody Record

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

Report/Deliverables: Level III + Quattro Pro Summary Tables

Hardcopy due 4/13/98

EDDs Due 4/27/98

CC0001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803100

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5845.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	
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)	0.7	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.

BN11S9SW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803100

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5845.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

030173
3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	5	
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	0.4	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.

BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. – Date Analyzed: 3/15/98

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	4	J
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	6	
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. – Date Analyzed: 3/15/98

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

030017

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803100

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5845.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.				
10.				
11.				
12.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	21.88	2 ✓	JN
2.				
3.				
4.				
5.				
6.				
7.				
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28.				
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30.				

Cont 4/17/98

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.	Unknown	5.54	0.5	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

EPA SAMPLE NO.

BN11S1QD001

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: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. _____ Date Analyzed: 3/15/98

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.				
10.				
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030018

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	
EP-QT005	QT-005
Rinsate Blank	
S9-QS003	QS-003
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 Brunswick

Project Manager or Contact: Pete Nimmer
Phone: 914-565-8100

Project No.: 29600.47

Project Name: LTMP Event 11

Sample Storage Location: F8

ATO Number:

Page 1

Job ID: 980397

Reports/Deliverables Only: 4D + Quattro Pro Summary Tables
Hardcopy Due 4/13/98 EDD Due 4/27/98

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 + TICS	SVOC 8270 + TICS	EA Labs Accession Number	Remarks
03/13/98	1000			BN11S95D001 MS/MSD	4	X	X	9803106	Dave Brennan
03/13/98	—		X	BN11S95DXD1	2	X	X	9803107	EAL-PS-064
									VOC by 8260 plus library Search
									SVOC 8270 plus library Search
									Temp blank w/cooler.
									All samples on this COC included in SDG # BN11S95D001
									MS/MSD on 980310L
									L13480
									~~COC000~~ 2582

Sampled by: (Signature) Karen A. Ruby — Date/Time 03/13/98 1030

Relinquished by: (Signature) Karen A. Ruby — Date/Time 03/13/98 1600

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time 3/14/98 10:30

Sample Shipped by: (Circle) F.d. Ex. Puro. UPS

Other:

Air Bill Number: 8006372657196

Cooler Temp.: 2.4 C pH: ☐ Yes ☑ N Comments:

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

L13411, 980346

10000V

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

Chain-of-Custody Record

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

Company Name: EA Brunswick

Project Manager or Contact: Peter Nimmer
Phon: 914-565-8100

Project No.: 29600.47

Project Name: LTMPEVENT

Sample Storage Location: M9 NOT

ATO Number:

Page | of |

Job ID: 980346

Reports/Deliverables Only: 4D+Quattro summary tables Due 4/7/98 EDDS 4/21/98

LPM: DFB

Remarks: EAL-PS-064

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 plus library search	TAL Elements SW846 6010/7000	SVOC 8270 plus TIC	EA Labs Accession Number	Remarks
3/6/98	0705	X		BN11S1Q0001	5	X	X	X	9802614	Dave Brennan
3/6/98	0710	X		BN11S1QS001 3	[illegible]	X	X		9802615	
3/6/98	0715	X		BN11S1QS002 3	[illegible]	X	X		9802616	VOC 8260 plus library search
3/6/98	0840	X		BN11S1SW001	3	X	X		9802617	SVOC 8270 plus library search
3/6/98	1120	X		BN11S1SW002	3	X	X		9802618	TAL Elements refer to
3/6/98	1135	X		BN11S1SW003	3	X	X		9802619	Table 7-1 QAPP (SW846, 6010, 7470)
3/6/98	1145	X		BN11S1SW004	3	X	X		9802620	
3/6/98	1205	X		BN11S1SW005	3	X	X		9802621	Temp blank in cooler
3/6/98	1225	X		BN11S1SW006	3	X	X		9802622	
3/6/98	1245	X		BN11S1SW007 MS/MSD	6	X	[illegible]	KL	9802623	SDG# BN11S1Q0001
3/6/98	—	X		BN11S1SWXQ1	3	X	X		9802624	includes all samples on
3/6/98	1300	X		BN11S1LTSW1	3	X	X		9802625	this COC
3/6/98	1405	X		BN11S1LTSW2	3	X	X		9802626	
3/6/98	1245	X		BN11S1SW007 MS	2		X		~~9802627~~ 9802623	~~9802627~~ e 3/7/98
3/6/98	—	X		BN11S1LTXD1	3	X	X		9802628	Summary Package Forms
3/6/98	0705	X		BN11S1QTD02	2	X			9802629	and coc to Brunswick.
				MS/MSD low 9802623						Full Package send to
				9802627 skipped to match appropriate MS/MSD						Newburgh:
				sample 3/7/98						CC000 02521
										L13411

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rudzik	3/6/98 1430	Karen A. Rudzik	3/6/98 1700		
Received by: (Signature)	Date/Tim	Received by: (Signature)	Date/Time	Sample Shipped by: (Circle)	
		[illegible]	3/7/98 12:30	8006372656 38	Fed. Ex. Puro. UPS

Cooler Temp.: 2.8° C pH: ☑ Yes ☐ No Comments:

*NOTE: Please Indicate method number for analyses requested. This will help clarify any questions with laboratory technicians.

Other:

Air Bill Number:

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

L15409

120001

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: Pete Nimmer
Phone: 914 565-8100

Project No.: 29600.47

Project Name: LTMP Event 11

Sample Storage Location: J8

ATO Number:

Page of

Job ID: 980394.

Reports/Deliverables Only: Level 4D + Quattro Summary Table
Hardcopy Due: 4/13/98 EDD Due: 4/27/98

Parameter Method Numbers for Analysis*

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 / preserved HCL	VOC 8260 / preserved Na_2SO_3	TAL Elements 6010							EA Labs Accession Number	Remarks
3/13/98	1121	X		BN11EPR1001	4	X		X							9803088	Dave Brennan
3/13/98	1051	X		BN11EPR1002	3	X									9803089	VOC by 8260 plus library Search
3/13/98	1046	X		BN11EPR1003	3	X									9803090	
3/13/98	1028	X		BN11EPR1004	3	X									9803091	TAL Elements refer to
				~~BN11EPR1005~~		~~X~~		~~AP~~							~~9803092~~	Table 7-1 QAPP (SW-846, 6010, 7470)
				~~BN11EPR1006~~		~~X~~		~~AP~~							~~9803093~~	
3/13/98	1125	X		BN11EPTE001 MS/MSD	9		X	[redacted]							9803094	Templblank in cooler
3/13/98	—	X		BN11EPTEXP1	4		X	X							9803095	
3/13/98	1028	X		BN11EPQT005	3	X									9803096	Samples on this COC are
3/13/98	1125	X		BN11EPTE001 MS/MSD	2			X							~~9803097~~	all included in one SDG
															9803094	# BN11EPR1001
																QC on 9803094
																9803094 and 9803095 VOCs
																are preserved w/ Na_2SO_3
																EAL-PS-064
																L13482
																CR00002589

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Sherri A Pullar	3/13/98 1343	Sherri A Pullar	3/13/98 1343		
Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time		
		[signature]	3/14/98 10:30		

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

Other:

Air Bill Number: 8006037265919

Cooler Temp.: 2.2 °C pH: ☑ Yes ☐ No Comments:

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

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

L13411, 980346

980394

L13411, 980346

Company Name: EA Engineering	Project Manager or Contact: Peter Nimmer Phone (914) 565-8100
Project No. 29600.47/7501/2192	Project Name: LTMP Event 11
Sample Storage Location: F8	ATO Number:
Page of	Job ID: 980399

Chain of Custody Record

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

Report/Deliverables: Level IV + Quattro Pro Summary Tables
Hardcopy due 4/13/98
EDDs Due 4/27/98

Parameters/Method Numbers for Analysis*: VOCs 8260 + library search; TAL Elements SW846 6000/7000; SVOCs 8270 + TICS

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260 + library search	TAL Elements SW846 6000/7000	SVOCs 8270 + TICS	EA Labs Accession Number	Remarks
03/13/98	0800	X		BN-11-S9-QS003	6	X	X	X	9803098	LPM: David Brennan
03/13/98	0810	X		BN-11-S9-QS004	4	X	X		9803099	EAL-PS-064
03/13/98	0945	X		BN-11-S9-SW001	3	X			9803100	VOCs by 8260
03/13/98	1030	X		BN-11-S9-LT001 MS/MSD	9	X			9803101	plus library search
03/13/98	—	X		BN-11-S9-SWXD1	4	X	X		9803102	
03/13/98	1030	X		BN-11-S9-LT001 MS	2		X		~~9803103~~ 9803101	TAL metals refer
										to Table 7-1
										in QAPP.
										SVOCs by 8270
										plus library search
				MS/MSD Dup 9803101						
										All samples on this
										COC are SDG
										# BN-11-S9-QS003
										(begins and ends)
				L13481						
										Tripblank BN-11-S9-QT001
										Included w/ VOC samples
				COC 0002583						Temp blank in cooler

data found in report 980394

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rudzy	3/13/98 1100	Karen A. Rudzy	3/13/98 1600		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		[illegible]	3/14/98 10:30	8006372 65719	Fed Ex. Puro. UPS

Cooler Temp: 2 °C pH: ☐ Yes ☑ No Comments: Custody Seals Intact ☑ Yes ☐ No

Hand Carried
Other:

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

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

C0001

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SD001

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6295.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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	19	
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	15	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	15	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	15	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.

BN11S9SD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6295.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001

Lab Name: EA LABS Contract:

Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9114

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1,3-Dichlorobenzene	490	U
106-46-7	1,4-Dichlorobenzene	490	U
95-50-1	1,2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-oxybis(1-Chloropropane)	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-Di-n-propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
111-91-1	bis(2-Chloroethoxy)methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
120-82-1	1,2,4-Trichlorobenzene	490	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
59-50-7	4-Chloro-3-methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	490	U
208-96-8	Acenaphthylene	490	U
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	460	J
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	290	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9114

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	490	U
606-20-2	2,6-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	560	
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	3800	
120-12-7	Anthracene	590	
86-74-8	Carbazole	700	
84-74-2	Di-n-butyl phthalate	490	U
206-44-0	Fluoranthene	4400	
129-00-0	Pyrene	4700	
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)anthracene	1800	
117-81-7	bis(2-Ethylhexyl)phthalate	270	J
218-01-9	Chrysene	3100	
117-84-0	Di-n-octyl phthalate	490	U
205-99-2	Benzo(b)fluoranthene	3100	
207-08-9	Benzo(k)fluoranthene	1100	
50-32-8	Benzo(a)pyrene	2000	
193-39-5	Indeno(1,2,3-cd)pyrene	1300	
53-70-3	Dibenz(a,h)anthracene	390	J
191-24-2	Benzo(g,h,i)perylene	1100	

040015

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803107

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6298.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 29 Date Analyzed: 3/26/98

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	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.

BN11S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803107

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6298.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 29 Date Analyzed: 3/26/98

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
95-50-1	1,2-Dichlorobenzene	7	U
541-73-1	1,3-Dichlorobenzene	7	U
106-46-7	1,4-Dichlorobenzene	7	U

FORM I VOA

3/90

030022

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803107

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9090

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: 29 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/21/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	460	U
111-44-4	bis(2-Chloroethyl)ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-Di-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	bis(2-Chloroethoxy)methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
99-09-2	3-Nitroaniline	2400	U
83-32-9	Acenaphthene	460	U
51-28-5	2,4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	460	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803107

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9090

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: 29 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/21/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-phenylether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4,6-Dinitro-2-methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine	460	U
101-55-3	4-Bromophenyl-phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	190	J
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-n-butyl phthalate	460	U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	270	J
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(a)anthracene	120	J
117-81-7	bis(2-Ethylhexyl)phthalate	460	U
218-01-9	Chrysene	460	U
117-84-0	Di-n-octyl phthalate	460	U
205-99-2	Benzo(b)fluoranthene	200	J
207-08-9	Benzo(k)fluoranthene	460	U
50-32-8	Benzo(a)pyrene	130	J
193-39-5	Indeno(1,2,3-cd)pyrene	460	U
53-70-3	Dibenz(a,h)anthracene	460	U
191-24-2	Benzo(g,h,i)perylene	460	U

000055

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.

BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

030173

3/90

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	5	
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

030012

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN-11-S9-QS003

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9803098

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SB2B8833

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/17/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/05/98

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:

BN-11-S9-QS003

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9803098

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SB2B8833

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/17/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/05/98

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	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(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(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. – Date Analyzed: 3/15/98

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	4	J
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	6	
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.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. _ Date Analyzed: 3/15/98

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

030017

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S1QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9802614

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B7545

Level: (low/med) LOW Date Received: 03/07/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/11/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/01/98

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:

BN11S1QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9802614

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B7545

Level: (low/med) LOW Date Received: 03/07/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/11/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/01/98

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

040011

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SD001

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6295.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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.				
5.				
6.				
7.				
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9.				
10.				
11.				
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27.				
28.				
29.				
30.				

030023

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN11S9SD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9114

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 19

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 203-64-5----	4H-Cyclopenta[def]phenanthre	18.21	720	JN
2. 84-65-1-----	9,10-Anthracenedione	18.64	990	JN
3. 150-86-7----	Phytol	19.40	470	JN
4. 238-84-6----	11H-Benzo [a] fluorene	20.60	430	JN
5. ----------	C17H12 isomer	20.82	420	J
6. 301-02-0----	9-Octadecenamide, (Z)-	21.31	1200	BJN
7. ----------	Unknown	23.10	490	J
8. ----------	Unknown	23.50	1900	J
9. ----------	Unknown hydrocarbon	24.13	920	J
10. ----------	Unknown	24.43	3000	J
11. ----------	Unknown hydrocarbon	24.86	5900	J
12. ----------	C20H12 PAH isomer	25.13	1400	J
13. ----------	Unknown hydrocarbon	25.68	430	J
14. ----------	Unknown	26.11	4700	J
15. ----------	Unknown hydrocarbon	26.66	5800	J
16. ----------	Unknown	26.74	2800	J
17. ----------	Unknown hydrocarbon	29.14	740	J
18. 83-47-6-----	.gamma.-Sitosterol	29.93	3100	JN
19. ----------	Unknown	30.03	4500	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803107

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6298.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 29 Date Analyzed: 3/26/98

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.				
5.				
6.				
7.				
8.				
9.				
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30.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN11S9SDXD1

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803107

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9090

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: 29 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/21/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 6

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.----------	Unknown	5.59	330	BJ
2.822-67-3----	2-Cyclohexen-1-ol	6.05	210	JN
3.930-68-7----	2-Cyclohexen-1-one	6.72	220	JN
4.111-90-0----	Ethanol,2-(2ethoxyethoxy)-	7.63	290	BJN
5.541-02-6----	Cyclopentasiloxane,decamethy	9.37	190	JN
6.301-02-0----	9-Octadecenamide,(Z)-	21.36	3800	BJN

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	21.88	2 ✓	JW
2.				
3.				
4.				
5.				
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030174

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.	Unknown	5.56	0.6	J
2.				
3.				
4.				
5.				
6.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN-11-S9-QS003

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9803098

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SB2B8833

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/17/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/05/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 2

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.----------	Unknown	6.52	5	BJ
2.498-07-7----	1,6-Anhydro-.beta.-D-glucopy	12.49	10	BJN

EPA SAMPLE NO.

BN11S1QD001

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: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. _____ Date Analyzed: 3/15/98

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.				
10.				
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30.				

030018

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN11S1QD001

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 9802614

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B7545

Level: (low/med) LOW Date Received: 03/07/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 03/11/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/01/98

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	4.00	6	BJ
2.	Unknown chlorinated compound	6.41	4	BJ
3.	Cyclohexanediol isomer	8.08	8	BJ

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-SWXD1	LT-901 (DUP)
LT-901 (Sediment) Samples	
S9-LTSD1	LT-901
S9-SDXD2	LT-901 (DUP)
Trip Blank	
EP-QT005	QT-005
Rinsate Blanks	
S9-QS003	QS-003
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

EA Brunswick

Project Manager or Contact: Peter Nimmer
Phone: 914-565-8100

Project No.: 29600.47

Project Name: LTMPEVENT

Sample Storage Location: M9 NOT

ATO Number:

Page 1 of 1

Job ID: 980346

Chain-of-Custody Record

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

Reports/Deliverables Only
4D+Quattro summary tables
Due 4/7/98 EDDS 4/21/98

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 plus library search	TAL Elements SW846 6010/7000	SVOC 8270 plus TIC	EA Labs Accession Number	Remarks
										LPM: DFB EAL-PS-064
3/6/98	0705	X		BN11S1Q00D1	5	X	X	X	9802614	Dave Brennan
3/6/98	0710	X		BN11S1QS001	3	X	X		9802615	
3/6/98	0715	X		BN11S1QS002	3	X	X		9802616	VOC 8260 plus library search
3/6/98	0840	X		BN11S1SW001	3	X	X		9802617	SVOC 8270 plus library search
3/6/98	1120	X		BN11S1SW002	3	X	X		9802618	TAL Elements refer to
3/6/98	1135	X		BN11S1SW003	3	X	X		9802619	Table 7-1 QAPP (SW846, 6010, 7470)
3/6/98	1145	X		BN11S1SW004	3	X	X		9802620	
3/6/98	1205	X		BN11S1SW005	3	X	X		9802621	Temp blank in cooler
3/6/98	1225	X		BN11S1SW006	3	X	X		9802622	
3/6/98	1245	X		BN11S1SW007MS/MSD	6	X	X		9802623	SDG# BN11S1Q00D001
3/6/98	—	X		BN11S1SWXQ1	3	X	X		9802624	includes all samples on
3/6/98	1300	X		BN11S1LTSW1	3	X	X		9802625	this COC
3/6/98	1405	X		BN11S1LTSW2	3	X	X		9802626	
3/6/98	1245	X		BN11S1SW007MS	2		X		~~9802627~~ 9802623	~~9802627~~
3/6/98	—	X		BN11S1LTXD1	3	X	X		9802628	c. 3/7/98
3/6/98	0705	X		BN11S1QTD02	2	X			9802629	Summary Package Forms
				MS/MSD low 9802623						and coc to Brunswick.
				9802627 skipped to match appropriate MS/MSD						Full Package send to
				sample 3/7/98.						Newburgh:
										OC00002521
										L13411

Sampled by: (Signature) Karen A. Rudzik — Date/Time 3/6/98 1430

Relinquished by: (Signature) Karen A. Rudzik — Date/Time 3/6/98 1700

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time

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

Other:

Air Bill Number: 8006742656 38

Cooler Temp.: 2.8° C pH: ☑ Yes ☐ No Comments: c-2

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

EA 0396 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

L13409

120001

Chain-of-Custody Record

EA Laboratories
19 Lov ton Circle
Sparks, MD 21152
Telephone (410) 771-4920
FAX (410) 771-4407

Company Name: EA Engineering

Project Manager or Contact: Pete Nimmer
Phone: 914 565-8100

Project No.: 29600.47

Project Name: LTMP Event 11

Sample Storage Location: J8

ATO Number:

Page of

Job ID: 980394.

Reports/Deliverables Only: Level 4D + Quattro Summary Table
Hardcopy Due: 4/13/98 EDD Due: 4/27/98

Parameters/Method Numbers for Analysis*: VOC 8260 / preserved HCL; VOC 8260 / preserved Na_2SO_3; TAL Elements 6010/7000

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC 8260 / HCL	VOC 8260 / Na_2SO_3	TAL Elements 6010/7000	EA Labs Accession Number	Remarks
3/13/98	1121	X		BN11EPR1001	4	X		X	9803088	Dave Brennan
3/13/98	1051	X		BN11EPR1002	3	X			9803089	VOC by 8260 plus library Search
3/13/98	1046	X		BN11EPR1003	3	X			9803090	
3/13/98	1028	X		BN11EPR1004	3	X			9803091	TAL Elements refer to
				~~BN11EPR1005~~		~~X~~		~~AP~~	~~9803092~~	Table 7-1 QHPP (SW-846, 6010, 7470)
				~~BN11EPR1006~~		~~X~~		~~AP~~	~~9803093~~	
3/13/98	1125	X		BN11EPTE001 MS/MSD	9		X	X	9803094	Temp blank in cooler
3/13/98	—	X		BN11EPTEXP1	4		X	X	9803095	
3/13/98	1028	X		BN11EPQT005	3	X			9803096	Samples on this COC are
3/13/98	1125	X		BN11EPTE001 MS/MSD	2			X	~~9803097~~	all included in one SDG
									9803094	# BN11EPR1001
										QC on 9803094
										9803094 and 9803095 VOCs
										are preserved w/ Na_2SO_3
										EAL-PS-064
										L13482
										CO00002589

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Sherry A Pullar	3/13/98 1343	Sherry A Pullar	3/13/98 1343		
Received by: (Signature)	Date/Time	Received by: (Signature)	Date/Time		
		[illegible]	3/14/98 10:30		

Sample Shipped by: (Circle) F d. Ex. Puro. UPS
Other:
Air Bill Number: 800637265919

Cooler T mp.: 2-2 °C pH: ☑ Yes ☐ No Comments:

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

EA 0366 White — EA Laboratories Yellow — EA Laborat[illegible] Pink — Project Manager Shade[illegible] for Lab Use Only

L13411, 980346

CO00002589

Chain of Custody Record

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

Company Name: EA Engineering
Project Manager or Contact: Peter Nimmer
Phone: (914) 565-8100
Project #: 29600.47/7501/2192
Project Name: LTMP Event 11
Sample Storage Location: F8
ATO Number:
Page of
Job ID: 980399

Report/Deliverables: Level III + Quattro Pro Summary Tables
Hardcopy due 4/13/98
EDD Due 4/27/98

Parameters/Method Numbers for Analysis*

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOCs 8260+library search	TAL Elements SW846 6000/7	SVOCs 8270+TICs	EA Labs Accession Number	Remarks
03/13/98	0800	X		BN-11-S9-QS003	6	X	X	X	9803098	LPM: David Brennan
03/13/98	0810	X		BN-11-S9-QS004	4	X	X		9803099	EAL-PS-064
03/13/98	0945	X		BN-11-S9-SW001	3	X			9803100	VOCs by 8260
03/13/98	1030	X		BN-11-S9-LT001 MS/MSD	9	X			9803101	plus library search
03/13/98	—	X		BN-11-S9-SWXD1	4	X	X		9803102	
03/13/98	1030	X		BN-11-S9-LT001 MS	2		X		~~9803103~~ 9803101	TAL metals refer to Table 7-1 in QAPP.
				MS/MSD on 9803101						SVOCs by 8270 plus library search
				134861						All samples on this COC are SDG # BN-11-S9-QS003 (begins and ends)
									data found in report 980394	Tripblank BN-11-S9-QT001 included w/ VOC samples. Temp blank in cooler
				COC00002583						

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Karen A. Rudzy	3/13/98 1100	Karen A. Rudzy	3/13/98 1600		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
			3/14/98 10:30	8506372657 19	Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp: 2-4°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*

L13411, 980346

CC001

Chain-of-Custody Record

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

Company Name: EA Brunswick

Project Manager or Contact: Peter Nimmer
Phone: 914-565-8100

Project No.: 29600.47

Project Name: LTMP Event 11

Sample Storage Location: F8

ATO Number:

Page 1 of 1

Job ID: 980396.

Reports/Deliverables Only: 4D + Quattro Pro Summary Tables
Hardcopy Due 4/13/98 EDD Due: 4/27/98

Date	Time	Water	Soil	Sample Identification (ID and Matrix) 19 Characters	No. of Containers	VOC8260 + TICS	TAL Elements 3 Sw846	EA Labs Accession Number	Remarks
03/13/98	1045		X	BN11S9LTSD1 MS/MSD	4	X	X	9803104	Dave Brennan
03/13/98	—		X	BN11S9SDX02	2	X	X	9803105	EAL-PS-064
									VOC by 8260 plus library search
									TAL Elements refer to Table 7-1 in QAPP
									Temp blank in cooler
									All samples on this COC included in SDG # BN11S9LTSD1
									MS/MSD on 9803104
									~~COC00002581~~ L13479

Parameters/Method Numbers for Analysis*

Sampled by: (Signature) Karen A. Ruggi — Date/Time 03/13/98 1100

Relinquished by: (Signature) Karen A. Ruggi — Date/Time 03/13/98 1600

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time

Received by: (Signature) — Date/Time

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

Air Bill Num 8086 3726 5719

Cooler Temp.: 2-4 C pH: Y s No Comments:

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

EA 0398 White — EA Laboratories Yellow — EA Laboratories Pink — Project Manager Shaded Area for Lab Use Only

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03101

Laboratory: EA LABORATORIES

SDG No.: T03098

Matrix: WATER

Client ID: BN11S9LT001

Percent Solids: 0.0

Date Received: 03/14/98

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	20900			P
7440-36-0	Antimony	2.5	B		P
7440-38-2	Arsenic	4.6	B		P
7440-39-3	Barium	286			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	27400			P
7440-47-3	Chromium	32.5			P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	36.5			P
7439-89-6	Iron	211000			P
7439-92-1	Lead	226			P
7439-95-4	Magnesium	6820			P
7439-96-5	Manganese	852			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	25.3	B		P
7440-09-7	Potassium	4950			P
7782-49-2	Selenium	7.6			P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	19800			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	53.2			P
7440-66-6	Zinc	349			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
= "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803102

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5849.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.

BN11S9SWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803102

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5849.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03102

Laboratory: EA LABORATORIES

SDG No.: T03098

Matrix: WATER

Client ID: BN11S9SWX01

Percent Solids: 0.0

Date Received: 03/14/98

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	15200			P
7440-36-0	Antimony	1.0	B		P
7440-38-2	Arsenic	4.1	B		P
7440-39-3	Barium	236			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	24900			P
7440-47-3	Chromium	22.6			P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	26.3			P
7439-89-6	Iron	173000			P
7439-92-1	Lead	193			P
7439-95-4	Magnesium	5410			P
7439-96-5	Manganese	733			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	24.8	B		P
7440-09-7	Potassium	4170			P
7782-49-2	Selenium	7.9			P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	19100			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	38.2	B		P
7440-66-6	Zinc	263			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.

BN11S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803104

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6291.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 18 Date Analyzed: 3/25/98

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	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	19	
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.
BN11S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803104

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6291.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 18 Date Analyzed: 3/25/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03104

Laboratory: EA LABORATORIES

SDG No.: T03104

Matrix: SOIL

Client ID: BN11S9LTSD

Percent Solids: 81.5

Date Received: 03/14/98

Results for: TOTAL metals

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3310			P
7440-36-0	Antimony	0.54	B	N	P
7440-38-2	Arsenic	3.3			P
7440-39-3	Barium	15.1	B		P
7440-41-7	Beryllium	0.02	U		P
7440-43-9	Cadmium	0.07	U		P
7440-70-2	Calcium	782		*	P
7440-47-3	Chromium	5.8		*	P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	6.8			P
7439-89-6	Iron	8570			P
7439-92-1	Lead	80.2		N	P
7439-95-4	Magnesium	975		*	P
7439-96-5	Manganese	47.9			P
7439-97-6	Mercury	0.05	U		CV
7440-02-0	Nickel	6.1			P
7440-09-7	Potassium	408		*	P
7782-49-2	Selenium	0.86			P
7440-22-4	Silver	0.15	B		P
7440-23-5	Sodium	121			P
7440-28-0	Thallium	0.12	U		F
7440-62-2	Vanadium	14.4			P
7440-66-6	Zinc	36.3		*	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
= "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803105

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6294.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 25 Date Analyzed: 3/26/98

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	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.

BN11S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803105

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6294.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 25 Date Analyzed: 3/26/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER
T03105

Laboratory: EA LABORATORIES

SDG No.: T03104

Matrix: SOIL

Client ID: BN11S9SDXD2

Percent Solids: 74.5

Date Received: 03/14/98

Results for: TOTAL metals

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4810			P
7440-36-0	Antimony	0.46	B	N	P
7440-38-2	Arsenic	2.4			P
7440-39-3	Barium	18.6	B		P
7440-41-7	Beryllium	0.04	B		P
7440-43-9	Cadmium	0.08	U		P
7440-70-2	Calcium	705		*	P
7440-47-3	Chromium	6.3		*	P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	4.9			P
7439-89-6	Iron	7420			P
7439-92-1	Lead	23.2		N	P
7439-95-4	Magnesium	1430		*	P
7439-96-5	Manganese	70.7			P
7439-97-6	Mercury	0.05	B		CV
7440-02-0	Nickel	5.5			P
7440-09-7	Potassium	641		*	P
7782-49-2	Selenium	0.60	B		P
7440-22-4	Silver	0.15	B		P
7440-23-5	Sodium	150			P
7440-28-0	Thallium	0.13	U		F
7440-62-2	Vanadium	10.3			P
7440-66-6	Zinc	21.5		*	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.

BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

030173
3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9QS003

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) Date Received: 3/14/98

% Moisture: not dec. Date Analyzed: 3/18/98

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	5	
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.

BN11S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03098

Laboratory: EA LABORATORIES

SDG No.: T03098

Matrix: WATER

Client ID: BN11S9QS003

Percent Solids: 0.0

Date Received: 03/14/98

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	6.0	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	1.2	B		P
7439-95-4	Magnesium	35.0	U		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		P
7782-49-2	Selenium	2.0	B		P
7440-22-4	Silver	1.0	U		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
= "CV" Cold Vapor AA - waters by SW7470, soils by SW7471

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	5	
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	0.4	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.

BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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 SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T03099

Laboratory: EA LABORATORIES

SDG No.: T03098

Matrix: WATER

Client ID: BN11S9QS004

Percent Solids: 0.0

Date Received: 03/14/98

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	6.0	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	1.3	B		P
7439-95-4	Magnesium	35.0	U		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		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	7210			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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. – Date Analyzed: 3/15/98

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	4	J
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	6	
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) _____ Date Received: 3/7/98

% Moisture: not dec. - Date Analyzed: 3/15/98

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

030017

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER
T02614

Laboratory: EA LABORATORIES

SDG No.: T02614

Matrix: WATER

Client ID: N11S1QD001

Percent Solids: 0.0

Date Received: 03/07/98

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	E	P
7440-36-0	Antimony	1.4	B		P
7440-38-2	Arsenic	2.2	B		P
7440-39-3	Barium	4.0	U	E	P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	22.8	B	E	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	1.1	B		P
7439-95-4	Magnesium	35.0	U	E	P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.15	B		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	71.0	U		P
7782-49-2	Selenium	3.0	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	93.8	B	E	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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803102

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5849.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	21.92	0.6	JN
2.				
3.				
4.				
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803104

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6291.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 18 Date Analyzed: 3/25/98

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.				
5.				
6.				
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SDXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803105

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6294.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 25 Date Analyzed: 3/26/98

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.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11EPQT005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803096

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5851.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	21.88	2 ✓	W
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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cm 4/17/98

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803098

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5843.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.	Unknown	5.56	0.6	J
2.				
3.				
4.				
5.				
6.				
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27.				
28.				
29.				
30.				

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803099

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5844.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.	Unknown	5.54	0.5	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S1QD001

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9802614

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5806.D

Level: (low/med) Date Received: 3/7/98

% Moisture: not dec. Date Analyzed: 3/15/98

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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Appendix D.5

MS/MSD Recovery Reports

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW009MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6000.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	9	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	9	
67-64-1	Acetone	17	B
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene Chloride	9	B
75-15-0	Carbon Disulfide	8	
75-34-3	1,1-Dichloroethane	9	
78-93-3	2-Butanone	17	
540-59-0	1,2-Dichloroethene (total)	18	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	12	
107-06-2	1,2-Dichloroethane	9	
71-43-2	Benzene	9	
79-01-6	Trichloroethene	8	
78-87-5	1,2-Dichloropropane	9	
75-27-4	Bromodichloromethane	8	
108-10-1	4-Methyl-2-Pentanone	15	
10061-01-5	cis-1,3-Dichloropropene	7	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	6	
79-00-5	1,1,2-Trichloroethane	7	
591-78-6	2-Hexanone	17	
127-18-4	Tetrachloroethene	9	
124-48-1	Chlorodibromomethane	8	
108-90-7	Chlorobenzene	7	
100-41-4	Ethylbenzene	8	
1330-20-7	Xylenes (total)	24	
100-42-5	Styrene	7	
75-25-2	Bromoform	7	
79-34-5	1,1,2,2-Tetrachloroethane	7	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9MW009MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6000.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	7	
541-73-1	1,3-Dichlorobenzene	7	
106-46-7	1,4-Dichlorobenzene	7	

030238

IE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW009MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6000.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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030239

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MW009MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6001.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	10	
75-01-4	Vinyl Chloride	10	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	10	
67-64-1	Acetone	18	B
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene Chloride	9	B
75-15-0	Carbon Disulfide	8	
75-34-3	1,1-Dichloroethane	9	
78-93-3	2-Butanone	18	
540-59-0	1,2-Dichloroethene (total)	18	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	13	
107-06-2	1,2-Dichloroethane	9	
71-43-2	Benzene	9	
79-01-6	Trichloroethene	9	
78-87-5	1,2-Dichloropropane	9	
75-27-4	Bromodichloromethane	8	
108-10-1	4-Methyl-2-Pentanone	15	
10061-01-5	cis-1,3-Dichloropropene	7	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	7	
591-78-6	2-Hexanone	17	
127-18-4	Tetrachloroethene	8	
124-48-1	Chlorodibromomethane	7	
108-90-7	Chlorobenzene	7	
100-41-4	Ethylbenzene	8	
1330-20-7	Xylenes (total)	24	
100-42-5	Styrene	7	
75-25-2	Bromoform	7	
79-34-5	1,1,2,2-Tetrachloroethane	6	

000243

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9MW009MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6001.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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	6	
541-73-1	1,3-Dichlorobenzene	7	
106-46-7	1,4-Dichlorobenzene	7	

000244

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9MW009MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803393MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B6001.D

Level: (low/med) _____ Date Received: 3/18/98

% Moisture: not dec. _____ Date Analyzed: 3/30/98

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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030245

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9LT001

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) Date Received: 3/14/98

% Moisture: not dec. Date Analyzed: 3/18/98

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.
BN11S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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

030488

FORM I VOA

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5846.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	20	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	12	
75-00-3	Chloroethane	12	
67-64-1	Acetone	24	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene Chloride	12	
75-15-0	Carbon Disulfide	10	
75-34-3	1,1-Dichloroethane	14	
78-93-3	2-Butanone	24	
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	13	
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	11	
79-01-6	Trichloroethene	12	
78-87-5	1,2-Dichloropropane	12	
75-27-4	Bromodichloromethane	11	
108-10-1	4-Methyl-2-Pentanone	20	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	12	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	11	
591-78-6	2-Hexanone	23	
127-18-4	Tetrachloroethene	11	
124-48-1	Chlorodibromomethane	10	
108-90-7	Chlorobenzene	11	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	37	
100-42-5	Styrene	12	
75-25-2	Bromoform	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9LT001MS

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) Date Received: 3/14/98

% Moisture: not dec. Date Analyzed: 3/18/98

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	11	
541-73-1	1,3-Dichlorobenzene	11	
106-46-7	1,4-Dichlorobenzene	12	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) Date Received: 3/14/98

% Moisture: not dec. Date Analyzed: 3/18/98

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	20	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	13	
75-00-3	Chloroethane	12	
67-64-1	Acetone	28	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene Chloride	13	
75-15-0	Carbon Disulfide	9	
75-34-3	1,1-Dichloroethane	14	
78-93-3	2-Butanone	31	
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	13	
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	11	
71-43-2	Benzene	11	
79-01-6	Trichloroethene	12	
78-87-5	1,2-Dichloropropane	12	
75-27-4	Bromodichloromethane	12	
108-10-1	4-Methyl-2-Pentanone	23	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	12	
10061-02-6	trans-1,3-Dichloropropene	11	
79-00-5	1,1,2-Trichloroethane	12	
591-78-6	2-Hexanone	27	
127-18-4	Tetrachloroethene	11	
124-48-1	Chlorodibromomethane	10	
108-90-7	Chlorobenzene	12	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	37	
100-42-5	Styrene	12	
75-25-2	Bromoform	11	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	11	
541-73-1	1,3-Dichlorobenzene	11	
106-46-7	1,4-Dichlorobenzene	12	

FORM I VOA

3/90

030503

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	20	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	12	
75-00-3	Chloroethane	12	
67-64-1	Acetone	24	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene Chloride	12	
75-15-0	Carbon Disulfide	10	
75-34-3	1,1-Dichloroethane	14	
78-93-3	2-Butanone	24	
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	13	
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	11	
79-01-6	Trichloroethene	12	
78-87-5	1,2-Dichloropropane	12	
75-27-4	Bromodichloromethane	11	
108-10-1	4-Methyl-2-Pentanone	20	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	12	
10061-02-6	trans-1,3-Dichloropropene	9	
79-00-5	1,1,2-Trichloroethane	11	
591-78-6	2-Hexanone	23	
127-18-4	Tetrachloroethene	11	
124-48-1	Chlorodibromomethane	10	
108-90-7	Chlorobenzene	11	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	37	
100-42-5	Styrene	12	
75-25-2	Bromoform	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	11	
541-73-1	1,3-Dichlorobenzene	11	
106-46-7	1,4-Dichlorobenzene	12	

FORM I VOA

3/90

030277

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5847.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	20	
75-01-4	Vinyl Chloride	15	
74-83-9	Bromomethane	13	
75-00-3	Chloroethane	12	
67-64-1	Acetone	28	
75-35-4	1,1-Dichloroethene	12	
75-09-2	Methylene Chloride	13	
75-15-0	Carbon Disulfide	9	
75-34-3	1,1-Dichloroethane	14	
78-93-3	2-Butanone	31	
540-59-0	1,2-Dichloroethene (total)	26	
67-66-3	Chloroform	13	
71-55-6	1,1,1-Trichloroethane	14	
56-23-5	Carbon Tetrachloride	10	
107-06-2	1,2-Dichloroethane	11	
71-43-2	Benzene	11	
79-01-6	Trichloroethene	12	
78-87-5	1,2-Dichloropropane	12	
75-27-4	Bromodichloromethane	12	
108-10-1	4-Methyl-2-Pentanone	23	
10061-01-5	cis-1,3-Dichloropropene	10	
108-88-3	Toluene	12	
10061-02-6	trans-1,3-Dichloropropene	11	
79-00-5	1,1,2-Trichloroethane	12	
591-78-6	2-Hexanone	27	
127-18-4	Tetrachloroethene	11	
124-48-1	Chlorodibromomethane	10	
108-90-7	Chlorobenzene	12	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	37	
100-42-5	Styrene	12	
75-25-2	Bromoform	11	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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	11	
541-73-1	1,3-Dichlorobenzene	11	
106-46-7	1,4-Dichlorobenzene	12	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9803101MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VE5B5848.D

Level: (low/med) _____ Date Received: 3/14/98

% Moisture: not dec. _____ Date Analyzed: 3/18/98

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.
BN11S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6296.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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	85	
75-01-4	Vinyl Chloride	84	
74-83-9	Bromomethane	66	
75-00-3	Chloroethane	87	
67-64-1	Acetone	170	
75-35-4	1,1-Dichloroethene	77	
75-09-2	Methylene Chloride	82	
75-15-0	Carbon Disulfide	57	
75-34-3	1,1-Dichloroethane	86	
78-93-3	2-Butanone	180	
540-59-0	1,2-Dichloroethene (total)	150	
67-66-3	Chloroform	78	
71-55-6	1,1,1-Trichloroethane	73	
56-23-5	Carbon Tetrachloride	64	
107-06-2	1,2-Dichloroethane	72	
71-43-2	Benzene	74	
79-01-6	Trichloroethene	57	
78-87-5	1,2-Dichloropropane	80	
75-27-4	Bromodichloromethane	63	
108-10-1	4-Methyl-2-Pentanone	130	
10061-01-5	cis-1,3-Dichloropropene	61	
108-88-3	Toluene	69	
10061-02-6	trans-1,3-Dichloropropene	58	
79-00-5	1,1,2-Trichloroethane	66	
591-78-6	2-Hexanone	200	
127-18-4	Tetrachloroethene	47	
124-48-1	Chlorodibromomethane	64	
108-90-7	Chlorobenzene	70	
100-41-4	Ethylbenzene	70	
1330-20-7	Xylenes (total)	210	
100-42-5	Styrene	70	
75-25-2	Bromoform	53	
79-34-5	1,1,2,2-Tetrachloroethane	91	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6296.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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
95-50-1	1,2-Dichlorobenzene	62	
541-73-1	1,3-Dichlorobenzene	63	
106-46-7	1,4-Dichlorobenzene	64	

030167

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6296.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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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030168

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN11S9SD001MSD

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6297.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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	88	
75-01-4	Vinyl Chloride	88	
74-83-9	Bromomethane	69	
75-00-3	Chloroethane	91	
67-64-1	Acetone	180	
75-35-4	1,1-Dichloroethene	77	
75-09-2	Methylene Chloride	83	
75-15-0	Carbon Disulfide	57	
75-34-3	1,1-Dichloroethane	85	
78-93-3	2-Butanone	180	
540-59-0	1,2-Dichloroethene (total)	150	
67-66-3	Chloroform	79	
71-55-6	1,1,1-Trichloroethane	73	
56-23-5	Carbon Tetrachloride	65	
107-06-2	1,2-Dichloroethane	71	
71-43-2	Benzene	73	
79-01-6	Trichloroethene	58	
78-87-5	1,2-Dichloropropane	79	
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	68	
10061-02-6	trans-1,3-Dichloropropene	56	
79-00-5	1,1,2-Trichloroethane	64	
591-78-6	2-Hexanone	200	
127-18-4	Tetrachloroethene	46	
124-48-1	Chlorodibromomethane	60	
108-90-7	Chlorobenzene	68	
100-41-4	Ethylbenzene	68	
1330-20-7	Xylenes (total)	210	
100-42-5	Styrene	69	
75-25-2	Bromoform	49	
79-34-5	1,1,2,2-Tetrachloroethane	86	

FORM I VOA

030172

3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN11S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6297.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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
95-50-1	1,2-Dichlorobenzene	63	
541-73-1	1,3-Dichlorobenzene	63	
106-46-7	1,4-Dichlorobenzene	64	

030173

FORM I VOA

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BN11S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9803106MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VH8B6297.D

Level: (low/med) LOW Date Received: 3/14/98

% Moisture: not dec. 33 Date Analyzed: 3/26/98

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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030174

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001MS

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106MS

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9115

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	2900	
111-44-4	bis(2-Chloroethyl)ether	2700	
95-57-8	2-Chlorophenol	2600	
541-73-1	1,3-Dichlorobenzene	2100	
106-46-7	1,4-Dichlorobenzene	2100	
95-50-1	1,2-Dichlorobenzene	2200	
95-48-7	2-Methylphenol	2900	
108-60-1	2,2'-oxybis(1-Chloropropane)	3100	
106-44-5	4-Methylphenol	3300	
621-64-7	N-Nitroso-Di-n-propylamine	3100	
67-72-1	Hexachloroethane	2000	
98-95-3	Nitrobenzene	2600	
78-59-1	Isophorone	3100	
88-75-5	2-Nitrophenol	3100	
105-67-9	2,4-Dimethylphenol	3000	
111-91-1	bis(2-Chloroethoxy)methane	2800	
120-83-2	2,4-Dichlorophenol	3200	
120-82-1	1,2,4-Trichlorobenzene	2500	
91-20-3	Naphthalene	3500	
106-47-8	4-Chloroaniline	500	
87-68-3	Hexachlorobutadiene	2400	
59-50-7	4-Chloro-3-methylphenol	3300	
91-57-6	2-Methylnaphthalene	3300	
77-47-4	Hexachlorocyclopentadiene	200	J
88-06-2	2,4,6-Trichlorophenol	3400	
95-95-4	2,4,5-Trichlorophenol	3200	
91-58-7	2-Chloronaphthalene	3000	
88-74-4	2-Nitroaniline	3700	
131-11-3	Dimethylphthalate	3200	
208-96-8	Acenaphthylene	2900	
99-09-2	3-Nitroaniline	1500	J
83-32-9	Acenaphthene	5100	
51-28-5	2,4-Dinitrophenol	2500	J
100-02-7	4-Nitrophenol	3100	
132-64-9	Dibenzofuran	4200	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001MS

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106MS

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9115

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	3200	
606-20-2	2,6-Dinitrotoluene	3500	
84-66-2	Diethylphthalate	3200	
7005-72-3	4-Chlorophenyl-phenylether	2800	
86-73-7	Fluorene	4600	
100-01-6	4-Nitroaniline	2000	J
534-52-1	4,6-Dinitro-2-methylphenol	3200	
86-30-6	N-Nitrosodiphenylamine	3300	
101-55-3	4-Bromophenyl-phenylether	3200	
118-74-1	Hexachlorobenzene	3200	
87-86-5	Pentachlorophenol	2800	
85-01-8	Phenanthrene	12000	E
120-12-7	Anthracene	5200	
86-74-8	Carbazole	5200	
84-74-2	Di-n-butyl phthalate	2900	
206-44-0	Fluoranthene	11000	E
129-00-0	Pyrene	19000	E
85-68-7	Butylbenzylphthalate	4700	
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)anthracene	10000	E
117-81-7	bis(2-Ethylhexyl)phthalate	9200	E
218-01-9	Chrysene	13000	E
117-84-0	Di-n-octyl phthalate	4100	
205-99-2	Benzo(b)fluoranthene	12000	E
207-08-9	Benzo(k)fluoranthene	6500 ~~12000~~	E
50-32-8	Benzo(a)pyrene	9700	E
193-39-5	Indeno(1,2,3-cd)pyrene	7900	E
53-70-3	Dibenz(a,h)anthracene	4100	
191-24-2	Benzo(g,h,i)perylene	6800	E

WEM 4/23/98

040144

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN11S9SD001MS

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106 MS

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9115

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/22/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001MSD

Lab Name: EA LABS Contract:

La ode: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9116

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/23/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	2700	
111-44-4	bis(2-Chloroethyl)ether	2500	
95-57-8	2-Chlorophenol	2500	
541-73-1	1,3-Dichlorobenzene	2000	
106-46-7	1,4-Dichlorobenzene	1900	
95-50-1	1,2-Dichlorobenzene	2200	
95-48-7	2-Methylphenol	2800	
108-60-1	2,2'-oxybis(1-Chloropropane)	2900	
106-44-5	4-Methylphenol	3000	
621-64-7	N-Nitroso-Di-n-propylamine	2900	
67-72-1	Hexachloroethane	1900	
98-95-3	Nitrobenzene	2600	
78-59-1	Isophorone	2900	
88-75-5	2-Nitrophenol	3000	
105-67-9	2,4-Dimethylphenol	3000	
111-91-1	bis(2-Chloroethoxy)methane	2800	
120-83-2	2,4-Dichlorophenol	3100	
120-82-1	1,2,4-Trichlorobenzene	2600	
91-20-3	Naphthalene	2800	
106-47-8	4-Chloroaniline	840	
87-68-3	Hexachlorobutadiene	2600	
59-50-7	4-Chloro-3-methylphenol	3300	
91-57-6	2-Methylnaphthalene	3000	
77-47-4	Hexachlorocyclopentadiene	240	J
88-06-2	2,4,6-Trichlorophenol	3200	
95-95-4	2,4,5-Trichlorophenol	3200	
91-58-7	2-Chloronaphthalene	3000	
88-74-4	2-Nitroaniline	3500	
131-11-3	Dimethylphthalate	3000	
208-96-8	Acenaphthylene	2800	
99-09-2	3-Nitroaniline	2200	J
83-32-9	Acenaphthene	3500	
51-28-5	2,4-Dinitrophenol	2200	J
100-02-7	4-Nitrophenol	3100	
132-64-9	Dibenzofuran	3400	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN11S9SD001 MSD

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106 MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9116

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/23/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
121-14-2	2,4-Dinitrotoluene	3400	
606-20-2	2,6-Dinitrotoluene	3400	
84-66-2	Diethylphthalate	3300	
7005-72-3	4-Chlorophenyl-phenylether	3300	
86-73-7	Fluorene	3400	
100-01-6	4-Nitroaniline	2600	
534-52-1	4,6-Dinitro-2-methylphenol	3000	
86-30-6	N-Nitrosodiphenylamine	3300	
101-55-3	4-Bromophenyl-phenylether	3100	
118-74-1	Hexachlorobenzene	3100	
87-86-5	Pentachlorophenol	2900	
85-01-8	Phenanthrene	7500	E
120-12-7	Anthracene	3600	
86-74-8	Carbazole	4000	
84-74-2	Di-n-butyl phthalate	3000	
206-44-0	Fluoranthene	7300	E
129-00-0	Pyrene	11000	E
85-68-7	Butylbenzylphthalate	4400	
91-94-1	3,3'-Dichlorobenzidine	850	
56-55-3	Benzo(a)anthracene	5800	
117-81-7	bis(2-Ethylhexyl)phthalate	4800	
218-01-9	Chrysene	7800	E
117-84-0	Di-n-octyl phthalate	4400	
205-99-2	Benzo(b)fluoranthene	7100	E
207-08-9	Benzo(k)fluoranthene	4600	
50-32-8	Benzo(a)pyrene	5700	
193-39-5	Indeno(1,2,3-cd)pyrene	4500	
53-70-3	Dibenz(a,h)anthracene	3300	
191-24-2	Benzo(g,h,i)perylene	4100	

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO:

BN11S9SD001 MSD

Lab Name: EA LABS Contract:

Lab Code: EAENG Case No: SAS No.: _____ SDG No:

Matrix: (soil/water) SOIL Lab Sample ID: 9803106 MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SB2B9116

Level: (low/med) LOW Date Received: 03/14/98

% Moisture: 33 decanted: (Y/N) N Date Extracted: 03/23/98

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/23/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICS found: 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T03101S

Laboratory: EA LABORATORIES

SDG No.: T03098

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		24337.0000		20873.0000		2000.00	173.2		P
Antimony	75-125	415.9587		2.4988	B	500.00	82.7		P
Arsenic	75-125	1938.9880		4.5718	B	2000.00	96.7		P
Barium	75-125	2247.2000		286.2100		2000.00	98.0		P
Beryllium	75-125	46.8430		0.2000	U	50.00	93.7		P
Cadmium	75-125	44.1259		0.6000	U	50.00	88.3		P
Calcium	75-125	36609.0000		27411.0000		10000.00	92.0		P
Chromium	75-125	227.9900		32.5370		200.00	97.7		P
Cobalt	75-125	476.7400		7.4635	B	500.00	93.9		P
Copper	75-125	290.6800		36.4990		250.00	101.7		P
Iron		228250.0000		210860.0000		1000.00	1739.0		P
Lead	75-125	689.5189		225.6299		500.00	92.8		P
Magnesium	75-125	16800.0000		6815.9000		10000.00	99.8		P
Manganese	75-125	1358.6000		851.8400		500.00	101.4		P
Mercury	75-125	3.8600		0.1000	U	4.00	96.5		CV
Nickel	75-125	532.1500		25.2840	B	500.00	101.4		P
Potassium	75-125	15131.0000		4948.8000		10000.00	101.8		P
Selenium	75-125	1859.0519		7.5562		2000.00	92.6		P
Silver	75-125	495.1665		1.0000	U	500.00	99.0		P
Sodium	75-125	29762.0000		19803.0000		10000.00	99.6		P
Thallium	75-125	23.7400		1.0000	U	25.00	95.0		F
Vanadium	75-125	543.3400		53.2110		500.00	98.0		P
Zinc	75-125	815.8300		349.3800		500.00	93.3		P

omments:

050000

EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T03104S

Laboratory: EA LABORATORIES

SDG No.: T03104

Matrix (soil/water): SOIL
% Solids for Sample: 81.5

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		3740.1194		3307.3819		232.83	185.9		P
Antimony	75-125	41.2808		0.5404	B	58.21	70.0	N	P
Arsenic	75-125	234.7680		3.3441		232.83	99.4		P
Barium	75-125	232.0578		15.1082	B	232.83	93.2		P
Beryllium	75-125	5.2565		0.0240	U	5.82	90.3		P
Cadmium	75-125	5.7660		0.0719	U	5.82	99.1		P
Calcium	75-125	1852.2485		781.6587		1164.13	92.0		P
Chromium	75-125	28.7482		5.8446		23.28	98.4		P
Cobalt	75-125	58.0715		3.2282	B	58.21	94.2		P
Copper	75-125	35.4315		6.7934		29.10	98.4		P
Iron		8951.8166		8569.8995		116.41	328.1		P
Lead	75-125	121.5445		80.1697		58.21	71.1	N	P
Magnesium	75-125	1985.3087		975.4463		1164.13	86.7		P
Manganese	75-125	103.5250		47.8872		58.21	95.6		P
Mercury	75-125	2.6897		0.0482	U	2.56	105.1		CV
Nickel	75-125	62.6244		6.0891		58.21	97.1		P
Potassium	75-125	1454.2322		407.6755		1164.13	89.9		P
Selenium	75-125	227.0568		0.8638		232.83	97.1		P
Silver	75-125	57.6837		0.1529	B	58.21	98.8		P
Sodium	75-125	1279.0305		121.3450		1164.13	99.4		P
Thallium	75-125	2.7203		0.1185	U	3.03	89.8		F
Vanadium	75-125	71.8583		14.4442		58.21	98.6		P
Zinc	75-125	98.6647		36.3448		58.21	107.1		P

Comments:

EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T03393S

Laboratory: EA LABORATORIES

SDG No.: T03385

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	2064.1000		83.1990	B	2000.00	99.0		P
Antimony	75-125	512.8173		1.3810	B	500.00	102.3		P
Arsenic	75-125	2023.5404		2.0000	U	2000.00	101.2		P
Barium	75-125	2025.4000		27.0450	B	2000.00	99.9		P
Beryllium	75-125	48.8070		0.2000	U	50.00	97.6		P
Cadmium	75-125	48.5579		0.6000	U	50.00	97.1		P
Calcium		53694.0000		41960.0000		10000.00	117.3		P
Chromium	75-125	202.8700		4.0000	U	200.00	101.4		P
Cobalt	75-125	481.2000		7.0000	U	500.00	96.2		P
Copper	75-125	257.0945		2.0000	U	250.00	102.8		P
Iron	75-125	1030.5000		52.0000	U	1000.00	103.0		P
Lead	75-125	486.1833		1.3197	B	500.00	97.0		P
Magnesium	75-125	13050.0000		2994.2000		10000.00	100.6		P
Manganese	75-125	498.7000		8.0000	U	500.00	99.7		P
Mercury	75-125	3.9000		0.1000	U	4.00	97.5		CV
Nickel	75-125	496.1200		5.0000	U	500.00	99.2		P
Potassium	75-125	14196.0000		3750.9000		10000.00	104.5		P
Selenium	75-125	1985.2548		3.3530	B	2000.00	99.1		P
Silver	75-125	497.0710		1.0000	U	500.00	99.4		P
Sodium	75-125	34475.0000		22381.0000		10000.00	120.9		P
Thallium	75-125	43.3400		1.0000	U	50.00	86.7		F
Vanadium	75-125	512.3500		3.0000	U	500.00	102.5		P
Zinc	75-125	480.9600		12.0000	U	500.00	96.2		P

Comments: