N60087.AR.000724
NAS BRUNSWICK
5090.3a

Monitoring Event 12 - July 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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October 1998
296.0047

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October 1998

QUALITY REVIEW STATEMENT

Contract No. N62472-92-D-1296 EA Project Number: 29600.47.7592
Contract Task Order No. 0047
Activity: Naval Air Station, Brunswick, Maine

Description of Report/Deliverable:

Monitoring Event 12 - July 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.

Senior Technical Reviewer

Michael S. Battle/mep 10/30/98

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

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1. PROJECT ACTIVITIES AND MONITORING EVENT RESULTS

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. The LTMP will be revised in 1998 based on the data previously collected. 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. Bi-annual sampling will be initiated in April 1999. 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 July 1998 monitoring/sampling event (Monitoring Event 12). Appendix A provides field monitoring and sampling forms, Appendix B provides an analytical data quality review, and Appendix C provides analytical report Form Is. A discussion of temporal trends and other observations based on data collected during tri-annual monitoring (March, July, and November 1998) will be presented in the Annual Report for 1998.

1.2 MEASUREMENT OF WATER LEVEL ELEVATIONS

1.2.1 Gauging Activities

Water level measurements were obtained during Monitoring Event 12 on 1 July 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 May 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 1.

The gauging procedures are detailed in the final report for Monitoring Event 4 (EA 1996) and the LTMP (ABB-ES 1994b). Staff gauges were added to the surface water impoundment following Monitoring Event 12, and will be gauged during subsequent monitoring events.

1.2.2 Results

Water level gauging data recorded on 6 May 1998 (bi-monthly data) and 1 July 1998 (Monitoring Event 12 data) are provided in Table 2. The Field Record of Well Gauging forms completed during the well gauging events are provided in Appendix A. The 13 site monitoring wells were gauged during May and July 1998 in accordance with the procedures outlined in the LTMP (ABB-ES 1995).

Figures 3 and 4 provide the interpreted ground-water flow directions for the subject site based on the 6 May and 1 July 1998 well gauging data, respectively.

1.3 GROUND-WATER MONITORING, SAMPLING, AND ANALYSIS

1.3.1 Sampling Activities

The ground-water sampling program was performed on 16-17 July 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. 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 11 wells specified in the LTMP during the July 1998 sampling event using the low flow sampling technique. Two monitoring wells (MW-NASB-077 and MW-NASB-078) which are sampled annually, were sampled during this monitoring event.

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. 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). Ten of the 11 monitoring wells at Site 9 reached equilibrium of the water quality indicator parameters prior to sampling. One well, MW-NASB-069, had one water quality parameter (dissolved oxygen) which did not stabilize to within 10 percent on three successive readings. Water quality parameters are summarized on Tables 3 and 4 for ground-water and surface water samples, respectively. Field records of well gauging, purging, sampling, and surface water sampling, are provided in Appendix A.

Ground-water samples were collected for analysis of Target Compound List (TCL) volatile organic compounds (VOC) by EPA Method 8260. Four of 11 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). Ground water collected from one monitoring well, MW-NASB-071, was not analyzed for TAL elements due to field error. 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.

1.3.2 Results

Table 5 provides a summary of the VOC and TAL elements reported in ground-water samples collected at Site 9. Appendix C contains the laboratory Form I summary tables for the analyses performed.

Notable results of ground-water sampling conducted as part of Monitoring Event 12 include:

- Vinyl chloride, a constituent of concern, was reported in 3 of 11 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 (11 μg/L), MW-NASB-072 (1 μg/L), and MW-NASB-080 (5 μg/L).

- Antimony was reported above the corresponding State Maximum Exposure Guideline (2.8 μg/L) in 2 wells: MW-NASB-080 (4.0 μg/L) and MW-NASB-081 (3.6 μg/L). However, antimony was reported in both wells at a concentration between the Instrument Detection Limit and the Contract Required Detection Limit.

- Monitoring well MW-NASB-071 was not sampled for TAL elements due to field error. In previous sampling events, manganese has been reported above the corresponding State Maximum Exposure Guideline of 200 μg/L in this well.

- Two VOC (acetone and methylene chloride) were detected in associated method blanks and are considered laboratory artifacts.

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

1.4.1 Sampling Activities

The surface water, sediment, and leachate station seep/sediment sampling program was performed on 20 July 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 scheduled to be sampled annually, but was also flooded and, therefore, not sampled during Monitoring Event 12. Leachate station seep and seep sediment samples were collected at the foot of the drain located south of Site 9 (Figure 1) as scheduled. Table 1 provides a summary of the surface water, sediment, and leachate station seep/sediment sampling program.

Surface water, sediment, and leachate station seep samples were collected for analysis of TCL VOC by EPA Method 8260. Leachate station seep and seep 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 were further analyzed for the presence of TCL semivolatile organic compounds (SVOC) by EPA Method 8270.

1.4.2 Surface Water Results

Table 6 provides a summary of the VOC detected in surface water sample SW-010 collected at Site 9. Appendix C contains the Form I summary tables for the analyses performed. The sample location is provided on Figure 1.

Notable results of surface water sampling conducted as part of Monitoring Event 12 include:

- Vinyl chloride was reported in sample location SW-010 at 0.6 J μg/L.
- Reported concentrations of acetone are suspected to be laboratory contamination.

1.4.3 Sediment Results

Table 7 provides a summary of the compounds/analytes detected in sediment sample SED-010 collected at Site 9. Appendix C contains the Form I summary tables for the analyses performed. The sample location is illustrated on Figure 1.

Notable results of the sediment sampling conducted as part of Monitoring Event 12 include:

- No VOC were reported in the sample collected.
- A total of 17 SVOC were reported in the sediment sample. A majority of the SVOC reported in the sample were polycyclic aromatic hydrocarbons.

1.4.4 Leachate Station Seep and Sediment Results

Table 8 provides a summary of the compounds/analytes detected in leachate station LT-901 seep and seep sediment samples collected at Site 9. Appendix C contains the Form I summary tables for the analyses performed on leachate samples. Figure 1 provides the sampling location.

Notable results of the leachate station sampling include:

- One VOC (toluene) was reported in the leachate station seep sample at a concentration of 0.7J μg/L.
- A total of 28 VOC were reported in the leachate station seep sediment sample, most at estimated concentrations.
- Two of the 28 VOC (acetone and 2-butanone) are suspected laboratory artifacts.

1.5 VISUAL INSPECTION

Site inspection activities at Site 9 were completed on 28 July 1998 by a civil engineer in accordance with the LTMP (ABB-ES 1995). There was no evidence of stressed vegetation. The surface water impoundments were drained at the time of the engineering inspection for cleaning. No physical evidence of tampering of site wells was evident. Stream gauges were installed within each surface water impoundment to gauge surface water levels. The site monitoring wells were observed to be capped, labeled, locked, and in good condition.

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 July 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., monitored 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 solid and aqueous media are included in Appendix B.

Notable findings of the analytical data quality review include:

- The organic and inorganic results for sediment sample SED-010 and the associated duplicate sample should be considered estimations of the true concentration due to relative percent difference of greater than 50 percent between the primary and duplicate sample.

- Mercury results were rejected based on holding time exceedance for the following samples: MW-NASB-081, MW-NASB-069, MW-NASB-079, MW-NASB-079 DUP, MW-NASB-072, and MW-NASB-076. Note that mercury concentrations in these samples have not been reported above the MEG/MCL of 20 μg/L during previous sampling events.

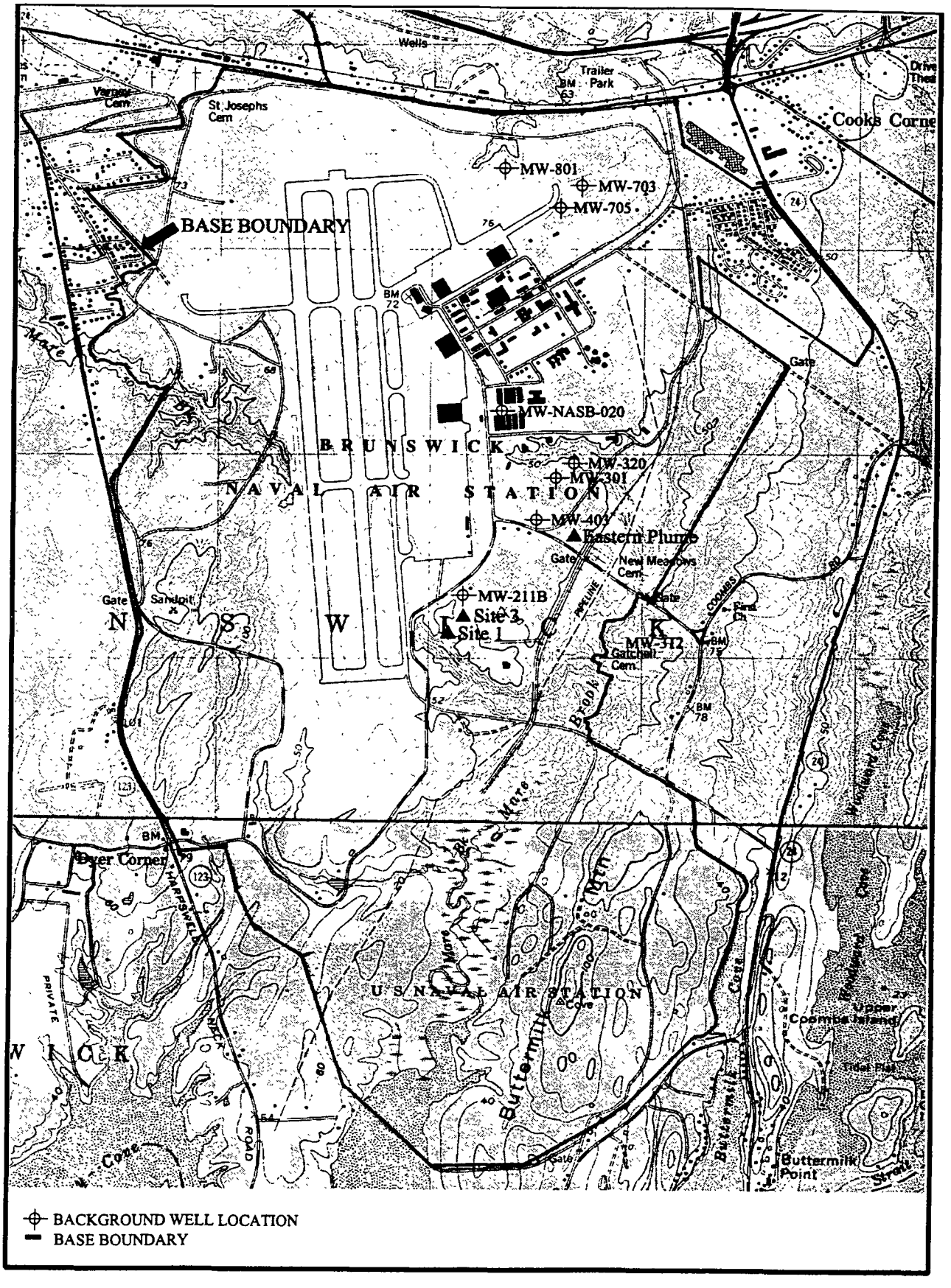
- Mercury results should be considered estimations, biased, and slightly low for the following samples: rinsate blanks QS-003 and QS-004, LT-901 (SEEP), and LT-901 (SEEP) DUP.

- Volatile organic concentrations should be considered estimations and biased low for the following samples: QT-007 reanalysis, MW-NASB-081 reanalysis, MW-NASB-080 reanalysis, MW-NASB-069 reanalysis, MW-NASB-079 reanalysis, MW-NASB-079 DUP reanalysis, MW-NASB-077 reanalysis, LT-901 (SED), and SED-10 DUP. The original sample data were used in lieu of the re-analysis data due to the holding time discrepancies.

- The analytical results for aluminum and mercury in leachate seep sample LT-901 should be considered bias low and the analytical results for antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, lead, magnesium, nickel, potassium, selenium, silver, sodium, vanadium, and zinc in leachate station sediment sample SED-10 should be considered bias low due to matrix spike discrepancies.

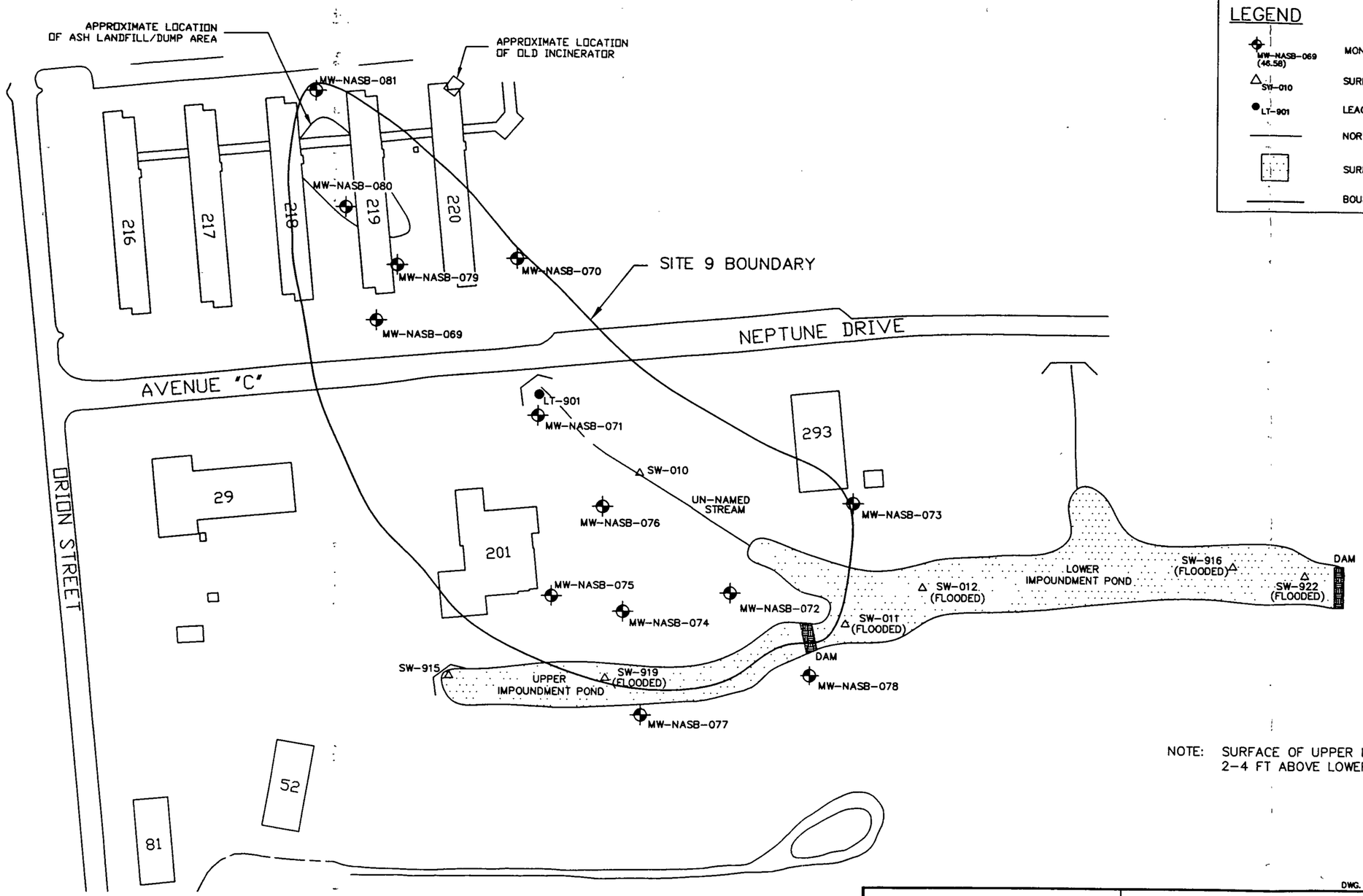
- Chloroform results in Samples QD-001 and LT-901 (SED); and antimony and selenium results in Sample LT-901 (SEEP) should be considered false-positives due to field blank contamination. The results for acetone in MW-NASB-079 should be considered false-positive due to method blank contamination.

- The methylene chloride result in MW-NASB-079; and aluminum and zinc results in leachate station seep sample LT-901 should be considered estimations of the true concentrations based on the exceedance of the precision criteria for field duplicates.



BACKGROUND WELL LOCATION
BASE BOUNDARY

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



LEGEND

- MW-NASB-069 (46.58) — MONITORING WELL
- SW-010 — SURFACE WATER/SEDIMENT SAMPLING LOCATION
- LT-901 — LEACHATE SAMPLING STATION
- NORTHERN/SOUTHERN UNNAMED STREAM PROFILE
- SURFACE WATER IMPOUNDMENT
- BOUNDARY FOR SITE 9

NOTE: SURFACE OF UPPER IMPOUNDMENT POND IS APPROXIMATELY 2-4 FT ABOVE LOWER IMPOUNDMENT POND.

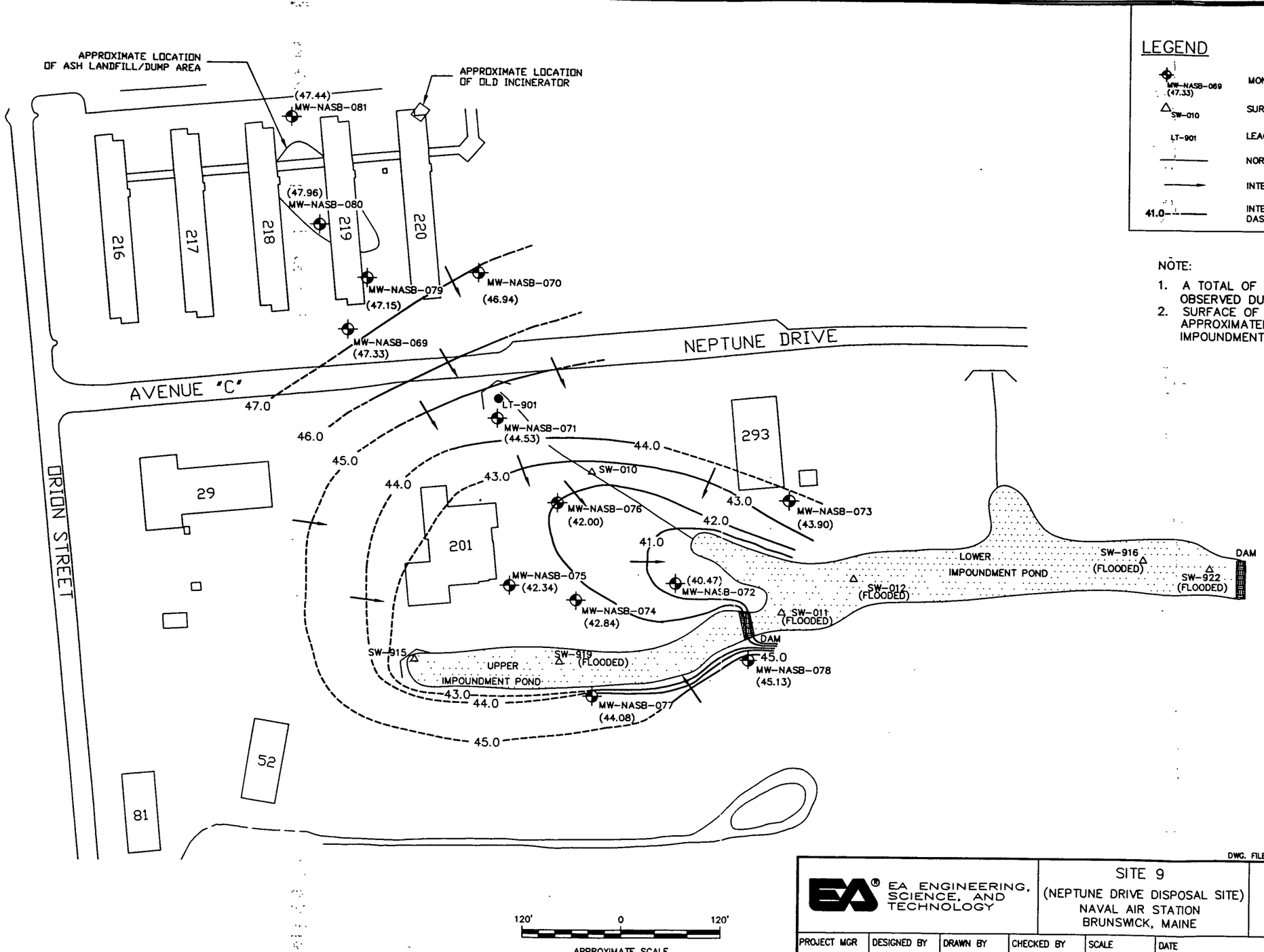
DWG. FILE No. F:\CAD\29600\47\ANNUAL\SITE9\1997\S9EV8MAR

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



LEGEND

MW-NASB-069 (47.33)	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. A TOTAL OF 1.74 INCHES OF PRECIPITATION WAS OBSERVED DURING GAUGING EVENT
2. SURFACE OF UPPER IMPOUNDMENT POND IS APPROXIMATELY 2-4 FT ABOVE LOWER IMPOUNDMENT POND.

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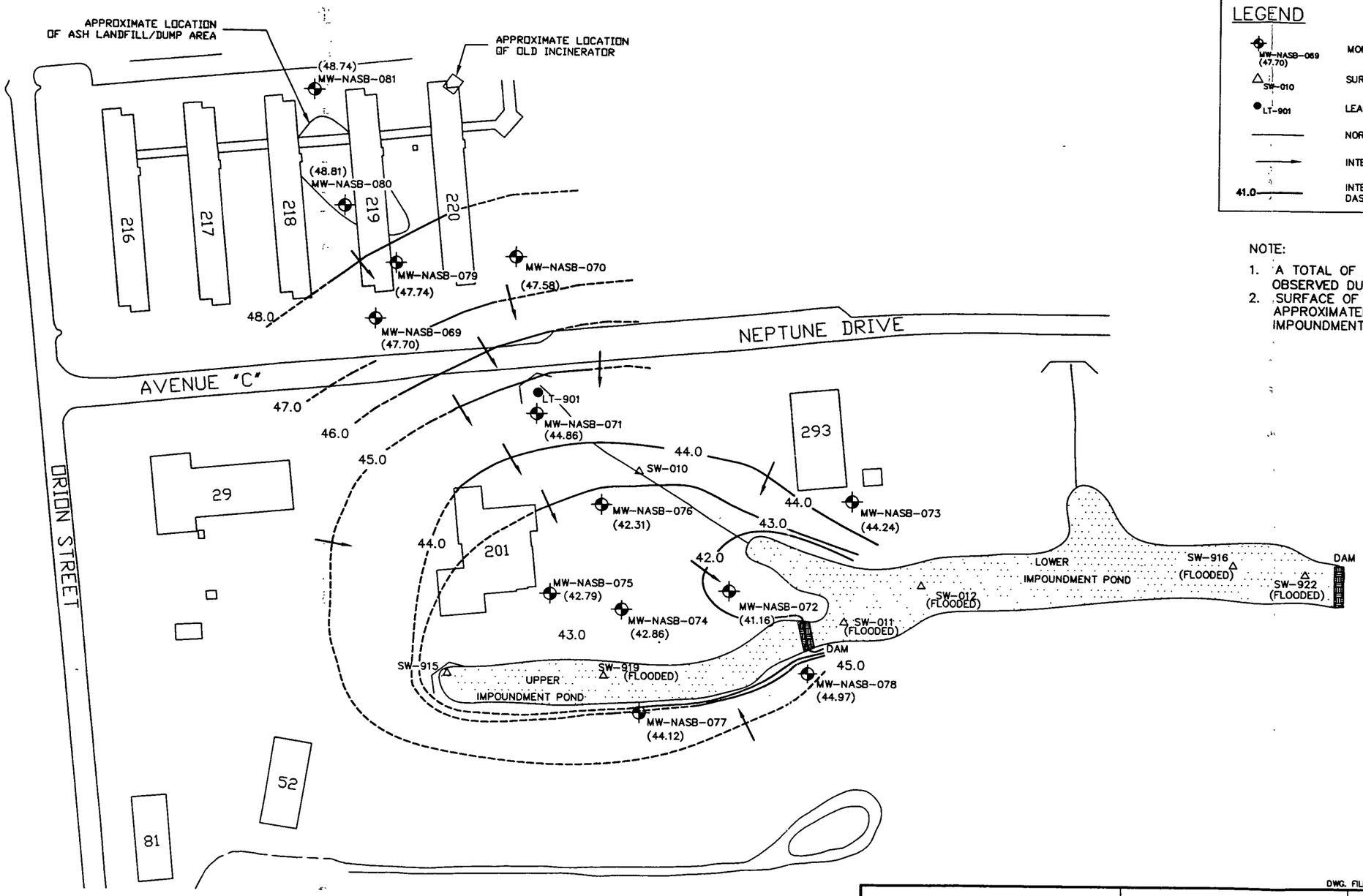
EA ENGINEERING, SCIENCE, AND TECHNOLOGY

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

FIGURE 3
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 6 MAY 1998 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
CEM	PLN	SAP	PLN	1"=120'	2 OCT 1998	29600.47	S9MAY98



LEGEND

MW-NASB-069 (47.70)	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. A TOTAL OF 0.22 INCHES OF PRECIPITATION WAS OBSERVED DURING GAUGING EVENT.
2. SURFACE OF UPPER IMPOUNDMENT POND IS APPROXIMATELY 2-4 FT ABOVE LOWER IMPOUNDMENT POND.

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EA ENGINEERING, SCIENCE, AND TECHNOLOGY

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

FIGURE 4
INTERPRETED POTENTIOMETRIC SURFACE ELEVATIONS, 1 JULY 1998 WELL GAUGING DATA

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
CEM	SYC	SYC	PLN	1"=120'	2 OCT 1998	29600.47	S9EV12

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 12	
			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[c]
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	X
MW-NASB-078	MW-910	Annual	X	NR	NR	X	X	X
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 12	
		TCL VOC	TCL SVOC	TAL Elements	Field Parameters[a]	Gauged	Sampled
Leachate Station							
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[e]
SED-012	Tri-Annual	X	X	NR	NR	NR	Flooded[e]
SED-915	Tri-Annual	X	X	NR	NR	NR	Flooded[e]
SED-916	Annual	X	NR	NR	NR	NR	Flooded[e]
SED-919	Tri-Annual	X	X	NR	NR	NR	Flooded[e]
SED-922	Tri-Annual	X	NR	NR	NR	NR	Flooded[e]

(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) TAL element analysis not performed due to field error.
(d) Location not sampled 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 May 1998)		Event 12 Gauging Data (1 July 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	10.02	47.33	9.65	47.70
MW-NASB-070	MW-902	58.26	27.32	11.32	46.94	10.68	47.58
MW-NASB-071	MW-903	46.25	21.54	1.72	44.53	1.39	44.86
MW-NASB-072	MW-904	49.81	14.63	9.34	40.47	8.65	41.16
MW-NASB-073	MW-905	51.71	32.12	7.81	43.90	7.47	44.24
MW-NASB-074	MW-906	51.68	27.12	8.84	42.84	8.82	42.86
MW-NASB-075	MW-907	54.91	21.22	12.57	42.34	12.12	42.79
MW-NASB-076	MW-908	52.79	19.94	10.79	42.00	10.48	42.31
MW-NASB-077	MW-909	58.89	37.29	14.81	44.08	14.77	44.12
MW-NASB-078	MW-910	53.74	14.93	8.61	45.13	8.77	44.97
MW-NASB-079	MW-914	58.15	18.92	11.00	47.15	10.41	47.74
MW-NASB-080	MW-915	58.51	19.04	10.55	47.96	9.70	48.81
MW-NASB-081	MW-916	58.22	18.85	10.28	47.94	9.48	48.74

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 JULY 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	6.36	15.60	317	0.46	2	113
MW-NASB-071	MW-903	6.39	13.52	235	0.19	2	56
MW-NASB-072	MW-904	6.22	12.66	100	2.37	7	149
MW-NASB-074	MW-906	6.42	12.05	231	0.21	7	123
MW-NASB-075	MW-907	5.84	16.70	196	6.54	0	253
MW-NASB-076	MW-908	5.92	17.47	195	0.83	1	103
MW-NASB-077	MW-909	6.36	10.55	30	5.59	3	175
MW-NASB-078	MW-910	5.63	13.82	65	5.52	1	261
MW-NASB-079	MW-914	7.08	16.87	168	0.46	7	-88
MW-NASB-080	MW-915	6.79	16.78	280	0.30	1	-14
MW-NASB-081	MW-916	6.63	16.56	301	3.36	0	157

NOTE: NTU = Nephelometric turbidity unit.

TABLE 4 SUMMARY OF WATER QUALITY INDICATOR PARAMETERS MEASURED IN SURFACE WATER AND LEACHATE SEEP SAMPLES COLLECTED ON 20 JULY 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	6.47	15.65	125	6.91	14	75
Leachate Seep						
LT-901	6.56	16.54	350	1.55	263	-37

NOTE: NTU = Nephelometric turbidity unit.

TABLE 5 SUMMARY OF ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES COLLECTED ON 16-17 JULY 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound/Analyte	MW-NASB-069[a] MW-901	MW-NASB-071 MW-903	MW-NASB-072 MW-904	MW-NASB-072 Duplicate MW-904 DUP	MW-NASB-074 MW-906	MW-NASB-075 MW-907	MW-NASB-076 MW-908	MEG[b]	MCL[c]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
Total 1,2-Dichloroethene	13	(<1U)	(<1U)	(<1U)	3	(<1U)	(<1U)	70	70
Vinyl chloride	**11**	(<1U)	**1**	**1**	(<1U)	(<1U)	(<1U)	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)	0.9J	(<1U)	(<1U)	---	100
Acetone	8B	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	---	---
Methylene Chloride	3	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	---	5
Tetrachloroethane	(<1U)	(<1U)	(<1U)	(<1U)	0.6J	(<1U)	(<1U)	70	---
Toluene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	1,400	1,000

(a) Reanalysis conducted on samples due to low surrogate recoveries.
(b) 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.
(c) 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.
B = Compound detected in associated method blank.
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-077[a] MW-909	MW-NASB-078 MW-910	MW-NASB-079[a] MW-914	NW-NASB-079 Duplicate[a] MW-914 DUP	MW-NASB-080[a] MW-915	MW-NASB-081[a] MW-916	QT- 006	MEG[b]	MCL[c]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
Total 1,2-Dichloroethene	(<1U)	(<1U)	(<1U)	(<1U)	0.4J	(<1U)	(<1U)	70	70
Vinyl chloride	(<1U)	(<1U)	(<1U)	(<1U)	**5**	(<1U)	(<1U)	0.15	2
1,1-Dichloroethane	(<1U)	(<1U)	(<1U)	(<1U)	0.9J	0.3J	(<1U)	70	---
Ethylbenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	700	700
Total xylenes	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	600	10,000
Trichloroethene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	5	5
Chloroform	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	---	100
Acetone	6B	(<5U)	9B	13B	84EB	10B	(<5U)	---	---
Methylene Chloride	4	(<1U)	3	6	0.9J	(<1U)	(<1U)	---	5
Tetrachloroethane	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	70	---
Toluene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	1,400	1,000
TARGET ANALYTE LIST ELEMENTS BY EPA SW-846 6000/7000 SERIES METHODS (μg/L)									
Aluminum	NR	NR	73.3B*	84.7B*	66.4B*	(<56.0U)	NR	1,430	50-200[d]
Antimony	NR	NR	2.0B*	1.7B*	**4.0B***	**3.6B***	NR	2.8	6
Barium	NR	NR	163B*	169B*	469	25.0B*	NR	1,500	2,000
Cadmium	NR	NR	(<0.60U)	(<0.60U)	(<0.60U)	(<0.60U)	NR	5	5
Calcium	NR	NR	18,500	19,300	51,600	43,100	NR	---	---
Chromium	NR	NR	(<4.0U)	(<4.0U)	(<4.0U)	(<4.0U)	NR	100	100
Copper	NR	NR	(<2.0U)	(<2.0U)	(<2.0U)	(<2.0U)	NR	---	1,300[d]
Iron	NR	NR	12,900	13,300	944	(<52.0U)	NR	---	300[d]
Lead	NR	NR	(<1.0U)	(<1.0U)	(<1.0U)	1.3B*	NR	---	15[e]
Magnesium	NR	NR	1,130	1,170	2,960	2,940	NR	---	---
Manganese	NR	NR	66.0	67.8	162	(<8.0U)	NR	200	50[d]
Potassium	NR	NR	2,010	2,150	4970	3,760	NR	---	---
Selenium	NR	NR	(<2.0U)	(<2.0U)	3.8B*	3.9B*	NR	10	50
Sodium	NR	NR	4,050	3,710	9,860	17,800	NR	---	---

NOTE: QT = Trip blank.
E = Compound concentration exceeds calibration range.

TABLE 6 SUMMARY OF ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES COLLECTED ON 20 JULY 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SW-010	QT-007[a]	QS-003	QD-001[a]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)				
Methylene chloride	(<1U)	(<1U)	(<1U)	0.4J
Carbon disulfide	(<1U)	(<1U)	(<1U)	(<1U)
Toluene	(<1U)	(<1U)	(<1U)	(<1U)
Vinyl chloride	0.6J	(<1U)	(<1U)	(<1U)
Total 1,2-Dichloroethene	0.9J	(<1U)	(<1U)	(<1U)
Trichloroethene	(<1U)	(<1U)	(<1U)	(<1U)
1,1,1-Trichloroethane	(<1U)	(<1U)	(<1U)	(<1U)
Acetone	120	8	(<5U)	(<5U)
Chloroform	(<1U)	(<1U)	4	4

(a) Reanalysis conducted on samples due to low surrogate recoveries.

NOTE: QT = Trip blank.
QS = Equipment rinsate blank.
QD = Source water blank. QD-001 was analyzed under a separate sample delivery group shipped on 16 July 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 20 JULY 1998 AT SITE 9, NAVAL AIR STATION, BRUNSWICK, MAINE

Compound	SED-010	SED-010 Duplicate	QT-007[a] (μg/L)	QS-004 (μg/L)	QD-001[a] (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/kg)					
1,1,1-Trichloroethane	(<6U)	(<6U)	(<1U)	(<1U)	(<1U)
Methylene Chloride	(<6U)	(<6U)	(<1U)	(<1U)	0.4J
Acetone	(<12U)	(<11U)	8	(<5U)	(<5U)
Chloroform	(<6U)	(<6U)	(<1U)	4	4
SEMIVOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (μg/kg)					
Acenaphthene	210J	130J	NR	(<10U)	(<10U)
Dibenzofuran	140J	79J	NR	(<10U)	(<10U)
Fluorene	260J	150J	NR	(<10U)	(<10U)
Phenanthrene	2,500	1,600	NR	(<10U)	(<10U)
Anthracene	330J	190J	NR	(<10U)	(<10U)
Carbazole	400	230J	NR	(<10U)	(<10U)
Fluoranthene	2,600	1,700	NR	(<10U)	(<10U)
Pyrene	3,200	2,300	NR	(<10U)	(<10U)
Benzo(a)anthracene	1,200	680	NR	(<10U)	(<10U)
Chrysene	1,500	970	NR	(<10U)	(<10U)
Bis(2-ethylhexyl)phthalate	82J	100J	NR	(<10U)	(<10U)
Benzo(b)fluoranthene	1,900	1,100	NR	(<10U)	(<10U)
Benzo(k)fluoroethane	780	450	NR	(<10U)	(<10U)
Benzo(a)pyrene	1,300	750	NR	(<10U)	(<10U)
Indeno(1,2,3-c,d)pyrene	770	540	NR	(<10U)	(<10U)
Dibenzo(a,h)anthracene	170J	120J	NR	(<10U)	(<10U)
Benzo(g,h,i)perylene	670	510	NR	(<10U)	(<10U)

(a) Reanalysis conducted on samples due to low surrogate recoveries.

NOTE: QT = Trip blank. Samples associated with QT-007 were analyzed under a separate sample delivery group shipped the same day.
QS = Equipment rinsate blank. Samples associated with QS-004 were analyzed under a separate sample delivery group shipped the same day.
QD = Source water blank. Samples associated with QD-001 were analyzed under a separate sample delivery group shipped on 16 July 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 20 JULY 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-007[a] (μg/L)	QS-003 (SEEP) (μg/L)	QS-004 (SED) (μg/L)	QD-001[a] (μg/L)
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD SW-8260								
Acetone	(<5U)	7	95	35	8	(<5U)	(<5U)	(<5U)
Methylene chloride	(<1U)	(<1U)	9J	(<9U)	(<1U)	(<1U)	(<1U)	0.4J
Chloroform	(<1U)	(<1U)	6J	(<9U)	(<1U)	4	4	4
1,1-Dichloroethene	(<1U)	(<1U)	5J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Carbon Disulfide	(<1U)	(<1U)	6J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,1-Dichloroethane	(<1U)	(<1U)	4J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
2-Butanone	(<5U)	(<5U)	30	(<18U)	(<5U)	(<5U)	(<5U)	(<5U)
Total 1,2-Dichloroethene	(<1U)	(<1U)	11J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Benzene	(<1U)	(<1U)	6J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Trichloroethene	(<1U)	(<1U)	5J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,2-Dichloropropane	(<1U)	(<1U)	6J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Bromodichloromethane	(<1U)	(<1U)	4J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
4-Methyl-2-Pentanone	(<5U)	(<5U)	16J	(<18U)	(<5U)	(<5U)	(<5U)	(<5U)
trans-1,3Dichloropropane	(<1U)	(<1U)	3J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,1,2-Trichloroethane	(<1U)	(<1U)	5J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
2-Hexanone	(<5U)	(<5U)	9J	(<18U)	(<5U)	(<5U)	(<5U)	(<5U)
Tetrachloroethene	(<1U)	(<1U)	4J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Chlorodibromomethane	(<1U)	(<1U)	3J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Ethylbenzene	(<1U)	(<1U)	5J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Total Xylenes	(<1U)	(<1U)	15	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Styrene	(<1U)	(<1U)	3J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Bromoform	(<1U)	(<1U)	3J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,1,2,2-Tetrachloroethane	(<1U)	(<1U)	8J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,2-Dichlorobenzene	(<1U)	(<1U)	7J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,3-Dichlorobenzene	(<1U)	(<1U)	6J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,4-Dichlorobenzene	(<1U)	(<1U)	7J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
Toluene	0.7J	0.6J	44	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)
1,1,1-Trichloroethane	(<1U)	(<1U)	5J	(<9U)	(<1U)	(<1U)	(<1U)	(<1U)

(a) Reanalysis conducted on samples due to low surrogate recoveries.

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 16 July 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.

Analyte	LT-901 (SEEP) (μg/L)	LT-901 (SEEP) DUP (μg/L)	LT-901 (SED) (mg/kg)	LT-901 (SED) DUP (mg/kg)	QT-007[a] (μg/L)	QS-003 (SEEP) (μg/L)	QS-004 (SED) (μg/L)	QD-001[a] (μg/L)
TARGET ANALYTE LIST ELEMENTS BY EPA SERIES METHODS SW-846 6000/7000/9000 (μg/L)								
Aluminum	7,020	5,000	4,880	3,740	NR	(<56.0U)	(<56.0U)	(<56.0
Antimony	2.3B*	2.5B*	0.76B*	0.78B*	NR	1.8B*	(<1.0U)	3.2B*
Arsenic	7.1B*	5.6B*	4.7	2.7	NR	(<2.0U)	(<2.0U)	(<2.0
Barium	107B*	87.1B*	26.6B*	19.7B*	NR	(<4.0U)	(<4.0U)	(<4.0
Beryllium	(<0.20U)	(<0.20U)	(<0.14U)	(<0.11U)	NR	(<0.20U)	(<0.20U)	(<0.60
Cadmium	(<0.60U)	(<0.60U)	0.19B*	(<0.60U)	NR	(<0.60U)	(<0.60U)	(<0.60
Calcium	29,200	28,100	1,270	1,070	NR	98.9B*	198B*	55.4B
Chromium	13.7	7.3B*	9.4	7.3	NR	(<4.0U)	(<4.0U)	(<4.0
Cobalt	(<7.0U)	(<7.0U)	3.4B*	1.4B*	NR	(<7.0U)	(<7.0U)	(<7.0
Copper	23.2	15.8	16.8	10.1	NR	(<2.0U)	(<2.0U)	(<2.0
Iron	44,300	36,200	13,900	9,840	NR	(<52.0U)	(<52.0U)	(<52.0
Lead	111	81.1	125	69.7	NR	(<1.0U)	(<1.0U)	4.3
Magnesium	4,610	4,000	1,570	1,260	NR	(<35.0U)	(<35.0U)	(<35.0
Manganese	694	624	70.9	55.2	NR	(<8.0U)	(<8.0U)	(<8.0
Mercury	(<0.10U)	(<0.10U)	(<0.10U)	(<0.08U)	NR	(<0.10U)	(<0.10U)	(<0.10
Nickel	8.6B*	(<5.0U)	9.0B*	5.4B*	NR	(<5.0U)	(<5.0U)	(<5.0
Potassium	4,770	4,250	663	542	NR	(<71.0U)	(<71.0U)	(<71.0
Selenium	(<2.0U)	3.6B*	0.70B*	(<0.35U)	NR	2.1B*	(<2.0U)	4.1B*
Silver	(<1.0U)	(<1.0U)	(<0.24U)	(<0.18U)	NR	(<1.0U)	(<1.0U)	(<1.0
Sodium	32,300	32,000	266	215	NR	301B*	335B*	633B*
Vanadium	24.8B*	15.8B*	21.0	14.2	NR	(<3.0U)	(<3.0U)	(<3.0
Zinc	157	115	74.0	38.6	NR	(<12.0U)	(<12.0U)	(<12.0

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

U.S. Environmental Protection Agency (U.S. EPA). 1994. National Primary Drinking Water Standards. Office of Water, Washington, D.C. EPA 610-P-94-001. February.

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: LTMP Bimonthly Gauging May 1998 Site 9
Project No: 29600.47
Date: 6 May 1998
Weather/Temperature: Heavy Rain
EA Personnel: RH, BA
Equipment: slope indicator, TVA-1000

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)	Measured Well Depth (ft)	Water Table Elevation (ft MSL)
MW-NASB 069	Y/Y	Y	*	*	Good		57.35	10.02	42.42	47.33
MW-NASB 070	Y/Y	Y	*	*	Good		58.26	11.32	27.32	46.94
MW-NASB 071	Y/Y	Y	*	*	Good		46.25	1.72	21.54	44.53
MW-NASB 072	Y/Y	Y	*	*	Good		49.81	9.34	14.63	40.47
MW-NASB 073	Y/Y	Y	*	*	Good		51.71	7.81	32.12	43.90
MW-NASB 074	Y/Y	Y	*	*	Good		51.68	8.84	27.12	42.84
MW-NASB 075	Y/Y	Y	*	*	Good		54.91	12.57	21.22	42.34
MW-NASB 076	Y/Y	Y	*	*	Good		52.79	10.79	19.94	42.00
MW-NASB 077	Y/Y	Y	*	*	Good		58.89	14.81	37.29	44.08
MW-NASB 078	Y/Y	Y	*	*	Good		53.74	8.61	14.93	45.13
MW-NASB 079	Y/N	Y	*	*	Good		58.15	11.00	18.92	47.15
MW-NASB 080	Y/Y	Y	*	*	Good		58.51	10.55	19.04	47.96
MW-NASB 081	Y/Y	Y	*	*	Good		58.22	10.28	18.85	47.94

NOTE: MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile organic compounds.

* unable to use TVA due to Rain

f:\wp\29600\47\LTMP\gauge3.frm

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

FIELD RECORD OF WELL GAUGING

Project Name: LTMP Event 12 July 1998 Site 9	Project No: 29600.47, 7502	Date: 7/1/98
Weather/Temperature: overcast, rainy		
EA Personnel: RH, SC	Equipment: Slope indicator, 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)	Measured Well Depth (ft)	Water Table Elevation (ft MSL)
			Air Ambient	Well Mouth						
MW-NASB 069	Y Y	Y			Good		57.35	9.65	42.42	47.70
MW-NASB 070	Y Y	Y			Good		58.26	10.68	27.32	47.58
MW-NASB 071	Y Y	Y			Good		46.25	1.39	21.54	44.86
MW-NASB 072	Y Y	Y			Good		49.81	8.65	14.63	41.16
MW-NASB 073	Y Y	Y			Good		51.71	7.47	32.12	44.24
MW-NASB 074	Y Y	Y			Good		51.68	8.82	27.12	42.86
MW-NASB 075	Y Y	Y			Good		54.91	12.12	21.22	42.79
MW-NASB 076	Y Y	Y			Good		52.79	10.48	19.94	42.31
MW-NASB 077	Y Y	Y			Good		58.89	14.77	37.29	44.12
MW-NASB 078	Y Y	Y			Good		53.74	8.77	14.93	44.97
MW-NASB 079	Y Y	Y			Good		58.15	10.41	18.92	47.74
MW-NASB 080	Y Y	Y			Good		58.51	9.70	19.04	48.81
MW-NASB 081	Y Y	Y			Good		58.22	9.48	18.85	48.74

NOTE: MSL = Mean sea level; PVC = Polyvinyl chloride; VOC = Volatile organic compounds.

Unable to record VOC concentrations due to rain

f:\wp\29600\47\LT[illegible]gauge3.frm

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:	AW-NASA-069	Project Number:	29600.47.7502
Well ID:	S-4.9	Well Lock Status:	Locked
Well Condition:	Good	Weather:	Sunny

Gauge Date:	7/16/98	Gauge Time:	1132
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.45	Well Diameter (in.):	2"

Purge Date:	7/16/98	Purge Time:	1135
Purge Method:	Low Flow	Field Personnel:	SAP/KS
Ambient Air VOCs (ppm):		Well Mouth VOCs (ppm):	

WELL VOLUME

A. Well Depth (ft):	42.42	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.32	C. Well Volume (L)	19.42
E. Liquid Depth (ft) (A-B)	32.10	E. Three Well Volumes	58.26

Parameter	Beginning	1	2	3	4	5
Time (min.)	1137	1142	1147	1152	1157	1200
Depth to Water (ft)	10.34	10.36	10.36	10.36	10.36	10.36
Purge Rate ~~(gpm)~~ lpm	0.1	0.1	0.1	0.1	0.1	0.1
Volume Purged ~~(gal)~~ L	0.2	0.7	1.2	1.7	2.3	2.9
pH	6.19	6.28	6.31	6.34	6.36	
Temperature (°C)	15.51	15.56	15.41	15.79	15.60	
Conductivity (μmhos/cm)	337	328	320	322	317	
Dissolved Oxygen (mg/L)	0.61	0.48	0.61	0.46	0.46	
Turbidity (NTU)	22	19	5	4	2	
eH (mV)	104	114	114	108	113	

Total Quantity of Water Removed (L):	3.2		
Samplers:	SAP KS	Sampling Time (Start/End):	1203
Sampling Date:	7/16/98	Decontamination Fluids Used:	DI
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-59-MW003		
Sample Parameters:	VOC		
Comments and Observations:			

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600477502
Well ID:	MW-NASB-071	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, 85

Gauge Date:	7/17/98	Gauge Time:	1006
Sounding Method:	Slope indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.80	Well Diameter (in.):	2

Purge Date:	7/17/98	Purge Time:	1007
Purge Method:	Low Flow	Field Personnel:	BA SC
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):	2.15	C. Well Volume (L)	11.73
E. Liquid Depth (ft) (A-B)	19.39	E. Three Well Volumes	35.19

Parameter	Beginning	1	2	3	4	5
Time (min.)	1010	1013	1016	1019	1022	1025
Depth to Water (ft)	2.55	2.55	2.55	2.55	2.55	2.55
Purge Rate (~~gpm~~) lpm	1.8	1.8	1.8	1.8	1.8	1.8
Volume Purged (~~gal~~) L	5.4	10.8	16.2	21.6	27.0	32.4
pH	5.87	6.19	6.31	6.36	6.38	6.39
Temperature (°C)	13.74	13.64	13.60	13.56	13.54	13.52
Conductivity (μmhos/cm)	262	245	241	238	237	235
Dissolved Oxygen (mg/L)	0.25	0.22	0.19	0.17	0.17	0.19
Turbidity (NTU)	13	5	2	4	2	2
eH (mV)	105	82	68	62	59	56

Total Quantity of Water Removed (L):	41.4		
Samplers:	BA, SC	Sampling Time (Start/End):	1030 /
Sampling Date:	7/17/98	Decontamination Fluids Used:	none
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-59-MW007		
Sample Parameters:	VOC		

Comments and Observations: Containerized water ran through treatment plant

phchecq OK

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600477502
Well ID:	MW-NASB-72	Well Lock Status:	locked
Well Condition:	good	Weather:	sunny, 85

Gauge Date:	7/17/98	Gauge Time:	1145
Sounding Method:	Slope indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.25	Well Diameter (in.):	2

Purge Date:	7/17/98	Purge Time:	1148
Purge Method:	Low Flow	Field Personnel:	BA SC
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):	9.65	C. Well Volume (L)	3.01
E. Liquid Depth (ft) (A-B)	4.98	E. Three Well Volumes	9.03

Parameter	Beginning	1	2	3	4	5
Time (min.)	1151	1154	1157	1200	1203	
Depth to Water (ft)	9.98	9.98	9.98	9.98	9.98	
Purge Rate (gpm)	0.2	0.2	0.2	0.2	0.2	
Volume Purged (gal)	0.6	1.2	1.8	2.4	3.0	
pH	4.83	5.66	6.01	6.17	6.22	
Temperature (°C)	13.25	12.50	12.62	12.66	12.66	
Conductivity (μmhos/cm)	92	105	109	101	100	
Dissolved Oxygen (mg/L)	2.66	2.52	2.52	2.42	2.37	
Turbidity (NTU)	8	6	6	7	7	
eH (mV)	134	141	145	148	149	

Total Quantity of Water Removed (L):	4.6		
Samplers:	BA, SC	Sampling Time (Start/End):	1210/1211
Sampling Date:	7/17/98	Decontamination Fluids Used:	none
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN1259MW010	BN1259MWX02	
Sample Parameters:	VOC, TAL Elements		

Comments and Observations: Containerized water ran through treatment plant

phcheck ok

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47.7502
Well ID:	MW-NASB-074	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, 85°

Gauge Date:	7/17/98	Gauge Time:	1038
Sounding Method:	Slope indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	1.90	Well Diameter (in.):	2

Purge Date:	7/17/98	Purge Time:	1040
Purge Method:	Low-Flow	Field Personnel:	BA, SC
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):	10.05	C. Well Volume (L)	10.32
E. Liquid Depth (ft) (A-B)	17.07	E. Three Well Volumes	30.96

Parameter	Beginning	1	2	3	4	5
Time (min.)	1045	1050	1055	1100	1105	1110
Depth to Water (ft)	10.72	10.70	10.65	10.65	10.65	10.65
Purge Rate (gpm)	0.4	0.4	0.4	0.4	0.4	0.4
Volume Purged (gal)	2	4	6	8	10	12
pH	6.51	6.19	6.21	6.38	6.40	6.41
Temperature (°C)	12.28	11.87	12.11	12.10	12.08	12.07
Conductivity (μmhos/cm)	231	232	245	250	222	225
Dissolved Oxygen (mg/L)	0.35	1.09	0.25	0.21	0.21	0.20
Turbidity (NTU)	1540	210	84	23	13	10
eH (mV)	143	134	130	127	127	125

Total Quantity of Water Removed (L):	18.4		
Samplers:	BA, SC	Sampling Time (Start/End):	1125 / 1126
Sampling Date:	7/17/98	Decontamination Fluids Used:	none
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-1259-MW008		
Sample Parameters:	VOC		

Comments and Observations: water was ~~org~~ orange color initially

ph check ok

EA Engineering, Science, and Technology

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

Site Name:	Site 9	Project Number: 2960047 7502	Date: 7/17/98
Well ID:	MW-NASB-07B	Field Personnel:	BA, SC

Parameter	6	7	8	9	10	11
Time (min.)	1119	1118	1121			
Depth to Water (ft)	10.65	10.65	10.65			
Purge Rate (gpm)	0.4	0.4	0.4			
Volume Purged (gal)	14	15.2	16.4			
pH	6.41	6.41	6.42			
Temperature (°C)	12.07	12.05	12.05			
Conductivity (μmhos/cm)	235	232	231			
Dissolved Oxygen (mg/L)	0.21	0.21	0.21			
Turbidity (NTU)	8	8	7			
eH (mV)	123	123	123			

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:	NAS Brunswick-Site 9	Project Number:	29600.47 7502
Well ID:	MW-NASB-075	Well Lock Status:	good
Well Condition:	good	Weather:	hot (90) humid, hazy

Gauge Date:	7/17/98	Gauge Time:	1220
Sounding Method:	slope indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	200	Well Diameter (in.):	2"

Purge Date:	7/17/98	Purge Time:	1225
Purge Method:	Low Flow	Field Personnel:	BDA, SJC
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):	.605
B. Depth to Water (ft):	13.48	C. Well Volume (L)	~~.605~~ 4.68
E. Liquid Depth (ft) (A-B)	7.74	E. Three Well Volumes	14.04

Parameter	Beginning	1	2	3	4	5
Time (min.)	1230	1235	1240	1243	1246	1249
Depth to Water (ft)	13.81	13.72	13.61	13.60	13.60	13.60
Purge Rate (gpm)	.4	.3	.3	.3	.3	.3
Volume Purged (gal)	2.0	3.5	5.0	~~6.5~~ 5.9	~~8.0~~ 6.8	~~9.5~~ 7.7
pH	5.83	5.91	5.90	5.82	5.83	5.84
Temperature (°C)	15.14	15.82	16.22	16.35	16.42	16.70
Conductivity (μmhos/cm)	162	190	194	193	194	196
Dissolved Oxygen (mg/L)	10.17	5.63	6.07	6.28	6.29	6.54
Turbidity (NTU)	347 *	26	25 *	0	0	0
eH (mV)	288 *	253	248	261	255	253

Total Quantity of Water Removed (L):	8.9		
Samplers:		Sampling Time (Start/End):	1253
Sampling Date:	7/17/98	Decontamination Fluids Used:	DI
Sample Type:	grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-S9-MW009		
Sample Parameters:	VOC + 8260		
Comments and Observations:	clean cup out twice.		

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47.7502
Well ID:	MW-NASB-076	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, 85°

Gauge Date:	7/17/98	Gauge Time:	1318
Sounding Method:	Slope indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.00	Well Diameter (in.):	2

Purge Date:	7/17/98	Purge Time:	1320
Purge Method:	Low Flow	Field Personnel:	BA, SC
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):	11.37	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.)	1323	1326	1329	1332		
Depth to Water (ft)	11.45	11.45	11.45	11.45		
Purge Rate (gpm)	0.4	0.4	0.4	0.4		
Volume Purged (gal)	1.2	2.4	3.6	4.8		
pH	5.93	5.92	5.91	5.92		
Temperature (°C)	16.34	16.62	17.03	17.47		
Conductivity (μmhos/cm)	188	196	192	195		
Dissolved Oxygen (mg/L)	0.91	0.82	0.82	0.83		
Turbidity (NTU)	5	8	5	1		
eH (mV)	113	107	106	103		

Total Quantity of Water Removed (L):	6.4		
Samplers:	BA, SC	Sampling Time (Start/End):	1335/1336
Sampling Date:	7/17/98	Decontamination Fluids Used:	none
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-59-MW011		
Sample Parameters:	VOC		

Comments and Observations: containerized water from through plant

pH check OK

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47
Well ID:	mw-NASB-077	Well Lock Status:	locked
Well Condition:	Good	Weather:	Humid ± 85

Gauge Date:	7/16/98	Gauge Time:	1515
Sounding Method:	Slop Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	3.04	Well Diameter (in.):	2"

Purge Date:	7/16/98	Purge Time:	1515
Purge Method:	Low Flow	Field Personnel:	CS SAP
Ambient Air VOCs (ppm):	Ø	Well Mouth VOCs (ppm):	Ø

WELL VOLUME

A. Well Depth (ft):	CS 27.32	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	17.0	C. Well Volume (L)	6.24
E. Liquid Depth (ft) (A-B)	10.32	E. Three Well Volumes	18.72

Parameter	Beginning	1	2	3	4	5
Time (min.)	CS 1520	1525	1530	1535	1540	1545
Depth to Water (ft)	CS 17.08	17.13	17.13	17.17	17.31	17.31
Purge Rate (gpm)	0.2	0.2	0.2	0.2	0.2	0.3
Volume Purged (gal)	1.2	2.2	3.2	4.2	5.2	6.7
pH	6.42	6.41	6.41	6.42	6.41	6.39
Temperature (°C)	11.26	11.06	11.22	11.24	11.27	10.74
Conductivity (μmhos/cm)	34	33	34	34	33	32
Dissolved Oxygen (mg/L)	6.75	6.27	5.74	5.53	5.58	5.71
Turbidity (NTU)	1.4	1.4	7.8	9.8	9.6	5.9
eH (mV)	147.7	149.8	165.3	157.5	163.4	169.7

Total Quantity of Water Removed (L):	12.7		
Samplers:	CS/SAP	Sampling Time (Start/End):	1605
Sampling Date:	7/16/98	Decontamination Fluids Used:	DI H_2O
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-S9-MW005		
Sample Parameters:	VOC		
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	Date:	7/16/98
Well ID:	MW-NASB-077	Field Personnel:	KS SAP		

Parameter	6	7	8	9	10	11
Time (min.)	1550	1555	1600			
Depth to Water (ft)	17.31	17.31	17.31			
Purge Rate (gpm)	0.3	0.3	0.3			
Volume Purged (gal)	8.2	9.7	11.2			
pH	6.39	6.37	6.36			
Temperature (°C)	10.57	10.50	10.55			
Conductivity (μmhos/cm)	32	31	30			
Dissolved Oxygen (mg/L)	5.59	5.58	5.59			
Turbidity (NTU)	3.1	2.9	3.0			
eH (mV)	176.7	171.5	174.8			

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:	29600.47.7502
Well ID:	MW-NASB-078	Well Lock Status:	locked
Well Condition:	good	Weather:	Sunny, 80

Gauge Date:	7/17/98	Gauge Time:	829
Sounding Method:	Sbpe indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	3.52	Well Diameter (in.):	2

Purge Date:	7/17/98	Purge Time:	830
Purge Method:	Low Flow	Field Personnel:	BA, SC
Ambient Air VOCs (ppm):	0 / 0	Well Mouth VOCs (ppm):	0 / 0

WELL VOLUME

A. Well Depth (ft):	14.93	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	9.92	C. Well Volume (L)	3.03
E. Liquid Depth (ft) (A-B)	5.01	E. Three Well Volumes	9.09

Parameter	Beginning	1	2	3	4	5
Time (min.)	833	838	841	844		
Depth to Water (ft)	10.15	10.15	10.15	10.15		
Purge Rate (gpm)	0.3	0.3	0.3	0.3		
Volume Purged (gal)	0.9	2.9	3.3	4.2		
pH	5.69	5.84	5.64	5.63		
Temperature (°C)	15.15	13.81	13.89	13.82		
Conductivity (μmhos/cm)	65	61	62	63		
Dissolved Oxygen (mg/L)	5.73	5.84	5.59	5.52		
Turbidity (NTU)	212	7	2	1		
eH (mV)	250	259	260	261		

Total Quantity of Water Removed (L):	6.3		
Samplers:	BA, SC	Sampling Time (Start/End):	850 / 851
Sampling Date:	7/17/98	Decontamination Fluids Used:	none
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN1259MW006		
Sample Parameters:	VOC		
Comments and Observations:	cleaned up at 835		

phcheck OK

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.41
Well ID:	mw-NASB-079	Well Lock Status:	Locked
Well Condition:	Good	Weather:	Hazy hot

Gauge Date:	7/16/98	Gauge Time:	
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.20	Well Diameter (in.):	2"

Purge Date:	7/16/98	Purge Time:	1340
Purge Method:	Low Flow	Field Personnel:	KS/SAP
Ambient Air VOCs (ppm):	Ø	Well Mouth VOCs (ppm):	Ø

WELL VOLUME

A. Well Depth (ft):	18.92	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	11.20	C. Well Volume (L)	4.67
E. Liquid Depth (ft) (A-B)	7.72	E. Three Well Volumes	14.01

Parameter	Beginning	1	2	3	4	5
Time (min.)	1345	1350	1355	1400	1405	1410
Depth to Water (ft)	11.20	11.23	11.24	11.24	11.24	11.24
Purge Rate (gpm)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (gal)	1.2	2.2	3.2	4.2	5.2	6.2
pH	6.77	7.07	6.95	7.07	7.14	7.15
Temperature (°C)	18.30	16.78	16.65	16.85	17.25	17.45
Conductivity (μmhos/cm)	230	225	221	211	214	200
Dissolved Oxygen (mg/L)	0.13	0.13	0.33	0.22	0.20	0.21
Turbidity (NTU)	808.7	365.7	112.4	89.9	61.4	40.5
eH (mV)	-71.4	-105.1	-90.4	-106.8	-116.1	-118.0

Total Quantity of Water Removed (L):	12.2		
Samplers:	SAP/KS	Sampling Time (Start/End):	1435
Sampling Date:	7/16/98	Decontamination Fluids Used:	DI
Sample Type:	Grab	Sample Preservatives:	HCL/HNO3
Sample Bottle IDs:	BW-12-59-MW004/MWXDI		
Sample Parameters:	VOC/TAL Metals		
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	Date:	7/16/98
Well ID:	MW-NASB-079	Field Personnel:	CSI SAP		

Parameter	6	7	8	9	10	11
Time (min.)	1415	1420	1425	1428	1431	1434
Depth to Water (ft)	11.24	11.24	11.24	11.24	11.24	11.24
Purge Rate (gpm)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (gal)	7.2	8.2	9.2	10.2	11.2	12.2
pH	7.11	7.11	7.10	7.08	7.08	7.08
Temperature (°C)	17.20	16.95	16.86	16.86	16.86	16.87
Conductivity (μmhos/cm)	185	175	175	160	167	168
Dissolved Oxygen (mg/L)	0.20	0.30	0.34	0.45	0.45	0.46
Turbidity (NTU)	23	12	10	7	7	7
eH (mV)	-99	-102	-97	-90	-89	-88

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
Well ID:	MW-NASB-080	Well Lock Status:	Locked
Well Condition:	Good	Weather:	Hazy, Hot, Humid ± 75

Gauge Date:	7/16/98	Gauge Time:	950
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	2.05	Well Diameter (in.):	2"

Purge Date:	7/16/98	Purge Time:	952
Purge Method:	Low Flow	Field Personnel:	SAP KS
Ambient Air VOCs (ppm):	Ø	Well Mouth VOCs (ppm):	Ø

WELL VOLUME

A. Well Depth (ft):	19.04	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.24	C. Well Volume (L)	5.32
E. Liquid Depth (ft) (A-B)	8.80	E. Three Well Volumes	15.96

Parameter	Beginning	1	2	3	4	5
Time (min.) 0951	~~10.45~~	1002	1007	1012	1017	1022
Depth to Water (ft)	10.45	10.56	10.56	10.56	10.56	10.56
Purge Rate (gpm)	0.3	0.3	0.3	0.3	0.3	0.3
Volume Purged (gal)	1.5 KS	3.0	4.5	6.0	7.5	9.0
pH	6.53	6.67	6.73	6.76	6.77	6.78
Temperature (°C)	15.85	16.40	16.69	16.83	16.85	16.74
Conductivity (μmhos/cm)	226	260	244	252	255	254
Dissolved Oxygen (mg/L)	.46	.41	.34	.31	.30	.29
Turbidity (NTU)	8.8	3.4	2.0	1.5	1.4	1.5
eH (mV)	128.7	94.6	60.8	39.8	27.8	17.3

Total Quantity of Water Removed (L):	21.9		
Samplers:	KS/SAP	Sampling Time (Start/End):	1105
Sampling Date:	7/16/98	Decontamination Fluids Used:	DI H_2O
Sample Type:	Grab	Sample Preservatives:	HCL
Sample Bottle IDs:	BN-12-S9-MW002		
Sample Parameters:	VOC, TAL metals		
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	Date:	7/16/98
Well ID:	MW-NASB-080	Field Personnel:	KB / SAP		

Parameter	6	7	8	9	10	11
Time (min.)	1027	1032	1037	1042	1045	1048
Depth to Water (ft)	10.56	10.56	10.56	10.56	10.56	10.56
Purge Rate (gpm)	0.3	0.3	0.3	0.3	0.3	0.3
Volume Purged (gal)	10.5	12.0	13.5	15.0	15.9	16.8
pH	6.77	6.78	6.79	6.79	6.79	6.79
Temperature (°C)	16.80	16.78	16.77	16.79	16.80	16.80
Conductivity (μmhos/cm)	283	286	275	278	277	281
Dissolved Oxygen (mg/L)	.29	.30	.29	.27	.28	.28
Turbidity (NTU)	1.4	1.4	1.5	1.5	1.5	3.0
eH (mV)	12.6	5.4	1.3	-3.5	-6.3	-8.6

Parameter	12	13	14	15	16	17
Time (min.)	1051	1054	1057	1100	1103	
Depth to Water (ft)	10.56	10.56	10.56	10.56	10.56	
Purge Rate (gpm)	0.3	0.3	0.3	0.3	0.3	
Volume Purged (gal)	17.7	18.6	19.5	20.4	21.3	
pH	6.80	6.80	6.79	6.78	6.79	
Temperature (°C)	16.78	16.77	16.77	16.77	16.78	
Conductivity (μmhos/cm)	284	280	282	283	280	
Dissolved Oxygen (mg/L)	.28	.29	.30	.28	.30	
Turbidity (NTU)	1.4	1.4	1.4	1.4	1.4	
eH (mV)	-10.7	-12.4	-14.1	-14.2	-14.3	

Comments and Observations:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL GAUGING, PURGING, AND SAMPLING

Site Name:	Site 9	Project Number:	29600.47.7502
Well ID:	MW-NAS13-081	Well Lock Status:	Locked
Well Condition:	Good	Weather:	Overcast Hazy Hot Humid

Gauge Date:	7/16/98	Gauge Time:	850
Sounding Method:	Slope Indicator	Measurement Ref:	TOC
Stick Up/Down (ft):	1.91	Well Diameter (in.):	2"

Purge Date:	7/16/98	Purge Time:	851
Purge Method:	Low Flow	Field Personnel:	Stp KS
Ambient Air VOCs (ppm):		Well Mouth VOCs (ppm):	

WELL VOLUME

A. Well Depth (ft):	18.85	D. Well Volume/ft (L):	0.605
B. Depth to Water (ft):	10.02	C. Well Volume (L)	5.34
E. Liquid Depth (ft) (A-B)	8.83	E. Three Well Volumes	16.02

Parameter	Beginning	1	2	3	4	5
Time (min.)	854	859	8904	909	918	915
Depth to Water (ft)	10.09	10.09	10.09	10.09	10.09	10.09
Purge Rate (gpm)	0.2	0.2	0.2	0.2	0.2	0.2
Volume Purged (gal)	0.6	1.6	2.6	3.6	4.2	4.8
pH	5.76	6.59	6.64	6.64	6.64	6.63
Temperature (°C)	15.67	16.37	16.62	16.52	16.54	16.56
Conductivity (μmhos/cm)	286	296	297	299	299	301
Dissolved Oxygen (mg/L)	2.01	3.09	3.33	3.35	3.35	3.36
Turbidity (NTU)	38	3	0	0	0	0
eH (mV)	172	160	156	155	156	157

Total Quantity of Water Removed (L):	4.8		
Samplers:	Stp/KS	Sampling Time (Start/End):	918
Sampling Date:	7/16/98	Decontamination Fluids Used:	DI
Sample Type:	Grab	Sample Preservatives:	HCL/HNO3
Sample Bottle IDs:	BN-12-59-MW001		
Sample Parameters:	VOC/metals		
Comments and Observations:	~~VOC~~ TAL Elements		

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: Sites 1+3			Project Number: 29600477502
Sample Location ID: SW1SE001			Date: 7/16/98
Sampling Time:	Start:	End:	Sample Team Members: BA SC

SW SED

SURFACE WATER INFORMATION

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

Water Depth and Sample Location _____ (ft)

Depth of Sample from Top of Water _____ (ft)

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

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

Water Quality Parameters
(✓) Temperature 16.29 °C
(✓) Conductivity 520 µmhs/cm
(✓) ph 6.51 units
(✓) Dissolved oxygen 3.57 mg/L
(✓) Turibidity 34 NTU
(✓) Eh -31 mv

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color gray
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2L	✓	BN12S1SW007
✓		✓		8oz	✓	BN12S1SD007

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: BW1SE002			Date: 7/16/98
Sampling Time:	Start: 1130	End: 1135	Sample Team Members: BA, SC

SW SED

SURFACE WATER INFORMATION

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

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

Water Quality Parameters
(✓) Temperature 15.68 °C
(✓) Conductivity 357 µmhs/cm
(✓) ph 6.65 units
(✓) Dissolved oxygen 6.12 mg/L
(✓) Turibidity 13 NTU
(✓) Eh -20 mv

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color gray
(✓) iron staining

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2L	✓	BN12S1SW00~~8~~6
✓		✓		8oz	✓	BN12S1SD006

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SW1SED003			Date: 7/16/98
Sampling Time:	~~Start~~: 1120 SW	~~End~~: 1125 SED	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

Water Quality Parameters
(✓) Temperature 15.85 °C
(✓) Conductivity 365 µmhs/cm
(✓) ph 6.81 units
(✓) Dissolved oxygen 7.79 mg/L
(✓) Turibidity 8 NTU
(✓) Eh -11 mv

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

Field QC Data: (✓) Field Duplicate Collected
Duplicate ID BW2SE
( ) MS/MSD SWX01

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color light brown
(✓) iron staining

Field QC Data: (✓) Field Duplicate Collected
Duplicate ID BN12S1SDX01
( ) 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
✓	✓		✓	1.2 L	✓	BN12S1SW005
✓		✓		8 oz	✓	BN12S1SD005

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SW1SED 004			Date: 7/16/98
Sampling Time:	Start: 1045	End: 1050	Sample Team Members: BA, SC

SW SED

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

Water Quality Parameters
(✓) Temperature 19.72 °C
(✓) Conductivity 124 µmhs/cm
(✓) ph 6.95 units
(✓) Dissolved oxygen 8.60 mg/L
(✓) Turibidity 5 NTU
(✓) Eh 37 mv

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2 L	✓	BN12S1SW004
✓		✓		8 oz	✓	BN12S1SD004

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.4.7.7502
Sample Location ID: SW/SED 005			Date: 7/16/98
Sampling Time:	Start: 1025 SW	End: 1030 SED	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

Water Quality Parameters
(✓) Temperature 18.6 °C
(✓) Conductivity 126 µmhs/cm
(✓) ph 6.72 units
(✓) Dissolved oxygen 7.32 mg/L
(✓) Turibidity 67 NTU
(✓) Eh 19 mv

beaver dam has made water level rise above level at SW-6 approximately 1-2 ft. water cloudy.

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2L	✓	BN125SW003
✓		✓		8oz	✓	BN125S0003

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SW/SED 006			Date: 7/16/98
Sampling Time:	Start: 1015 SW	End: 1020 SED	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

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

Water Quality Parameters
(✓) Temperature 18.50 °C
(✓) Conductivity 123 µmhs/cm
(✓) ph 6.66 units
(✓) Dissolved oxygen 8.11 mg/L
(✓) Turibidity 5 NTU
(✓) Eh 38 mv

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor _____
(✓) Color dark brow
(✓) iron staining

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2L	✓	BN12515W002
✓		✓		8oz	✓	BN12515D002

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SW/SED 007			Date: 7/16/98
Sampling Time:	Start: 1000 SW	End: 1005 SED	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 2 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

Water Quality Parameters
(✓) Temperature 18.65 °C
(✓) Conductivity 123 µmhs/cm
(✓) ph 6.66 units
(✓) Dissolved oxygen 8.27 mg/L
(✓) Turibidity 5 NTU
(✓) Eh 40 mv

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

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

Sample Location Sketch:
( ) Yes
(✓) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓	✓		✓	1.2L	✓	BN-12-S1-SW001
✓		✓		802	✓	BN-12-S1-SD001

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: Seep 1			Date: 7/16/98
Sampling Time:	~~Start~~: 1140 SW	~~End~~: 1150 SED	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

Water Depth and Sample Location 0.5 (ft)

Depth of Sample from Top of Water 0.2 (ft)

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

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

Water Quality Parameters
(✓) Temperature 14.32 °C
(✓) Conductivity 731 µmhs/cm
(✓) ph 5.91 units
(✓) Dissolved oxygen 3.08 mg/L
(✓) Turibidity 217 NTU
(✓) Eh 84 mv

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

Field QC Data: (✓) Field Duplicate Collected
Duplicate ID BN12S1
( ) MS/MSD LTXD1

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown
(✓) iron staining

Field QC Data: (✓) Field Duplicate Collected
Duplicate ID BN12S1LTXD2
( ) 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
✓		✓		8oz	✓	BN12S1LTSD1
✓	✓		✓	1.2L	✓	BN12S1LTSW1

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SEEP-2			Date: 7/16/98
Sampling Time:	Start: 1220	End:	Sample Team Members: BA, SC

SURFACE WATER INFORMATION SED

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

Water Depth and Sample Location NA (ft)

Depth of Sample from Top of Water NA (ft)

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

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

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

not collected dry

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

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

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color brown
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓		✓		802	✓	BN12S1LTSD2

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600477502
Sample Location ID: Seep-3			Date: 7/16/98
Sampling Time:	~~Start:~~ 1235	End:	Sample Team Members: BA, SC

SED

SURFACE WATER INFORMATION

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

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

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

Water Depth and Sample Location NA (ft)

Depth of Sample from Top of Water NA (ft)

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

not collected, dry

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

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

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown, orange
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓		✓		802	✓	BN12S1LTSD3

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: Seep-4			Date: 7/16/98
Sampling Time:	Start: 1240	End:	Sample Team Members: BA, SC

SED

SURFACE WATER INFORMATION

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

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

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

Water Depth and Sample Location NA (ft)

Depth of Sample from Top of Water NA (ft)

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

not collected dry

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

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

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown, orange
( ) _____

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓		✓		8 oz	✓	BN12S1LTS04

NOTES/SKETCH

EA Engineering, Science, and Technology

FIELD RECORD OF SURFACE WATER AND SEDIMENT SAMPLING

Site Name: Sites 1+3			Project Number: 29600.47.7502
Sample Location ID: SEEP-5			Date: 7/16/98
Sampling Time:	Start: 1250 SED	End:	Sample Team Members: BA, SC

SURFACE WATER INFORMATION

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

Water Depth and Sample Location NA (ft)

Depth of Sample from Top of Water NA (ft)

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

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

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

not collected, Dry

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

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

Sample Location Sketch:
( ) Yes
( ) No

Method Used:
( ) Winkler
( ) Probe

SEDIMENT INFORMATION

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

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

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

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

Sample Observations:
(✓) Odor none
(✓) Color dark brown
(✓) iron staining

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

SAMPLES COLLECTED

Check if Required at this Location	Matrix: Surface Water	Matrix: Sediment	Check if Preserved with Acid/Base	Volume Required	Check if Sample Collected	Sample Bottle IDs
✓		✓		8oz	✓	BN12S1LT505

NOTES/SKETCH

Appendix B

Analytical Data Quality Review

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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 were field duplicates) and 4 sediment samples collected from Site 9 (of which 2 were 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 12. 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 12 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	✓J	✓	✓	✓J	✓	✓	✓	86.7% ✘	86.7% ✓
	Metals	✘	✓B	✓	✓J	NA	✓J	✓		
	BNAs	✓	✓	✓	✓J	✓	✓	✓		
Sediment Matrix	VOA	✓J	✓	✓	✓J	✓	✓	✓		
	Metals	✓	✓B	✓	✓J	NA	✓J	✓		
	BNAs	✓	✓	✓	✓J	✓	✓J	✓		

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

All organic and inorganic data are usable as reported, with the exception of the reported mercury results for the following samples: MW-NASB-081, MW-NASB-069, MW-NASB-079, MW-NASB-079 DUP, MW-NASB-072, and MW-NASB-076. These samples should be considered unusable based on holding time issues.

Refer to the appropriate sections below for 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 1994b); the precision and accuracy objectives and reporting requirements identified in the LTMP were met. The sediment sample was further

1. To use a microwave digestion versus water bath.

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 VOC	Exceedance of Acceptance Criteria	Sample	Method Holding Time for Mercury	Exceedance of Acceptance Criteria
QT-007 RE	14 days	1 day	QS-003	28 days	9 days
MW-NASB-081 RE	14 days	13 days	QS-004	28 days	9 days
MW-NASB-080 RE	14 days	13 days	LT-901 (SEEP)	28 days	9 days
MW-NASB-069 RE	14 days	13 days	LT-901 (SEEP) DUP	28 days	9 days
MW-NASB-079 RE	14 days	14 days	MW-NASB-081	28 days	40 days
MW-NASB-079 DUP RE	14 days	14 days	MW-NASB-069	28 days	40 days
MW-NASB-077 RE	14 days	14 days	MW-NASB-079	28 days	40 days
LT-901 (SED) DUP	14 days	6 days	MW-NASB-079 DUP	28 days	40 days
SED-10 DUP	14 days	6 days	MW-NASB-072	28 days	39 days
			MW-NASB-076	28 days	39 days

The usability of the volatile organic data for the following: QT-007 RE, MW-NASB-081 RE, MW-NASB-080 RE, MW-NASB-069 RE, MW-NASB-079 RE, MW-NASB-079 DUP RE, MW-NASB-077 RE, LT-901 (SED), and SED-10 DUP are unaffected, in that the holding time did not exceed 14 days. However, the reported volatile organic concentrations should be considered estimations of the true sample concentrations for the above listed samples. The analytical results for these samples may be bias slightly low. NOTE: The data Reviewer suggests that the original sample data be used instead of the reanalysis data due to holding time discrepancies.

The usability of mercury data for QS-003, QS-004, LT-901 (SEEP), and LT-901 (SEEP) DUP are unaffected, since the holding time did not exceed 28 days. However, the reported mercury concentrations should be considered estimations of the true sample concentrations for the above listed samples. The analytical results for these samples may be bias slightly low. The mercury data for MW-NASB-081, MW-NASB-069, MW-NASB-079, MW-NASB-079 DUP, MW-NASB-072, and MW-NASB-076 are unusable as reported, since the holding time was grossly exceeded. The analytical results for the above mentioned samples should not be used in the evaluation process.

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, with the exception of 1,1-dichloroethene (17 percent) in Sample MW-NASB-081. All laboratory prepared spikes (performed in both method blanks and LCS) had acceptable RPDs. The RPD for 1,1-dichloroethene in the sample mentioned above did not indicate significant imprecision, therefore, the data are usable as reported. The analytical precision was determined to be acceptable and the aqueous volatile organic data usable as reported based on the review of laboratory precision.

The MS/MSD was performed on Samples SED-10 and LT-901 (SED). The sediment and leachate sediment sample MS/MSD RPDs were 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 and, therefore, the data are usable as reported based on the review of MS/MSD precision.

B.3.3 Target Analyte List Metals

All 23 analytes were used to quantify the laboratory duplicate RPD. There were no control limits identified in the QAPP for aqueous or sediment duplicate RPD for TAL metals, therefore, the laboratory control limits were used. The laboratory replicated the analyses of Samples SED-10, 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, thallium was 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, with the exception of 1,2-dichloroethane-d4 in Sample QT-007 (75 percent) and bromofluorobenzene in three samples (MW-NASB-007 RE1 [73 percent], MW-NASB-007 RE2 [72 percent], and QT-007 [84 percent]). The laboratory appropriately repeated the analysis results for these samples. The re-analysis results were within the control limits, therefore, the analytical results are usable as reported.

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, 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 2-4 dinitrotoluene (91 percent) in SED-10 which exceeded the control limits. The high recovery of 2-4 dinitrotoluene suggests a potential high bias for this compound; 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, confirming the laboratory's purging efficiency. The data are usable as reported based on the review of LCS accuracy.

B.4.3 Target Analyte List Metals

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

The laboratory performed MS spikes on those samples identified in Section B.3.2. The groundwater and leachate station seep MS recoveries were within the established control limits, with the exceptions of aluminum (56.4 percent) and mercury (47.8 percent) in Sample LT-901 (SEEP). The analytical results for aluminum and mercury in Sample LT-901 (SEEP) should be considered biased low. All other aqueous data are usable as reported based on the review of MS accuracy.

The sediment MS recoveries for Sample SED-10 were within the established control limits with the following exceptions: antimony (33.6 percent), arsenic (58.3 percent), barium (64.2 percent), beryllium (61.6 percent), cadmium (57.8 percent), calcium (61.9 percent), chromium (64.7 percent), cobalt (61.6 percent), copper (60.2 percent), lead (57.8 percent), magnesium (70.7 percent), nickel (62.6 percent), potassium (65.3 percent), selenium (51.9 percent), silver (60.2 percent), sodium (62.4 percent), vanadium (63.3 percent), and zinc (53.5 percent), which were all below the lower control limit of 75 percent. Therefore, all of the analytical results for the analytes listed above in sediment Sample SED-10 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 of 19 aqueous field samples were collected, resulting in a field completeness level of 86.7 percent. The 2 samples not collected, SW/SED-11 and SW/SED-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 86.7 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-006	QT-007
Acetone	µg/L	(<5U)	8
NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).			

The trip blank contamination noted in QT-007 did not affect the usability of any data as acetone was not detected in the associated samples.

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)
Chloroform	µg/L	(<1.0U)	(<1.0U)	0.4J
Methylene chloride	µg/L	4	4	4
Antimony	µg/L	1.8B*	(<1.0U)	3.2B*
Calcium	µg/L	98.9B*	198B*	55.4B*
Lead	µg/L	(<1.0U)	(<1.0U)	4.3
Selenium	µg/L	2.1B*	(<2.0U)	4.1B*
Sodium	µg/L	301B*	335B*	633B*

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.

The analytical results of the equipment rinsate blanks and source water blank indicate that there was minor VOC contamination present. Chloroform results in QD-001 should be considered as a false-positive. Chloroform was not detected in any of the associated samples with the exception of LT-901 (SED). The chloroform concentration in Sample LT-901 (SED) should be considered a false-positive. The results for methylene chloride in Sample LT-901 (SED) exceeded 5 times the source water blank concentration and, therefore, the data should be considered usable for leachate sediment samples.

Analytes antimony, calcium, lead, selenium, and sodium were identified in Site 9 rinsate blanks. The appearance of antimony, calcium, selenium, and sodium in the source water blank indicates the analytes are constituents of the rinse water and should not be considered indicators of poor field decontamination procedures. The presence of the compounds in the rinsate blanks indicate a potential for these compounds to be false-positives.

The analysis of TAL metals for the rinsate blank associated with Sample LT-901 (SED) indicates the presence of the following contaminants: calcium and sodium. Of these analytes, calcium and sodium were also present in the source water blank, indicating that these analytes are constituents of the source water and not necessarily an indicator of poor decontamination procedures. Sodium results have the potential to be false-positives. Calcium contamination did not affect the usability of Sample LT-901 (SED) as the concentration of this analyte in the sample exceeded 5 times the rinsate blank concentration. Though not detected in the rinsate sample associated with Sample LT-901 (SED), lead contamination introduced by the source water did not affect the usability as the sample concentration was greater than 5 times the source water concentration.

The analyses of TAL metals for the rinsate blank associated with the aqueous Sample LT-901 (SEEP) indicated the presence of the following contaminants: calcium, selenium, sodium, and antimony. These analytes 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. Antimony and selenium results should be considered false-positives. Calcium and

sodium contamination did not affect the usability of Sample LT-901 (SEEP) as the concentrations of these analytes in the sample exceeded 5 times the rinsate blank. Though not detected in the rinsate sample associated with Sample LT-901 (SEEP), lead contamination introduced by the source water did not affect the usability as the sample concentration was 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-079	MW-NASB-079 DUP	RPD %	Difference
Acetone	µg/L	9B	13B	**36**	---
Methylene Chloride	µg/L	3	6	**67**	---
Aluminum	µg/L	73.3B*	84.7B*	NA	11.4
Antimony	µg/L	2.0B*	1.7B*	NA	0.3
Barium	µg/L	163B*	169B*	NA	6
Calcium	µg/L	18,500	19,300	4	NR
Iron	µg/L	12,900	13,300	3	NR
Magnesium	µg/L	1,130	1,170	NA	40
Manganese	µg/L	66.0	67.8	NA	1.8
Potassium	µg/L	2,010	2,150	NA	140
Sodium	µg/L	4,050	3,710	NA	340

NOTE: B = Method blank contamination.
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.
NR = Not required; the analyte concentration exceeds 5 times the CRDL and, therefore, the RPD was applied.
Dashes (---) indicate this column does not apply to organic analysis.
Results in bold indicate an exceedance of the precision requirements.

All precision requirements were met for both organic and inorganic results for the duplicate analyses of Sample MW-NASB-079 with the exception of acetone and methylene chloride. The analytical results for methylene chloride should be considered an estimation of the true concentration based on the exceedance of the precision criteria for field duplicates. The results for acetone should be considered false-positive due to method blank contamination and, therefore, the precision criteria would not apply. All other analytical data are usable as reported based on the review of the field duplicate precision.

Analyte	Units	MW-NASB-072	MW-NASB-072 DUP	RPD %	Difference
Vinyl Chloride	µg/L	1	1	0	---
Aluminum	µg/L	202	269	NA	67
Antimony	µg/L	1.2B*	1.4B*	NA	0.2
Calcium	µg/L	13,300	11,700	13	NR
Copper	µg/L	2.9B*	2.9B*	NA	0
Iron	µg/L	170	360	NA	190
Lead	µg/L	(<1.0U)	1.3B*	NA	0.8
Magnesium	µg/L	3,130	2,800	NA	330
Manganese	µg/L	64:2	61.3	NA	2.9
Potassium	µg/L	1,020	999B*	NA	21
Sodium	µg/L	8,640	7,540	14	NR

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

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

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
Acetone	µg/L	(<5.0U)	7	**95**	---
Toluene	µg/L	0.7J	0.6J	15	---
Aluminum	µg/L	7,020	5,000	**34**	NR
Antimony	µg/L	2.3B*	2.5B*	NA	0.2
Arsenic	µg/L	7.1B*	5.6B*	NA	1.5
Barium	µg/L	107B*	87.1B*	NA	19.9
Calcium	µg/L	29,200	28,100	4	NR
Chromium	µg/L	13.7	7.3B*	NA	6.4
Copper	µg/L	23.2	15.8	NA	7.4
Iron	µg/L	44,300	36,200	20	NR
Lead	µg/L	111	81.1	NA	29.9
Magnesium	µg/L	4,610	4,000	NA	610
Manganese	µg/L	694	624	11	NR
Nickel	µg/L	8.6B*	(<5.0U)	NA	6.1
Potassium	µg/L	4,770	4,250	NA	520
Selenium	µg/L	(<2.0U)	3.6B*	NA	2.6
Sodium	µg/L	32,300	32,000	1	NR
Vanadium	µg/L	24.8B*	15.8B*	NA	9
Zinc	µg/L	157	115	**31**	NR

NOTE: U = Not detected. Sample quantitation limits are shown as (<____U).
J = Estimated concentration below detection limit.
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.
Dashes (---) indicate this column does not apply to organic analysis.
Results in bold indicate an exceedance of the precision requirements.

All precision requirements were met for both organic and inorganic analyses with the exception of acetone, aluminum, and zinc. The exceedance of the RPD criteria for acetone should not be considered to be significant as the concentrations are at or near the IDL where analytical error is expected. The analytical results for aluminum and zinc 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 station sediment sample duplicate results associated with SDG S9LTSD1:

Analyte	Units	LT-901 (SED)	LT-901 (SED) DUP	RPD %	Difference
Acetone	µg/Kg	95	(<9.0U)	**92**	---
Methylene Chloride	µg/Kg	9J	(<9.0U)	**67**	---
Chloroform	µg/Kg	6J	(<9.0U)	29	---
1,1-Dichloroethene	µg/Kg	5J	(<9.0U)	11	---
Carbon Disulfide	µg/Kg	6J	(<9.0U)	29	---
1,1-Dichloroethane	µg/Kg	4J	(<9.0U)	12	---
2-Butanone	µg/Kg	30	(<18U)	**54**	---
Total 1,2-Dichloroethene	µg/Kg	11J	(<9.0U)	**84**	---
Benzene	µg/Kg	6J	(<9.0U)	29	---
Trichloroethene	µg/Kg	5J	(<9.0U)	11	---
1,2-Dichloropropane	µg/Kg	6J	(<9.0U)	29	---
Bromodichloromethane	µg/Kg	4J	(<9.0U)	12	---
4-Methyl-2-Pentanone	µg/Kg	16J	(<18U)	41	---
trans-1,3-Dichloropropane	µg/Kg	3J	(<9.0U)	40	---
1,1,2-Trichloroethane	µg/Kg	5J	(<9.0U)	11	---
2-Hexanone	µg/Kg	9J	(<9.0U)	0	---
Tetrachloroethene	µg/Kg	4J	(<9.0U)	12	---
Chlorodibromomethane	µg/Kg	3J	(<18U)	40	---
Ethylbenzene	µg/Kg	5J	(<9.0U)	11	---
Total Xylenes	µg/Kg	15	(<9.0U)	**108**	---
Stryrene	µg/Kg	3J	(<9.0U)	40	---
Bromoform	µg/Kg	3J	(<9.0U)	40	---
1,1,2,2-Tetrachloroethane	µg/Kg	8J	(<9.0U)	**56**	---
1,2-Dichlorobenzene	µg/Kg	7J	(<9.0U)	43	---
1,3-Dichlorobenzene	µg/Kg	6J	(<9.0U)	29	---
1,4-Dichlorobenzene	µg/Kg	7J	(<9.0U)	43	---
Toluene	µg/Kg	44	(<9.0U)	12	---
1,1,1-Trichloroethane	µg/Kg	5J	(<9.0U)	11	---
Aluminum	mg/Kg	4,880	3,740	26	NR
Antimony	mg/Kg	0.76B*	0.78B*	NA	0.02
Arsenic	mg/Kg	4.7	2.7	NA	2
Barium	mg/Kg	26.6B*	19.7B*	NA	6.9
Cadmium	mg/Kg	0.19B*	(<0.60U)	NA	0.11
Calcium	mg/Kg	1,270	1,070	NA	200
Chromium	mg/Kg	9.4	7.3	NA	2.1
Cobalt	mg/Kg	3.4B*	1.4B*	NA	2.0
Copper	mg/Kg	16.8	10.1	34	6.7
Iron	mg/Kg	13,900	9,840	NA	NR
Lead	mg/Kg	125	69.7	NA	55.3
Magnesium	mg/Kg	1,570	1,260	NA	310
Manganese	mg/Kg	70.9	55.2	NA	15.7
Nickel	mg/Kg	9.0B*	5.4B*	NA	3.6
Potassium	mg/Kg	663	542	NA	121
Selenium	mg/Kg	0.70B*	(<0.35U)	NA	0.53
Sodium	mg/Kg	266	215	NA	51
Vanadium	mg/Kg	21.0	14.2	NA	6.8
Zinc	mg/Kg	74.0	38.6	NA	35.4

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

All precision requirements were met for the inorganic results for the duplicate analysis. The exceedance of the RPD criteria for acetone, methylene chloride, 2-butanone, total 1,2-dichloroethene, total xylenes, and 1,1,2,2-tetrachloroethane should not be considered to be significant as the concentrations are at or near the IDL where analytical error is expected. All other analytes are usable as reported based on the data Reviewer's review of the precision of the field duplicate. The lack of precision for this matrix may be indicative of sampling a sediment with high moisture content due to a low flow source which penetrates the soil and, therefore, should be considered rough estimates of the actual given concentrations of anlytes at any one given time.

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

Analyte	Units	SED-010	SED-010 DUP	RPD %
Acenaphthene	µg/Kg	210J	130J	47
Dibenzofuran	µg/Kg	140J	79J	**56**
Fluorene	µg/Kg	260J	150J	**54**
Phenanthrene	µg/Kg	2,500	1,600	44
Anthracene	µg/Kg	330J	190J	**54**
Carbazole	µg/Kg	400	230J	**54**
Fluoranthene	µg/Kg	2,600	1,700	42
Pyrene	µg/Kg	3,200	2,300	33
Benzo(a)anthracene	µg/Kg	1,200	680	**55**
Chrysene	µg/Kg	1,500	970	43
Bis(2-ethylhexyl)phthalate	µg/Kg	82J	100J	20
Benzo(b)fluoranthene	µg/Kg	1,900	1,100	**53**
Benzo(k)fluoroethane	µg/Kg	780	450	**54**
Benzo(a)pyrene	µg/Kg	1,300	750	**52**
Indeno(1,2,3-c,d)pyrene	µg/Kg	770	540	35
Dibenzo(a,h)anthracene	µg/Kg	170J	120J	34
Benzo(g,h,i)perylene	µg/Kg	670	510	27

NOTE: 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

Analytical Report Data Tables

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

Appendix C.1

Ground-Water Samples
Site 9

APPENDIX C.1

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

Sample Designation	Sample Station
Monitoring Wells	
S9-MW003	MW-NASB-069
S9-MW007	MW-NASB-071
S9-MW010	MW-NASB-072
S9-MWXD2	MW-NASB-072 (DUP)
S9-MW008	MW-NASB-074
S9-MW009	MW-NASB-075
S9-MW011	MW-NASB-076
S9-MW005	MW-NASB-077
S9-MW006	MW-NASB-078
S9-MW004	MW-NASB-079
S9-MWXD1	MW-NASB-079 (DUP)
S9-MW002	MW-NASB-080
S9-MW001	MW-NASB-081
Trip Blank	
S9-QT006	QT-006

L13501 / 980428

Company Name:	Project Manager or Contact:
EA Engineering	Peter Nimmer
Project No.	Phone: 914-565-5100
960047	Project Name:
	LTMP Event 12
Sample Storage Location:	ATO Number:
F8/VOA	
Page 1 of 1	Job ID: 98 1190

Chain of Custody Record

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

Report/Deliverables: 4D, Quattro Pro Summary Tables
Hardcopy Due: 8/19/98
EDD Due: 9/2/98

Parameters/Method Numbers for Analysis*: VOC 8260 + TIC; TAL Elements 6010/7000

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TIC	TAL Elements 6010/7000			EA Labs Accession Number	Remarks
7/16/98	912	X		BM12S9MW001 MS/MSD	11	X	X		98089 13	~~98089 14~~	LPM: David Brennan
7/16/98	1105	X		BM12S9MW002	4	X	X		98089 14	~~98089 15~~	VOC 8260 plus
7/16/98	1203	X		BM12S9MW003	3	X	X AP		98089 15	~~98089 16~~	library search
7/16/98	1435	X		BM12S9MW004	4	X	X		98089 16	~~98089 17~~	
7/16/98	~~[illegible]~~	X		BM12S9MWXD1	4	X	X		98089 17	~~98089 18~~	TAL Elements refer
7/16/98	1605	X		BM12S9MW005	3	X			98089 18	~~98089 19~~	to Table 2-1 QAPP
7/17/98	850	X		BM12S9MW006	3	X			98089 19	~~98089 20~~	
7/17/98	1030	X		BM12S9MW007	3	X			98089 20	~~98089 21~~	Samples Start and
7/17/98	1125	X		BM12S9MW008	3	X			98089 21	~~98089 22~~	end SDG #
7/17/98	1253	X		BM12S9MW009	3	X			98089 22	~~98089 23~~	BM-12-S9-MW001
7/17/98	1210	X		BM12S9MW010	4	X	X		98089 23	~~98089 24~~	
7/17/98	1335	X		BM12S9MW011	3	X			98089 24	~~98089 25~~	trip blank w/cooler
7/17/98	—	X		BM12S9MWXD2	4	X	X		98089 25	~~98089 26~~	

L12314
Summary package
to Sue Chaucat
Brunswick

Project Summary: EDL-PS-064
COC # 3425

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Brian Anderson	7/17/98 1400	Suzanne Chase	7/17/98 1400		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		Joseph Dive	7/18/98 10:30	801679124605	Fed Ex. Puro. UPS Hand Carried Other

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

C2001

L13482/980394

Company Name:	Project Manager or Contact:
EA Engineering	Pete Nummer Phone: 914-565 8100
Project No. 29600.47 2192	Project Name: LTMP Event 12
Sample Storage Location: F8/J09	ATO Number:
Page 1 of 1	Job ID: ~~981190~~ ~~981197~~ 981194

Chain of Custody Record

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

Report/Deliverables: Level 4D, Quattro Pro Summary Tables
Hardcopy Due: 8/19/98
EDD Due: 9/2/98

Parameters/Method Numbers for Analysis*: VOC 8260 + TICS; TAL Eleven

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TICS	TAL Eleven				EA Labs Accession Number	Remarks
7/17/98	0945	X		BN12EPR1001	3	X			9808926		~~9808927~~	LPM: David Brennan
7/17/98	0935	X		BN12EPR1002	3	X			9808927		~~9808928~~	VOC by 8260 plus
7/17/98	0930	X		BN12EPR1003	3	X			9808928		~~9808929~~	library Search
7/17/98	0920	X		BN12EPR1004	3	X			9808929		~~9808930~~	
7/17/98	0905	X		BN12EPR1005	3	X			9808930		~~9808931~~	
7/17/98	0855	X		BN12EPR1006	3	X			9808931		~~9808932~~	Samples Stored
7/17/98	1030	X		BN12EPR1001 MS/MSD	11	X	X		VOAs preserved	No Air	~~9808933~~	overnight 50 C
7/17/98	—	X		BN12EPTEXD1	4	X	X		VOAs preserved	No Air	~~9808933~~	BN12EPR1001
7/17/98	1000	X		BN12EPR1007	4	X	X		9808934		~~9808935~~	
7/16/98	0918	X		BN12CPGT406	3	X			9808935		~~9808936~~	
												Temp blanket/ cooler
												EAL-PS-064
												L14315
												COC 000 3429

Sampled by (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by (Signature)	Date/Time
Brian Anderson	7/17 1200				

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time	Airbill Number	Sample Shipped by (Circle)
Brian Anderson	7/17 1600	Joseph Blue	7/17/98 1030	801679124605	Fed Ex Puro UPS Hand Carried Other

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

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

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808915

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8657.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	11	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	8	B
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	13	
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.

BN12S9MW003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808915

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8657.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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.
BN12S9MW007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808920

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8676.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808920

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8676.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW010

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808923

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8682.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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)	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.
BN12S9MW010

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808923

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8682.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T08923

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER

Client ID: BN1 259MW010

Percent Solids: 0.0

Date Received: 07/18/98

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	202			P
7440-36-0	Antimony	1.2	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	13300			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	170			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	3130			P
7439-96-5	Manganese	64.2			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	1020			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	8640			P
7440-28-0	Thallium	1.0	U	W N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN12S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808925

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8684.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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)	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.

BN12S9MWXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808925

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8684.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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
T08925

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER

Client ID: BN / 259MW~~011~~ 002 P-7.18

Percent Solids: 0.0

Date Received: 07/18/98

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	269			P
7440-36-0	Antimony	1.4	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	11700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	360			P
7439-92-1	Lead	1.3	B		P
7439-95-4	Magnesium	2800			P
7439-96-5	Manganese	61.3			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	999	B		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	7540			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

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

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW008

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808921

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8677.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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~~ 3	~~U~~
67-66-3	Chloroform	0.9	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	0.6	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

dlg 9/4/98

030182

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW008

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808921

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8677.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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

030183

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW009

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808922

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8678.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW009

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9808922

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8678.D

Level: (low/med) Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW011

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808924

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8683.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW011

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808924

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8683.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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 030218 3/90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808918

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8660.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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

BN12S9MW005

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808918

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8660.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808919

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8675.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW006

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: #9808919

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8675.D

Level: (low/med) Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN12S9MW004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808916

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8658.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	9	B
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	3	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	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.

BN12S9MW004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808916

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8658.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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

030096

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T08916

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER

Client ID: BN1259MW004

Percent Solids: 0.0

Date Received: 07/18/98

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	73.3	B		P
7440-36-0	Antimony	2.0	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	163	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	18500			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	12900			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	1130			P
7439-96-5	Manganese	66.0			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2010			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	4050			P
7440-28-0	Thallium	1.0	U	W	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.

BN12S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808917

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8659.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	13	B
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.

BN12S9MWXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808917

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8659.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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

030126

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER
T08917

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER

Client ID: BN1 259MWXD1

Percent Solids: 0.0

Date Received: 07/18/98

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	84.7	B		P
7440-36-0	Antimony	1.7	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	169	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	19300			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	13300			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	1170			P
7439-96-5	Manganese	67.8			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2150			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	3710			P
7440-28-0	Thallium	1.0	U	W 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

VOLATILE ORGANICS ANALYSIS DATA SHEET

BN12S9MW002

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808914

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8656.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	5	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	84	EB
75-35-4	1,1-Dichloroethene	1	U
75-09-2	Methylene Chloride	0.9	J
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	0.9	J
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	0.4	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

BN12S9MW002

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808914

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8656.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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
T08914

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER

Client ID: BN1 259MW00~~3~~2 mtw 10-7-98

Percent Solids: 0.0

Date Received: 07/18/98

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	66.4	B		P
7440-36-0	Antimony	4.0	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	469			P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	51600			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	944			P
7439-92-1	Lead	1.0	U		P
7439-95-4	Magnesium	2960			P
7439-96-5	Manganese	162			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	4970			P
7782-49-2	Selenium	3.8	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	9860			P
7440-28-0	Thallium	1.0	U	W ✓	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.

BN12S9MW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8655.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	10	B
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.

BN12S9MW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8655.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T08913

Laboratory: EA LABORATORIES

SDG No.: T08913

Matrix: WATER Client ID: BN1 259MW001

Percent Solids: 0.0 Date Received: 07/18/98

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	56.0	U		P
7440-36-0	Antimony	3.6	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	25.0	B		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	43100			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	2940			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	3760			P
7782-49-2	Selenium	3.9	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	17800			P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN1209QT006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808935

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8674.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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.

BN1209QT006

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808935

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8674.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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

030259 3/90

Appendix C.2

Surface Water Samples
Site 9

APPENDIX C.2

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

Sample Designation	Sample Station
Surface Water Samples	
S9-SW001	SW-010
Trip Blank	
S9-QT007	QT-007
Equipment Rinsate Blank	
S9-QS003	QS-003
Source Water Blank	
S1-QD001	QD-001

L13481/980395

Company Nam :	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 29600097	Phon 914-565-8100
Dept.: 2192 Task: 7502	Project Name: LTMP Event 12
Sampl Storage Location: H7/H8/VOA	ATO Number:
Page 1 of 1	Report #: 981200

Chain of Custody Record

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

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

EDD: (Yes)/No Quattro Pro Summary Table

DUE TO CLIENT: Hardcopy - 8/20/98

EDD Due: 9/3/98

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC by 8260 +TICS	TAL metals 6010/7000	SVOC by 8270 TICS									EA Labs Accession Number	Remarks
7/20/98	900	X		BN12590003	4	X	X										9808999	LPM: Dave Brennan
7/20/98	915	X		BN12590004	6	X	X	X									9809000	EAL-PS-064
7/20/98	1015	X		BN12595W001	3	X											9809001	VOC by 8260 +
7/20/98	1045	X		BN12594T001 MS/MSD	9	X					MS/MSD					3	9809002	library search
7/20/98	1045	X		BN12594T001 MS	2	X	X									3	—	TAL Elements
7/20/98	—	X		BN12594T001	4	X	X										9809003	refer to Table 7-1
7/20/98	900	X		BN12590T007	3	X											9809004	in QAPP
																		SDG BN12590003
																		starts w/
																		BN12590003 and
																		ends w/
																		BN1259 ~~LTM~~ 0T007
																		temp blank w/
																		cooler
																		L14325

020001

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Brian D. Anderson	7/20/98 1200			[signature]	7/21

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
Brian D. Anderson	7/20/98 1530	[signature]	7/21/98 1000	8016792 4590	Fed Ex. Puro. UPS Hand Carried Other

Cooler Temp. 1.9 C pH: Yes No Comments: Custody Seals Intact Yes No

L13411 / 980546

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: 914-965-8100

Project No. 2960047

Project Name: LTMP Event 12

Dept.: 2192 Task:

Sample Storage Location: F7

ATO Number:

Page (of)

Report #: 981187

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

EDD: (Yes)/No Quattro Pro Summary Tables

DUE TO CLIENT: Hardcopy - 8/17/98

EDD - 8/31/98

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TICS	TAL Elements Lead/Zinc	SVOC 8270 + TICS									EA Labs Accession Number	Remarks
7/16/98	~~1000~~ 818	X		BN12S1QD001	6	X	X	X									9808878	LPM: DB
7/16/98	818	X		BN12S1QS001	4	X	X										9808879	EAL-BS-064
7/16/98	830	X		BN12S1QS002	4	X	X										9808880	V04Sby8260 plus
7/16/98	1000	X		BN12S1SW001 MS/MSD	9	X					MS/MSD						9808881	library search
7/16/98	1000	X		BN12S1SW001 MS	2		X											
7/16/98	1015	X		BN12S1SW002	4	X	X										9808882	TAL Elements refer to
7/16/98	1025	X		BN12S1SW003	4	X	X										9808883	Table 7-1 in QAPP
7/16/98	1045	X		BN12S1SW004	4	X	X										9808884	
7/16/98	1120	X		BN12S1SW005	4	X	X										9808885	BN-12-S1-QD001 Starts
7/16/98	1130	X		BN12S1SW006	4	X	X										9808886	SDG and Sample
7/16/98	1200	X		BN12S1SW007	4	X	X										9808887	BN12S1QT005
7/16/98	—	X		BN12S1SWXD1	4	X	X										9808888	ends SDG
7/16/98	1140	X		BN12S1LTSW1	4	X	X										9808889	
		X		~~BN12S1LTSW2~~		X	X										~~9808890~~	Temp blank in cooler
7/16/98	—	X		BN12S1LTXD1	4	X	X										9808890	
7/16/98	810	X		BN12S1QT005	2	X											9808891	Summary package to
																		Brunswick
																		L14310
																		COC 000.3426

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Suzanne Chase	7/16/98 1200	Suzanne Chase	7/16/98 1500		

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		Dyann Thorp	7/17/98 9:30	801679124362	Fed Ex. Puro. UPS

Cooler Temp. 2C pH: ✓ Yes No Comments: Custody Seals Intact ✓ Yes No

Hand Ca

100020

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN12S9SW001

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: 9809001

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8701.D

Level: (low/med) Date Received: 7/21/98

% Moisture: not dec. Date Analyzed: 8/3/98

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	0.6	J
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
67-64-1	Acetone	120	
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)	0.9	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.

BN12S9SW001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809001

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8701.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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.

BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	8	
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.
BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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.
BN12S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9808999

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8699.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	4	
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.

BN12S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9808999

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8699.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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	0.4	J
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	4	
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.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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

Appendix C.3

Sediment Samples
Site 9

APPENDIX C.3

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

Sample Designation	Sample Station
Sediment Samples	
S9-SD001	SED-010
S9-SDXD1	SED-010 (DUP)
Trip Blank	
S9-QT007	QT-007
Rinsate Blank	
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

L13480/980397

Company Name:	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 2960047	Phone: 914-565-8100
Dept.: 2192 Task: 7502	Project Name: LTM Pevent #12
Sample Storage Location: H9/VOA	ATO Number:
Page 1 of 1	Report #: 981202

Chain of Custody Record

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

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

EDD: (Yes)/No Quattro Pro Summary Table

DUE TO CLIENT: Hardcopy - 8/20/98

EDD - 9/3/98

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC + TICS 8260	SVOC + TICS 8270									EA Labs Accession Number	Remarks
7/20/98	1025		X	BN-12-SS-SD001 MS/MSD	4	X	X			MS/MSD						9809007	LPM: Dave Brennan
7/20/98	—		X	BN-12-SS-SPXD1	2	X	X									9809008	EAL-PS-044
																	VOCs by 8260
																	plus library Search
																	SVOCs Reqon to
																	QAPP table 7-1
																	SDG BN-10-SS-SD001
																	stays tendo
																	with samples
																	temp blank w/
																	cooler
																	L14326
																	COC00003441

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Brian D. Anderson	7/20/98 1200			[illegible]	7/20/98 1000

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
Brian D. Anderson	7/20/98 1530			8016791245 90	Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. 1.9 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*

100020

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
Phon 914-565-8100

Project No. 29600.97

Project Name: LTMP Event 12

Dept.: 2192 Task: 7502

Sample Storage Location: H7/H8/VOA

ATO Number:

Page 1 of 1 Report #: 981200

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

EDD: (Yes)/No Quattro Pro Summary Table

DUE TO CLIENT: Hardcopy - 8/20/98

EDD Due: 9/3/98

Parameters/Method Numbers for Analysis

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC by 8260 + TICs	TAL metals 6010/7060	SVOC by 8270 TICs									EA Labs Accession Number	Remarks
7/20/98	900	X		BN12590003	4	X	X										9808999	LPM: Dave Brennan
7/20/98	915	X		BN12590004	6	X	X	X									9809000	EAL-B-064
7/20/98	1015	X		BN12595001	3	X											9809001	VOC by 8260 +
7/20/98	1045	X		BN12594001 MS/MSD	9	X					MS/MSD					3	9809002	library search
7/20/98	1045	X		BN12594001 MS	2	X	X									3	—	TAL Elements
7/20/98	—	X		BN12594TB01	4	X	X										9809003	refer to Table 7-1
7/20/98	900	X		BN12590T007	3	X											9809004	in QAPP

SDG BN12590003 starts w/ BN12590003 and ends w/ BN12590T007

temp blank w/ cooler

L14325

Samples by: (Signature) Brian D. Anderson — Date/Time 7/20/98 1200

Relinquished by: (Signature) — Date/Time

Received by: (Signature) — Date/Time 7/21

Relinquished by: (Signature) Brian D. Anderson — Date/Time 7/20/98 1530

Received by Laboratory: (Signature) — Date/Time 7/21/98 1000

Airbill Number: 801679124590

Sample Shipped by: (Circle) Fed Ex. Hand Carry UPS

Cooler Temp. 4.9 C pH: Yes No Comments:

Custody Seals Intact Yes No

L13481/980395

020001

L13411/980546

Chain of Custody Record

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

Company Name: EH Engineering

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

Project No. 2960047

Project Name: LTMP Event 12

Dept.: 2192 Task:

Sample Storage Location: F7

ATO Number:

Page (of)

Report #: 981187

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

EDD: (Yes)/No Quattro Pro Summary Tables

DUE TO CLIENT: Hardcopy - 8/17/98

EDD - 8/31/98

Parameters/Method Numbers for Analysis

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TICS	TAL Elements 6010/7000	SVOC 8270 + TICS									EA Labs Accession Number	Remarks
7/16/98	~~1000~~ 818	X		BN12S1QQ001	6	X	X	X									9808878	LPM: DB
7/16/98	818	X		BN12S1QS001	4	X	X										9808879	EAL-PS-064
7/16/98	830	X		BN12S1QS002	4	X	X										9808880	VOAs by 8260 plus
7/16/98	1000	X		BN12S1SW001 MS/MSD	9	X				MS/MSD							9808881	library search
7/16/98	1000	X		BN12S1SW001 MS	2		X											
7/16/98	1015	X		BN12S1SW002	4	X	X										9808882	TAL Elements refer to
7/16/98	1025	X		BN12S1SW003	4	X	X										9808883	Table 7-1 in QAPP
7/16/98	1045	X		BN12S1SW004	4	X	X										9808884	
7/16/98	1120	X		BN12S1SW005	4	X	X										9808885	BN-12-S1-QD001 starts
7/16/98	1130	X		BN12S1SW006	4	X	X										9808886	SDG and sample
7/16/98	1200	X		BN12S1SW007	4	X	X										9808887	BN12S1QT005
7/16/98	—	X		BN12S1SWXD1	4	X	X										9808888	ends SDG
7/16/98	1140	X		BN12S1LTSW1	4	X	X										9808889	
		X		~~BN12S1LTSW2~~		X	X										~~9808890~~	Temp blank in cooler
7/16/98	—	X		BN12S1LTXD1	4	X	X										9808890	
7/16/98	810	X		BN12S1QT005	2	X											9808891	Summary package to
																		Brunswick
																		L14310
																		COC 000.3426

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Suzanne Chase	7/16/98 1200	Suzanne Chase	7/16/98 1500		

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
		Dyann Thorp	7/17/98 9:30	801679124362	Fed Ex. Puro. UPS Hand Carried Other

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

100020

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7308.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
67-64-1	Acetone	12	U
75-35-4	1,1-Dichloroethene	6	U
75-09-2	Methylene Chloride	6	U
75-15-0	Carbon Disulfide	6	U
75-34-3	1,1-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
107-06-2	1,2-Dichloroethane	6	U
71-43-2	Benzene	6	U
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
124-48-1	Chlorodibromomethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
1330-20-7	Xylenes (total)	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

BN12S9SD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7308.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9918

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/18/98

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/Kg	Q
108-95-2	Phenol	400	U
111-44-4	bis-(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	210	J
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	140	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9918

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/18/98

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/Kg	Q
121-14-2	2,4-Dinitrotoluene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	260	J
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	2500	
120-12-7	Anthracene	330	J
86-74-8	Carbazole	400	
84-74-2	Di-n-butyl phthalate	400	U
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	3200	
85-68-7	Butylbenzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benz[a]anthracene	1200	
117-81-7	bis(2-Ethylhexyl)phthalate	82	J
218-01-9	Chrysene	1500	
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	1900	
207-08-9	Benzo[k]fluoranthene	780	
50-32-8	Benzo[a]pyrene	1300	
193-39-5	Indeno[1,2,3-cd]pyrene	770	
53-70-3	Dibenz[ah]anthracene	170	J
191-24-2	Benzo[ghi]perylene	670	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809008

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7311.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 12 Date Analyzed: 7/30/98

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/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	6	U
75-01-4	Vinyl Chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
67-64-1	Acetone	11	U
75-35-4	1,1-Dichloroethene	6	U
75-09-2	Methylene Chloride	6	U
75-15-0	Carbon Disulfide	6	U
75-34-3	1,1-Dichloroethane	6	U
78-93-3	2-Butanone	11	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	11	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	11	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.: BN12S9SDXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809008

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7311.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 12 Date Analyzed: 7/30/98

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/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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SDXD1

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809008

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9960

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 12 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/20/98

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/Kg	Q
108-95-2	Phenol	380	U
111-44-4	bis-(2-Chloroethyl) ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-Oxybis(1-chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	130	J
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	79	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SDXD1

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809008

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9960

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 12 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/20/98

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/Kg	Q
121-14-2	2,4-Dinitrotoluene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	150	J
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	1600	
120-12-7	Anthracene	190	J
86-74-8	Carbazole	230	J
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	1700	
129-00-0	Pyrene	2300	
85-68-7	Butylbenzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benz[a]anthracene	680	
117-81-7	bis(2-Ethylhexyl)phthalate	100	J
218-01-9	Chrysene	970	
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	1100	
207-08-9	Benzo[k]fluoranthene	450	
50-32-8	Benzo[a]pyrene	750	
193-39-5	Indeno[1,2,3-cd]pyrene	540	
53-70-3	Dibenz[ah]anthracene	120	J
191-24-2	Benzo[ghi]perylene	510	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	8	
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

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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.
BN12S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8700.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	4	
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.
BN12S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8700.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9QS004

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B9769

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/27/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/11/98

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:

BN12S9QS004

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B9769

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/27/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/11/98

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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	0.4	J
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	4	
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.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S1QD001

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: 9808878

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B9557

Level: (low/med) LOW Date Received: 07/17/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/98

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:

BN12S1QD001

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) WATER Lab Sample ID: 9808878

Sample wt/vol: 1000 (g/mL) ML Lab File ID: SC3B9557

Level: (low/med) LOW Date Received: 07/17/98

% Moisture: _____ decanted: (Y/N) N Date Extracted: 07/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/98

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

Appendix C.4

Leachate Seep and Sediment Samples
Site 9

APPENDIX C.4

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

Sample Designation	Sample Station
LT-901 (Seep) Samples	
S9-LT001	LT-901
S9-LTXD1	LT-901 (DUP)
LT-901 (Sediment) Samples	
S9-LTSD1	LT-901
S9-SDXD2	LT-901 (DUP)
Trip Blank	
S9-QT007	QT-007
Rinsate Blanks	
S9-QS003	QS-003
S9-QS004	QS-004
Source Water Blank	
S1-QD001	QD-001

L13479/980396

Company Name: EA Engineering	Project Manager or Contact: Pete Nimmer Phone: 914-565-8100
Project No.: 29600.477502.2192	Project Name: LTMPE Year 12
Sample Storage Location: H9/VOA	ATO Number:
Page 1 of 1	Job ID: 981201

Chain of Custody Record

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

Report/Deliverables: Level 4D, Quattro Pro summary Tables
Hardcopy Due: 8/20/98
EDD Due: 9/3/98

Parameters/Method Numbers for Analysis*: VOC by 8260 + TIC; TAL metals 6010/7000

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC by 8260 + TIC	TAL metals 6010/7000	EA Labs Accession Number	Remarks
7/20/98	1050		X	BM12S9LTSD1 MS/MSD	2	X		9809005	LPM: David Brennan
7/20/98	1050		X	BM12S9LTSD1 MS	2		X	1	EAL-PS-D64
7/20/98	—		X	BM12S95AXD2	2	X	X	9809006	VOC 8260 plus library search
									TAL metals refer to Table 7-1 in QAPP
									Sample SDG BM12S9LTSD1 thru COC only
									L14327
									temp blank w/cooler

MS/MSD

QC009 8440

Sampled by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Brian D. Anderson	7/20/98 1200			Lennet Tindell	7/21/98 1000
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Date/Time**	**Airbill Number**	**Sample Shipped by: (Circle)**
Brian D. Anderson	7/20/98 1500	[illegible]	7/21/98 1000	801679124590	Fed Ex. Puro UPS Hand Carried Other

Cooler Temp: 4.9 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.

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. 29600097

Project Name: LTMP Event 12

Dept.: 2192 Task: 7502

Sample Storage Location: H7/H8/VOA

ATO Number:

Page 1 of 1

Report #: 981200

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

EDD: (Yes)/No Quattro Pro Summary Table

DUE TO CLIENT: Hardcopy - 8/20/98

EDD Due: 4/3/98

Parameters/Method Numbers for Analysis

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC by 8260 + TICs	TAL metals 6010/7000	SVOC by 8270 TICs								EA Labs Accession Number	Remarks
7/20/98	900	X		BN125905003	4	X	X									9808999	LPM: Dave Brennan
7/20/98	915	X		BN125905009	6	X	X	X								9809000	EAL-B-064
7/20/98	1015	X		BN125905W001	3	X										9809001	VOC by 8260 +
7/20/98	1045	X		BN125947001 MS/MSD	9	X				MS/MSD					3	9809002	library search
7/20/98	1045	X		BN125947001 MS	2	X	X									—	TAL Elements
7/20/98	—	X		BN125947101	4	X	X									9809003	refer to Table 7-1
7/20/98	900	X		BN125905T007	3	X										9809004	in QAPP

SDG BN125905003 starts w/ BN125905003 and ends w/ BN125947101 BT007

temp blank w/ cooler

L14325

100000243 9

Sampl s by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Brian D. Anderson	7/20/98 1200				7/21

R linquished by: (Signature)	Date/Time	Received by Laboratory (Signature)	Date/Time	Airbill Number:	Sample Shipped by: (Circle)
Brian D. Anderson	7/20/98 1530		7/21/98 1000	8016792459 0	Fed Ex. UPS Hand Carried

Cooler Temp. 4 C pH: Yes No Comments: Custody Seals Intact Yes No

L13481/980395

020001

L13411/980346

Company Nam :	Project Manager or Contact:
EA Engineering	Pete Nimmer
Project No. 296004 7	Phone: 914-565-8100
Dept.: 2192 Task:	Project Name: LTMP Event 12
Sample Storage Location: F7	ATO Number:
Page (of)	Report #: 981187

Chain of Custody Record

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

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

EDD: (Yes)/No Quattro Pro Summary Tables

DUE TO CLIENT: Hardcopy - 8/17/98

EDD - 8/31/98

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260 + TICS	TAL Elements 6010/7000	SVOC 8270 + TICS								EA Labs Accession Number	Remarks
7/16/98	~~1000~~ 818	X		BN12S1QD001	6	X	X	X								9808878	LPM: DB
7/16/98	818	X		BN12S1QS001	4	X	X									9808879	EAL-PS-064
7/16/98	830	X		BN12S1QS002	4	X	X									9808880	VOAs by 8260 plus
7/16/98	1000	X		BN12S1SW001 MS/MSD	9	X				MS/MSD						9808881	library search
7/16/98	1000	X		BN12S1SW001 MS	2		X										
7/16/98	1015	X		BN12S1SW002	4	X	X									9808882	TAL Elements refer to
7/16/98	1025	X		BN12S1SW003	4	X	X									9808883	Table 7-1 in QAPP
7/16/98	1045	X		BN12S1SW004	4	X	X									9808884	
7/16/98	1120	X		BN12S1SW005	4	X	X									9808885	BN-12-S1-QD001 Starts
7/16/98	1130	X		BN12S1SW006	4	X	X									9808886	SDG and sample
7/16/98	1200	X		BN12S1SW007	4	X	X									9808887	BN12S1QT005
7/16/98	—	X		BN12S1SWXD1	4	X	X									9808888	ends SDG
7/16/98	1140	X		BN12S1LTSW1	4	X	X									9808889	
		X		~~BN12S1LTSW2~~		X	X									~~9808890~~	Temp blank in cooler
7/16/98	—	X		BN12S1LTXD1	4	X	X									9808890	
7/16/98	810	X		BN12S1QT005	2	X										9808891	Summary package to
																	Brunswick
																	L14310
																	COC 000.3426

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Suzanne Chase	7/16/98 1200	Suzanne Chase	7/16/98 1500		
Relinquished by: (Signature)	**Date/Time**	**Received by Laboratory: (Signature)**	**Date/Time**	**Airbill Number:**	**Sample Shipped by: (Circle)**
		Dyann T Bruce	7/17/98 9:30	801679124362	Fed Ex. Puro. UPS Hand Carried Other:

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

100020

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8702.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	0.7	J
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.

BN12S9LT001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8702.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T09002

Laboratory: EA LABORATORIES

SDG No.: T08999

Matrix: WATER

Client ID: BN12S9LT001 @ 9/9/98

Percent Solids: 0.0

Date Received: 07/21/98

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	7020		N	P
7440-36-0	Antimony	2.3	B		P
7440-38-2	Arsenic	7.1	B		P
7440-39-3	Barium	107	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	29200			P
7440-47-3	Chromium	13.7			P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	23.2			P
7439-89-6	Iron	44300			P
7439-92-1	Lead	111			P
7439-95-4	Magnesium	4610			P
7439-96-5	Manganese	694			P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	8.6	B		P
7440-09-7	Potassium	4770			P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	32300			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	24.8	B		P
7440-66-6	Zinc	157			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.

BN12S9LTXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809003

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8705.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	7	
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	0.6	J
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.

BN12S9LTXD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809003

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8705.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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

T09003

Laboratory: EA LABORATORIES

SDG No.: T08999

Matrix: WATER

Client ID: BN12S9LTXD1 @9/9/98

Percent Solids: 0.0

Date Received: 07/21/98

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	5000		N	P
7440-36-0	Antimony	2.5	B		P
7440-38-2	Arsenic	5.6	B		P
7440-39-3	Barium	87.1	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	28100			P
7440-47-3	Chromium	7.3	B		P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	15.8			P
7439-89-6	Iron	36200			P
7439-92-1	Lead	81.1			P
7439-95-4	Magnesium	4000			P
7439-96-5	Manganese	624			P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	4250			P
7782-49-2	Selenium	3.6	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	32000			P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	15.8	B		P
7440-66-6	Zinc	115			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.

BN12S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005

Sample wt/vol: 5.1 (g/mL) G Lab File ID: VE5B7494.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
67-64-1	Acetone	95	
75-35-4	1,1-Dichloroethene	5	J
75-09-2	Methylene Chloride	9	J
75-15-0	Carbon Disulfide	6	J
75-34-3	1,1-Dichloroethane	4	J
78-93-3	2-Butanone	30	
540-59-0	1,2-Dichloroethene (total)	11	J
67-66-3	Chloroform	6	J
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	12	U
107-06-2	1,2-Dichloroethane	12	U
71-43-2	Benzene	6	J
79-01-6	Trichloroethene	5	J
78-87-5	1,2-Dichloropropane	6	J
75-27-4	Bromodichloromethane	4	J
108-10-1	4-Methyl-2-Pentanone	16	J
10061-01-5	cis-1,3-Dichloropropene	12	U
108-88-3	Toluene	44	
10061-02-6	trans-1,3-Dichloropropene	3	J
79-00-5	1,1,2-Trichloroethane	5	J
591-78-6	2-Hexanone	9	J
127-18-4	Tetrachloroethene	4	J
124-48-1	Chlorodibromomethane	3	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	5	J
1330-20-7	Xylenes (total)	15	
100-42-5	Styrene	3	J
75-25-2	Bromoform	3	J
79-34-5	1,1,2,2-Tetrachloroethane	8	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LTSD1

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005

Sample wt/vol: 5.1 (g/mL) G Lab File ID: VE5B7494.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	J
541-73-1	1,3-Dichlorobenzene	6	J
106-46-7	1,4-Dichlorobenzene	7	J

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T09005

Laboratory: EA LABORATORIES

SDG No.: T08864

Matrix: TOTAL

Client ID: BN12S9LTSD1

Percent Solids: 41.3

Date Received: 07/21/98

Results for: SOIL metals

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4880			P
7440-36-0	Antimony	0.76	B	N	P
7440-38-2	Arsenic	4.7		N	P
7440-39-3	Barium	26.6	B	N	P
7440-41-7	Beryllium	0.14	U	N	P
7440-43-9	Cadmium	0.19	B	N	P
7440-70-2	Calcium	1270		N	P
7440-47-3	Chromium	9.4		N	P
7440-48-4	Cobalt	3.4	B	N	P
7440-50-8	Copper	16.8		N	P
7439-89-6	Iron	13900			P
7439-92-1	Lead	125		N	P
7439-95-4	Magnesium	1570		N	P
7439-96-5	Manganese	70.9			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	9.0	B	N	P
7440-09-7	Potassium	663		N	P
7782-49-2	Selenium	0.70	B	N	P
7440-22-4	Silver	0.24	U	N	P
7440-23-5	Sodium	266		N	P
7440-28-0	Thallium	0.46	B	W*	F
7440-62-2	Vanadium	21.0		N	P
7440-66-6	Zinc	74.0		N	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.
BN12S95DXD2

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809006

Sample wt/vol: 5.1 (g/mL) G Lab File ID: VE5B7498.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 44 Date Analyzed: 8/9/98

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

EPA SW846

FORM 1
METALS ANALYSIS DATA SHEET

LAB SAMPLE NUMBER

T09006

Laboratory: EA LABORATORIES

SDG No.: T08864

Matrix: TOTAL

Client ID: B N12S9SDXD2

Percent Solids: 56.2

Date Received: 07/21/98

Results for: SOIL metals

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3740			P
7440-36-0	Antimony	0.78	B	N	P
7440-38-2	Arsenic	2.7		N	P
7440-39-3	Barium	19.7	B	N	P
7440-41-7	Beryllium	0.11	U	N	P
7440-43-9	Cadmium	0.11	U	N	P
7440-70-2	Calcium	1070		N	P
7440-47-3	Chromium	7.3		N	P
7440-48-4	Cobalt	1.4	B	N	P
7440-50-8	Copper	10.1		N	P
7439-89-6	Iron	9840			P
7439-92-1	Lead	69.7		N	P
7439-95-4	Magnesium	1260		N	P
7439-96-5	Manganese	55.2			P
7439-97-6	Mercury	0.08	U		CV
7440-02-0	Nickel	5.4	B	N	P
7440-09-7	Potassium	542		N	P
7782-49-2	Selenium	0.35	U	N	P
7440-22-4	Silver	0.18	U	N	P
7440-23-5	Sodium	215		N	P
7440-28-0	Thallium	0.16	U	W*	F
7440-62-2	Vanadium	14.2		N	P
7440-66-6	Zinc	38.6		N	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.: BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	8	
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.
BN12S9QT007

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809004

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8694.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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.

BN12S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9808999

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8699.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	4	
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.
BN12S9QS003

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9808999

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8699.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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

T08999

Laboratory: EA LABORATORIES

SDG No.: T08999

Matrix: WATER

Client ID: BN12S9QS003 Q 9/9/98

Percent Solids: 0.0

Date Received: 07/21/98

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	N	P
7440-36-0	Antimony	1.8	B		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	98.9	B		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	1.0	U		P
7439-95-4	Magnesium	35.0	U		P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	71.0	U		P
7782-49-2	Selenium	2.1	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	301	B		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.
BN12S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8700.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	4	
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.

BN12S9QS004

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809000

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8700.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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

T09000

Laboratory: EA LABORATORIES

SDG No.: T08999

Matrix: WATER

Client ID: BN12S9QS004 @ 9/9/98

Percent Solids: 0.0

Date Received: 07/21/98

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	N	P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	198	B		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	1.0	U		P
7439-95-4	Magnesium	35.0	U		P
7439-96-5	Manganese	8.0	U		P
7439-97-6	Mercury	0.10	U	N	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	335	B		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.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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	0.4	J
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	4	
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.

BN12S1QD001

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VJ9A2861.D

Level: (low/med) _____ Date Received: 7/17/98

% Moisture: not dec. 0 Date Analyzed: 7/29/98

GC Column: RTX 502.20 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

T08878

Laboratory: EA LABORATORIES

SDG No.: T08878

Matrix: WATER

Client ID: BN 12S1QD001 @9/24/98

Percent Solids: 0.0

Date Received: 07/17/98

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	3.2	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	4.0	U		P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	55.4	B		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	4.3			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	4.1	B		P
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	633	B		P
7440-28-0	Thallium	1.0	U		F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	12.0	U		P

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

Appendix C.5

MS/MSD Recovery Reports

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN12S9MW001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8661.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	11	
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	9	
75-00-3	Chloroethane	10	
67-64-1	Acetone	18	B
75-35-4	1,1-Dichloroethene	8	
75-09-2	Methylene Chloride	11	
75-15-0	Carbon Disulfide	8	
75-34-3	1,1-Dichloroethane	10	
78-93-3	2-Butanone	16	
540-59-0	1,2-Dichloroethene (total)	18	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	7	
107-06-2	1,2-Dichloroethane	7	
71-43-2	Benzene	8	
79-01-6	Trichloroethene	7	
78-87-5	1,2-Dichloropropane	8	
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	8	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	8	
591-78-6	2-Hexanone	13	
127-18-4	Tetrachloroethene	6	
124-48-1	Chlorodibromomethane	8	
108-90-7	Chlorobenzene	8	
100-41-4	Ethylbenzene	9	
1330-20-7	Xylenes (total)	24	
100-42-5	Styrene	7	
75-25-2	Bromoform	7	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8661.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN1259MW001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8680.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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	12	
75-01-4	Vinyl Chloride	13	
74-83-9	Bromomethane	10	
75-00-3	Chloroethane	12	
67-64-1	Acetone	19	
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene Chloride	10	
75-15-0	Carbon Disulfide	10	
75-34-3	1,1-Dichloroethane	11	
78-93-3	2-Butanone	18	
540-59-0	1,2-Dichloroethene (total)	21	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	11	
56-23-5	Carbon Tetrachloride	8	
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	9	
108-10-1	4-Methyl-2-Pentanone	16	
10061-01-5	cis-1,3-Dichloropropene	8	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	8	
79-00-5	1,1,2-Trichloroethane	9	
591-78-6	2-Hexanone	14	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	9	
100-41-4	Ethylbenzene	9	
1330-20-7	Xylenes (total)	28	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	11	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN1259MW001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8680.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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	8	
541-73-1	1,3-Dichlorobenzene	8	
106-46-7	1,4-Dichlorobenzene	8	

030580

FORM I VOA

3/90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8662.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	11	
75-01-4	Vinyl Chloride	12	
74-83-9	Bromomethane	10	
75-00-3	Chloroethane	11	
67-64-1	Acetone	4000	EB
75-35-4	1,1-Dichloroethene	10	
75-09-2	Methylene Chloride	13	
75-15-0	Carbon Disulfide	10	
75-34-3	1,1-Dichloroethane	11	
78-93-3	2-Butanone	32	
540-59-0	1,2-Dichloroethene (total)	21	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon Tetrachloride	8	
107-06-2	1,2-Dichloroethane	8	
71-43-2	Benzene	9	
79-01-6	Trichloroethene	8	
78-87-5	1,2-Dichloropropane	8	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	17	
10061-01-5	cis-1,3-Dichloropropene	8	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	9	
591-78-6	2-Hexanone	15	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	9	
100-41-4	Ethylbenzene	10	
1330-20-7	Xylenes (total)	29	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	11	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9MW001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8662.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/30/98

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	8	
541-73-1	1,3-Dichlorobenzene	8	
106-46-7	1,4-Dichlorobenzene	8	

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN1259MW001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8681.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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	11	
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	9	
75-00-3	Chloroethane	10	
67-64-1	Acetone	22	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	9	
75-15-0	Carbon Disulfide	9	
75-34-3	1,1-Dichloroethane	10	
78-93-3	2-Butanone	17	
540-59-0	1,2-Dichloroethene (total)	20	
67-66-3	Chloroform	10	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	7	
107-06-2	1,2-Dichloroethane	8	
71-43-2	Benzene	8	
79-01-6	Trichloroethene	7	
78-87-5	1,2-Dichloropropane	8	
75-27-4	Bromodichloromethane	8	
108-10-1	4-Methyl-2-Pentanone	15	
10061-01-5	cis-1,3-Dichloropropene	8	
108-88-3	Toluene	8	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	8	
591-78-6	2-Hexanone	13	
127-18-4	Tetrachloroethene	6	
124-48-1	Chlorodibromomethane	8	
108-90-7	Chlorobenzene	8	
100-41-4	Ethylbenzene	8	
1330-20-7	Xylenes (total)	25	
100-42-5	Styrene	8	
75-25-2	Bromoform	7	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN1259MW001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: #9808913MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8681.D

Level: (low/med) _____ Date Received: 7/18/98

% Moisture: not dec. 0 Date Analyzed: 7/31/98

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	

030586

FORM I VOA

3/90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8703.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	11	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	10	
67-64-1	Acetone	17	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	9	
75-15-0	Carbon Disulfide	9	
75-34-3	1,1-Dichloroethane	10	
78-93-3	2-Butanone	18	
540-59-0	1,2-Dichloroethene (total)	19	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	8	
107-06-2	1,2-Dichloroethane	8	
71-43-2	Benzene	9	
79-01-6	Trichloroethene	8	
78-87-5	1,2-Dichloropropane	8	
75-27-4	Bromodichloromethane	9	
108-10-1	4-Methyl-2-Pentanone	17	
10061-01-5	cis-1,3-Dichloropropene	8	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	8	
591-78-6	2-Hexanone	14	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	9	
108-90-7	Chlorobenzene	9	
100-41-4	Ethylbenzene	9	
1330-20-7	Xylenes (total)	27	
100-42-5	Styrene	9	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	11	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN12S9LT001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002MS

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8703.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	8	
541-73-1	1,3-Dichlorobenzene	8	
106-46-7	1,4-Dichlorobenzene	8	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8704.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	10	
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	8	
75-00-3	Chloroethane	10	
67-64-1	Acetone	17	
75-35-4	1,1-Dichloroethene	9	
75-09-2	Methylene Chloride	9	
75-15-0	Carbon Disulfide	9	
75-34-3	1,1-Dichloroethane	10	
78-93-3	2-Butanone	18	
540-59-0	1,2-Dichloroethene (total)	19	
67-66-3	Chloroform	9	
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	8	
107-06-2	1,2-Dichloroethane	8	
71-43-2	Benzene	9	
79-01-6	Trichloroethene	8	
78-87-5	1,2-Dichloropropane	8	
75-27-4	Bromodichloromethane	8	
108-10-1	4-Methyl-2-Pentanone	16	
10061-01-5	cis-1,3-Dichloropropene	8	
108-88-3	Toluene	9	
10061-02-6	trans-1,3-Dichloropropene	7	
79-00-5	1,1,2-Trichloroethane	8	
591-78-6	2-Hexanone	14	
127-18-4	Tetrachloroethene	7	
124-48-1	Chlorodibromomethane	8	
108-90-7	Chlorobenzene	9	
100-41-4	Ethylbenzene	9	
1330-20-7	Xylenes (total)	27	
100-42-5	Styrene	8	
75-25-2	Bromoform	8	
79-34-5	1,1,2,2-Tetrachloroethane	10	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
BN12S9LT001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9809002MSD

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VA1B8704.D

Level: (low/med) _____ Date Received: 7/21/98

% Moisture: not dec. _____ Date Analyzed: 8/3/98

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	8	
541-73-1	1,3-Dichlorobenzene	8	
106-46-7	1,4-Dichlorobenzene	8	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LTSD1MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005MSD

Sample wt/vol: 5.1 (g/mL) G Lab File ID: VE5B7496.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	130	
75-01-4	Vinyl Chloride	150	
74-83-9	Bromomethane	120	
75-00-3	Chloroethane	150	
67-64-1	Acetone	420	
75-35-4	1,1-Dichloroethene	110	
75-09-2	Methylene Chloride	140	
75-15-0	Carbon Disulfide	120	
75-34-3	1,1-Dichloroethane	120	
78-93-3	2-Butanone	320	
540-59-0	1,2-Dichloroethene (total)	260	
67-66-3	Chloroform	140	
71-55-6	1,1,1-Trichloroethane	130	
56-23-5	Carbon Tetrachloride	78	
107-06-2	1,2-Dichloroethane	130	
71-43-2	Benzene	120	
79-01-6	Trichloroethene	96	
78-87-5	1,2-Dichloropropane	120	
75-27-4	Bromodichloromethane	100	
108-10-1	4-Methyl-2-Pentanone	310	
10061-01-5	cis-1,3-Dichloropropene	88	
108-88-3	Toluene	200	
10061-02-6	trans-1,3-Dichloropropene	85	
79-00-5	1,1,2-Trichloroethane	120	
591-78-6	2-Hexanone	350	
127-18-4	Tetrachloroethene	74	
124-48-1	Chlorodibromomethane	90	
108-90-7	Chlorobenzene	110	
100-41-4	Ethylbenzene	110	
1330-20-7	Xylenes (total)	310	
100-42-5	Styrene	62	
75-25-2	Bromoform	77	
79-34-5	1,1,2,2-Tetrachloroethane	200	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LTSD1MSD

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005MSD

Sample wt/vol: 5.1 (g/mL) G Lab File ID: VE5B7496.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	120	
541-73-1	1,3-Dichlorobenzene	120	
106-46-7	1,4-Dichlorobenzene	120	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LTSD1MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005MS

Sample wt/vol: 4.9 (g/mL) G Lab File ID: VE5B7495.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	100	
75-01-4	Vinyl Chloride	110	
74-83-9	Bromomethane	45	
75-00-3	Chloroethane	120	
67-64-1	Acetone	480	
75-35-4	1,1-Dichloroethene	110	
75-09-2	Methylene Chloride	140	
75-15-0	Carbon Disulfide	120	
75-34-3	1,1-Dichloroethane	130	
78-93-3	2-Butanone	340	
540-59-0	1,2-Dichloroethene (total)	270	
67-66-3	Chloroform	140	
71-55-6	1,1,1-Trichloroethane	130	
56-23-5	Carbon Tetrachloride	100	
107-06-2	1,2-Dichloroethane	130	
71-43-2	Benzene	130	
79-01-6	Trichloroethene	110	
78-87-5	1,2-Dichloropropane	130	
75-27-4	Bromodichloromethane	110	
108-10-1	4-Methyl-2-Pentanone	310	
10061-01-5	cis-1,3-Dichloropropene	99	
108-88-3	Toluene	180	
10061-02-6	trans-1,3-Dichloropropene	94	
79-00-5	1,1,2-Trichloroethane	120	
591-78-6	2-Hexanone	350	
127-18-4	Tetrachloroethene	80	
124-48-1	Chlorodibromomethane	100	
108-90-7	Chlorobenzene	120	
100-41-4	Ethylbenzene	110	
1330-20-7	Xylenes (total)	340	
100-42-5	Styrene	55	
75-25-2	Bromoform	93	
79-34-5	1,1,2,2-Tetrachloroethane	190	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9LTSD1MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809005MS

Sample wt/vol: 4.9 (g/mL) G Lab File ID: VE5B7495.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 59 Date Analyzed: 8/9/98

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	120	
541-73-1	1,3-Dichlorobenzene	120	
106-46-7	1,4-Dichlorobenzene	120	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7309.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/Kg

CAS No.	Compound		Q
74-87-3	Chloromethane	50	
75-01-4	Vinyl Chloride	66	
74-83-9	Bromomethane	71	
75-00-3	Chloroethane	63	
67-64-1	Acetone	98	
75-35-4	1,1-Dichloroethene	54	
75-09-2	Methylene Chloride	62	
75-15-0	Carbon Disulfide	49	
75-34-3	1,1-Dichloroethane	59	
78-93-3	2-Butanone	130	
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	60	
71-55-6	1,1,1-Trichloroethane	60	
56-23-5	Carbon Tetrachloride	72	
107-06-2	1,2-Dichloroethane	64	
71-43-2	Benzene	64	
79-01-6	Trichloroethene	61	
78-87-5	1,2-Dichloropropane	65	
75-27-4	Bromodichloromethane	64	
108-10-1	4-Methyl-2-Pentanone	140	
10061-01-5	cis-1,3-Dichloropropene	60	
108-88-3	Toluene	65	
10061-02-6	trans-1,3-Dichloropropene	59	
79-00-5	1,1,2-Trichloroethane	65	
591-78-6	2-Hexanone	150	
127-18-4	Tetrachloroethene	51	
124-48-1	Chlorodibromomethane	70	
108-90-7	Chlorobenzene	65	
100-41-4	Ethylbenzene	67	
1330-20-7	Xylenes (total)	210	
100-42-5	Styrene	65	
75-25-2	Bromoform	74	
79-34-5	1,1,2,2-Tetrachloroethane	64	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SD001MS

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7309.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/Kg	Q
95-50-1	1,2-Dichlorobenzene	61	
541-73-1	1,3-Dichlorobenzene	60	
106-46-7	1,4-Dichlorobenzene	61	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SD001MSD

Lab Name: EA LABORATORIES Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7310.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/Kg	Q
74-87-3	Chloromethane	17	
75-01-4	Vinyl Chloride	71	
74-83-9	Bromomethane	72	
75-00-3	Chloroethane	65	
67-64-1	Acetone	95	
75-35-4	1,1-Dichloroethene	56	
75-09-2	Methylene Chloride	62	
75-15-0	Carbon Disulfide	50	
75-34-3	1,1-Dichloroethane	58	
78-93-3	2-Butanone	130	
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	62	
71-55-6	1,1,1-Trichloroethane	62	
56-23-5	Carbon Tetrachloride	71	
107-06-2	1,2-Dichloroethane	64	
71-43-2	Benzene	63	
79-01-6	Trichloroethene	61	
78-87-5	1,2-Dichloropropane	64	
75-27-4	Bromodichloromethane	63	
108-10-1	4-Methyl-2-Pentanone	140	
10061-01-5	cis-1,3-Dichloropropene	61	
108-88-3	Toluene	65	
10061-02-6	trans-1,3-Dichloropropene	61	
79-00-5	1,1,2-Trichloroethane	65	
591-78-6	2-Hexanone	140	
127-18-4	Tetrachloroethene	52	
124-48-1	Chlorodibromomethane	71	
108-90-7	Chlorobenzene	67	
100-41-4	Ethylbenzene	64	
1330-20-7	Xylenes (total)	210	
100-42-5	Styrene	67	
75-25-2	Bromoform	72	
79-34-5	1,1,2,2-Tetrachloroethane	63	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BN12S9SD001MSD

Lab Name: EA LABORATORIES Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: #9809007MSD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: VE5B7310.D

Level: (low/med) LOW Date Received: 7/21/98

% Moisture: not dec. 17 Date Analyzed: 7/30/98

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/Kg

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	63	
541-73-1	1,3-Dichlorobenzene	61	
106-46-7	1,4-Dichlorobenzene	63	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001ms

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007 ms

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9919

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/19/98

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/Kg	Q
108-95-2	Phenol	3000	
111-44-4	bis-(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	2900	
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	1700	
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	2900	
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	2200	
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	3500	
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	3000	
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	3000	
132-64-9	Dibenzofuran	140	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001ms

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007ms

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9919

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/19/98

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/Kg	Q
121-14-2	2,4-Dinitrotoluene	3500	
606-20-2	2,6-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	270	J
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2800	
85-01-8	Phenanthrene	2600	
120-12-7	Anthracene	360	J
86-74-8	Carbazole	440	
84-74-2	Di-n-butyl phthalate	3000	
206-44-0	Fluoranthene	2800	
129-00-0	Pyrene	6300	E
85-68-7	Butylbenzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benz[a]anthracene	1200	
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
218-01-9	Chrysene	1600	
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	2000	
207-08-9	Benzo[k]fluoranthene	690	
50-32-8	Benzo[a]pyrene	1400	
193-39-5	Indeno[1,2,3-cd]pyrene	820	
53-70-3	Dibenz[ah]anthracene	190	J
191-24-2	Benzo[ghi]perylene	750	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001 MSD

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9920

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/19/98

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/Kg	Q
108-95-2	Phenol	3000	
111-44-4	bis-(2-Chloroethyl) ether	400	U
95-57-8	2-Chlorophenol	3000	
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	2300	
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-propylamine	3100	
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	2700	
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	3600	
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	3100	
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	3100	
132-64-9	Dibenzofuran	130	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

BN12S9SD001 MSD

Lab Name: EA LABS Contract:

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

Matrix: (soil/water) SOIL Lab Sample ID: 9809007 MSD

Sample wt/vol: 30.0 (g/ml) G Lab File ID: SC3B9920

Level: (low/med) LOW Date Received: 07/21/98

% Moisture: 17 decanted: (Y/N) N Date Extracted: 08/03/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/19/98

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/Kg	Q
121-14-2	2,4-Dinitrotoluene	3700	
606-20-2	2,6-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	270	J
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	3000	
85-01-8	Phenanthrene	2700	
120-12-7	Anthracene	330	J
86-74-8	Carbazole	480	
84-74-2	Di-n-butyl phthalate	3100	
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	6900	E
85-68-7	Butylbenzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benz[a]anthracene	1400	
117-81-7	bis(2-Ethylhexyl)phthalate	89	J
218-01-9	Chrysene	1700	
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	2400	
207-08-9	Benzo[k]fluoranthene	760	
50-32-8	Benzo[a]pyrene	1500	
193-39-5	Indeno[1,2,3-cd]pyrene	920	
53-70-3	Dibenz[ah]anthracene	220	J
191-24-2	Benzo[ghi]perylene	810	

EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T08913S

Laboratory: EA LABORATORIES

SDG No.: T08913

BN1259MW001

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	1962.0000		56.0000	U	2000.00	98.1		P
Antimony	75-125	445.4715		3.5772	B	500.00	88.4		P
Arsenic	75-125	1771.3005		2.0000	U	2000.00	88.6		P
Barium	75-125	1919.3000		24.9590	B	2000.00	94.7		P
Beryllium	75-125	45.8970		0.6000	U	50.00	91.8		P
Cadmium	75-125	41.2878		0.6000	U	50.00	82.6		P
Calcium		53264.0000		43101.0000		10000.00	101.6		P
Chromium	75-125	186.5100		4.0000	U	200.00	93.3		P
Cobalt	75-125	454.5300		7.0000	U	500.00	90.9		P
Copper	75-125	215.6042		2.0000	U	250.00	86.2		P
Iron	75-125	901.4100		52.0000	U	1000.00	90.1		P
Lead	75-125	416.0859		1.2647	B	500.00	83.0		P
Magnesium	75-125	12134.0000		2943.4000		10000.00	91.9		P
Manganese	75-125	463.9500		8.0000	U	500.00	92.8		P
Mercury	75-125	3.3800		0.1000	U	4.00	84.5		CV
Nickel	75-125	462.2200		5.0000	U	500.00	92.4		P
Potassium	75-125	12367.0000		3762.7000		10000.00	86.0		P
Selenium	75-125	1601.0603		3.9486	B	2000.00	79.9		P
Silver	75-125	435.0033		1.0000	U	500.00	87.0		P
Sodium	75-125	28182.0000		17773.0000		10000.00	104.1		P
Thallium	75-125	19.1000		1.0000	U	25.00	76.4		F
Vanadium	75-125	463.2000		3.0000	U	500.00	92.6		P
Zinc	75-125	487.1700		12.0000	U	500.00	97.4		P

Comments:

EPA SW846

FORM 5
SPIKE SAMPLE RECOVERY

LAB SAMPLE NUMBER

T09002S

Laboratory: EA LABORATORIES

SDG No.: T08999

BV12S9L7001

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	8108.0000		7016.8000		2000.00	54.6	N	P
Antimony	75-125	491.0341		2.2906	B	500.00	97.7		P
Arsenic	75-125	1956.3467		7.1261	B	2000.00	97.5		P
Barium	75-125	2222.9000		107.3100	B	2000.00	105.8		P
Beryllium	75-125	48.5340		0.2000	U	50.00	97.1		P
Cadmium	75-125	45.5347		0.6000	U	50.00	91.1		P
Calcium	75-125	38514.0000		29234.0000		10000.00	92.8		P
Chromium	75-125	210.6900		13.6560		200.00	98.5		P
Cobalt	75-125	496.1300		7.0000	U	500.00	99.2		P
Copper	75-125	264.7983		23.2473		250.00	96.6		
Iron		44907.0000		44254.0000		1000.00	65.3		
Lead	75-125	586.3766		110.6108		500.00	95.2		P
Magnesium	75-125	14193.0000		4605.2000		10000.00	95.9		P
Manganese	75-125	1175.7000		694.2200		500.00	96.3		P
Mercury	75-125	1.9100		0.1000	U	4.00	47.8	N	CV
Nickel	75-125	501.6400		8.6128	B	500.00	98.6		P
Potassium	75-125	14491.0000		4765.6000		10000.00	97.3		P
Selenium	75-125	1923.6515		2.0000	U	2000.00	96.2		P
Silver	75-125	465.2104		1.0000	U	500.00	93.0		P
Sodium	75-125	43096.0000		32332.0000		10000.00	107.6		P
Thallium	75-125	25.1900		1.0000	U	25.00	100.8		F
Vanadium	75-125	520.3000		24.8450	B	500.00	99.1		P
Zinc	75-125	634.4100		156.7700		500.00	95.5		P

Comments: