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Summary of Monitoring Well Installation and Direct-Push Ground-Water Sampling Conducted 13-30 October 1998 at Sites 1 and 3 and the Eastern Plume, 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

EA Engineering, Science, and Technology
The Maple Building
3 Washington Center
Newburgh, New York 12550

January 1999
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13 January 1999

Mr. Emil Klawitter
Remedial Project Manager
Northern Division, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113-2090

RE: Summary of Monitoring Well Installation and Direct-Push Ground-Water Sampling
Conducted 13-30 October 1998 at Sites 1 and 3 and the Eastern Plume,
Naval Air Station, Brunswick, Maine
Contract N62472-92-D-1296, Contract Task Order No. 0047
EA Project No. 29600.47

Dear Mr. Klawitter:

EA Engineering, Science, and Technology is pleased to provide the enclosed summary of monitoring well installation activities and direct-push ground-water sampling activities conducted at the Eastern Plume at Naval Air Station, Brunswick, Maine. The monitoring well installation activities included the installation of 5 monitoring wells within the Eastern Plume to further assess the distribution of volatile organic compounds (VOC) between the northern and southern lobes of the Eastern Plume, and to further characterize the limits of dissolved-phase VOC in the vicinity of monitoring well MW-311. One additional monitoring well was installed at Sites 1 and 3 to further characterize the flow of ground water within the southwestern portion the site.

The direct-push investigation consisted of sampling ground water from 7 direct-push locations to assess the vertical and horizontal distribution of dissolved-phase VOC, and to determine the depth to bedrock/refusal. As part of the direct-push investigation, electrical conductivity (EC) logging was performed to identify potential water-bearing intervals, and ground-water samples were collected based on the EC logging results. The monitoring well and direct-push sampling locations are shown on Figure 1.

This letter report includes the boring logs (Attachment A), summary of survey information (Attachment B), Field Record of Well Development forms (Attachment C), EC logs (Attachment D), and the Form I analytical results (Attachment E).

MONITORING WELL INSTALLATION PROGRAM

Well Installation Procedure

The locations of each monitoring well were flagged in the field, and cleared for underground utility interference through Dig Safe and the securing of an excavation permit from NAS Brunswick Public Works Department. Monitoring wells were drilled and installed by Northeast Drilling of Brunswick, Maine, under contract with EA, using a Mobil B47 drill rig with 4-in. inner diameter steel casing (drive and wash method).

Between 13 and 30 October 1998, Northeast Drilling, under the supervision of EA, completed 6 monitoring wells (MW-330 through MW-334 within the Eastern Plume and MW-240 within Sites 1 and 3) at preselected locations shown on Figure 1. An EA geologist supervised the drilling operations and served as onsite health and safety officer. No action levels were exceeded, nor were upgrades in personal protective equipment ordered during drilling activities.

Prior to drilling activities, the drill rig and support equipment were thoroughly steam cleaned. Between drilling locations, drill augers, rods, split-barrel samplers, and other downhole equipment were steam cleaned to minimize the potential for cross-contamination. Split-barrel samplers were washed with clean potable water between sampling intervals at each drilling location.

Soil Sampling

Soil samples were collected continuously using split-barrel samplers driven by a 140-lb hammer falling 30 in. to identify unconsolidated subsurface soil conditions. No soil samples were collected for laboratory analysis. Samples were visually inspected and classified by the supervisory geologist. Detailed boring logs are provided in Attachment A. After classification, each sample was retained in a closed container. Headspace vapor screening for VOC was performed using a Microtip Model IS-3000 photoionization detector (PID). Elevated headspace readings were detected in soil samples collected from intervals within the saturated zone at 2 monitoring wells (MW-330 and MW-331). These elevated readings are likely attributed to a miscalibrated PID and elevated humidity (i.e., rain) during the installation of these wells. The PID was subsequently recalibrated, and subsequent soil samples did not indicate elevated PID readings.

Monitoring Well Installation

Monitoring well screens were located to intersect coarse-grained intervals identified during split-barrel logging. Where practical, soil borings were continued to identify the thickness of the clay overlying bedrock, and the depth to bedrock. The wells installed at Eastern Plume and Sites 1 and 3 were completed using 2-in. inner diameter threaded, flush-joint Schedule 40 PVC well casing with machine slotted (slot size = 0.010 in.) well screen and 2-in. inner diameter PVC riser pipe. Each well was completed with a 4-in. inner diameter steel protective casing with a lockable steel cap set in concrete to approximately 4 ft below ground surface.

The annular space between the borehole and PVC well screen was filled with clean No. 1 silica sand from at least 1 ft below the well screen to at least 2 ft above the screened interval. The 4-in. steel casing was raised continuously while the filter pack was added to minimize bridging and to evenly distribute the sand. The casing was then raised to approximately 2 ft above the filter pack, and a minimum 2-ft layer of bentonite pellets was added and allowed to hydrate using potable water when necessary. Above each bentonite seal, borings were grouted to ground surface with a mixture of potable water, cement, and bentonite. A summary of well construction details for the 6 newly installed monitoring wells are provided in Table 1. A summary of survey information for monitoring wells MW-330 through MW-334 and MW-240 is provided in Attachment B.

Monitoring Well Development

Upon completion of each monitoring well and following the required stabilization interval (48 hours minimum), monitoring wells were developed on 21-22 October 1998 and 2-3 November 1998 utilizing the pump and surge method. Prior to development, static ground-water elevations were recorded. To monitor effectiveness of the development process, the following parameters were assessed prior to, during, and after development: pH, conductivity, temperature, dissolved oxygen, Eh, and turbidity. These values are presented in the Field Record of Well Development forms in Attachment C.

Monitoring Well Ground-Water Sampling

Ground-water sampling was conducted at the 6 new wells as part of Long-Term Monitoring Plan Event 13. Results will be presented in the Report for Long-Term Monitoring Program for Event 13.

DIRECT-PUSH GROUND-WATER SAMPLING PROGRAM

The direct-push sampling program was performed to further evaluate the subsurface conditions and to determine the most appropriate screening intervals for monitoring wells MW-333 and MW-334. In addition, the depth to bedrock (i.e., refusal) was determined at direct-push sampling locations. The direct-push locations were selected based on input from the Maine Department of Environmental Protection, U.S. Environmental Protection Agency and other Restoration Advisory Board members. Final locations were determined based on site conditions and drill rig accessibility. Four sampling locations (DP-EP-01 through DP-EP-04) were located along a woods road between MW-229A-B and MW-313, approximately 200 ft apart. Three additional direct-push stations (DP-EP-05 through DP-EP-07) were located in a triangular pattern surrounding MW-311. Wooded areas were cleared to permit direct-push rig access to locations DP-EP-05 through DP-EP-07. Site utilities were cleared at direct-push locations prior to conducting intrusive activities. The locations of the direct-push sampling points are provided on Figure 1. A summary of survey information for direct-push locations DP-EP-01 through DP-EP-07 can be found in Attachment B.

Electrical Conductivity Testing

EC testing was performed at DP-EP-01 through DP-EP-07 prior to ground-water sample collection. EC logging is performed by advancing a probe through the unconsolidated material and recording EC and speed of travel. These data can be correlated to subsurface lithology. EC logging results were compared to soil samples collected from split-barrel samplers to confirm that EC logging was accurately representing subsurface conditions. The EC data were used to identify the depth and thickness of sand zones at the site which may yield significant ground water for sampling. EC logs were obtained from the 7 direct-push locations to depths ranging from 76 ft below grade (DP-EP-05) to 118 ft below grade (DP-EP-07).

The interpreted site geology consists of an upper sand layer; a transition zone consisting of sand, silt, and clay; clay layer; and bedrock. The EC logs are provided in Attachment D.

Direct-Push Ground-Water Sampling

Ground-water sampling locations were selected based on the EC logging. Ground-water sampling was attempted at the intervals inferred to have the most likelihood of yielding ground water (i.e., coarse grain sand layers) at each direct-push location. Ground-water sampling was attempted at 26 discrete depth intervals during the direct-push investigation. Sufficient ground water for sampling was encountered at 11 sample intervals, as summarized in Table 2.

Ground-water sampling was performed under the supervision of an EA geologist or scientist using a track or truck-mounted hydraulic direct-push system. This method involves the use of a direct-push water sampling probe similar to a cone penetrometer. The direct-push sample probe was "pushed" under hydraulic pressure to the selected sample depth without boring a pilot hole. The sample probe is a 1.0- to 1.4-in. outside diameter steel probe with 4-ft slotted screen sections and an expendable point attached.

The following procedure was followed during the direct-push ground-water sampling program. Upon arrival at the site, the direct-push sampler was decontaminated. After decontamination, EC logging was performed until refusal was encountered. The direct-push probe was pushed with the system hydraulics in order to set it at the desired depth. Next, the direct-push probe was advanced to the discrete depth sampling location (based on the EC logging) and then pulled back 4 ft to open the screen and gauge the depth to water. The depth to water was checked periodically for a minimum of 15 minutes. The direct-push probe remained in place to allow ground water to reach static level before sampling. Teflon® sample tubing with a bottom check valve was inserted into the direct-push probe to collect the ground-water sample. This process was repeated for the remaining discrete depth sampling intervals at each direct-push sampling station using dedicated sample tubing. Following sampling, direct-push locations were closed by natural collapse and by using bentonite grout slurry.

Ground-water samples were collected from the 7 direct-push sample locations between 15-16 and 28 October 1998. There were no chemical odors noted during ground-water sampling. Two trip blank samples were analyzed to assess the potential for introduction of contaminants

during sample transport. One equipment rinsate sample was collected by running deionized water through a decontaminated sample screen and into appropriate sample containers. Samples were sent to EA Laboratories of Sparks, Maryland. Ground-water samples, trip blank samples, and equipment rinsate samples were submitted for analysis of Target Compound List VOC compounds per U.S. Environmental Protection Agency Method 8260.

During sampling, artesian conditions were observed at 4 sampling locations, including DP-EP-05 (from 22 to 26 ft bgs; from -12.1 to -16.1 MSL), DP-EP-06 (from 39 to 43 ft bgs; from -25.3 to -29.3 MSL), and DP-EP-07 (from 38 to 42 ft bgs and from 51 to 55 ft bgs; from –27.0 to –31.0 MSL and from -40.0 to -44.0 MSL).

Direct-Push Equipment Decontamination

Decontamination of the direct-push equipment consisted of pressure washing with a deionized water/Alconox® mixture of the interior and exterior surfaces to remove residual sediment. Following decontamination, the direct-push components were rinsed off with liberal amounts of isopropyl alcohol and deionized water, permitted to air dry, and then reassembled. Decontamination of equipment prior to site entry was also conducted, and equipment was decontaminated prior to leaving the site. Decontamination was conducted at the ground-water treatment plant (Building 50). Fluids generated during decontamination activities were containerized in 55-gal drums, transported to Building 50, and subsequently treated by the ground-water extraction and treatment system.

SUMMARY OF RESULTS

Direct-Push Ground-Water Samples

Table 3 provides a summary of the analytical results for ground-water samples collected on 15-16 and 28 October 1998 at the 7 direct-push sample stations (DP-EP-01 through DP-EP-07). Figure 2 summarizes the direct-push sample locations which contained ground water with dissolved-phase VOC at concentrations above State of Maine Maximum Exposure Guidelines (MEGs) or Federal Maximum Contaminant Levels (MCLs).

Notable results of the ground-water sampling program include the following:

- There were no VOC reported above State MEG or Federal MCL in 5 ground-water samples collected from the sample stations DP-EP-01 through DP-EP-04. These stations are located south of MW-311 near newly installed sentinel wells MW-333 and MW-334.

- Concentrations of VOC were reported above the State MEG or Federal MCL in ground-water samples collected from 3 direct-push sample stations (DP-EP-05 through DP-EP-07) located in the vicinity of MW-311. The VOC concentrations were reported in samples collected from the deep coarse-grained sand strata analogous to the deep sand that MW-311 is screened through.

- Ground-water samples collected from intervals above and below the coarse-grained sand interval at DP-EP-05 through DP-EP-07 reported non-detections for VOC.

- One VOC, methylene chloride, was reported in the ground-water samples and the associated rinsate blank. Methylene chloride is inferred to be a laboratory artifact.

EASTERN PLUME BEDROCK ELEVATION AND CLAY THICKNESS

In conjunction with the monitoring well installation and direct-push sampling program described above, the site geology of the Eastern Plume was also investigated during this field effort. Where possible, information was collected from direct-push stations and soil borings to identify the depth to bedrock and the thickness of the clay unit. Data used to assess the elevation of bedrock and clay thickness included soil boring logs, EC logs, and previously conducted cone-penetrometer investigations. The newly collected information and previously collected soil boring and monitoring well data were used to construct a contour map of the elevation of bedrock surface (Figure 3) and an isopach map showing the inferred thickness of the clay unit which overlies bedrock (Figure 4). These maps will be used to interpret the distribution of VOC in the Eastern Plume, and to assess likely contaminant transport pathways in the subsurface.

Notable observations based on the contour map of the elevation of bedrock surface (Figure 3) include the following:

- The bedrock surface shows two bedrock depressions. One depression is located in the southern portion of the Eastern Plume area centered around DP-EP-07, southwest of MW-311. The second depression is located west of the Picnic Area pond centered around CP-131.

- The depressions in the bedrock surface are similar to the locations of depressions noted in the top of the clay unit, identified in previous investigations (E.C. Jordan, 1991 Draft Final Supplemental Remedial Investigation Report, Figure 8-9).

- An area of higher bedrock surface elevation is present between CP-129 and MW-309A, and extends toward the northwest. This east-west trending bedrock ridge roughly bisects the northern and southern lobes of the Eastern Plume.

- Bedrock surface elevations increase significantly east of Merriconeag Stream, where a north-south trending bedrock high is present. This corresponds to a significant increase in surface topography east of Merriconeag Stream.

- Bedrock surface elevations generally appear to increase south of the Eastern Plume, between the recently completed direct-push locations DP-EP-01 through DP-EP-04 and CP-122.

Notable observations based on the clay thickness isopach map (Figure 4) include the following:

- Bedrock is overlain by at least 10 ft of clay across the majority of the Eastern Plume.
- Clay thickness within the Eastern Plume is variable north of Old Gurnet Road, generally ranging between 2- and 16-ft thick. Two localized areas did not report clay in logs (CP-129 and MW-323). Both CP-129 and MW-323 reported localized bedrock high points. Note that although nearby borings reported clay, CP-129 reported the highest bedrock elevation in the Eastern Plume.
- The clay unit within the Eastern Plume south of Old Gurnet Road ranged between 5- and 62-ft thick, with the exception of one area located on the bedrock ridge near CP-129.
- The greatest clay thickness (62 ft) was measured at MW-EP-07. This is consistent with a general increase in clay thickness present southwest of MW-311.
- Clay thickness generally thins toward the east, across Merriconeag Stream. This is consistent with increasing bedrock surface elevation in this area.

It has been our pleasure providing Northern Division these data. If there are any questions, please do not hesitate to call.

Respectfully,

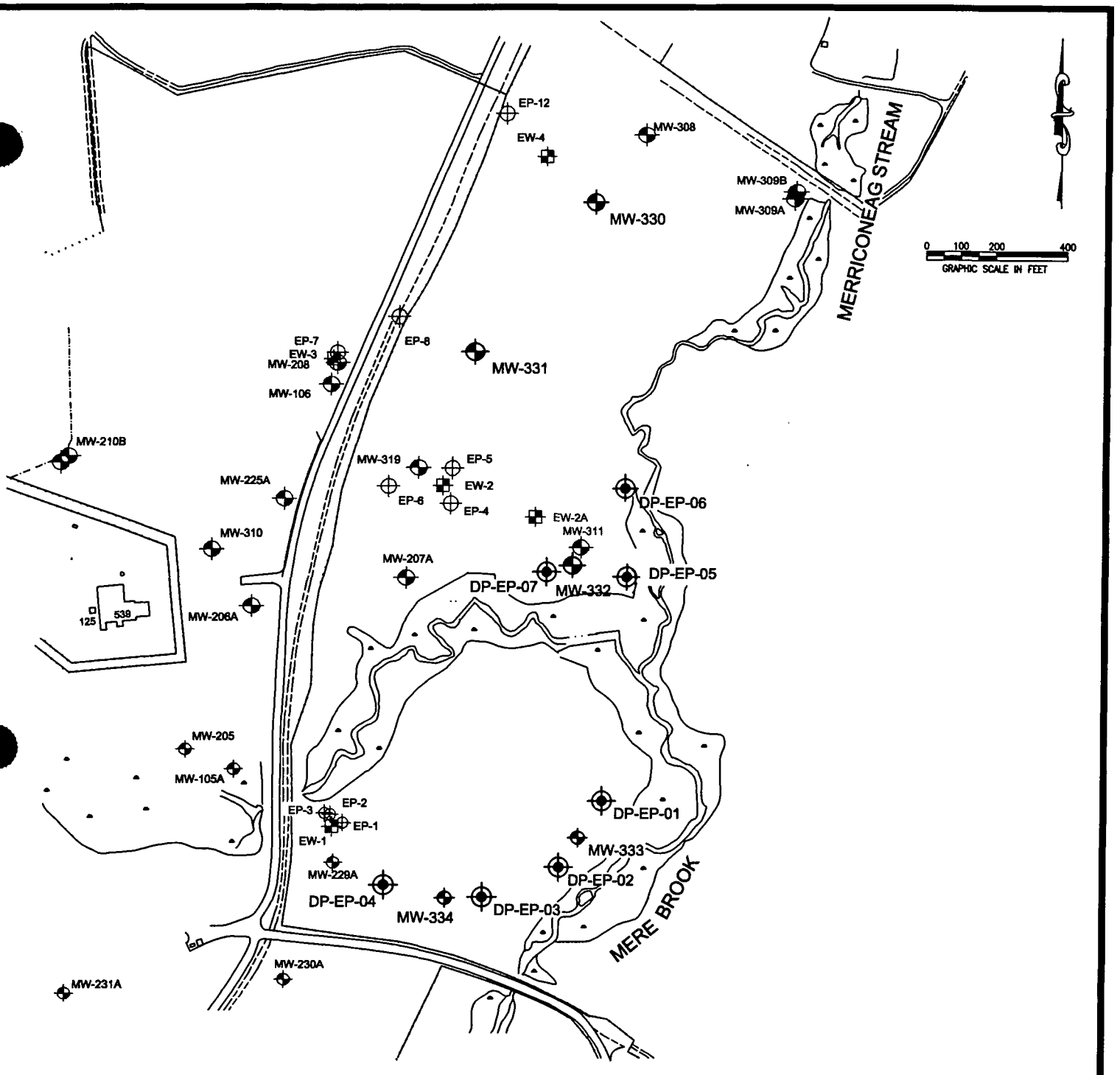
Peter L. Nimmer, P.G.
CTO Manager

Paul W. Higgins, C.G.
Project Geologist

STATE OF MAINE
PAUL W. HIGGINS
No. 259
CERTIFIED GEOLOGIST

PLN/mkp
Attachments

cc: A. Williams (NAS Brunswick)
C. Flynn (EA)



NOTE: LARGER LOCATIONS INDICATES DIRECT-PUSH SAMPLE LOCATIONS AND MONITORING WELLS INSTALLED DURING OCTOBER 1998.

APPROXIMATE LOCATIONS OF SAMPLE POINTS SHOWN.

LEGEND

- MONITORING WELL LOCATION
- DIRECT-PUSH GROUND-WATER SAMPLE LOCATION
- PIEZOMETER LOCATION
- EXTRACTION WELL LOCATION

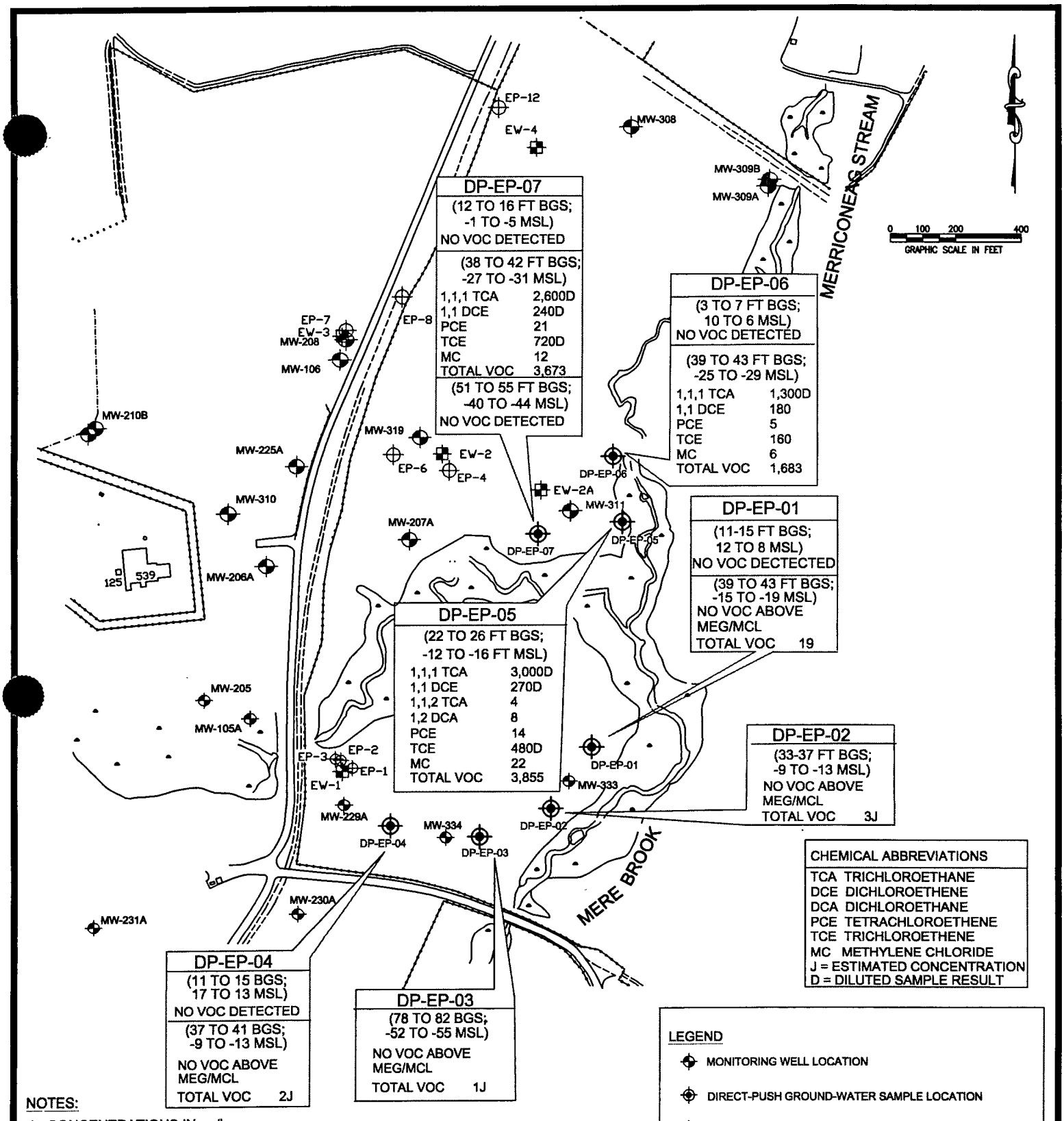
DWG. FILE No. F:\CAD\29600\47\ANNUAL\EP-DPLOC.DWG

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

NAVAL AIR STATION
BRUNSWICK, MAINE

FIGURE 1
MONITORING WELL AND DIRECT-PUSH LOCATIONS

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
PLN	SYC	SYC	PLN	1" = 400'	8 DEC 98	29600.47	ep-dploc



NOTES:

1. CONCENTRATIONS IN ug/L
2. GROUND-WATER SAMPLES COLLECTED 15-16, 27 AND 28 OCTOBER 1998
3. FT BGS INDICATES FEET BELOW GROUND SURFACE. MSL INDICATES FEET RELATIVE TO MEAN SEA LEVEL.

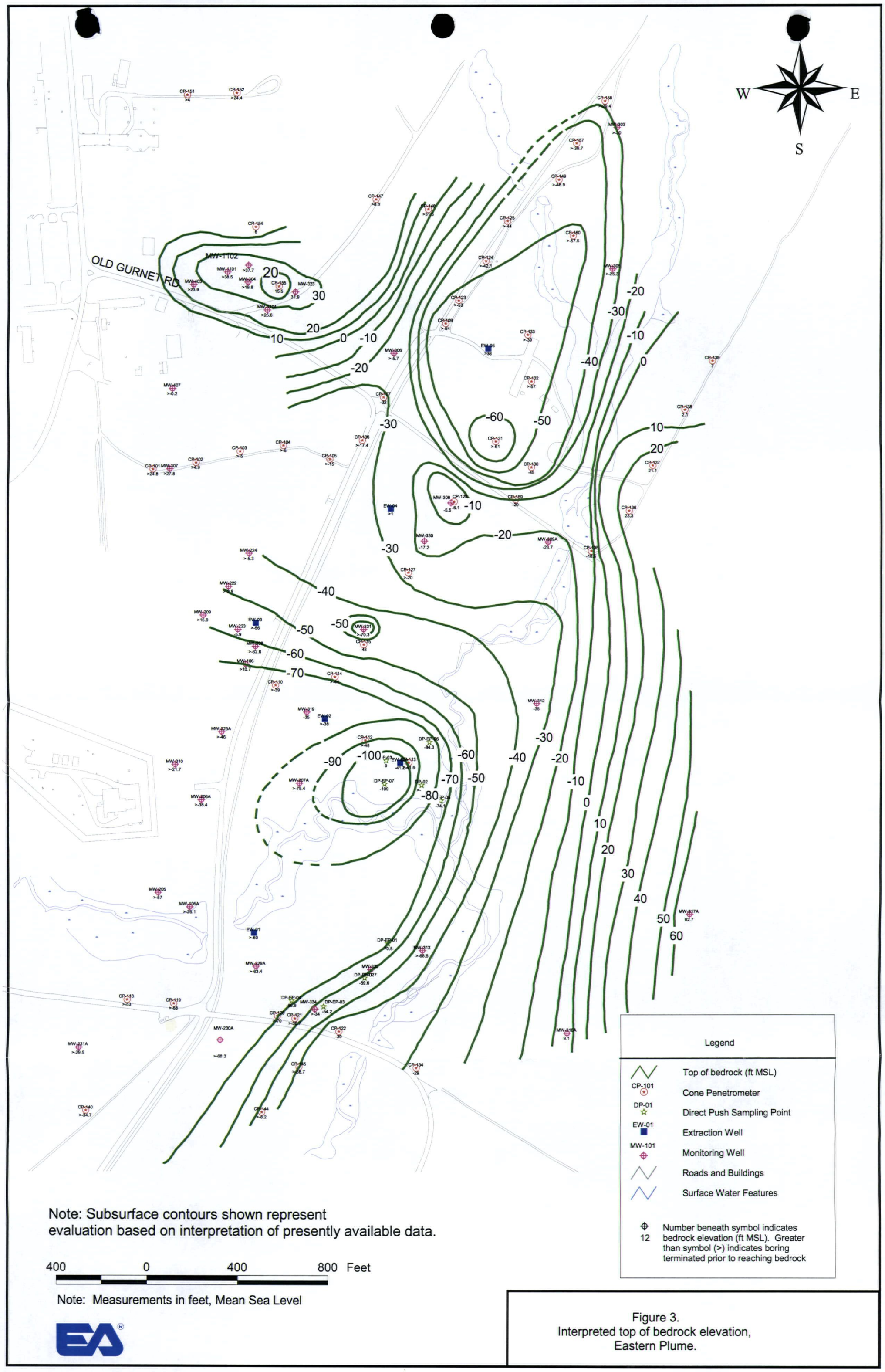
DWG FILE No. F:\CAD\29600\47\ANNUAL\EP-DPVOC.DWG

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

NAVAL AIR STATION BRUNSWICK, MAINE

FIGURE 2
DIRECT-PUSH GROUND-WATER ANALYTICAL RESULTS

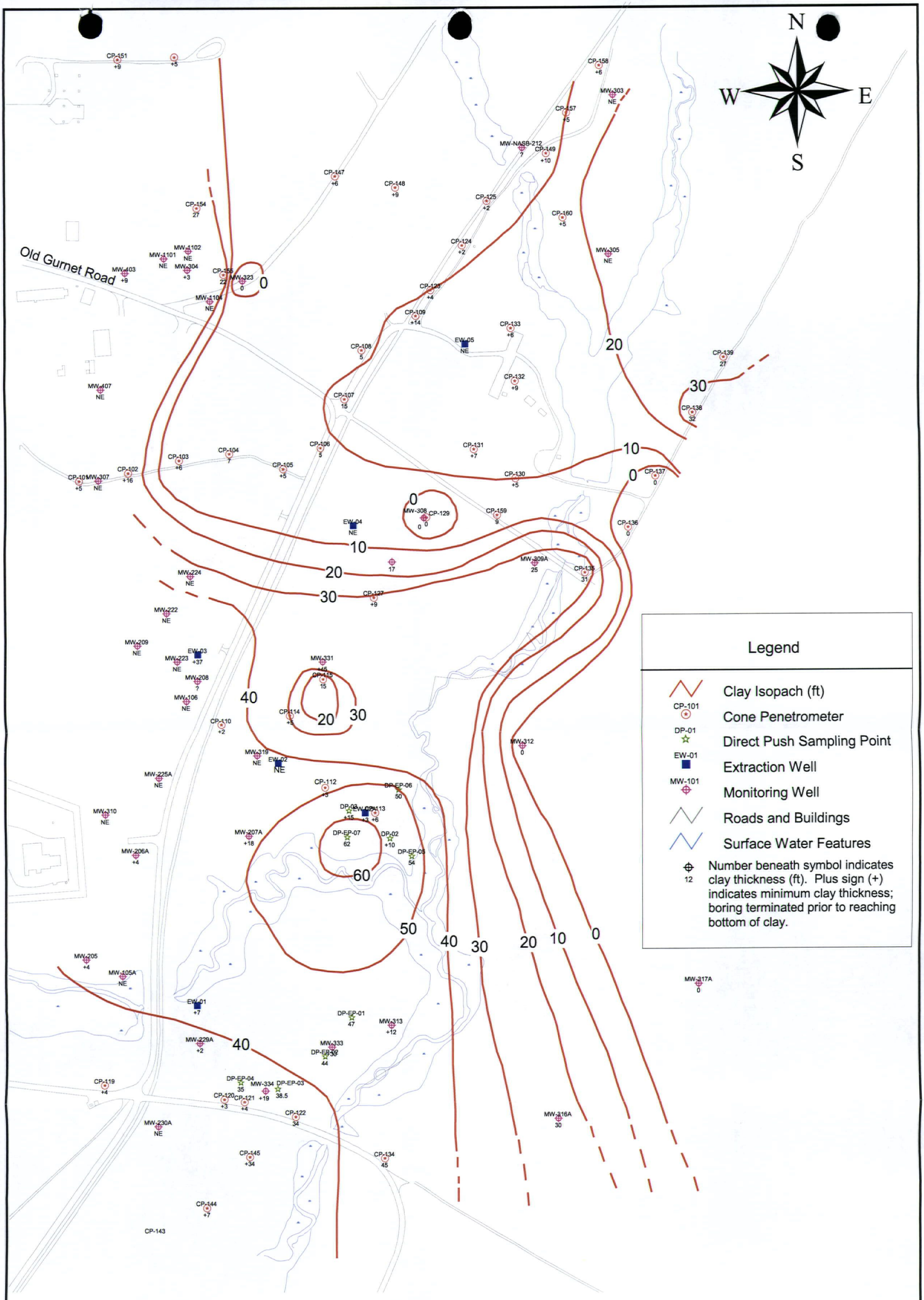
PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FILE No.
PLN	SYC	SYC	PLN	1" = 400'	8 DEC 98	29600.47	ep-dpvoc



Note: Subsurface contours shown represent evaluation based on interpretation of presently available data.

Note: Measurements in feet, Mean Sea Level

Figure 3.
Interpreted top of bedrock elevation,
Eastern Plume.



Note:
All measurements in feet.
NE indicates clay not encountered.

Note: Subsurface contours shown represent evaluation based on interpretation of presently available data.

Figure 4.
Clay thickness isopach map, Eastern Plume.

TABLE 1 SUMMARY OF MONITORING WELL AND DIRECT-PUSH DETAILS
NAVAL AIR STATION, BRUNSWICK, MAINE

MONITORING WELLS

Monitoring Well Number	Total Depth (ft bgs)[a]	Screen Interval (ft bgs)	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)
MW-240	42	29-39	49.1	52.21
MW-330	50	24-34	32.8	35.71
MW-331	98	44-54	27.7	30.54
MW-332	20	8-18	22.3	25.33
MW-333	42	30-40	24.3	27.25
MW-334	62	35-45	28.0	30.93

DIRECT-PUSH STATIONS

Direct-Push Location	Total Depth to Refusal (ft bgs)	Ground Surface Elevation (ft MSL)
DP-EP-01	94	23.5
DP-EP-02	84	24.4
DP-EP-03	81	26.3
DP-EP-04	97	28.1
DP-EP-05	77	9.9
DP-EP-06	98	13.7
DP-EP-07	118	11.0

(a) bgs = Below ground surface.

NOTE: MSL = Mean sea level.
All monitoring wells were constructed of 2-in. Schedule 40 PVC well screen (slot size = 0.10 in.) and riser.

TABLE 2 SUMMARY OF DIRECT-PUSH GROUND-WATER SAMPLE DEPTHS
EASTERN PLUME, NAVAL AIR STATION, BRUNSWICK, MAINE

Depth of Sample (ft bgs)[a]	Depth of Sample (ft MSL)	Ground-Water Sampling Summary
DP-EP-01		
6-8	17.5 to 19.5	Insufficient water for sampling
11-15	12.5 to 8.5	Sample collected
16-20	7.5 to 3.5	Insufficient water for sampling
39-43	-15.5 to -19.5	Sample collected
DP-EP-02		
6-10	18.4 to 14.4	Insufficient water for sampling
33-37	-8.6 to -12.6	Sample collected
DP-EP-03		
7-10	19.3 to 16.3	Insufficient water for sampling
22-26	4.3 to 0.3	Insufficient water for sampling
36-40	-9.7 to -13.7	Insufficient water for sampling
78-81	-51.7 to -54.7	Sample collected
DP-EP-04		
11-15	17.1 to 13.1	Sample collected
37-41	-8.9 to -12.9	Sample collected
53-57	-24.9 to -28.9	Insufficient water for sampling
95-99	-66.9 to -70.9	Insufficient water for sampling
DP-EP-05		
8-12	1.9 to -2.1	Insufficient water for sampling
22-26	-12.1 to -16.1	Sample collected
48-52	-38.1 to -42.1	Insufficient water for sampling
73-77	-63.1 to -67.1	Insufficient water for sampling
DP-EP-06		
3-7	10.7 to 6.7	Sample collected
21-25	-7.3 to -11.3	Insufficient water for sampling
39-43	-25.3 to -29.3	Sample collected
91-95	-77.3 to -81.3	Insufficient water for sampling
DP-EP-07		
12-16	-1.0 to -5.0	Sample collected
38-42	-27.0 to -31.0	Sample collected
51-55	-40.0 to -44.0	Sample collected
114-118	-10.3 to -10.7	Insufficient water for sampling

NOTE: ft MSL indicates feet mean sea level.

TABLE 3 ANALYTICAL RESULTS FOR DIRECT-PUSH SAMPLING CONDUCTED ON 15, 16, AND 28 OCTOBER 1998
NAVAL AIR STATION, BRUNSWICK, MAINE

Analyte	DP-EP-01 (11-15 ft bgs; 12.5 to 8.5 MSL)	DP-EP-01 (39-43 ft bgs; -15.5 to -19.5 MSL)	DP-EP-02 (33-37 ft bgs; -8.6 to -12.6 MSL)	DP-EP-02 DUP (33-37 ft bgs; -8.6 to -12.6 MSL)	DP-EP-03 (78-81 ft bgs; -51.7 to -54.7 MSL)	DP-EP-04 (11-15 ft bgs; 17.1 to 13.1 MSL)	DP-EP-04 (37-41 ft bgs; -8.9 to -12.9 MSL)	MEG[a]	MCL[b]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)									
1,1,1-Trichloroethane	(<5U)	5J	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	200	200
1,1,2,2-Tetrachloroethane	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	---	---
1,1,2-Trichloroethane	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	3	5
1,1-Dichloroethane	(<5U)	7	(<5U)	2J	(<5U)	(<5U)	(<5U)	70	---
1,1-Dichloroethene	(<5U)	5	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	7	7
1,2-Dichloroethane	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	5	5
Acetone	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)	(<10U)	---	---
Benzene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	5	5
Carbon disulfide	(<5U)	(<5U)	(<5U)	(<5U)	1J	(<5U)	2J	---	---
Chloroform	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	---	100
Ethylbenzene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	700	700
Methylene chloride	(<5U)	2J	3J	(<5U)	(<5U)	(<5U)	(<5U)	---	5
Tetrachloroethene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	3	5
Toluene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	1,400	1,000
Total 1,2-Dichloroethene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	70	70
Total xylenes	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	600	10,000
Trichloroethene	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	5	

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

NOTE: bgs = Below ground surface; MSL = Mean sea level.
J = Estimated concentration below detection limit; DUP indicates duplicate sample.
Only those analytes detected in at least one of the samples, and the contaminants of concern listed in the LTMP (ABB-ES 1994), are shown on this table.
Results in bold indicate concentrations above primary Federal MCL and/or State MEG. Trip blank QT1 (16 October 1998) contained 3J μg/L of acetone; no VOC were detected in trip blank QT2 (28 October 1998).

TABLE 3 (Continued)

Analyte	DP-EP-05 (22-26 ft bgs; -12.1 to -16.1 MSL)	DP-EP-06 (3-7 ft bgs; 10.7 to 6.7 MSL)	DP-EP-06 (39-43 ft bgs; -25.3 to -29.3 MSL)	DP-EP-07 (12-16 ft bgs; -1.0 to -5.0 MSL)	DP-EP-07 DUP (12-16 ft bgs; -1.0 to -5.0 MSL)	DP-EP-07 (38-42 ft bgs; -27.0 to -31.0 MSL)	DP-EP-07 (51-55 ft bgs; -40.0 to -44.0 MSL)	Rinsate	MEG[b]	MCL[c]
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (μg/L)										
1,1,1-Trichloroethane	**3,000D**	(<1U)	**1,300D**	(<1U)	(<1U)	**2,600D**	(<1U)	200	200	
1,1,2,2-Tetrachloroethane	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	---	---	
1,1,2-Trichloroethane	**4**	(<1U)	2	(<1U)	(<1U)	3	(<1U)	3	5	
1,1-Dichloroethane	43E	(<1U)	26	(<1U)	(<1U)	53	(<1U)	70	---	
1,1-Dichloroethene	**270D**	(<1U)	**180**	(<1U)	(<1U)	**240D**	(<1U)	7	7	
1,2-Dichloroethane	**8**	(<1U)	4	(<1U)	(<1U)	4	(<1U)	5	5	
Acetone	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	(<5U)	---	---	
Benzene	1	(<1U)	(<1U)	(<1U)	(<1U)	2	(<1U)	5	5	
Carbon disulfide	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	---	---	
Chloroform	2	(<1U)	(<1U)	(<1U)	(<1U)	1	(<1U)	---	100	
Ethylbenzene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	700	700	
Methylene chloride	**22**	(<1U)	**6**	(<1U)	(<1U)	**12**	(<1U)	---	5	
Tetrachloroethene	**14**	(<1U)	**5**	(<1U)	(<1U)	**21**	(<1U)	3	5	
Toluene	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	1,400	10,000	
Total 1,2-Dichloroethene	11	(<1U)	(<1U)	(<1U)	(<1U)	17	(<1U)	70	70	
Total xylenes	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	(<1U)	600	100	
Trichloroethene	**480D**	(<1U)	**160**	(<1U)	(<1U)	**720D**	(<1U)	5	5	

NOTE: D = Analysis at a secondary dilution factor.

Attachment A

Soil Boring Logs

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-240

PROJECT	Name: Brunswick Naval Air Station		Client: U.S. Navy, Northern Division	
	Location: Sites 1 and 3			Number: 29600.47.7160
BORING	Logged By: Suzanne Chase			Date: 10/26/98
	Surface Elevation: 49.1 ft. MSL	Total Depth (ft): 42.0		Dia. (in): 4.0 in.
DRILL	Company: Northeast Diamond Drilling		Rig/Type: CME-75	
	Method: Drive-wash / Split-barrel - 140 lb. ham.			Permit No.: NA
	Driller: Tim Whitman			License No.: NA
WELL	TOC Elev. (ft): 52.21	Water Level Initial (ft): 6.0		Static (ft): NA
	Screen	Dia. (in): 2.0	Type/Size: pvc/10 slot	Length (ft): 10.0
	Casing	Dia. (in): 2.0	Type: pvc	Length (ft): 31.0

Page 1 of 2

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 2 in. Brown fine SAND (dry, loose). 12 in. Dark brown fine SAND (dry, loose). Bottom 5 in. Dark orange fine SAND (dry, loose).	SW		2		0-2	0.3	3 5 5 6	19
Top 2 in. Dark orange fine SAND (dry, loose). Bottom 15 in. Tan fine SAND (dry, medium dense).			4		2-4	0.3	10 10 11 10	17
Tan fine SAND (moist, dense).			6		4-6	0.4	8 12 14 17	11
Tan fine SAND, some mica flakes, no odor (wet, medium dense).			8		6-8	0.4	5 8 8 8	10
			10		8-10	0.5	4 7 6 9	10
Same as above.			12		10-12	0.5	6 7 10 13	9
			14		12-14	0.5	7 7 7 8	8
Same as above.			16		14-16	0.7	7 7 7 7	2
			18		16-18	0.6	5 6 9 12	9
Tan fine SAND, little SILT, faint stratifications (wet, dense). 1/4 in. Orange fine SAND lenses 6 1/2 in. from top of sample.			20		18-20	2.1	8 13 17 19	10
Tan fine SAND, top 5 in. medium dense, bottom 4 in. loose (dry).			22		20-22	0.8	10 13 19 17	9
Tan fine SAND, some iron staining, mica flakes (dry, dense).			24		22-24	0.7	12 16 18 19	10

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-240

PROJECT	**Name**: Brunswick Naval Air Station	**Client**: U.S. Navy, Northern Division	
	Location: Sites 1 and 3	**Number**: 29600.47.7160	
BORING	**Logged By**: Suzanne Chase	**Date**: 10/26/98	
	Surface Elevation: 49.1 ft. MSL	**Total Depth (ft)**: 42.0	**Dia. (in)**: 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Tan fine SAND, some mica flakes (moist, dense).	SW				24-26	0.8	13 15 19 20	9
Tan fine SAND, some mica flakes (wet, dense).			26		26-28	0.3	12 12 16 19	9
Brown fine SAND, some mica flakes (wet, medium dense).			28		28-30	0.3	12 14 16 17	10
Same as above, some stratification.			30		30-32	0.3	8 10 15 14	12
Brown fine SAND, some mica flakes, little SILT (wet, medium dense).			32		32-34	0.3	7 10 12 14	10
Same as above, some stratification.			34		34-36	0.2	10 10 16 18	10
Same as above			36		36-38	0.2	11 14 15 16	11
Brown fine SAND, little SILT, some mica flakes (wet, dense).			38		38-40	0.4	7 9 14 18	11
Bottom of boring at 42 feet.			40		40-42	0.4	8 9 14 17	12
			42					
			44					
			46					
			48					
			50					
			52					

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-330

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/19/98	
	Surface Elevation: 32.8 ft. MSL	**Total Depth (ft):** 50.0	**Dia. (in):** 4.0 in.
DRILL	**Company:** Northeast Diamond Drilling	**Rig/Type:** Mobil B-50	
	Method: Drive-wash / Split-barrel - 140 lb. ham.	**Permit No.:** NA	
	Driller: Tim Whitman	**License No.:** NA	
WELL	**TOC Elev. (ft):** 35.71	**Water Level Initial (ft):** 6.0	**Static (ft):** NA
	Screen **Dia. (in):** 2.0	**Type/Size:** pvc/10 slot	**Length (ft):** 10.0
	Casing **Dia. (in):** 2.0	**Type:** pvc	**Length (ft):** 26.0

Page 1 of 2

Description (Color, Texture, Structure) — Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 5 in. Brown medium SAND (dry). 3 in. Orange medium SAND (dry). Bottom 4 in. Light brown fine SAND (dry).	SW		2		0-2	0	5 5 6 6	11
18 in. Light brown fine and medium SAND (dry). Bottom 2 in. with small GRAVEL (dense).			4		2-4	7	8 10 15 20	18
Light brown fine and medium SAND (dry, very dense).			6		4-6	8	20 26 28 29	12
Top 10 in. Brown fine and medium SAND, some dark mottling (wet). Bottom 4 in. Light brown fine and medium SAND, iron staining, some small GRAVEL bottom 2 in. (dense).			8		6-8	16	28 26 15 12	14
Top 2 in. Gray-light brown silty SAND (wet). 10 in. Light brown fine and medium SAND, 2 in. band of rust. Bottom 3 in. Light brown fine and medium SAND (dense).			10		8-10	23	9 12 20 16	15
Top 2in. Light brown silty SAND. 8 in. Gray fine SAND. Bottom 2 in. Gray silty SAND.	ML		12		10-12	22	6 11 4 4	12
Top 4 in. Gray sandy SILT and CLAY. Bottom 8 in. Gray clayey, silty SAND (soft).	CL		14		12-14	7	WOR 3 3 2	12
Top 12 in. Gray silty CLAY. Bottom 12 in. Gray CLAY, dark mottling. (very soft).			16		14-16	7	WOH WOH WOH WOH	24
Gray CLAY, plastic, firm (very soft).			18		16-18	7	WOH WOH WOH WOH	24
No recovery			20		18-20	7	WOH WOH 2 2	0
Top 14 in. Gray silty Clay grading to Clay. Bottom 10 in. Gray fine SAND and CLAY (very soft).			22		20-22	28	WOR WOR WOR WOR	24
Gray CLAY, plastic, sticky. Slightly sandy towards bottom of spoon (very soft).			24		22-24	23	WOR WOR WOR WOR	24
NOTE: Elevated PID readings likely attributed to calibration problems.								

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-330

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/19/98	
	Surface Elevation: 32.8 ft. MSL	**Total Depth (ft):** 50.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 4 in. Gray SILT. 2 in. Gray CLAY. 2 in. Gray fine SAND. 2 in. Gray CLAY. 2 in. Gray fine SAND. 8 in. Gray silty SAND and CLAY	CL				24-26	38	WOH WOH WOH 6	20
Gray fine sandy CLAY (not gritty).			26		26-28	29	1 2 WOH WOH	20
Gray fine sandy CLAY (very soft).			28		28-30	25	WOR WOR WOR WOR	24
Gray fine sandy CLAY (not gritty).			30		30-32	83	1 WOH WOH WOH	24
Same as above			32		32-34	3	WOR WOR WOR WOR	24
Gray CLAY.			34		34-36	2	WOR WOR WOR WOR	24
Gray CLAY, sticky, black mottling.			36		36-38	14	WOR WOR WOR WOR	24
Gray CLAY			38		38-40	4	WOR WOR WOR WOR	24
Gray CLAY, some black mottling.			40		40-42	0	WOR WOR WOR WOR	24
Same as above			42		42-44	6	WOR WOR WOR WOR	24
Gray CLAY, some black mottling.			44		44-46	38	WOR WOR WOR WOR	24
Same as above			46		46-48	42	WOR WOR WOR WOR	24
Top 12 in. Gray CLAY, black mottling. 6 in. Gray sandy CLAY. Bottom 6 in. Gray medium SAND.			48		48-50	62	WOR WOR WOR 8	24
Bedrock at 50ft 1 in.			50		50-52			
Bottom of boring at 50 feet 1 inch.			52					

LEGEND

Clay
Fat Clay
Sand
Sandy Clay
Silt
Silty Sand
Sandy Gravel
Bentonite
Grout
Concrete
Screened Interval
Riser
Bulk Sample
Lab Sample
No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-331

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/16/98	
	Surface Elevation: 27.7 ft. MSL	**Total Depth (ft):** 98.0	**Dia. (in):** 4.0 in.
DRILL	**Company:** Northeast Diamond Drilling	**Rig/Type:** Mobil B-50	
	Method: Drive-wash / Split-barrel - 140 lb. ham.	**Permit No.:** NA	
	Driller: Tim Whitman	**License No.:** NA	
WELL	**TOC Elev. (ft):** 30.54	**Water Level Initial (ft):** 4.0	**Static (ft):** NA
	Screen **Dia. (in):** 2.0	**Type/Size:** pvc/10 slot	**Length (ft):** 10.0
	Casing **Dia. (in):** 2.0	**Type:** pvc	**Length (ft):** 46.0

Page 1 of 4

Description (Color, Texture, Structure) — Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 11 in. Brown topsoil. Bottom 13 in. Orange fine SAND.	SW				0-2	0	2 2 5 9	24
Top 16 in. Orange fine SAND. Bottom 2 in. Gray fine SAND Gray clay in tip of spoon.			2		2-4	3.1	9 6 6 3	18
Top 6 in. Gray clayey SILT. Bottom 14 in. Gray CLAY.	ML		4		4-6	4.0	4 4 8 4	20
Top 2 in. Gray silty CLAY. Bottom 22 in. Gray CLAY.	CL		6		6-8	3.0	4 4 3 3	24
Gray CLAY, soft.			8		8-10	3.0	WOR WOR WOR WOH	24
Gray CLAY, very soft.			10		10-12	3.2	WOR WOH 1 2	24
Top 16 in. Gray CLAY. Bottom 8 in. Gray silt and orange fine SAND, some CLAY.			12		12-14	3.6	1 1 2 1	24
Gray silty, orange fine/medium SAND. Broken basket, poor recovery.	SW		14		14-16	3.8	WOH WOH WOH WOH	4
Top 8 in. Orange SILT. 8 in. Orange sandy CLAY. 3 in. Orange coarse SAND. Bottom 5 in. Orange silty SAND.			16		16-18	2.4	WOR 1 4 3	24
Top 6 in. Orange-brown silty SAND. 10 in. Orange-brown fine SAND. Bottom 8 in. Orange-brown silty CLAY and fine SAND.			18		18-20	2.5	2 4 2 4	24
Top 5 in. Orange-brown fine SAND. Bottom 3 in. Orange fine SAND, loose.			20		20-22	2.8	1 2 3 4	8
Gray SILT (very soft). Elevated PID readings likely attributed to calibration problems.	ML		22		22-24	1.6	WOR WOH WOH WOH	24
			24					

LEGEND

Clay; Fat Clay; Sand; Sandy Clay; Silt; Silty Sand; Sandy Gravel; Bentonite; Grout; Concrete; Screened Interval; Riser; Bulk Sample; Lab Sample; No Sample Rec'd

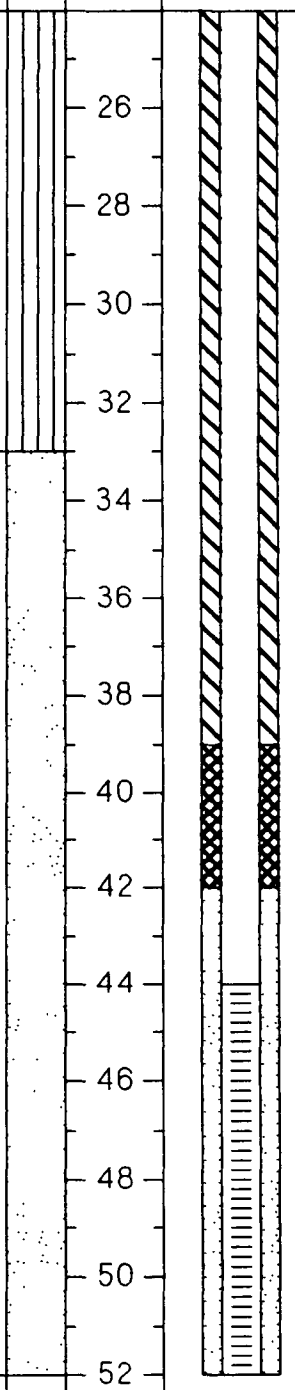
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-331

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/16/98	
	Surface Elevation: 27.7 ft. MSL	**Total Depth (ft):** 98.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) — Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Depth (feet)	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Gray SILT. Gray CLAY in tip of spoon.	ML		24-26	1.4	WOH WOH WOH WOH	24
Gray SILT (very soft).		26	26-28	3.0	WOH WOH WOH WOH	24
Gray SILT.		28	28-30	3.2	WOR WOH 1 WOH	24
Gray SILT. Gray CLAY in tip of spoon.		30	30-32	259	WOR 1 WOH WOH	24
Top 12 in. Gray SILT. 3 in. Orange fine/medium SAND. 6 in. Orange silty CLAY. Bottom 3 in. Orange medium SAND.		32	32-34	167	WOR 3 4 6	24
Top 10 in. Gray SILT. Bottom 14 in. Orange fine SAND.	SW	34	34-36	228	4 7 14 17	24
Top 8 in. Gray SILT. Bottom 16 in. Orange fine SAND.		36	36-38	246	10 14 18 25	24
Top 8 in. Gray SILT. Bottom 16 in. Orange fine SAND.		38	38-40	360	12 20 22 20	24
Top 2 in. Gray silty fine SAND. Bottom 11 in. Orange medium SAND.		40	40-42	303	11 12 12 12	13
Top 4 in. Gray-light brown fine SAND. Bottom 5 in. Orange fine SAND.		42	42-44	295	9 14 15 16	9
Orange-light brown fine SAND.		44	44-46	287	13 14 23 21	13
Same as above		46	46-48	282	10 19 28 29	24
Top 20 in. Orange fine SAND. Bottom 4 in. Gray fine SAND.		48	48-50	225	16 17 28 29	24
Top 4 in. Brown-gray fine SAND. 6 in. Gray fine SAND. Bottom 2 in. Gray silty CLAY.		50	50-52	202	5 5 6 14	12
		52				

Graphic Log / Well Completion



LEGEND

Clay; Fat Clay; Sand; Sandy Clay; Silt; Silty Sand; Sandy Gravel; Bentonite; Grout; Concrete; Screened Interval; Riser; Bulk Sample; Lab Sample; No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-331

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/16/98	
	Surface Elevation: 27.7 ft. MSL	**Total Depth (ft):** 98.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 12 in. Gray fine SAND. Bottom 12 in. Gray clayey SILT.	SW							
	CL				52-54	196	9 10 6 6	24
Gray CLAY, very soft, holds shape.			54		54-56	133	WOR WOR WOR WOR	24
			56					
Same as above.					56-58	153	WOR WOR WOR WOR	24
			58					
					58-60	143	WOR WOR WOR WOR	24
			60					
Gray CLAY, very soft, very sticky.					60-62	148	WOR WOR WOR WOR	24
Top 18 in. Gray CLAY, very soft, very sticky. Bottom 6 in. Black fine SAND, very loose, wet.			62					
					62-64	104	WOR WOR WOR WOR	24
Top 12 in. Black-gray fine SAND, wet, very loose, some SILT. 10 in. Gray SILT, very loose. Bottom 2 in. Black-gray silty fine SAND, loose.	SW		64					
	ML				64-66	102	21 14 6 5	24
	SW		66					
Top 2 in. Gray silty SAND, loose, wet. Bottom 22 in. Gray CLAY, sticky.	CL				66-68	113	10 1 WOH WOH	24
			68					
Gray CLAY, very soft, sticky, holds shape.					68-70	122	WOH WOR WOR WOR	12
			70					
					70-72	108	WOR WOR WOR WOR	24
			72					
					72-74	103	WOR WOR WOR WOR	24
Same as above.			74					
					74-76	99	WOR WOR WOR WOR	24
			76					
					76-78	88	WOR WOR WOR WOR	24
			78					
					78-80	110	WOR WOR WOR WOR	24
			80					

LEGEND

- Clay
- Fat Clay
- Sand
- Sandy Clay
- Silt
- Silty Sand
- Sandy Gravel
- Bentonite
- Grout
- Concrete
- Screened Interval
- Riser
- Bulk Sample
- Lab Sample
- No Sample Rec d

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-331

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** P. Higgins, S. D'Jimas	**Date:** 10/16/98	
	Surface Elevation: 27.7 ft. MSL	**Total Depth (ft):** 98.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Gray CLAY, sticky, very soft, holds shape.	CL				80-82	100	WOR WOR WOR WOR	24
			82					
Same as above.					82-84	80	WOR WOR WOR WOR	24
			84					
Same as above. Bottom 6 in. slightly darker in color.					84-86	73	WOR WOR WOR WOR	24
			86					
Gray CLAY, very soft, sticky, darker in color (metallic, silver).					86-88	79	WOR WOR WOR WOR	24
			88					
Same as above.					88-90	32	WOR WOR WOR WOR	24
			90					
					90-92	38	WOR WOR WOR WOR	24
			92					
Same as above.					92-94	36	WOR WOR WOR WOR	24
			94					
					94-96	73	WOR WOR WOR WOR	24
			96					
Same as above. Bottom 6 in. slightly darker in color.					96-98	94	WOR WOR WOR WOR	24
Bottom of boring at 98 feet.			98					
					98-100	93	WOR WOR WOR WOR	24
			100					
			102					
			104					
			106					
			108					

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec d

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-332

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume		**Number:** 29600.47.7160
BORING	**Logged By:** Suzanne Chase		**Date:** 10/28/98
	Surface Elevation: 22.3 ft. MSL	**Total Depth (ft):** 20.0	**Dia. (in):** 4.0 in.
DRILL	**Company:** Northeast Diamond Drilling	**Rig/Type:** Mobil B-47	
	Method: Drive-wash / Split-barrel - 140 lb. ham.		**Permit No.:** NA
	Driller: Tim Whitman		**License No.:** NA
WELL	**TOC Elev. (ft):** 25.33	**Water Level Initial (ft):** 7.0	**Static (ft):** NA
	Screen **Dia. (in):** 2.0	**Type/Size:** pvc/10 slot	**Length (ft):** 10.0
	Casing **Dia. (in):** 2.0	**Type:** pvc	**Length (ft):** 10.0

Page 1 of 1

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 6 in. Dark brown-black SAND, roots, twigs (dry, loose). Bottom 14 in. Orange-brown fine SAND (dry, loose).	SW		2		0-2	0.1	2 3 3 6	20
Tan-brown fine SAND (dry, loose).					2-4	0.2	5 6 9 11	18
Top 2 in. outwash. 5 in. Tan fine SAND, stratification (moist loose) At 7 in., 1/4 in. black fine SAND. 4 in. Tan fine SAND, trace SILT, (moist, loose). 2 in. Tan fine SAND (moist loose). 1 in. Gray fine SAND (moist, loose).			4 6		4-6	0.3	10 13 14 15	14
Top 6 in. orange-brown fine SAND, some small GRAVEL (wet, loose). 0.5 in. Orange medium and coarse SAND, some mica (wet, loose) 6.5 in. Gray fine SAND, some SILT, mica (wet, medium dense).			8		6-8	0.1	7 10 10 9	12
Top 2 in. Orange-brown fine SAND (wet, loose). 7 in. Gray CLAY with SILT, plastic (wet, soft). 3 in. Orange-brown fine SAND, some SILT, (wet, dense). 6 in. Orange-brown fine SAND (wet, loose).			10		8-10	0.3	6 4 9 7	18
Top 4 in. Brown SILT (wet, soft) grading to 10 in. fine and medium SAND, mica (wet, loose) grading to medium/coarse SAND (wet, medium dense) Stratification throughout.			12		10-12	0.1	4 5 7 11	17
Top 3 in. Brown coarse SAND (wet, loose). 9 in. Brown/orange fine SAND, trace SILT, stratification (wet, dense). 3 in. Dark gray fine SAND, SILT (wet, loose).			14		12-14	1.0	12 12 7 10	15
Top 4 in. Gray fine SAND with SILT (wet, loose). 8 in. Gray CLAY, plastic (wet, soft). 2 in. Gray fine SAND (wet, loose). 10 in. Gray CLAY, plastic (wet, soft).	CL		16		14-16	0.1	3 1 1 1	24
Gray CLAY, some SILT, plastic (wet, very soft). *Bottom of boring at 20 feet.*			18		16-18	0.2	1 1 WOR WOR	24
			20		18-20	0.2	WOR WOR WOR WOR	24
			22					
			24					

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-333

PROJECT	Name: Brunswick Naval Air Station	Client: U.S. Navy, Northern Division	
	Location: Eastern PLume	Number: 29600.47.7160	
BORING	Logged By: Suzanne Chase	Date: 10/28/98	
	Surface Elevation: 24.3 ft. MSL	Total Depth (ft): 42.0	Dia. (in): 4.0 in.
DRILL	Company: Northeast Diamond Drilling	Rig/Type: Mobil B-47	
	Method: Drive-wash / Split-barrel - 140 lb. ham.	Permit No.: NA	
	Driller: Tim Whitman	License No.: NA	
WELL	TOC Elev. (ft): 27.25	Water Level Initial (ft): 8.0	Static (ft): NA
	Screen: Dia. (in): 2.0	Type/Size: pvc/10 slot	Length (ft): 10.0
	Casing: Dia. (in): 2.0	Type: pvc	Length (ft): 32.0

Page 1 of 2

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 6 in. Dark brown-black fine SAND, organics, (dry, loose). Bottom 12 in. Orange fine SAND, organics (dry, loose).	SW		2		0-2	0.1	1 1 3 4	18
Top 15 in. Tan fine SAND, little mica (dry, loose). 1/4 in. Dark brown fine SAND (dry, loose). 3 in. Orange-brown fine SAND (dry, loose).			4		2-4	5.3	3 3 6 8	18
3 in. outwash. 5 in. Brown fine SAND, some SILT (dry, dense). 3 in. Brown very fine SAND (dry, dense). 2 in. Brown-gray fine SAND (dry, loose). 1 in. Orange-gray SILT, stratification (dry, dense).			6		4-6	1.9	7 10 12 17	14
9 in. Gray-brown fine SAND, some mica, interlayered with fine, medium SAND (moist, dense). 3 in. Brown-tan fine/medium SAND (moist, loose)			8		6-8	0.2	12 14 13 13	12
1 in outwash (small rounded GRAVEL). 7 in. Brown SILT (wet, dense). 2 in. Orange fine SAND (wet, stiff). 2 in. Tan fine SAND (wet, dense) 2 in. Tan SILT, some CLAY (wet, stiff).			10		8-10	0.2	10 12 9 6	14
5 in. Tan SILT, some CLAY (wet, very soft). 3 in. Tan silty CLAY, plastic (wet, very soft). 2 in. Tan SILT, iron banding (wet, very soft). 8 in. Gray silty CLAY, plastic (wet, very soft).	ML		12		10-12	1.3	5 3 2 2	18
Gray CLAY, plastic (wet, very soft) interlayered with silty CLAY,	CL		14		12-14	0.3	WOR WOR WOR WOR	20
Gray silty CLAY, plastic (wet, very soft).			16		14-16	0.3	WOR WOR WOR WOR	24
			18		16-18	0.1	WOR WOR WOR WOR	16
Top 20 in. Gray silty CLAY, plastic (wet, very soft). 4 in. Gray SILT and CLAY, plastic (wet, very soft).			20		18-20	0.0	WOR WOR WOR WOR	24
Gray silty CLAY, plastic (wet, very soft).			22		20-22	0.0	WOR WOR WOR WOR	17
			24		22-24	0.0	WOR WOR WOR WOR	18

LEGEND

Clay, Fat Clay, Sand, Sandy Clay, Silt, Silty Sand, Sandy Gravel, Bentonite, Grout, Concrete, Screened Interval, Riser, Bulk Sample, Lab Sample, No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-333

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern PLume	**Number:** 29600.47.7160	
BORING	**Logged By:** Suzanne Chase	**Date:** 10/28/98	
	Surface Elevation: 24.3 ft. MSL	**Total Depth (ft):** 42.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Depth (feet)	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Gray silty CLAY, plastic (wet, very soft) interlayered with gray SILT and CLAY, plastic (wet, very soft).	CL	26	24-26	0.0	WOR WOR WOR WOR	18
10 in. Gray SILT and CLAY, plastic (wet, very soft). 8 in. Gray silty CLAY, plastic (wet, very soft).		28	26-28	0.0	1 1 1 1	18
Gray silty CLAY, plastic (wet, very soft).		30	28-30	0.0	WOR WOR WOR WOR	11
Gray CLAY, plastic (wet, very soft).		32	30-32	0.0	WOR WOR WOR WOR	9
15 in. Gray CLAY, plastic (wet, very soft). 8 in. Gray silty CLAY, plastic (wet, very soft).		34	32-34	0.0	WOR WOR WOR WOR	23
16 in. Gray silty CLAY, plastic (wet, very soft). 3 in. Gray fine SAND (wet, loose). 5 in. Gray SILT and CLAY, plastic (wet, very soft).	SW	36	34-36	0.0	1 1 6 3	24
8 in. Gray CLAY (wet, very soft). 7 in. Gray fine SAND (wet, loose). 4 in. Gray CLAY, plastic (wet, soft).	CL	38	36-38	0.0	1 3 2 2	19
Gray silty CLAY, plastic (wet, very soft).		40	38-40	0.0	WOR WOR WOR WOR	22
Gray silty CLAY, plastic (wet, very soft).		42	40-42	0.0	1 WOR WOR WOR	22
Bottom of boring at 42 feet.		44				
		46				
		48				
		50				
		52				

Well Completion

LEGEND

Clay	Sandy Clay	Sandy Gravel	Concrete	Bulk Sample
Fat Clay	Silt	Bentonite	Screened Interval	Lab Sample
Sand	Silty Sand	Grout	Riser	No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-334

PROJECT	Name: Brunswick Naval Air Station	Client: U.S. Navy, Northern Division	
	Location: Eastern Plume	Number: 29600.47.7160	
BORING	Logged By: Suzanne Chase	Date: 10/29/98	
	Surface Elevation: 28.0 ft. MSL	Total Depth (ft): 62.0	Dia. (in): 4.0 in.
DRILL	Company: Northeast Diamond Drilling	Rig/Type: Mobil B-50	
	Method: Drive-wash / Split-barrel - 140 lb. ham.	Permit No.: NA	
	Driller: Tim Whitman	License No.: NA	
WELL	TOC Elev. (ft): 30.93	Water Level Initial (ft): 9.0	Static (ft): NA
	Screen: Dia. (in): 2.0	Type/Size: pvc/10 slot	Length (ft): 10.0
	Casing: Dia. (in): 2.0	Type: pvc	Length (ft): 37.0

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Top 3 in. Brown organics, roots. 4 in. Brown fine, medium SAND (medium dense) 8 in. Tan medium SAND, dry.	SW		2		0-2	0.2	6 8 9 12	15
Tan fine and medium SAND, dry.					2-4	0.0	11 12 14 16	18
7 in. Tan fine and medium SAND. 11 in. Rust colored zone (1/2 in. thick) fine SAND, some mottling.			4		4-6	0.0	9 9 16 19	10
10 in. Tan fine SAND. At 3 in. 1 in. zone of fine SAND with some coarse SAND. Moist toward bottom.			6		6-8	0.0	7 9 12 11	10
Tan medium SAND, small rust colored mottles (wet).			8		8-10	0.0	6 7 6 7	7
1 in. Coarse "washed" SAND. 8 in. Tan fine SAND, some medium, several thin zones of rust colored sand, fine and very fine SAND, dense.			10		10-12	0.0	5 6 9 9	9
2 in. Tan to olive fine SAND. 7 in. Tan to olive fine and medium SAND. 2 in. Tan very fine and fine SAND with minor rust colored lense. Wet, dense.			12		12-14	0.0	9 9 10 12	11
8 in. Tan to olive fine and medium SAND. 2 in Tan to olive fine SAND.			14		14-16	0.0	9 12 12 9	10
4 in. Olive SILT and very fine SAND. 1/4 in. band of rust colored SAND at 4 in. 12 in. Tan to olive fine SAND, minor lenses of rust colored SAND, loose.			16		16-18	0.1	5 6 6 9	16
9 in. Brown to tan fine SAND. 1 in. Brown to gray very fine SAND, tip is SILT and CLAY.	ML		18		18-20	0.0	10 9 3 3	10
7 in. Gray SILT and very fine SAND. 7 in. Gray SILT and CLAY, very soft.			20		20-22	0.0	2 1 WOR WOR	14
Gray CLAY. Silty CLAY from 6 in. to 10 in., very soft.	CL		22		22-24	0.0	WOR WOR WOR WOR	24
			24					

LEGEND

Clay; Fat Clay; Sand; Sandy Clay; Silt; Silty Sand; Sandy Gravel; Bentonite; Grout; Concrete; Screened Interval; Riser; Bulk Sample; Lab Sample; No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

WELL MW-334

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** Suzanne Chase	**Date:** 10/29/98	
	Surface Elevation: 28.0 ft. MSL	**Total Depth (ft):** 62.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Gray CLAY, very soft.	CL				24-26	0.0	WOR WOR WOR WOR	24
			26					
6 in. Gray silty CLAY. 14 in Gray CLAY. 4 in. Gray silty CLAY, very soft.					26-28	0.0	WOR WOR WOR WOR	24
			28					
Gray CLAY.					28-30	0.0	WOR WOR WOR WOR	18
			30					
10 in. Gray CLAY. 6 in. Gray very fine SAND.					30-32	0.0	WOR WOR WOR WOR	16
	SW							
			32					
16 in. Gray silty CLAY. 4 in. Gray very fine SAND.	ML				32-34	0.0	WOR WOR WOR WOR	20
	SW							
			34					
Gray CLAY, very soft.	CL				34-36	0.0	WOR WOR WOR WOR	8
			36					
Gray CLAY, very soft.					36-38	0.0	WOR WOR WOR WOR	4
			38					
3 in. Gray very fine SAND. 9 in. Gray CLAY, very soft.					38-40	0.1	WOR WOR WOR WOR	12
8 in Gray CLAY. 8 in. Gray fine SAND. 4 in. Gray CLAY, very soft.			40					
	ML				40-42	0.2	2 6 5 4	20
	CL							
			42					
9 in. Gray fine SAND. 13 in. Gray silty CLAY.	SW				42-44	0.0	1 1 WOR WOR	22
	CL		44					
Gray silty CLAY. Gray very fine SAND from 2 to 4 in.					44-46	0.0	WOR WOR WOR WOR	24
			46					
Gray silty CLAY, very soft.					46-48	0.0	WOR WOR WOR WOR	22
			48					
Gray CLAY, very soft.					48-50	0.0	WOR WOR WOR WOR	20
			50					
					50-52	0.0	WOR WOR WOR WOR	24
			52					

LEGEND

- Clay
- Fat Clay
- Sand
- Sandy Clay
- Silt
- Silty Sand
- Sandy Gravel
- Bentonite
- Grout
- Concrete
- Screened Interval
- Riser
- Bulk Sample
- Lab Sample
- No Sample Rec'd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC

WELL MW-334

PROJECT	**Name:** Brunswick Naval Air Station	**Client:** U.S. Navy, Northern Division	
	Location: Eastern Plume	**Number:** 29600.47.7160	
BORING	**Logged By:** Suzanne Chase	**Date:** 10/29/98	
	Surface Elevation: 28.0 ft. MSL	**Total Depth (ft):** 62.0	**Dia. (in):** 4.0 in.

Description (Color, Texture, Structure) Trace <10%, Little 10% to 20%, Some 20% to 30%, And 30% to 50%	USCS Class.	Graphic Log	Depth (feet)	Well Completion	Sample ID	PID (ppm)	Blows / 6 in.	Recovery in.
Gray CLAY.	CL				52-54	0.0	WOR WOR WOR WOR	24
			54		54-56	0.0	WOR WOR WOR WOR	10
			56					
Gray CLAY with black mottling, very soft.					56-58	0.0	WOR WOR WOR WOR	24
			58					
					58-60	0.0	WOR WOR WOR WOR	24
			60					
					60-62	0.0	WOR WOR WOR WOR	12
			62					
Bottom of boring at 62 feet.								
			64					
			66					
			68					
			70					
			72					
			74					
			76					
			78					
			80					

LEGEND

Clay
Fat Clay
Sand
Sandy Clay
Silt
Silty Sand
Sandy Gravel
Bentonite
Grout
Concrete
Screened Interval
Riser
Bulk Sample
Lab Sample
No Sample Rec'd

Attachment B

Summary of Survey Information

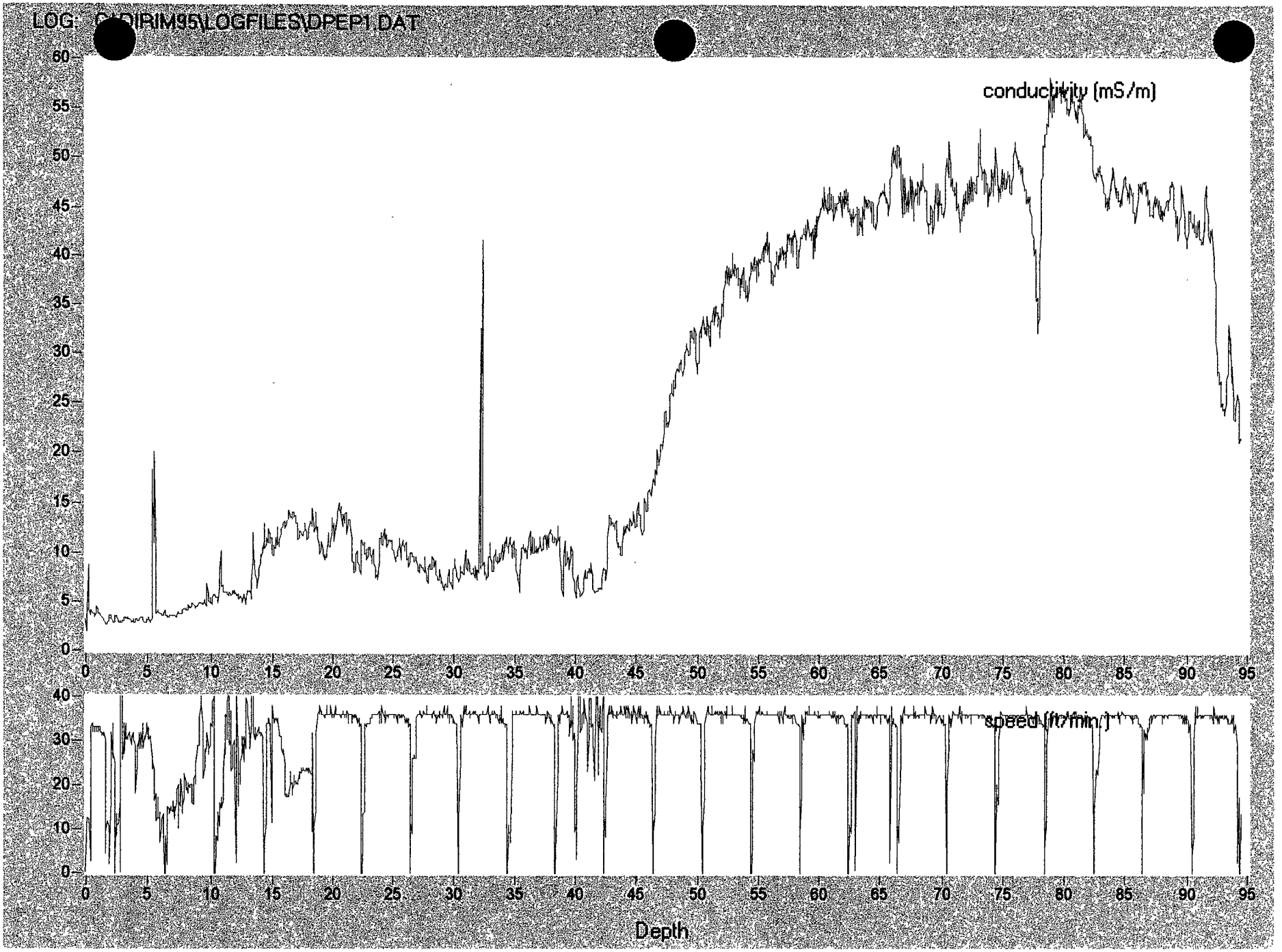
SUMMARY OF SURVEY INFORMATION
EASTERN PLUME AND SITES 1 AND 3
NAVAL AIR STATION, BRUNSWICK, MAINE

Monitoring Well Number	Northing	Easting	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)
Monitoring Wells				
MW-240	382293.9	562184.5	49.1	52.21
MW-330	383479.6	563987.2	32.8	35.71
MW-331	383090.3	563723.9	27.7	30.54
MW-332	382410.2	563976.9	22.3	25.33
MW-333	381593.8	563768.2	24.3	27.25
MW-334	381427.4	563521.1	28.0	30.93
Direct-Push Locations				
DP-EP-01	381710.7	563842.9	23.5	NA
DP-EP-02	381557.9	563741.7	24.4	NA
DP-EP-03	381430.1	563561.7	26.3	NA
DP-EP-04	381454.6	563419.9	28.1	NA
DP-EP-05	382338.6	564069.5	9.9	NA
DP-EP-06	382595.7	564017.1	13.7	NA
DP-EP-07	382410.3	563822.1	11.0	NA

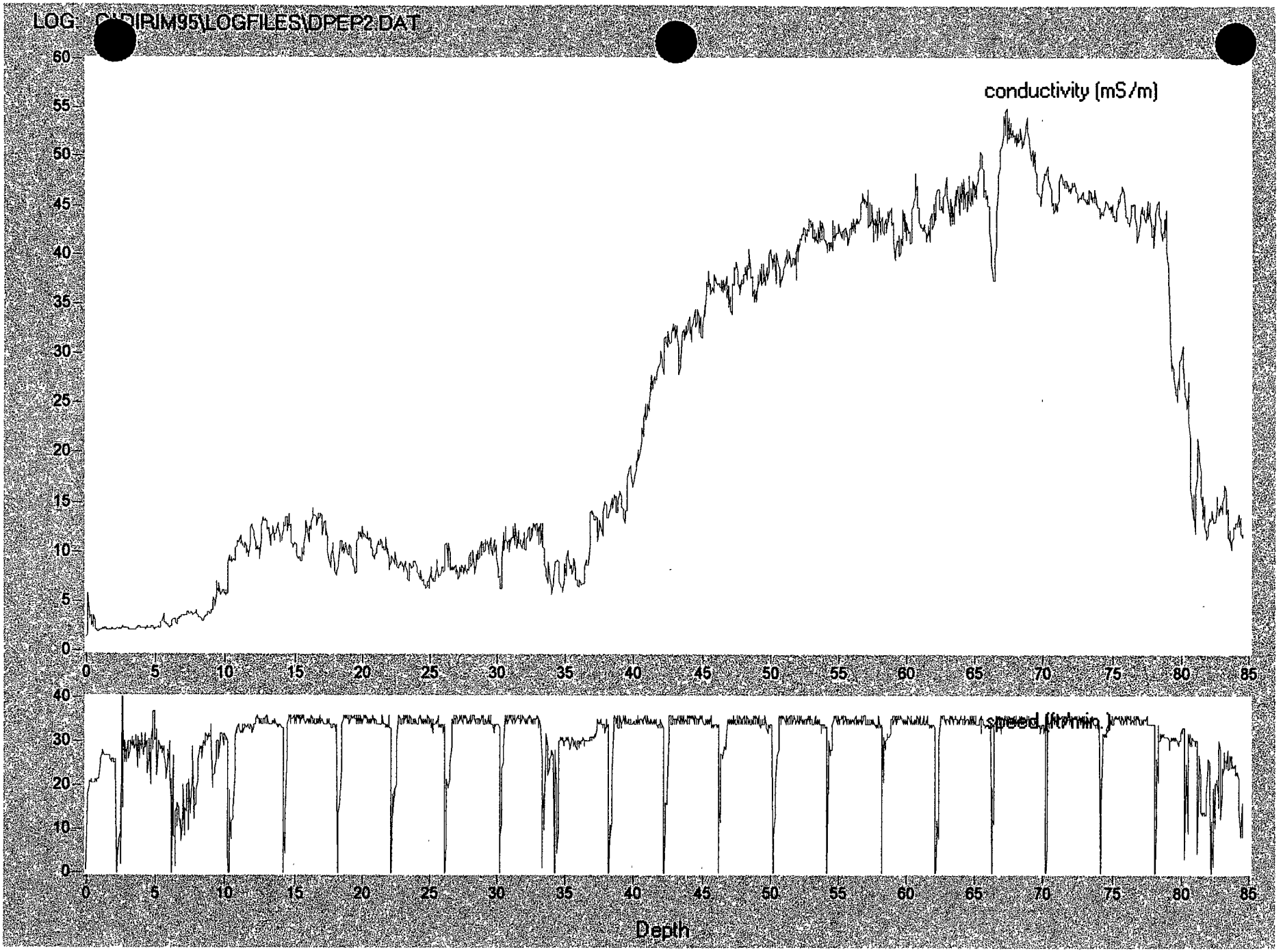
NOTE: Measurements based on Maine State Plane Coordinate System.
MSL = Mean Sea Level.
NA = Not applicable.
All wells were constructed of 2 in. Schedule 40 PVC well screen (slot size = 0.10 in.) and riser.

Attachment C

Electrical Conductivity Logs


LOG: C:\DIRIM95\LOGFILES\DPEP1.DAT
conductivity (mS/m)
speed (ft/min)
Depth

DP-EP-01 pg 1/1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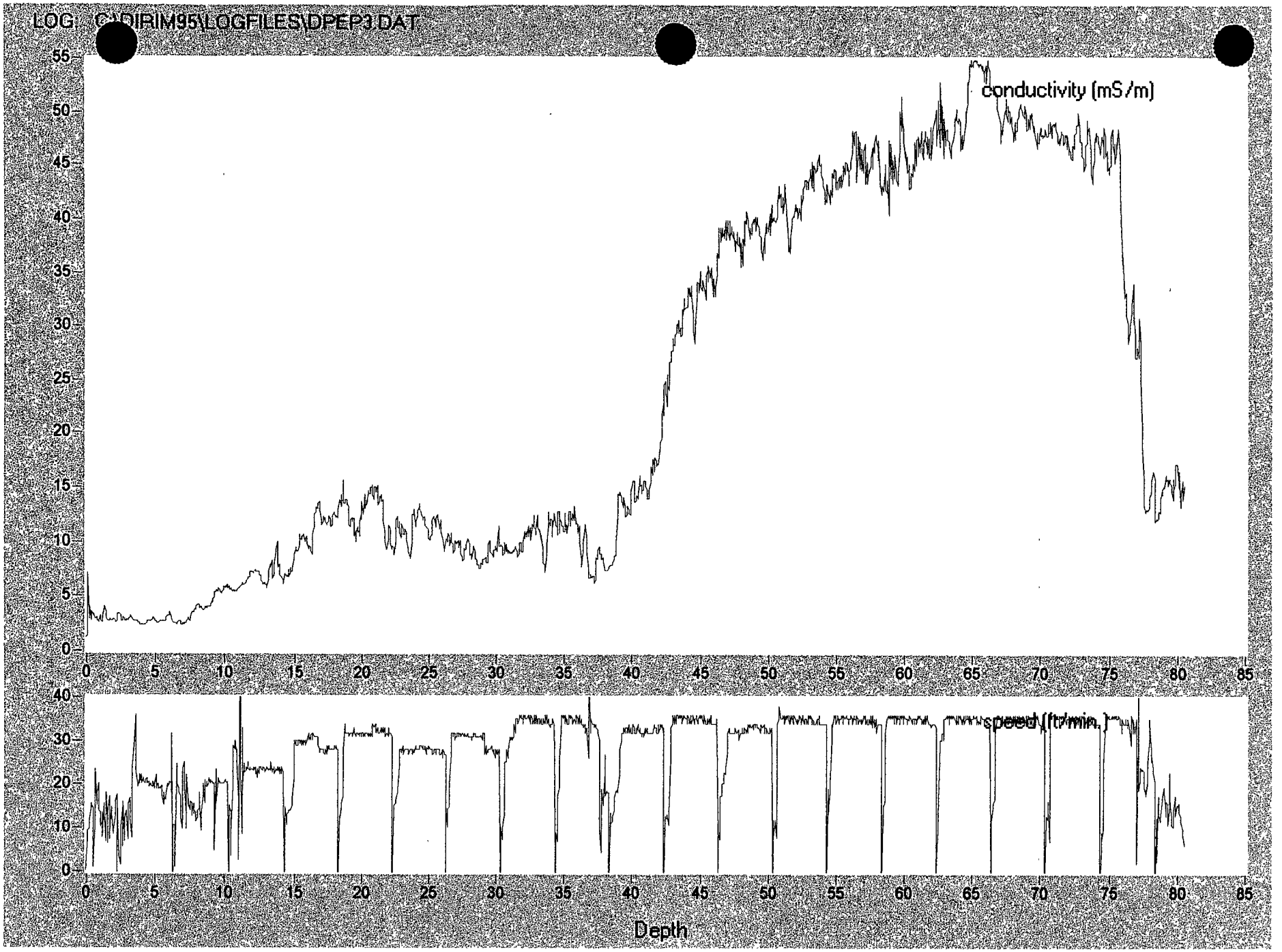
conductivity (mS/m)
speed (ft/min)
Depth

DP-EP-02 Pg 1/1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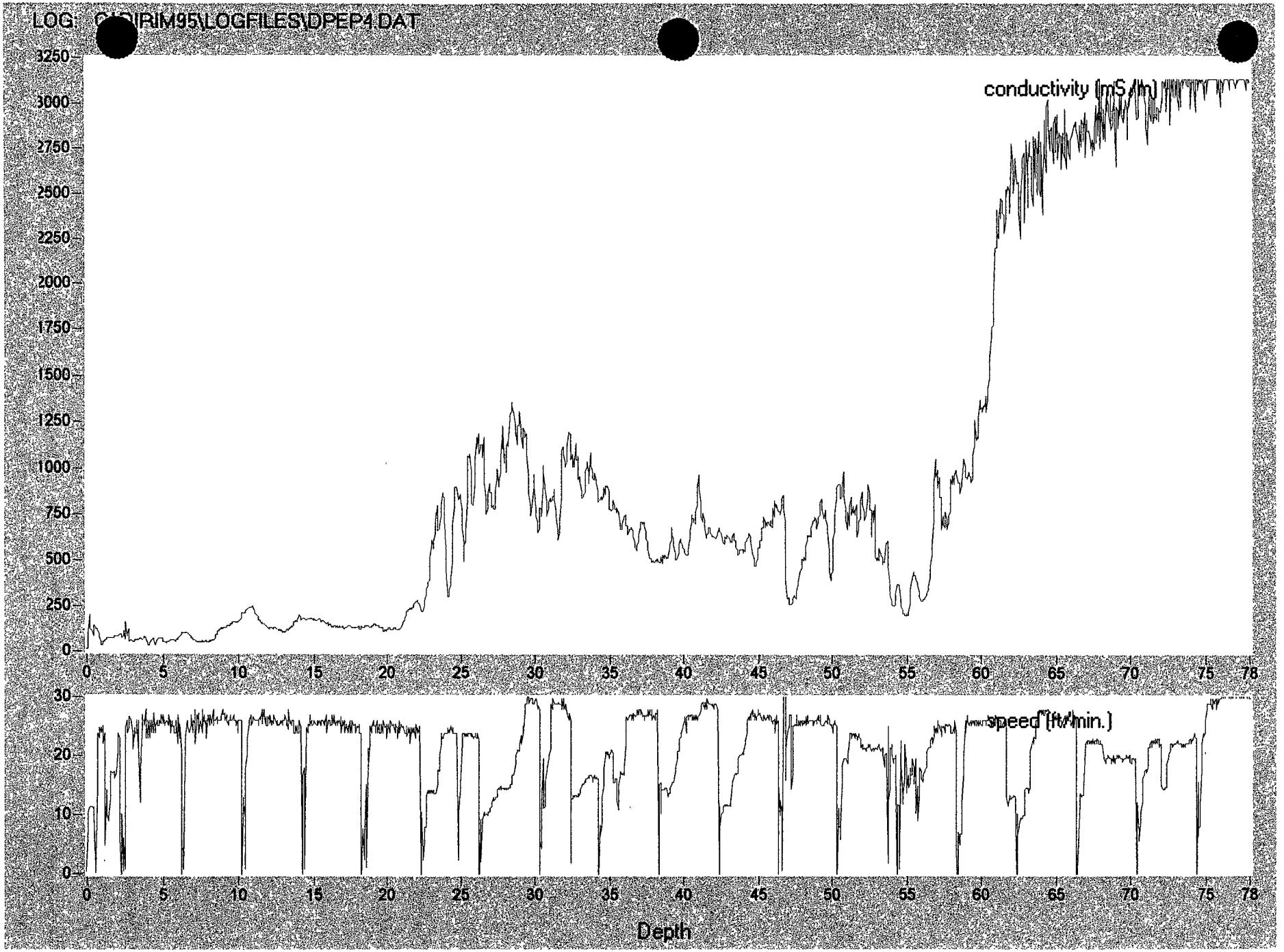
conductivity (mS/m)
speed (r/min.)
Depth

DP-EP-03 Pg 1/1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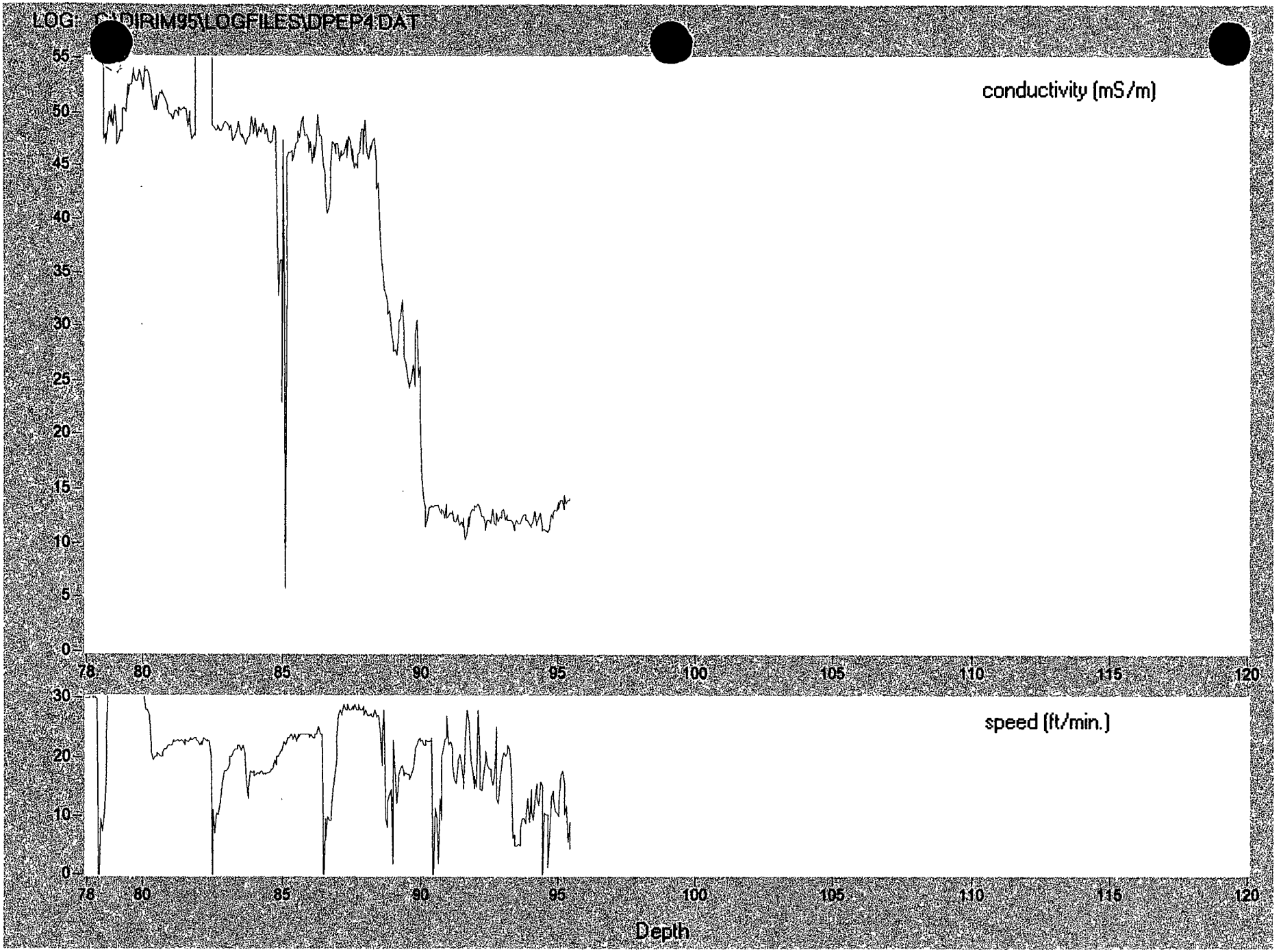
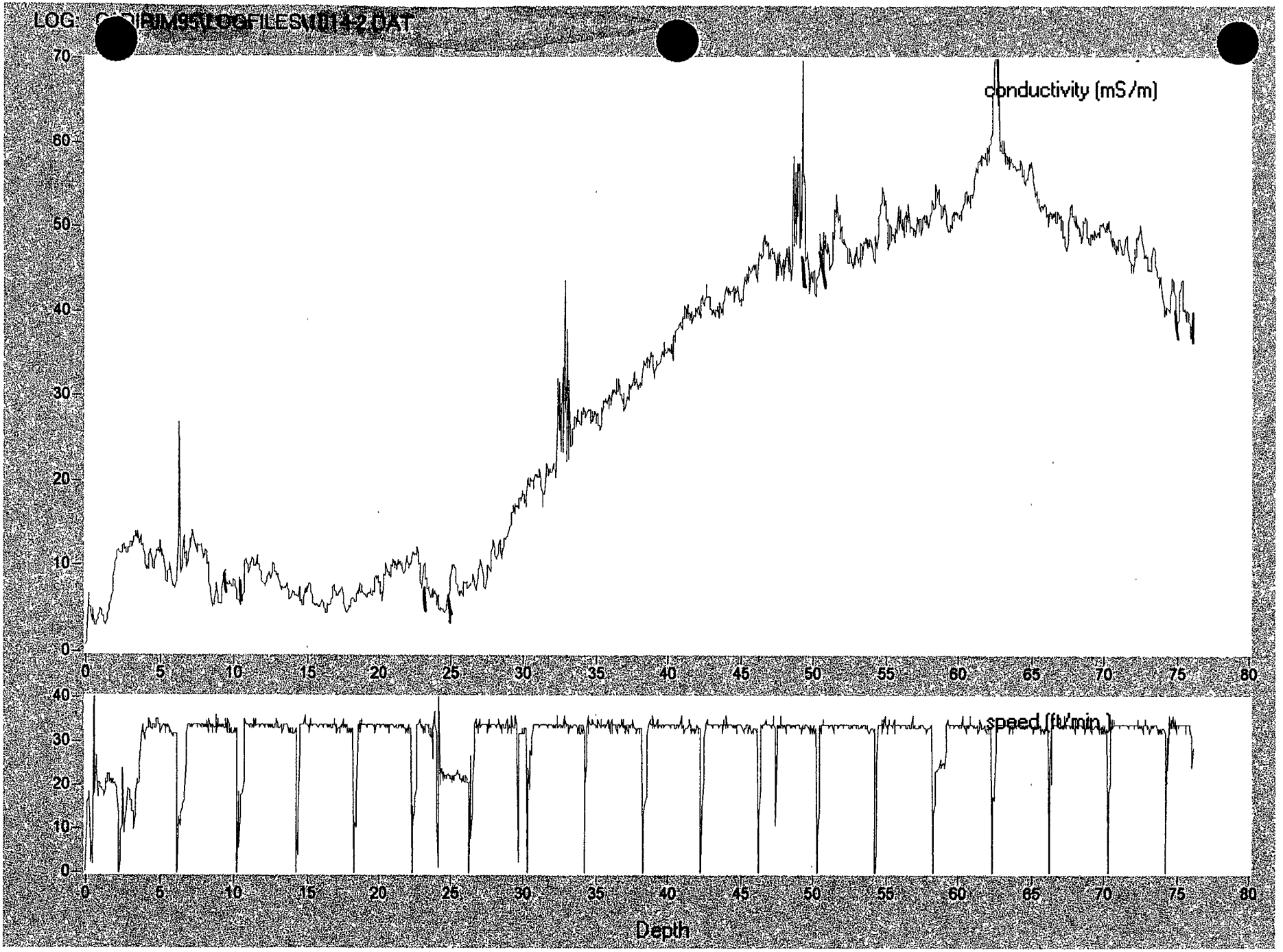
conductivity (mS/m)
speed (ft/min.)
Depth

DP-EP-04 Pg 1/2


LOG: C:\DIRIM95\LOGFILES\DPEP4.DAT
conductivity (mS/m)
55
50
45
40
35
30
25
20
15
10
5
0
78
80
85
90
95
100
105
110
115
120
speed (ft/min.)
30
20
10
0
Depth

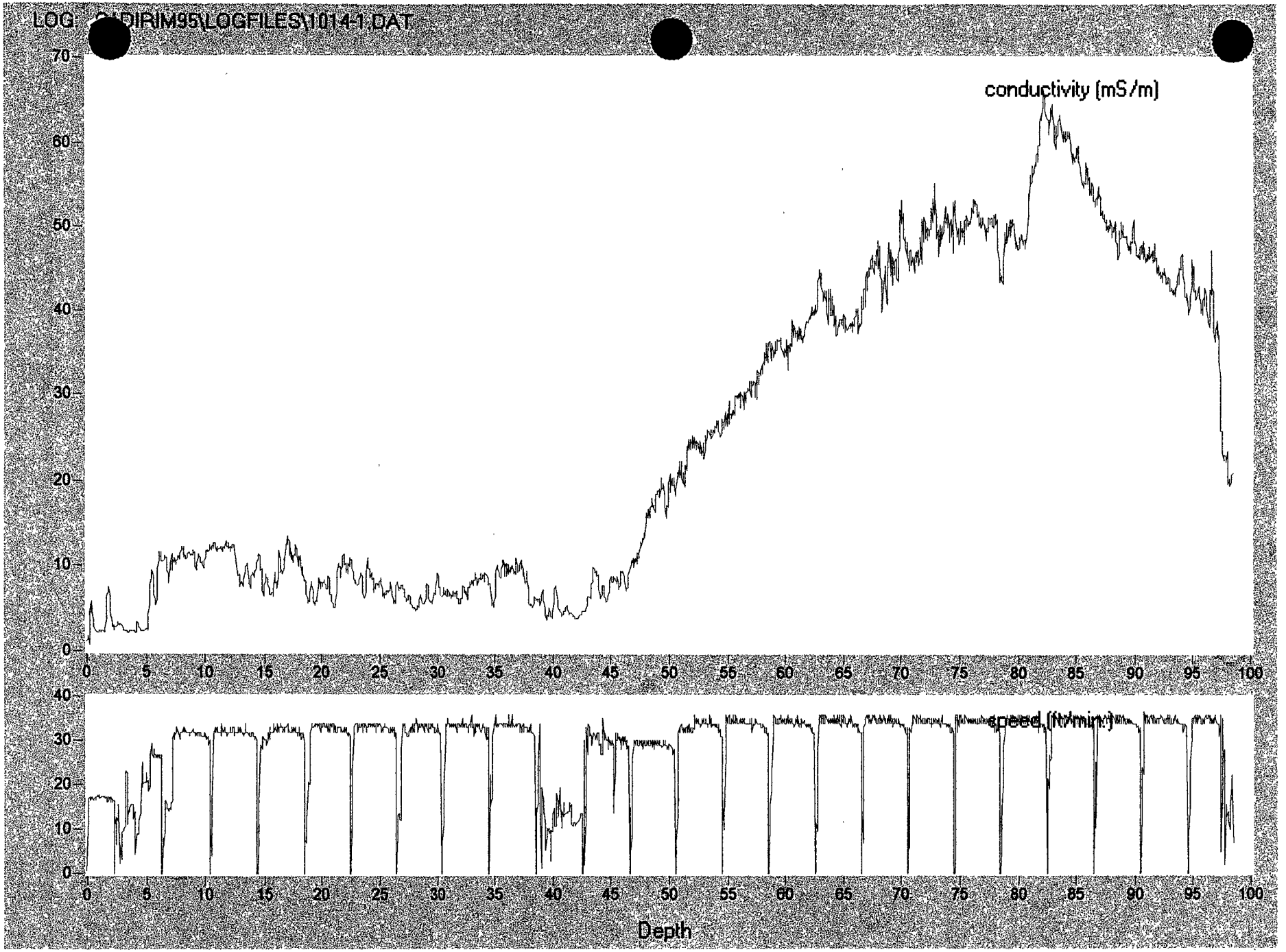
DP-EP-04 Pg 2/2

Pete



DP-EP-05 Pg 1/1

Pete



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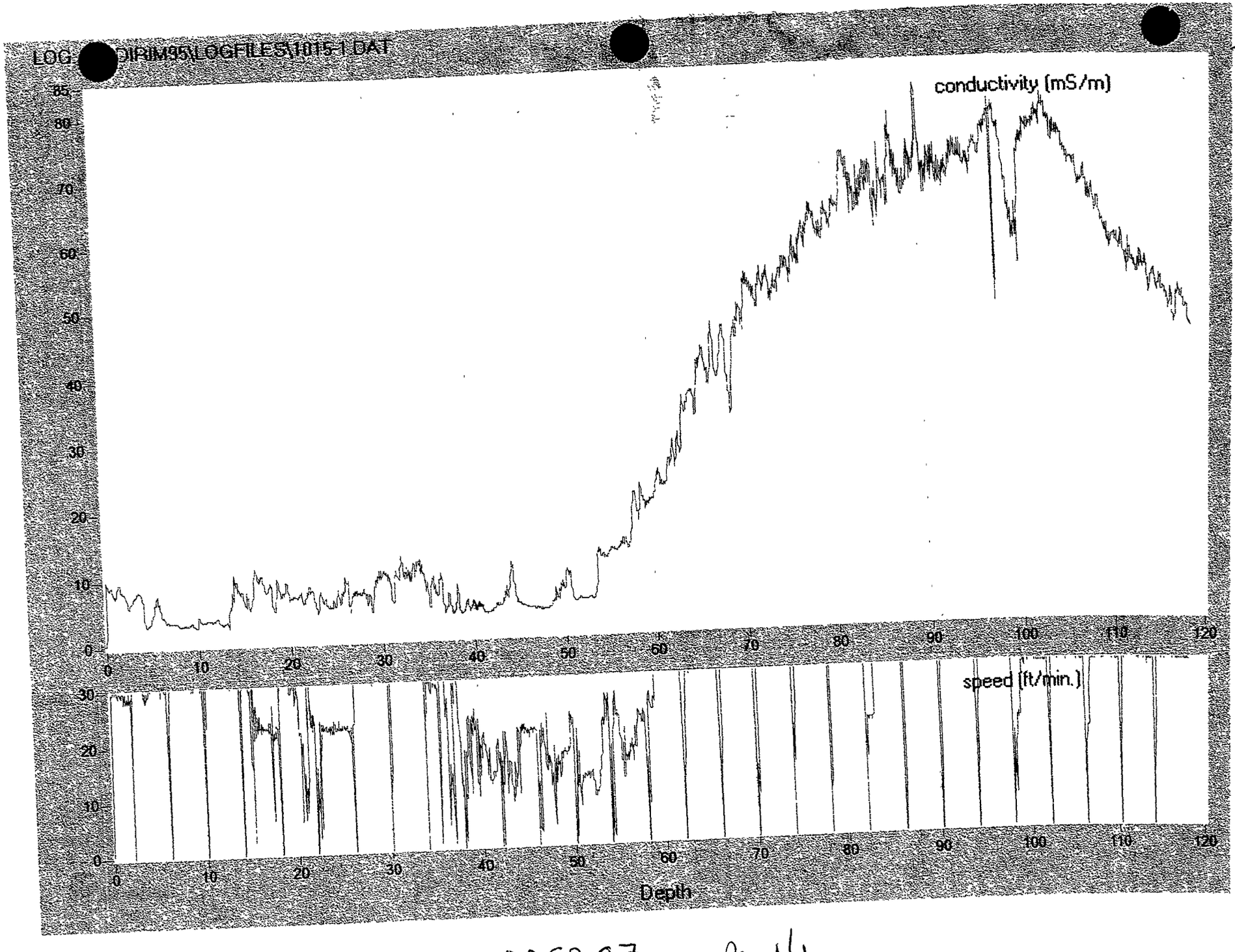

TO Pete

DP-EP-07 Pg 1/1

Attachment D

Field Record of Well Development Forms

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 3960047	Date: 11-2-98
EA Personnel: SD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Cloudy, 50°		Time: 830

Well No.: Next to weapons MW-340	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 30.2	D. Well Volume/ft: ~~0.07~~ 0.16
B. Total Well Depth (ft): 42.6	E. Total Well Volume (gal)[C*D]: 1.86
C. Water Column Height (ft): 11.6	F. Five Well Volumes (gal): 9.3

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)	850	800	805	810	815	825
Turbidity (nTu)	1352	964	46	398	140	119
Purge Rate (gpm)	1	1	2	2	2	2
Volume Purged (gal)	1	7	18	25	32	38
pH	7.2	6.37	6.22	6.17	6.04	6.06
Temperature (°F)	10.44	9.68	9.46	9.43	9.37	9.4
Conductivity (μmhos/cm)	191	167	162	164	162	162
eH (mV)	215.1	222.5	226.4	227.5	229.7	230.7

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes	End
Time (min)	830	835	845	850	855	900
Turbidity (nTu)	205	19	12.7 ~~59~~	1.7	6.3	6.1
Purge Rate (gpm)	2	2	1	1	1	1
Volume Purged (gal)	50	55	65	70	75	80
pH	6.18	5.91	5.88	5.97	6.03	5.99
Temperature (°F)	9.34	9.32	9.31	9.23	9.23	9.22
Conductivity (μmhos/cm)	161	163	160	162	162	161
eV (mV)	232	233.1	234.	236	237.5	238.9

COMMENTS AND OBSERVATIONS:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 11/2/98
EA Personnel: SSD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Cloudy 50°		Time:

Well No.: MW-240	Well Condition: good
Well Diameter: 2	Measurement Reference: TOC

Well Volume Calculations

A. Depth To Water (ft): 30.2	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 42.6	E. Total Well Volume (gal)[C*D]: 1.86
C. Water Column Height (ft): 11.6	F. Five Well Volumes (gal): 9.3

Parameter	Beginning	11 Volume	12 Volumes	13 Volumes	14 Volumes	15 Volumes
Time (min)	9:05	9:10				
Turbidity (nTu)	0	0				
Purge Rate (gpm)	1	1				
Volume Purged (gal)	85	90				
pH	5.93	5.62				
Temperature (°F)	9.27	9.22				
Conductivity (μmhos/cm)	160	160				
eH (mV)	238	239				

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)						
Turbidity (nTu)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°F)						
Conductivity (μmhos/cm)						
eV (mV)						

COMMENTS AND OBSERVATIONS:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern plume	Project No: 2960047	Date: 10-21-98
EA Personnel: SD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: 45° sunny		Time: 0730

Well No.: MW-330	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 1.4	D. Well Volume/ft: ~~0.167~~ 0.16
B. Total Well Depth (ft): 33.4	E. Total Well Volume (gal)[C*D]: ~~4.4~~ 5.1
C. Water Column Height (ft): 32.0	F. Five Well Volumes (gal): ~~25~~ 25.5

Parameter	Beginning*	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)		8:10	815	825	855	0905
Turbidity (nTu)		1796	1799	1796	1794	1793
Purge Rate (gpm)		1.5	1.5	**	**	**
Volume Purged (gal)		10	20	22	23	25
pH		8.1	8.1	8.1	8.36	8.06
Temperature (°C)		9.46	9.51	8.97	8.84	8.68
Conductivity (μmhos/cm)		171	163	76	125	69
eH (mV)		75.0	54.3	46.6	32.4	43.9

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes*	End
Time (min)	1040	1045	1050	1100	1110	1115
Turbidity (nTu)	1793	1797	1794	1795	1794	1793
Purge Rate (gpm)	**	1	1	.5	.5	1
Volume Purged (gal)	30	35	40	43	45	50
pH	9.31	9.22	8.29	8.18	8.35	8.77
Temperature (°C)	8.93	9.57	8.88	9.09	8.97	8.79
Conductivity (μmhos/cm)	116	122	57	74	102	52
eV (mV)	28.5	32.6	57.2	61.9	57.1	48.7

COMMENTS AND OBSERVATIONS:
After 5 vols - allowed charge for 1 hr.

* Water too cloudy (clayey) no Reading taken

** well dry - allowed to recharge

Engineering,
Science, and
Technology

FIELD RECORD OF WELL DEVELOPMENT

Name: Eastern Plume MW-330	Project No: 29600047	Date: 10/21/98
Personnel: SD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: 45° Sunny		Time: 0730

Well No.: MW-330	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC

Well Volume Calculations	
A. Depth To Water (ft): 1.4	D. Well Volume/ft: 0.167
B. Total Well Depth (ft): 33.4	E. Total Well Volume (gal)[C*D]: ~~4.4~~ 5.1
C. Water Column Height (ft): 32.0	F. Five Well Volumes (gal): 25.5

Parameter	Beginning	11 Volume	12 Volumes	13 Volumes	14 Volumes	15 Volumes
Time (min)	1030	1145	1245	1255	1310	1320
Turbidity (nTu)	1793	1794	1802	1801	1799	1798
Purge Rate (gpm)	1	1	1.5	1	1	1
Volume Purged (gal)	53	54	55	60	64	68
pH	8.36	8.31	8.7	8.12	8.34	8.54
Temperature (°F)	8.86	8.9	10.21	10.18	9.72	9.54
Conductivity (μmhos/cm)	103	106	106	56	101	99
eH (mV)	68.9	73.2	66	93.6	95.7	93.5

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)	1335					
Turbidity (nTu)	1798					
Purge Rate (gpm)	1					
Volume Purged (gal)	70					
pH	9.18					
Temperature (°F)	9.52					
Conductivity (μmhos/cm)	101					
eV (mV)	78.1					

COMMENTS AND OBSERVATIONS: full recharge of well in 10 minutes after pumped dry

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 29600047	Date: 10-22-98
EA Personnel: SD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Cloudy 55°		Time: 1145

Well No.: MW-331	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 1.0	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 53.8	E. Total Well Volume (gal)[C*D]: ~~8.9~~ 8.5
C. Water Column Height (ft): 52.8	F. Five Well Volumes (gal): 42.5

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)	12:30	12.40	1250	1255	1305	1310
Turbidity (nTu)	103.8	34.4	28.5	43.8	41.0	20.5
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	~15	~10	~10	5	5	5
pH	10.59	9.83	9.54	9.33	9.27	8.95
Temperature (°C)	8.9	8.53	8.58	8.45	8.47	9.48
Conductivity (μmhos/cm)	559	389	737	695	399	605
eH (mV)	77.4	113	126.2	134.9	135.3	147.5

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes	End
Time (min)	1315	1320	1325	1330	1335	1340
Turbidity (nTu)	16.1	13.4	8.3	5.2	4.4	3.2
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	5	5	5	5	5	5
pH	8.97	8.87	8.81	8.64	8.27	7.89
Temperature (°C)	8.43	8.50	8.68	8.68	8.48	8.73
Conductivity (μmhos/cm)	441	732	725	726	727	725
eV (mV)	145.0	150.3	152	156	164	171

COMMENTS AND OBSERVATIONS: water level after 35 min. 3 ft., water level after 1 hr ~4.6 ft.

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 11-2-98
EA Personnel: SD	Development Method:	
Weather/Temperature/Barometric Pressure: Overcast, 50		Time: 9:25

Well No.: Cemetary MW-332	Well Condition: good
Well Diameter: 2	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 8.6	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 18.6	E. Total Well Volume (gal)[C*D]: 1.6
C. Water Column Height (ft): 10	F. Five Well Volumes (gal): 8.0

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)	9:30	9:35	940	945	950	955
Turbidity (nTu)	1800	1801.7	168.3	1658.4	87.6	74.6
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	2	4	10	15	20	25
pH	6.2	6.09	5.91	5.98	5.72	5.87
Temperature (°C)	10.02	10.21	10.45	10.51	10.69	10.61
Conductivity (μmhos/cm)	66	46	29	31.0	29	31.
eH (mV)	219.9	206.9	200.1	198.4	197.6	198.6

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes	End
Time (min)	1000	1005	1010	1015	1020	1025
Turbidity (nTu)	464.4	557.0	266.8	67.5	54.9	32.5
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	30	35	40	45	50	55
pH	6.09	5.78	5.85	5.99	5.72	5.74
Temperature (°C)	10.53	10.54	10.55	10.60	10.57	10.59
Conductivity (μmhos/cm)	32	32	32	31	31	31
eV (mV)	194.2	191.6	188.8	185.9	187.7	187.3

COMMENTS AND OBSERVATIONS:

2 of 3

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 10-2-98
EA Personnel: SD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Overcast 50°		Time:

Well No.: MW-332	Well Condition: Good
Well Diameter: 2	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 8.6	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 18.6	E. Total Well Volume (gal)[C*D]: 1.6
C. Water Column Height (ft): 10	F. Five Well Volumes (gal): 8.0

Parameter	Beginning	11 Volume	12 Volumes	13 Volumes	14 Volumes	15 Volumes
Time (min)	1030	1035	1040	1045	1050	1055
Turbidity (nTu)	39.2	87.2	61.9	34.4	37.2	30.3
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	60	65	70	75	80	85
pH	5.65	5.68	5.69	5.73	5.90	5.79
Temperature (°F)	10.54	10.51	10.47	10.52	10.57	10.58
Conductivity (μmhos/cm)	31	32	32	31	32	32
eH (mV)	187.3	186.1	186.3	185.0	184.1	184.8

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)	1100	1105	1110	1115	1120	1125
Turbidity (nTu)	166.6	62.9	18.3	21.8	10.2	~~10~~ 8.5
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	90	95	100	105	110	115
pH	5.74	6.21	5.68	5.85	5.72	5.69
Temperature (°F)	10.57	10.67	10.67	10.64	10.67	10.63
Conductivity (μmhos/cm)	33	33	33	33	33	33
eV (mV)	185.1	176.5	184.9	182.6	183.8	184.5

COMMENTS AND OBSERVATIONS:

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 11-2-98
EA Personnel: SBD	Development Method: surge + purge	
Weather/Temperature/Barometric Pressure: overcast, 50°		Time:

Well No.: cemetary MW-332	Well Condition: Good
Well Diameter: 2	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 8.6	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 18.6	E. Total Well Volume (gal)[C*D]: 1.6
C. Water Column Height (ft): 10	F. Five Well Volumes (gal): 8.0

Parameter	21 Beginning	22 ~~11~~ Volume	23 ~~12~~ Volumes	24 ~~13~~ Volumes	25 ~~14~~ Volumes	15 Volumes
Time (min)	1130	1135	1140	1145	1150	
Turbidity (nTu)	7.1	5.4	3.7	3.6	2.4	
Purge Rate (gpm)	1	1	1	1	1	
Volume Purged (gal)	120	125	130	135	140	
pH	5.70	6.00	5.78	5.78	5.71	
Temperature (°F)	10.59	10.61	10.71	10.69	10.67	
Conductivity (μmhos/cm)	34	33	34	35	35	
eH (mV)	183.1	179.4	180.1	179.8	178.5	

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)						
Turbidity (nTu)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°F)						
Conductivity (μmhos/cm)						
eV (mV)						

COMMENTS AND OBSERVATIONS:

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EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 11-3-90
EA Personnel: SSD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Cloudy, 50°		Time: 900

Well No.: MW-333	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC

Well Volume Calculations

A. Depth To Water (ft): 11.6	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 40	E. Total Well Volume (gal)[C*D]: 4.5
C. Water Column Height (ft): 28.4	F. Five Well Volumes (gal): 22.5

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)	900	910	915	920	930	935
Turbidity (nTu)	178.63	178.65	178.63	178.69	178.3.1	953.
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	15	25	30	35	45	50
pH	6.88	6.85	6.51	6.51	6.77	7.04
Temperature (°F)	7.55	7.48	7.48	7.52	7.47	7.52
Conductivity (μmhos/cm)	114	116	110	109	107	109
eH (mV)	135.2	120.2	106.4	97.6	89.1	81.3

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes	End
Time (min)	940	945	950	1000	1010	1020
Turbidity (nTu)	246.0	171.7	288.4	93.7	562.7	439.7
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	55	60	65	75	85	90
pH	7.15	7.20	7.2	6.92	6.86	6.92
Temperature (°F)	7.54	7.52	7.51	7.54	7.54	7.54
Conductivity (μmhos/cm)	109	108	109	108	105	113
eV (mV)	74.3	66.9	60.9	63.3	66.8	65.9

COMMENTS AND OBSERVATIONS:

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EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 2960047	Date: 11-3-98
EA Personnel: SSD	Development Method: Surge + purge	
Weather/Temperature/Barometric Pressure: Cloudy, 40		Time: 10:30

Well No.: MW-333	Well Condition: Good
Well Diameter: 2	Measurement Reference: TOC

Well Volume Calculations

A. Depth To Water (ft): 11.6	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 40	E. Total Well Volume (gal)[C*D]: 4.5
C. Water Column Height (ft): 28.4	F. Five Well Volumes (gal): 22.5

Parameter	Beginning	11 Volume	12 Volumes	13 Volumes	14 Volumes	15 Volumes
Time (min)	1030	1040	1045	1050	1055	1100
Turbidity (nTu)	244.5	61.9	34.5	28.5	14.8	10.8
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	100	110	115	120	125	130
pH	7.06	6.86	6.87	7.04	6.85	6.83
Temperature (°F)	7.58	7.52	7.59	7.67	7.67	7.64
Conductivity (μmhos/cm)	115	111	112	112	111	112
eH (mV)	50.5	49.7	48.6	46.6	40.6	36.0

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)	1105	1110	1115	1120	1125	1130
Turbidity (nTu)	11.	9.3	9.5	9.4	9.1	7.2
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	130	135	140	145	150	155
pH	7.12	6.84	6.87	7.04	7.41	6.91
Temperature (°F)	7.58	7.51	7.60	7.60	7.57	7.58
Conductivity (μmhos/cm)	110	110	110	110	111	110
eV (mV)	35.7	26.8	27.2	27.8	23.0	25.8

COMMENTS AND OBSERVATIONS:

1 of 2

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 29600 47	Date: 11-2-98
EA Personnel: SSD	Development Method:	
Weather/Temperature/Barometric Pressure: Overcast 50°		Time: 1430

Well No.: MW-334	Well Condition: good
Well Diameter: 2"	Measurement Reference: TOC
Well Volume Calculations	
A. Depth To Water (ft): 13.9	D. Well Volume/ft: 0.16
B. Total Well Depth (ft): 41.6	E. Total Well Volume (gal)[C*D]: 4.4
C. Water Column Height (ft): 27.7	F. Five Well Volumes (gal): 22

Parameter	Beginning	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes
Time (min)	1245	1255	1305	1310	1325	1340
Turbidity (nTu)	1800	1795.6	1794.2	1793.6	1793.4	1798.3
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	15	20	30	35	55	72
pH	7.25	7.17	7.19	7.25	7.60	7.49
Temperature (°C)	9.54	8.96	8.77	8.68	8.71	8.59
Conductivity (μmhos/cm)	201	161	145.0	159	153	150
eH (mV)	151	128.5	120.8	112.1	111.5	96.4

Parameter	6 Volumes	7 Volumes	8 Volumes	9 Volumes	10 Volumes	End
Time (min)	1350	0710	0720	0730	0735	0800
Turbidity (nTu)	1792	1801	1794	1355	279.8	1790
Purge Rate (gpm)	1	1	1	1	1	1
Volume Purged (gal)	75	80	90	100	105	120
pH	7.23	7.29	6.96	7.14	7.58	7.23
Temperature (°C)	8.55	9.78	8.76	8.33	8.39	8.2
Conductivity (μmhos/cm)	151	149	146	147	152	143
eV (mV)	86.8	194.5	186.9	180	169.0	163.5

COMMENTS AND OBSERVATIONS: water thick, grey - very silty

2 of 2

EA Engineering, Science, and Technology

FIELD RECORD OF WELL DEVELOPMENT

Project Name: Eastern Plume	Project No: 296 0047	Date: 11-3-98
EA Personnel: SJD	Development Method:	
Weather/Temperature/Barometric Pressure: Cloudy, 40°		Time: 8:15

Well No.: MW-334	Well Condition: good
Well Diameter: 2"	Measurement Reference:
Well Volume Calculations	
A. Depth To Water (ft):	D. Well Volume/ft:
B. Total Well Depth (ft):	E. Total Well Volume (gal)[C*D]:
C. Water Column Height (ft):	F. Five Well Volumes (gal):

Parameter	Beginning	11 Volume	12 Volumes	13 Volumes	14 Volumes	15 Volumes
Time (min)	820	825	830	840		
Turbidity (nTu)	1654	1787	1799	1799		
Purge Rate (gpm)	1	1	1	1		
Volume Purged (gal)	130	135	140	150		
pH	6.8	7.14	7.33	7.29		
Temperature (°F)	8.21	8.11	8.22	8.10		
Conductivity (μmhos/cm)	147	146	146	146		
eH (mV)	150.9	174.1	143.7	140.2		

Parameter	16 Volumes	17 Volumes	18 Volumes	19 Volumes	20 Volumes	End
Time (min)						
Turbidity (nTu)						
Purge Rate (gpm)						
Volume Purged (gal)						
pH						
Temperature (°F)						
Conductivity (μmhos/cm)						
eV (mV)						

COMMENTS AND OBSERVATIONS:

Attachment E

Analytical Results
Form I Data

Company N[illegible]	Project Manager or Contact: Pete Nimmer
EA Engineering	Phone: 914-565-8100
Project N . 2960047	Project Name: Eastern Plume Direct Push
Dept.: 2151 Task: 7145	
Sample Storage Location: VOA	ATO Number:
Page 1 of 1	Report #: 981714

Parameter[illegible]thod Numbers for Analysis

Chain of Custody R[illegible]rd

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 QPRO summary

DUE TO CLIENT: 11-19-98 - Hard Copy

12-3-98 - EDD due

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC 8260	EA Labs Accession Number	Remarks
10/15/98	745	X		DP-EP-001 MS/MSD	9	X	9812878	LPM: Michael Walsh
10/15/98	710	X		DP-EP-002	3	X	9812879	
10/15/98	1430	X		DP-EP-003	3	X	9812880	L14859
10/15/98	1500	X		DP-EP-004	3	X	9812881	
10/15/98	1525	X		DP-EP-005	3	X	9812882	trip blank w/
10/15/98	—	X		DP-EP-X01	3	X	9812883	Cooler
10/16/98	730	X		DP-EP-006	3	X	9812884	
10/16/98	800	X		DP-EP-007	3	X	9812885	Data Package to
10/16/98	1100	X		DP-EP-QT1	3	X	9812886	Newburgh
								Form I, COC
								Summary
								package to
								Sue Chan at
								Brunswick
								All Vials
								COC00004889

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Suzanne Chan	10/15/98 1525	Suzanne Chan	10/16/98 1200		
R linquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Numb r:	Sample Shipped by: (Circle)
		[illegible]	10/16/98 8:30	8011 7 9122 500	Fed Ex. Puro. UPS Hand Carried Other:

Cooler Temp. 2.0 C pH: Yes No Comments: Custody Seals Intact Yes No

NOTE: Pleas indicat method number f r analyses requested. This will h lp clarify any questi ns with laboratory techniques.

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

Chain of Custody Record

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

Company Name: EA Engineering

Project Manager or Contact: Sue Chase
Phone: 207-798-5977

Project No: 29600.47

Project Name: Direct Push

Dept.: 2451 Task:

Sample Storage Location: PSF VOA

ATO Number:

Page 1 of 1 Report #: 98801

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

EDD: (Yes) No Summary Tables

DUE TO CLIENT: 11-28-98 w/ EDD

Parameters/Method Numbers for Analysis: VOC by 8260

Date	Time	Water	Soil	Sample Identification 19 Characters	No. of Containers	VOC by 8260	EA Labs Accession Number	Remarks
10/27/98	1450	X		DP-EP-013	3	+	9813848	LPM: Michael Walch
10/28/98	0740	X		DP-EP-008 MS/MSD	9	X	9813849	
10/28/98	0815	X		DP-EP-009	3	X	9813850	Temp Blank
10/28/98	0945	X		DP-EP-010	3	X	9813851	with cooler
10/28/98	1230	X		DP-EP-011	3	X	9813852	
10/28/98	1335	X		DP-EP-012	3	X	9813853	Data Package to
10/28/98	—	X		DP-EP-XD2	3	X	9813854	Newburgh
10/27/98	1450	X		DP-EP-QT2	3	X	9813855	
							—	Form I, COC
								Summary packages
								to Sue Chase
								Brunswick
								L15002
								00000410

Samples by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Stephanie N Dimas	10/28/98 1600				

Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Airbill Number:	Sampl Shipped by: (Circl)
Brian D. Anderson	10/28/98 1600	Joseph Blue	10-30-98 10:10	8016791243 95	(Fed Ex.) Puro. UPS Hand Carried Other:

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

NOTE: Please indicat 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 Lab Use Only*

SAMPLE KEY – DIRECT-PUSH
NAVAL AIR STATION, BRUNSWICK, MAINE

Sample Designation	Sample Station
Direct-Push	
DP-EP-01, 11-15 ft	DP-EP-013
DP-EP-01, 39-43 ft	DP-EP-008
DP-EP-02, 33-37 ft	DP-EP-009
DP-EP-02 Duplicate, 33-37 ft	DP-EP-XD2
DP-EP-03, 78-82 ft	DP-EP-010
DP-EP-04, 11-15 ft	DP-EP-012
DP-EP-04, 37-41 ft	DP-EP-011
DP-EP-05, 22-26 ft	DP-EP-001
DP-EP-06, 3-7 ft	DP-EP-006
DP-EP-06, 39-43 ft	DP-EP-007
DP-EP-07, 12-16 ft	DP-EP-003
DP-EP-07 Duplicate, 12-16 ft	DP-EP-XD1
DP-EP-07, 38-42 ft	DP-EP-004
DP-EP-07, 51-55 ft	DP-EP-005
Trip Blanks	
DP-EP-QT1	QT-1
DP-EP-QT2	QT-2
Rinse Blank	
Equipment Rinsate	DP-EP-002

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: DP-EP-013

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813848

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0294.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/9/98

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/L

CAS No.	Compound		Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
DP-EP-013

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813848

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0294.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/9/98

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/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-008

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0295.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/9/98

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/L

CAS No.	Compound		Q
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	
75-09-2	Methylene Chloride	2	J
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	7	
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-008

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813849

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0295.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/9/98

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/L

CAS No.	Compound		Q
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-009

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813850

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0317.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	3	J
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-009

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813850

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0317.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-XD2

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813854

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0321.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	2	J
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-XD2

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813854

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0321.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: DP-EP-010

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0318.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	1	J
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-010

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813851

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0318.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-012

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0320.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-012

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813853

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0320.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-011

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813852

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0319.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	2	J
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-011

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813852

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0319.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP001

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8523.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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	340	E
75-09-2	Methylene Chloride	22	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	43	E
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	11	
67-66-3	Chloroform	2	
71-55-6	1,1,1-Trichloroethane	350	E
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	8	
71-43-2	Benzene	1	
79-01-6	Trichloroethene	220	E
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	4	
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	14	
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.

DPEP001

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812878

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8523.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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.

DP-EP-001DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812878DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8815.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
67-64-1	Acetone	1000	U
75-35-4	1,1-Dichloroethene	270	D
75-09-2	Methylene Chloride	200	U
75-15-0	Carbon Disulfide	200	U
75-34-3	1,1-Dichloroethane	200	U
78-93-3	2-Butanone	1000	U
540-59-0	1,2-Dichloroethene (total)	200	U
67-66-3	Chloroform	200	U
71-55-6	1,1,1-Trichloroethane	3000	D
56-23-5	Carbon Tetrachloride	200	U
107-06-2	1,2-Dichloroethane	200	U
71-43-2	Benzene	200	U
79-01-6	Trichloroethene	480	D
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
108-10-1	4-Methyl-2-Pentanone	1000	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
591-78-6	2-Hexanone	1000	U
127-18-4	Tetrachloroethene	200	U
124-48-1	Chlorodibromomethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U
1330-20-7	Xylenes (total)	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-001DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812878DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8815.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP006

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812884

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8531.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP006

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812884

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8531.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP007

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812885

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8532.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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	180	E
75-09-2	Methylene Chloride	6	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	26	
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	320	E
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	4	
71-43-2	Benzene	1	U
79-01-6	Trichloroethene	160	E
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	2	
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	5	
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP007

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812885

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8532.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-007DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812885DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8817.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
67-64-1	Acetone	1000	U
75-35-4	1,1-Dichloroethene	200	U
75-09-2	Methylene Chloride	200	U
75-15-0	Carbon Disulfide	200	U
75-34-3	1,1-Dichloroethane	200	U
78-93-3	2-Butanone	1000	U
540-59-0	1,2-Dichloroethene (total)	200	U
67-66-3	Chloroform	200	U
71-55-6	1,1,1-Trichloroethane	1300	D
56-23-5	Carbon Tetrachloride	200	U
107-06-2	1,2-Dichloroethane	200	U
71-43-2	Benzene	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
108-10-1	4-Methyl-2-Pentanone	1000	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
591-78-6	2-Hexanone	1000	U
127-18-4	Tetrachloroethene	200	U
124-48-1	Chlorodibromomethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U
1330-20-7	Xylenes (total)	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-007DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812885DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8817.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
DPEP003

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812880

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8527.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP003

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: SAS No.: 8260 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: #9812880

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8527.D

Level: (low/med) Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEPXD1

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812883

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8530.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEPXD1

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812883

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8530.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP004

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812881

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8528.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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	300	E
75-09-2	Methylene Chloride	12	
75-15-0	Carbon Disulfide	1	U
75-34-3	1,1-Dichloroethane	53	E
78-93-3	2-Butanone	5	U
540-59-0	1,2-Dichloroethene (total)	17	
67-66-3	Chloroform	1	
71-55-6	1,1,1-Trichloroethane	350	E
56-23-5	Carbon Tetrachloride	1	U
107-06-2	1,2-Dichloroethane	4	
71-43-2	Benzene	2	
79-01-6	Trichloroethene	250	E
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	3	
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	21	
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.

DPEP004

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: SAS No.: 8260 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: #9812881

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8528.D

Level: (low/med) Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-004DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812881DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8816.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
67-64-1	Acetone	1000	U
75-35-4	1,1-Dichloroethene	240	D
75-09-2	Methylene Chloride	200	U
75-15-0	Carbon Disulfide	200	U
75-34-3	1,1-Dichloroethane	200	U
78-93-3	2-Butanone	1000	U
540-59-0	1,2-Dichloroethene (total)	200	U
67-66-3	Chloroform	200	U
71-55-6	1,1,1-Trichloroethane	2600	D
56-23-5	Carbon Tetrachloride	200	U
107-06-2	1,2-Dichloroethane	200	U
71-43-2	Benzene	200	U
79-01-6	Trichloroethene	720	D
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
108-10-1	4-Methyl-2-Pentanone	1000	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
591-78-6	2-Hexanone	1000	U
127-18-4	Tetrachloroethene	200	U
124-48-1	Chlorodibromomethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U
1330-20-7	Xylenes (total)	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-004DL

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812881DL

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8816.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 11/12/98

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200.0

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	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
DPEP005

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812882

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8529.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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		4	
75-09-2	Methylene Chloride		1	U
75-15-0	Carbon Disulfide		1	U
75-34-3	1,1-Dichloroethane		7	
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP005

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812882

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8529.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP002

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812879

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8526.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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	11	
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	
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEP002

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812879

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8526.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEPQT1

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812886

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8533.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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	3	J
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DPEPQT1

Lab Name: EA LABORATORIES Contract: 981714

Lab Code: EA ENG Case No.: _____ SAS No.: 8260 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: #9812886

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: VH8B8533.D

Level: (low/med) _____ Date Received: 10/19/98

% Moisture: not dec. 0 Date Analyzed: 10/29/98

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-QT2

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0322.D

Level: (low/med) LOW Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene Chloride	5	U
75-15-0	Carbon Disulfide	5	U
540-59-0	1,2-Dichloroethene (Total)	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
107-06-2	1,2-Dichloroethane	5	U
71-43-2	Benzene	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
95-47-6	Xylenes (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DP-EP-QT2

Lab Name: EA LABORATORIES Contract: 981801

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

Matrix: (soil/water) WATER Lab Sample ID: #9813855

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VA1C0322.D

Level: (low/med) _____ Date Received: 10/30/98

% Moisture: not dec. 0 Date Analyzed: 11/10/98

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	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U