

**Site Characterization Technical Memorandum
2002 Phase III Remedial Investigation
Sites 13,15,19, 27 and 22
Northeast Cape, St. Lawrence Island, Alaska**

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Prepared for:
Department of the Army
United States Army Engineer District, Alaska
Corps of Engineers
P.O. Box 898
Anchorage, Alaska 99506-0898

Prepared by:
MWH Americas, Inc.
4100 Spenard Road
Anchorage, Alaska 99517



MWH

MONTGOMERY WATSON HARZA

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ACRONYMS AND ABBREVIATIONS

MOC	Main Operations Complex
BD/DR	building demolition/debris removal
DERP-FUDS	Defense Environmental Restoration Program-Formerly Used Defense Sites
RI	remedial investigation
RA	risk assessment
SC	Suqitughneq River cross section
SB	soil boring

1.0 INTRODUCTION

Pursuant to Contract No. DACA85-98-D-0007, the United States Army Engineer District, Alaska (Alaska District) contracted with Montgomery Watson to perform Phase III Remedial Investigation (RI) activities at Northeast Cape, St. Lawrence Island, Alaska. The RI was conducted according to the guidelines of the Defense Environmental Restoration Program of the United States Department of Defense. This document presents a brief summary of the work performed in 2002 as part of the Phase III RI. This work was postponed from 2001 due to delays in building demolition/debris removal (BD/DR). Detailed information on work performed, data collected, and an evaluation of the findings will be added to the Phase III RI and RA Update Report Draft Final, to be completed at a later date.

2.0 SUMMARY OF WORK PERFORMED

Sites investigated during the Phase III RI in 2002 are listed in Table 2-1 and shown in Figure 2-1.

Table 2-1 Northeast Cape Phase III RI Sites

Site Number	Site Description
Sites 13, 15, 19, and 27	Main Operations Complex
Site 22	Water Wells and Water Supply Building

Sites 13, 15, 19, and 27, the Main Operations Complex (MOC) were designated Site 88 to simplify field operations and data reporting.

The 2002 Phase III RI fieldwork was performed from August 13 to August 22, 2002. Ten soil borings were advanced beyond the groundwater interface and completed as monitoring wells, eight soil boring were advanced to the groundwater interface or refusal at the MOC (Figure 2-2) and two soil borings were advanced to refusal at Site 22 (Figure 2-3). The ten monitoring wells were developed and sampled (see field forms in Attachment 1). Most of the monitoring wells had limited water recharge and were purged dry during development or sample collection.

Discharge was measured in the Suqitughneq River, at four locations (Figure 2-4). Two measurements were taken at locations where discharge was measured in 2001; another measurement was taken downstream at the location of a cross-section sampled in 2001 (SC-3). Streamflow at the fourth location was too slow to calculate discharge. Discharge cross sections and flow calculations are shown in Figure 2-5.

2.1 ENVIRONMENTAL MEDIA SAMPLING

Environmental media sampled during the Phase III RI Addendum consisted of soil and groundwater. Table 2-2 provides a summary of samples collected. Completed field sampling forms are included in Attachment 2.

**Table 2-2 Soil and Groundwater Sampling Summary
Northeast Cape Phase III RI
Northeast Cape, St, Lawrence Island, Alaska**

Site No.	Site Description	Sample Location	DRO/RRO AK102/103	GRO/BTEX AK101/SW8260B	PAH SW8270C SIM	PCB SW8082	Pb, Zn, Cr SW6020	TOC	Alkalinity, Sulfate EPA 3000	Methane, Ethane, Ethene RSK 175	Geotechnical Parameters*
			Planned Actual	Planned Actual	Planned Actual	Planned Actual	Planned Actual	Planned Actual	Planned Actual	Planned Actual	Planned Actual
13, 15, 19, 27	Main Operations Complex	Soil from	36	36	36	36	36	36			0
		Borings	36	36	36	36	36	36			3
		Groundwater	10	10					10	10	
		from Monitoring Wells	10	10					10	10	
22	Water Wells and Water Supply Bldg.	Soil from	4	4	4	4	4	4			0
		Borings	4	4	4	4	4	4			1
		Total Primary	50	50	50	40	40	40	10	10	0
		Samples	50	50	50	40	40	40	10	10	4

KEY:

* – Geotechnical parameters include sieve analysis ASTM D – 422, specific gravity ASTM D – 854, moisture content ASTM D – 2216, dry bulk density

ASTM D – 2937, hydraulic conductivity ASTM D – 4511, soil porosity – calculated

BTEX – benzene, toluene, ethylbenzene, xylenes

Cr – chromium

DRO – diesel range organics

GRO – gasoline range organics

PAH – polynuclear aromatic hydrocarbons

Pb – lead

PCB – polychlorinated biphenyl

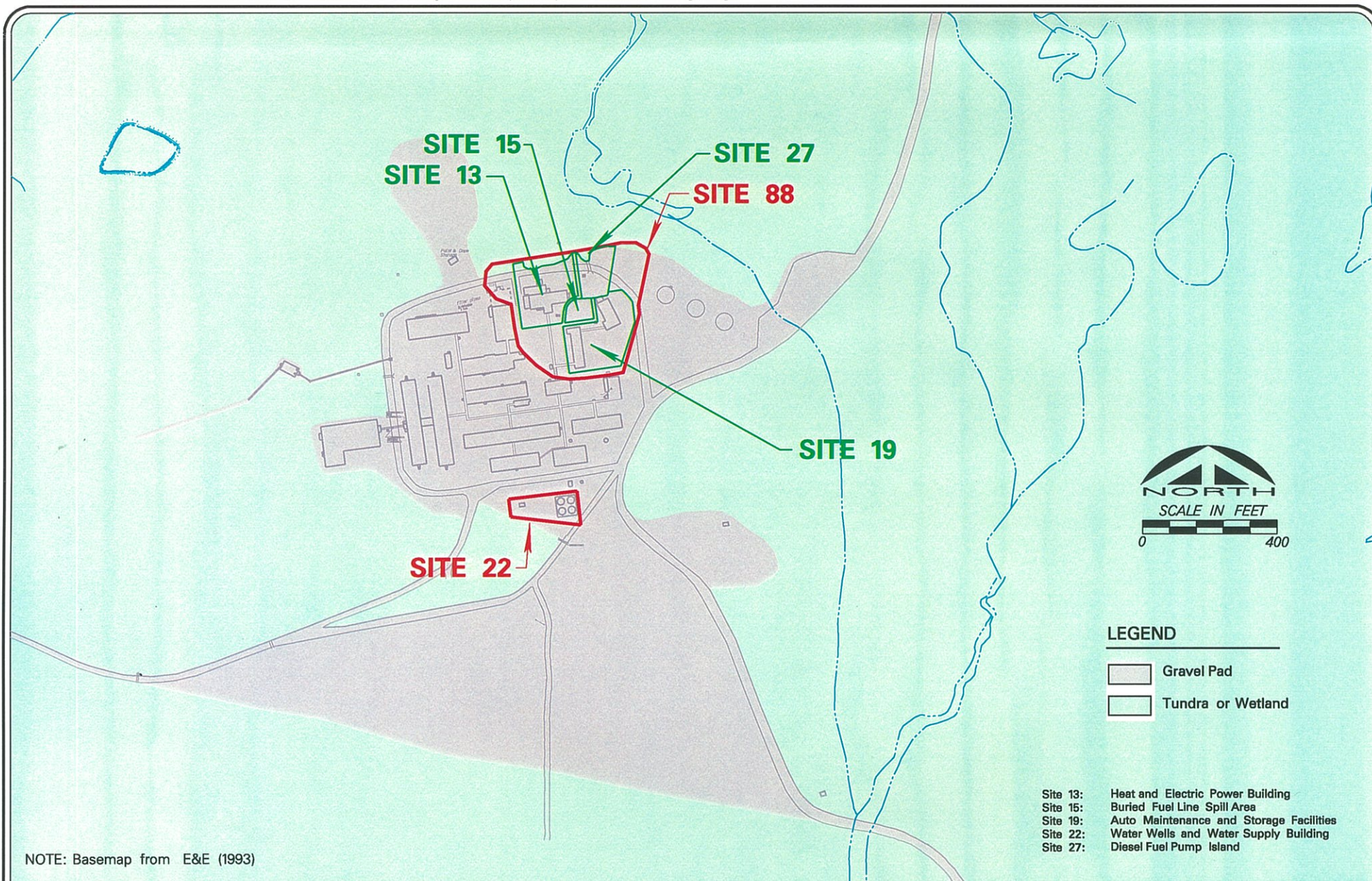
RI – remedial investigation

RRO – residual range organics

SIM – select ion monitoring

TOC – total organic carbon

Zn – zinc

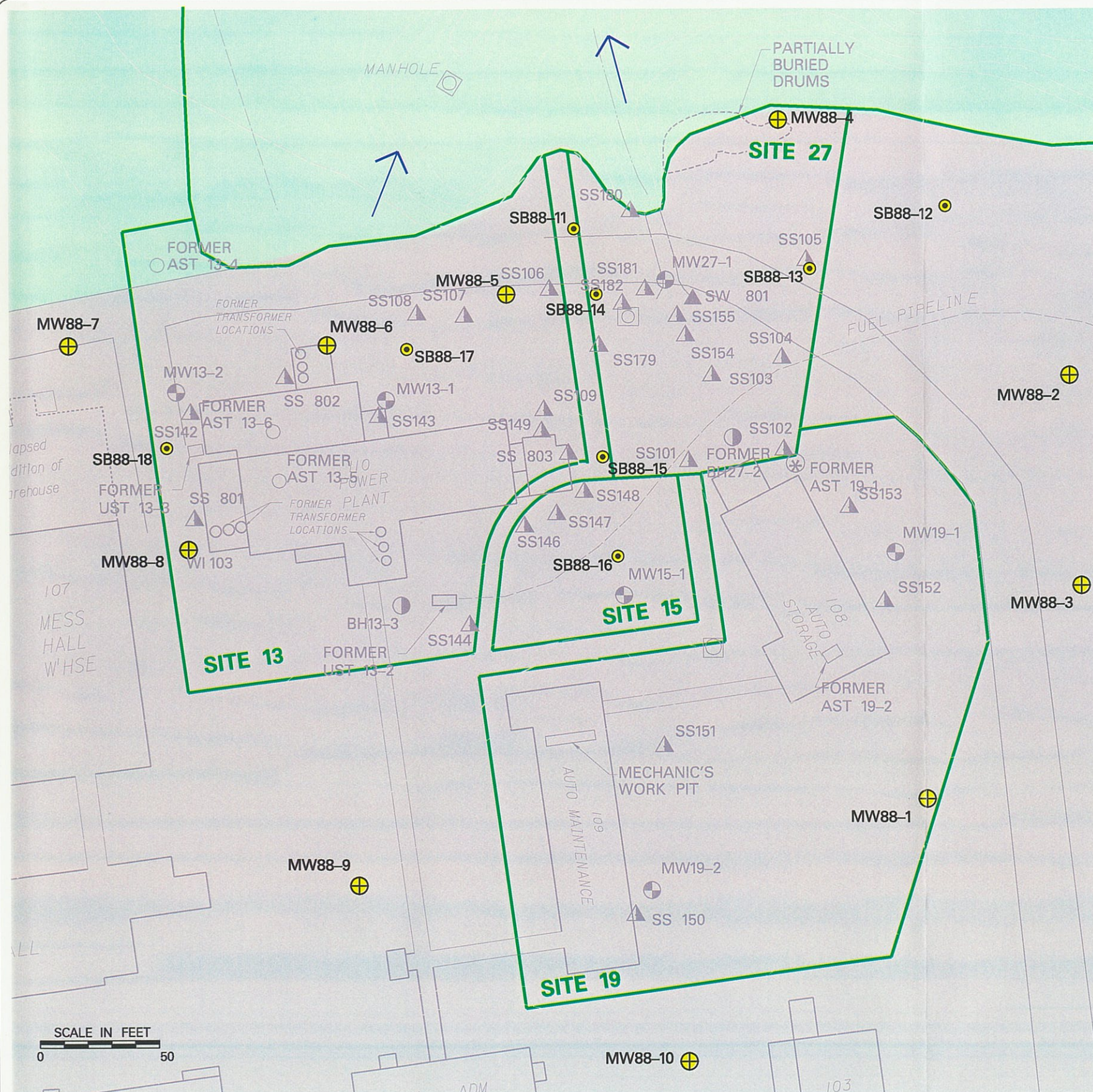


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FIGURE 2-1

U. S. ARMY ENGINEER DISTRICT, ALASKA - N. E. CAPE, ALASKA
 2002 PHASE III REMEDIAL INVESTIGATION TECHNICAL MEMORANDUM

MAIN OPERATION COMPLEX SITE MAP
SITE 88; (SITES 13,15,19 & 27) AND SITE 22



SOILS RESULTS

Soil Sample Location	Sample (feet bgs)	GRO (mg/Kg)	DRO (mg/Kg)	RRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	o-Xylene (mg/Kg)	m & p-Xylene (mg/Kg)	Naphthalene (mg/Kg)	Chromium (mg/Kg)
MW 88-1	15.5-17.5	19	5000	39 VJ	ND (0.012)	ND (0.027)	ND (0.027)	ND (0.027)	0.0022 VJ	6.5
MW 88-1	17.5-20	4.9	1400	16 VJ	ND (0.011)	ND (0.025)	ND (0.025)	ND (0.025)	0.00038 VJ	4.38
MW 88-2	8-10	ND (3)	ND (12)	6 VJ	ND (0.014)	ND (0.035)	ND (0.035)	ND (0.035)	0.001 VJ	16.1
MW 88-2	10-12	ND (3.6)	ND (11)	7.1 VJ	ND (0.015)	ND (0.037)	ND (0.037)	ND (0.037)	0.00056 VJ	8
MW 88-3	4-6	ND (6)	7.6 VJ	120 VJ	ND (0.023)	ND (0.058)	ND (0.058)	ND (0.058)	0.00081 VJ	22.3
MW 88-3	16-18	51	3700	24 VJ	ND (0.021)	ND (0.051)	ND (0.051)	0.31 VJ	1.5	13.1
MW 88-4	9-11	44	12000	3700	0.047	0.083	0.89	1.6	5.9 VHB	17.3
MW 88-4	11-13	54 VHB	2800	16 VJ	ND (0.018)	ND (0.044)	0.01 VJ	0.29	2.3	3.73
MW 88-5	1-3	ND (2.8)	380	3400	ND (0.012)	ND (0.025)	ND (0.025)	ND (0.025)	0.0041 VJ	42.3
MW 88-5	11-13	ND (4)	21	25 VJ	ND (0.014)	ND (0.034)	ND (0.034)	ND (0.034)	0.0037 VJ	4.5
MW 88-6	7-9	130 VHB	3100	23 VJ	ND (0.012)	ND (0.026)	0.044	0.44	4.1	12.8
MW 88-6	11-13	83 VHB	1200	30 VJ	ND (0.012)	ND (0.028)	0.013 VJ	0.15	1.1	8.3
MW 88-7	7-9	140 VHB	12000	55 VJ	ND (0.012)	ND (0.027)	0.13	1.5	7.9	17
MW 88-7	11-13	130 VHB	9200	54 VJ	ND (0.011)	ND (0.026)	0.38	2.2	8.4	11.6
MW 88-8	10-12	68 VHB	5200	11 VJ	ND (0.018)	ND (0.044)	ND (0.044)	0.17	3.3	9.63
MW 88-8	14-16	73 VHB	2300	7.4 VJ	ND (0.018)	ND (0.045)	ND (0.045)	0.18	2.3	8.34
MW 88-9	8-10	ND (3.5)	7 VJ	8.7 VJ	ND (0.015)	ND (0.036)	ND (0.036)	ND (0.036)	0.00045 VJ	7.04
MW 88-9	20-22	ND (4.8)	7.6 VJ	12 VJ	ND (0.016)	ND (0.038)	ND (0.038)	ND (0.038)	0.0019 VJ	12.5
MW 88-10	22-24	31	1400	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.48	10
MW 88-10	24-26	19	750	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.11	4.8
SB 88-11	3-5	70	13000	5100	0.12	3.2	2.7	5.1	12	16.5
SB 88-11	7-9	99	51000	6000	0.19	4.5	6.2	12	81	23.7
SB 88-12	4-6	ND (5.2)	190	1500	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0045 VJ	12.4
SB 88-12	10-12	ND (3.8)	20	33 VJ	ND (0.017)	ND (0.043)	ND (0.043)	ND (0.043)	0.0011 VJ	9.62
SB 88-13	6-8	11 VJ	430	4600	0.37	ND (0.18)	0.071 VJ	0.19	0.042	16.5
SB 88-13	14-16	ND (6.1)	77	420	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0018 VJ	14.3
SB 88-14	2-4	220 VHB	47000	3000	0.019	0.036 VJ	1.7	0.71	79	22.7
SB 88-14	12-14	62	210	900	0.024	1.4	1.7	1.3	0.41	22.8
SB 88-15	10-12	ND (4.9)	33	150	ND (0.018)	ND (0.044)	0.01 VJ	ND (0.044)	0.016	23
SB 88-15	12-14	ND (4.4)	79	590	ND (0.021)	ND (0.052)	ND (0.052)	ND (0.052)	0.0047 VJ	23.4
SB 88-16	6-8	110 VHB	16000	33 VJ	ND (0.015)	0.032 VJ	0.015 VJ	1.8	28	15.6
SB 88-16	10-12	60 VHB	4200	12 VJ	ND (0.017)	ND (0.041)	ND (0.041)	0.043	0.9 VLB	6.7
SB 88-17	8-10	130 VHB	4700	450	ND (0.013)	0.05 VHB	1.5 VHB	4 VHB	12	18.2
SB 88-17	12-14	140 VHB	4300	110 VJ	ND (0.012)	ND (0.023)	0.34 VHB	3 VHB	3.6	8.31
SB 88-18	8-10	100 VHB	7300	24 VJ	0.018 VHB	0.018 VJ	0.019 VJ	0.95 VHB	10	14
SB 88-18	10-12	170 VHB	4000 VJ	225	0.062 VJ	0.041	1.3 VJ	4.4 VJ	6.9 VJ	16.7 VJ

Ethylbenzene results did not exceed ADEC Method 2

WATER RESULTS

Sample Location	GRO (mg/L)	DRO (mg/L)	RRO (mg/L)	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	o-Xylene (mg/L)	m & p-Xylene (mg/L)
MW 88-1	0.024 VJ	1.2	0.43	0.00058	ND (0.0005)	0.00061 VB	0.00013 VJ	0.00022 VJ
MW 88-2	ND (0.05)	0.71	1.3	0.00092	0.00034 VJ	0.00036 VB	0.0001 VJ	0.00035 VJ
MW 88-3	0.42	34	0.22	0.00057	0.025	0.00024 VB	0.00008 VJ	0.022
MW 88-4	1.2	72	1.9	0.03	0.12	0.0032	0.007	0.085
MW 88-5	1.3	9.8	2.3	0.019	0.035	0.12	0.071	0.14
MW 88-6	1.1	69	2.1	0.00074	0.052	0.00019 VB	0.00038	0.055
MW 88-7	1.5	6.1 VLB	0.32	0.014	0.072	0.0012 VB	0.024	0.13
MW 88-8	0.52	20	0.18 VJ	0.00012 VJ	0.018	0.00011 VB	0.00084	0.016
MW 88-9	0.064	0.71	ND (0.2)	ND (0.0005)	ND (0.0005)	ND (0.0005)	ND (0.0005)	ND (0.0005)
MW 88-10	0.12	55	1.3	0.0027	0.0017	0.0014	0.00015 VJ	0.00079

KEY

DRO - diesel range organics
 GRO - gasoline range organics
 mg/Kg - milligrams per kilogram
 mg/L - milligrams per liter
 MW - monitoring well
 ND - not detected
 RRO - residual range organics
 SB - soil boring
 VB - analyte present in the blank and the sample
 VHB - results positively biased
 VJ - results negatively biased
 VLB - estimated value
 Bold - exceed ADEC Method 2 clean-up level
 () - method reporting limit

LEGEND

Monitoring Well/Soil Sample Location (2002)
 Borehole/Soil Sample Location (2002)
 Borehole (BH)
 Monitoring Well (MW)
 Surface Soil Sample (SS)
 Surface Water/Sediment Sample (SW/SD)
 Gravel Pad
 Tundra or Wetland
 Surface Water Drainage

FIGURE 2-2

U. S. ARMY ENGINEER DISTRICT, ALASKA - N. E. CAPE, ALASKA
 2002 PHASE III REMEDIAL INVESTIGATION TECHNICAL MEMORANDUM

SITE 88 (SITES 13, 15, 19, & 27) - MAIN OPERATIONS COMPLEX
 SAMPLING LOCATIONS & SELECTED RESULTS

Figure 2-2 (Updated)
SOILS RESULTS

Sample ID	Soil Sample Location	Sample (feet bgs)	GRO (mg/Kg)	DRO (mg/Kg)	RRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	o-Xylene (mg/Kg)	m & p- Xylene (mg/Kg)	Naphthalene (mg/Kg)	Chromium (mg/Kg)
02NE88SB001	MW 88-1	15.5-17.5	19	5000	39 VJ	ND (0.012)	ND (0.027)	ND (0.027)	ND (0.027)	0.0022 VJ	6.5
02NE88SB002	MW 88-1	17.5-20	4.9	1400	16 VJ	ND (0.011)	ND (0.025)	ND (0.025)	ND (0.025)	0.00038 VJ	4.38
02NE88SB003	MW 88-2	8-10	ND (3)	ND (12)	6 VJ	ND (0.014)	ND (0.035)	ND (0.035)	ND (0.035)	0.001 VJ	16.1
02NE88SB004	MW 88-2	10-12	ND (3.6)	ND (11)	7.1 VJ	ND (0.015)	ND (0.037)	ND (0.037)	ND (0.037)	0.00056 VJ	8
02NE88SB005	MW 88-3	4-6	ND (6)	7.6 VJ	120 VJ	ND (0.023)	ND (0.058)	ND (0.058)	ND (0.058)	0.00081 VJ	22.3
02NE88SB006	MW 88-3	16-18	51	3700	24 VJ	ND (0.021)	ND (0.051)	ND (0.051)	0.31 VJ	1.5	13.1
02NE88SB007	MW 88-4	9-11	44	12000	3700	0.047	0.083	0.89	1.6	5.9 VHB	17.3
02NE88SB008	MW 88-4	11-13	54 VHB	2600	16 VJ	ND (0.018)	ND (0.044)	0.01 VJ	0.29	2.3	3.73
02NE88SB009	MW 88-5	1-3	ND (2.8)	380	3400	ND (0.012)	ND (0.025)	ND (0.025)	ND (0.025)	0.0041 VJ	42.3
02NE88SB010	MW 88-5	11-13	ND (4)	21	25 VJ	ND (0.014)	ND (0.034)	ND (0.034)	ND (0.034)	0.0037 VJ	4.5
02NE88SB011	MW 88-6	7-9	130 VHB	3100	23 VJ	ND (0.012)	ND (0.026)	0.044	0.44	4.1	12.8
02NE88SB012	MW 88-6	11-13	83 VHB	1200	30 VJ	ND (0.012)	ND (0.028)	0.013 VJ	0.15	1.1	8.3
02NE88SB013	MW 88-7	7-9	140 VHB	12000	55 VJ	ND (0.012)	ND (0.027)	0.13	1.5	7.9	17
02NE88SB014	MW 88-7	11-13	130 VHB	9200	54 VJ	ND (0.011)	ND (0.026)	0.38	2.2	8.4	11.6
02NE88SB015	MW 88-8	10-12	68 VHB	5200	11 VJ	ND (0.018)	ND (0.044)	ND (0.044)	0.17	3.3	9.63
02NE88SB016	MW 88-8	14-16	73 VHB	2300	7.4 VJ	ND (0.018)	ND (0.045)	ND (0.045)	0.18	2.3	8.34
02NE88SB017	MW 88-9	8-10	ND (3.5)	7 VJ	8.7 VJ	ND (0.015)	ND (0.036)	ND (0.036)	ND (0.036)	0.00045 VJ	7.04
02NE88SB018	MW 88-9	20-22	ND (4.8)	7.6 VJ	12 VJ	ND (0.016)	ND (0.038)	ND (0.038)	ND (0.038)	0.0019 VJ	12.5
02NE88SB019	MW 88-10	22-24	31	1400	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.48	10
02NE88SB020	MW 88-10	24-26	19	750	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.11	4.8
02NE88SB021	SB 88-11	3-5	70	13000	5100	0.12	3.2	2.7	5.1	12	16.5
02NE88SB022	SB 88-11	7-9	99	51000	6000	0.19	4.5	6.2	12	81	23.7
02NE88SB023	SB 88-12	4-6	ND (5.2)	190	1500	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0045 VJ	12.4
02NE88SB024	SB 88-12	10-12	ND (3.8)	20	33 VJ	ND (0.017)	ND (0.043)	ND (0.043)	ND (0.043)	0.0011 VJ	9.62
02NE88SB025	SB 88-13	6-8	11 VJ	430	4600	0.37	ND (0.18)	0.071 VJ	0.19	0.042	16.5
02NE88SB026	SB 88-13	14-16	ND (6.1)	77	420	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0018 VJ	14.3
02NE88SB027	SB 88-14	2-4	220 VHB	47000	3000	0.019	0.036 VJ	1.7	0.71	79	22.7
02NE88SB028	SB 88-14	12-14	62	210	900	0.024	1.4	1.7	1.3	0.41	22.8
02NE88SB029	SB 88-15	10-12	ND (4.9)	33	150	ND (0.018)	ND (0.044)	0.01 VJ	ND (0.044)	0.016	23
02NE88SB030	SB 88-15	12-14	ND (4.4)	79	590	ND (0.021)	ND (0.052)	ND (0.052)	ND (0.052)	0.0047 VJ	23.4
02NE88SB031	SB 88-16	6-8	110 VHB	16000	33 VJ	ND (0.015)	0.032 VJ	0.015 VJ	1.8	28	15.6
02NE88SB032	SB 88-16	10-12	60 VHB	4200	12 VJ	ND (0.017)	ND (0.041)	ND (0.041)	0.043	0.9 VLB	6.7
02NE88SB033	SB 88-17	8-10	130 VHB	4700	450	ND (0.013)	0.05 VHB	1.5 VHB	4 VHB	12	18.2
02NE88SB034	SB 88-17	12-14	140 VHB	4300	110 VJ	ND (0.012)	ND (0.023)	0.34 VHB	3 VHB	3.6	8.31
02NE88SB035	SB 88-18	8-10	100 VHB	7300	24 VJ	0.018 VHB	0.018 VJ	0.019 VJ	0.95 VHB	10	14
02NE88SB036	SB 88-18	10-12	170 VHB	4000 VJ	226	0.062 VJ	0.041	1.3 VJ	4.4 VJ	6.9 VJ	16.7 VJ

Notes:

Values shown in **BOLD** exceed ADEC Method 2, under 40 inch zone, migration to groundwater pathway,
Ethylbenzene results did not exceed ADEC Method 2
PCB results did not exceed ADEC Method 2

Cross Reference Index
Sample ID, Location, and Depth

Sample ID	Soil Sample Location	Sample (feet bgs)
02NE88SB001	MW 88-1	15.5-17.5
02NE88SB002	MW 88-1	17.5-20
02NE88SB003	MW 88-2	8-10
02NE88SB004	MW 88-2	10-12
02NE88SB005	MW 88-3	4-6
02NE88SB006	MW 88-3	16-18
02NE88SB007	MW 88-4	9-11
02NE88SB008	MW 88-4	11-13
02NE88SB009	MW 88-5	1-3
02NE88SB010	MW 88-5	11-13
02NE88SB011	MW 88-6	7-9
02NE88SB012	MW 88-6	11-13
02NE88SB013	MW 88-7	7-9
02NE88SB014	MW 88-7	11-13
02NE88SB015	MW 88-8	10-12
02NE88SB016	MW 88-8	14-16
02NE88SB017	MW 88-9	8-10
02NE88SB018	MW 88-9	20-22
02NE88SB019	MW 88-10	22-24
02NE88SB020	MW 88-10	24-26
02NE88SB021	SB 88-11	3-5
02NE88SB022	SB 88-11	7-9
02NE88SB023	SB 88-12	4-6
02NE88SB024	SB 88-12	10-12
02NE88SB025	SB 88-13	6-8
02NE88SB026	SB 88-13	14-16
02NE88SB027	SB 88-14	2-4
02NE88SB028	SB 88-14	12-14
02NE88SB029	SB 88-15	10-12
02NE88SB030	SB 88-15	12-14
02NE88SB031	SB 88-16	6-8
02NE88SB032	SB 88-16	10-12
02NE88SB033	SB 88-17	8-10
02NE88SB034	SB 88-17	12-14
02NE88SB035	SB 88-18	8-10
02NE88SB036	SB 88-18	10-12

N.C.O. QRIER

**LEGEND**

- 2001 Potable Water Well Sample Location
- 2002 Borehole/Soil Sample Location
- DRO Diesel Range Organics
- () Method Reporting Limit
- mg/Kg Milligrams per Kilogram
- ND Not Detected
- RRO Residual Range Organics
- VJ Estimated Value
- BGS Below Ground Surface
- GRO Gasoline Range Organics

Sample Location	Sample Depth Interval (ft., bgs)	GRO (mg/Kg)	DRO (mg/Kg)	RRO (mg/Kg)	Benzene (mg/Kg)	Ethylbenzene (mg/Kg)	Toluene (mg/Kg)	o-Xylene (mg/Kg)	m & p- Xylene (mg/Kg)	Naphthalene (mg/Kg)	Chromium (mg/Kg)
SB 22-1	28-30	ND (4.1)	ND (11)	13 VJ	ND (0.019)	ND (0.047)	ND (0.047)	ND (0.047)	ND (0.047)	0.00092 VJ	7.26
	30-32	ND (4.3)	ND (11)	5.4 VJ	ND (0.017)	ND (0.042)	ND (0.042)	ND (0.042)	ND (0.042)	ND (0.0063)	7.87
SB 22-2	26-28	ND (4)	ND (11)	ND (110)	ND (0.016)	ND (0.038)	ND (0.038)	ND (0.038)	ND (0.038)	0.00072 VJ	9.09 VJ
	28-30	ND (4.1)	ND (11)	ND (110)	ND (0.015)	ND (0.037)	ND (0.037)	ND (0.037)	ND (0.037)	0.00031 VJ	7.88



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Anchorage, Alaska

FIGURE 2-3

U. S. ARMY ENGINEER DISTRICT, ALASKA - N. E. CAPE, ALASKA
2002 PHASE III REMEDIAL INVESTIGATION TECHNICAL MEMORANDUM

**LOCATIONS AND SELECTED RESULTS
SITE 22 FORMER WATER WELLS AND
WATER SUPPLY BUILDING 2002 SAMPLING**

LEGEND



Streamflow Measurement Location

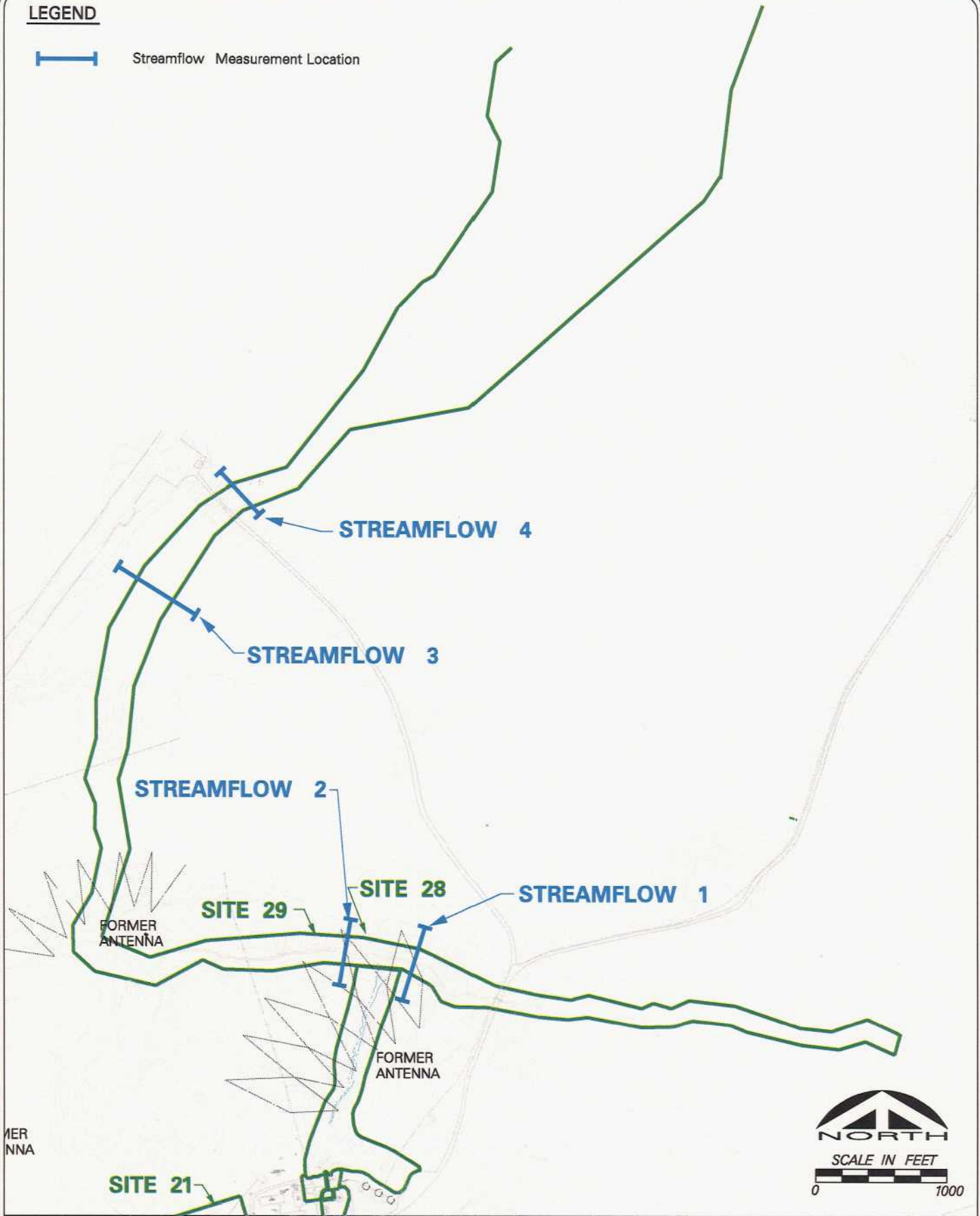


FIGURE 2-4

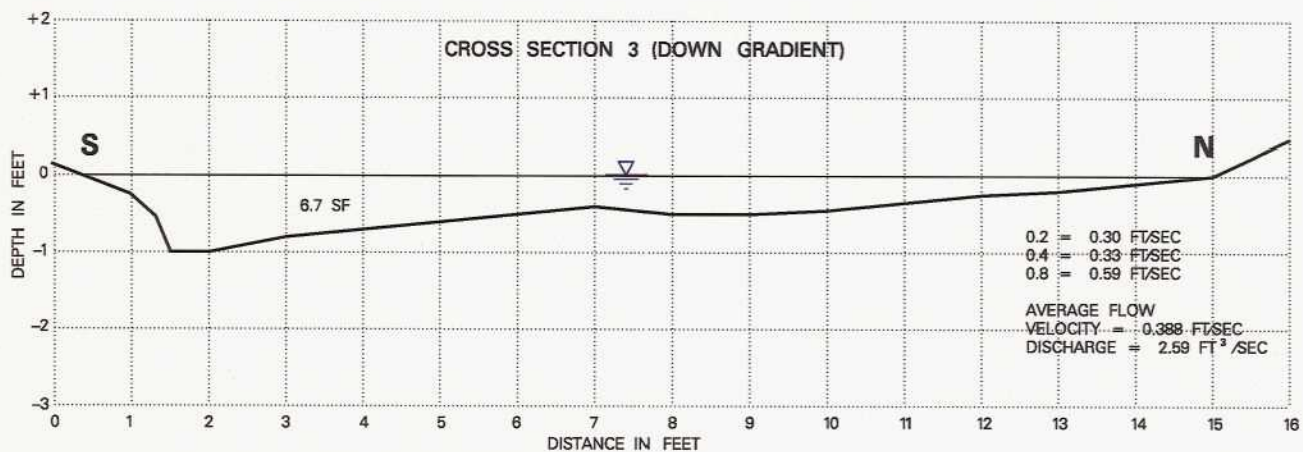
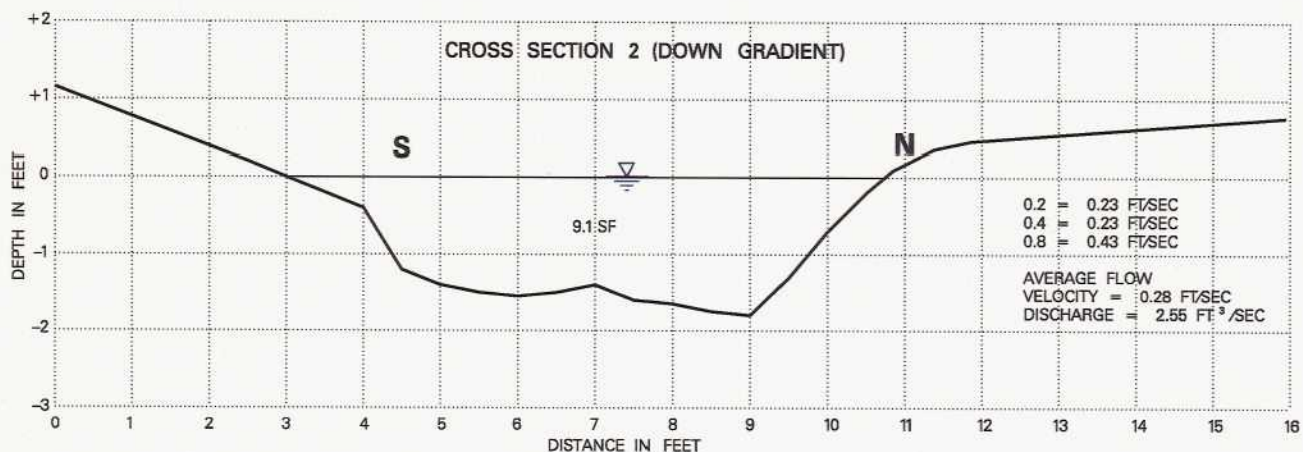
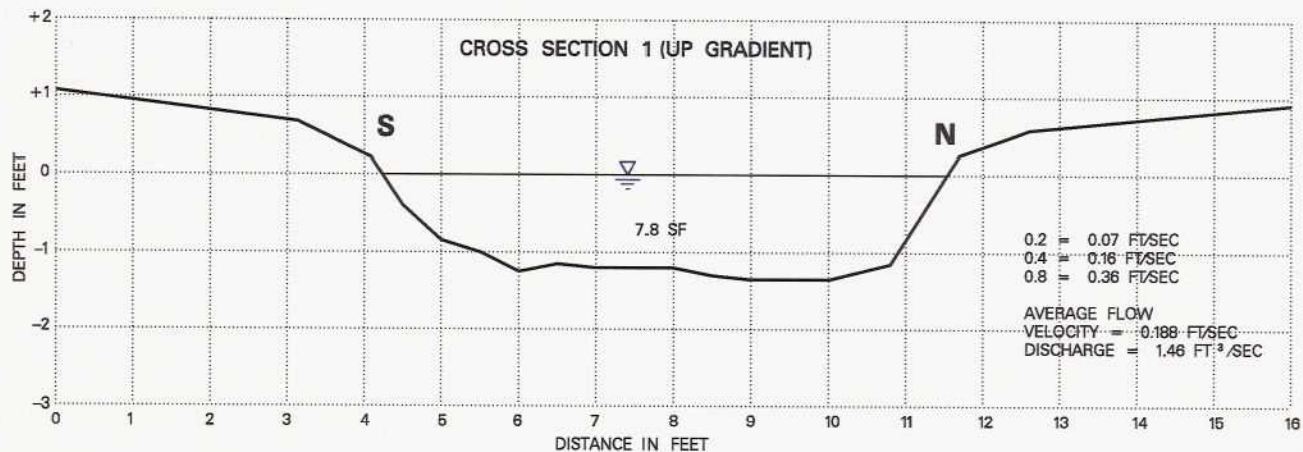
U. S. ARMY ENGINEER DISTRICT, ALASKA – N. E. CAPE, ALASKA
2002 PHASE III REMEDIAL INVESTIGATION TECHNICAL MEMORANDUM

**SITE 29 – SUQITUGHNEQ RIVER
2002 STREAMFLOW MEASUREMENT LOCATION**



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Anchorage, Alaska



Marsh-McBirney Discharge Calculation

1. Identify the centerline of the channel.
2. Calculate positions on the centerline by:
0.2 X depth
0.4 X depth
0.8 X depth
3. Measure velocity at the .2, .4, and .8 positions from the bottom using flowmeter.
4. Average the .2 and .8 velocities; average this value with the .4 velocity.
5. Multiply velocity (ft/sec) by area (ft² /sec) to get discharge (ft³/sec)

FIGURE 2-5

U. S. ARMY ENGINEER DISTRICT, ALASKA - N. E. CAPE, ALASKA
2002 PHASE III REMEDIAL INVESTIGATION TECHNICAL MEMORANDUM

CALCULATION OF DRAINAGE BASIN DISCHARGE



MWH

MONTGOMERY WATSON HARZA
Anchorage, Alaska

Sampling locations and selected analytical results are shown on Figures 2-2 (Site 88) and Figure 2-3 (Site 22). A complete summary of analytical results are included in Attachment 2. Survey data is included in Attachment 3.

The focus of the 2002 Phase III RI environmental media sampling was to collect sufficient soil and groundwater samples at the MOC and Site 22 to achieve the following:

- Determine the volume, including depth and areal extent, of contaminated soil at the MOC
- Evaluate the impact of a utilidor at Site 22 on the surrounding soil.
- Determine the depth to the deep aquifer inferred to be present below the MOC
- Perform a hydrologic characterization study at the MOC.
- Update the Human Health and Ecological Risk Assessments for Site 22 and sites at the MOC where applicable.

2.2 SUQITUGHNEQ RIVER FLOW MEASUREMENT

The flow rate of the Suqitughneq was measured at the same locations as in 2001 to evaluate the difference in discharge rates and at an additional point west of the bridge leading from the airstrip (Figures 2-4 and 2-5). An attempt was made to measure the flow east of the bridge, near the lagoon, but the flow was shallow and slight and failed to register on the flow meter. It was observed that all water levels were at the lowest in recent times in the ponds, streams, and discharge points throughout the facility.

3.0 DEVIATIONS FROM THE WORK PLAN

All fieldwork was performed in accordance with the Work Plan, Phase III Remedial Investigation, Northeast Cape, St. Lawrence Island, Alaska, Final (MW, 2001), except at Site 22. The two soil borings at Site 22 (SB 22-1 and SB 22-2) were planned to continue to the groundwater interface, but were terminated due to refusal at the bedrock surface at 32 and 36 feet below ground surface.

ATTACHMENT 1

Field Note Forms



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Northeast Cape Phase III Remedial Investigation
2002 Sample Plan

											Soil		Groundwater		Geotechnical	
											DRO/RRO AK 102103 GRO AK101 BTEX SW620B PAH/SIM SW6270C PCB SW6082 Pb, Zn, Cr, SW6020 TOC	DRO/RRO AK102103 GRO AK101 BTEX SW620B Alkalinity EPA 300 Sulfate EPA 300 Methan, Ethane, Ethene, RSK 175	DRO/RRO AK102103 GRO AK101 BTEX SW620B Alkalinity EPA 300 Sulfate EPA 300 Methan, Ethane, Ethene, RSK 175	DRO/RRO AK102103 GRO AK101 BTEX SW620B Alkalinity EPA 300 Sulfate EPA 300 Methan, Ethane, Ethene, RSK 175	DRO/RRO AK102103 GRO AK101 BTEX SW620B Alkalinity EPA 300 Sulfate EPA 300 Methan, Ethane, Ethene, RSK 175	DRO/RRO AK102103 GRO AK101 BTEX SW620B Alkalinity EPA 300 Sulfate EPA 300 Methan, Ethane, Ethene, RSK 175
Sample ID	Sample Type	Media	Sample Location	Date 2002	Time	Depth	PID	Laboratory	COC #							
02NE88SB001	N	Soil	MW-1	08/14/02	1530	15.5-17.5	204	CAS	1,2	1	1	1	1	1	1	1
02NE88SB001	MS/MSD	Soil	MW-1	08/14/02	1530	15.5-17.5	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB002	N	Soil	MW-1	08/14/02	1600	17.5-20.0	98.7	CAS	1,2	1	1	1	1	1	1	1
02NE88SB003	N	Soil	MW-2	08/14/02	1645	8.0-10.0	30.9	CAS	1,2	1	1	1	1	1	1	1
02NE88SB004	N	Soil	MW-2	08/14/02	1700	10.0-12.0	13.8	CAS	1,2	1	1	1	1	1	1	1
02NE88SB005	N	Soil	MW-3	08/15/02	1155	4.0-6.0	67.7	CAS	1,2	1	1	1	1	1	1	1
02NE88SB006	N	Soil	MW-3	08/17/02	1110	16.0-18.0	185.8	CAS	1,2	1	1	1	1	1	1	1
02NE88SB006	FD	Soil	MW-3	08/17/02	1110	16.0-18.0	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB006	QA	Soil	MW-3	08/17/02	1110	16.0-18.0	-	STL	14	1	1	1	1	1	1	1
02NE88SB007	N	Soil	MW-4	08/17/02	1320	9.0-11.0	284	CAS	1,2	1	1	1	1	1	1	1
02NE88SB008	N	Soil	MW-4	08/17/02	1330	11.0-13.0	440	CAS	1,2	1	1	1	1	1	1	1
02NE88SB009	N	Soil	MW-5	08/17/02	2000	1.0-3.0	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB010	N	Soil	MW-5	08/17/02	2030	11.0-13.0	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB011	N	Soil	MW-6	08/18/02	1145	7.0-9.0	185	CAS	1,2	1	1	1	1	1	1	1
02NE88SB012	N	Soil	MW-6	08/18/02	1155	11.0-13.0	111	CAS	1,2	1	1	1	1	1	1	1
02NE88SB013	N	Soil	MW-7	08/18/02	1335	7.0-9.0	695	CAS	1,2	1	1	1	1	1	1	1
02NE88SB014	N	Soil	MW-7	08/18/02	1350	11.0-13.0	627	CAS	1,2	1	1	1	1	1	1	1
02NE88SB015	N	Soil	MW-8	08/18/02	1700	10.0-12.0	1248*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB016	N	Soil	MW-8	08/18/02	1720	14.0-16.0	>10,000*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB016	MS/MSD	Soil	MW-8	08/18/02	1720	14.0-16.0	-	CAS	9,10	1	1	1	1	1	1	1
02NE88SB017	N	Soil	MW-9	08/19/02	1310	8.0-10.0	2876*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB017	MS/MSD	Soil	MW-9	08/19/02	1310	8.0-10.0	-	CAS	9,10	1	1	1	1	1	1	1
02NE88SB018	N	Soil	MW-9	08/19/02	1355	20.0-22.0	342*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB019	N	Soil	MW-10	08/19/02	1705	22.0-24.0	881*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB020	N	Soil	MW-10	08/19/02	1715	24.0-26.0	352*	CAS	9,10	1	1	1	1	1	1	1
02NE88SB021	N	Soil	SB-11	08/17/02	1820	3.0-5.0	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB022	N	Soil	SB-11	08/17/02	1840	8.0-10.0	-	CAS	1,2	1	1	1	1	1	1	1
02NE88SB023	N	Soil	SB-12	08/20/02	1250	4.0-6.0	89	CAS	9,10	1	1	1	1	1	1	1
02NE88SB024	N	Soil	SB-12	08/20/02	1305	10.0-12.0	53	CAS	9,10	1	1	1	1	1	1	1
02NE88SB025	N	Soil	SB-13	08/20/02	1415	6.0-8.0	153	CAS	9,10	1	1	1	1	1	1	1
02NE88SB026	N	Soil	SB-13	08/20/02	1435	14.0-16.0	11.2	CAS	9,10	1	1	1	1	1	1	1
02NE88SB027	N	Soil	SB-14	08/20/02	1505	2.0-4.0	6080	CAS	9,10	1	1	1	1	1	1	1
02NE88SB028	N	Soil	SB-14	08/20/02	1530	12.0-14.0	150	CAS	9,10	1	1	1	1	1	1	1
02NE88SB029	N	Soil	SB-15	08/20/02	1730	10.0-12.0	277.9	CAS	9,10	1	1	1	1	1	1	1
02NE88SB030	N	Soil	SB-15	08/20/02	1735	12.0-14.0	133	CAS	9,10	1	1	1	1	1	1	1
02NE88SB031	N	Soil	SB-16	08/20/02	1850	6.0-8.0	1558	CAS	9,10	1	1	1	1	1	1	1
02NE88SB032	N	Soil	SB-16	08/20/02	1905	10.0-12.0	2672	CAS	9,10	1	1	1	1	1	1	1
02NE88SB033	N	Soil	SB-17	08/21/02	1500	8.0-10.0	>10,000	CAS	12,13	1	1	1	1	1	1	1
02NE88SB034	N	Soil	SB-17	08/21/02	1510	12.0-14.0	>10,000	CAS	12,13	1	1	1	1	1	1	1
02NE88SB234	FD	Soil	SB-17	08/21/02	1515	-	-	CAS	12,13	1	1	1	1	1	1	1
02NE88SB035	N	Soil	SB-18	08/21/02	1555	8.0-10.0	4903	CAS	12,13	1	1	1	1	1	1	1
02NE88SB235	QA	Soil	SB-18	08/21/02	1600	-	-	STL	14	1	1	1	1	1	1	1
02NE88SB235	QA/MS/MSD	Soil	SB-18	08/21/02	1600	-	-	STL	14	1	1	1	1	1	1	1
02NE88SB036	N	Soil	SB-18	08/21/02	1605	10.0-12.0	4113	CAS	12,13	1	1	1	1	1	1	1
02NE88SB236	FD	Soil	SB-18	08/21/02	1607	-	-	CAS	12,13	1	1	1	1	1	1	1
02NE88SB037	N	Soil	SB-22-1	08/22/02	1400	28.0-30.0	0	CAS	12,13	1	1	1	1	1	1	1
02NE88SB237	FD	Soil	SB-22-1	08/22/02	1406	-	-	CAS	12,13	1	1	1	1	1	1	1
02NE88SB038	N	Soil	SB-22-1	08/22/02	1410	30.0-32.0	0	CAS	12,13	1	1	1	1	1	1	1
02NE88SB338	QA	Soil	SB-22-1	08/22/02	1415	-	-	STL	14	1	1	1	1	1	1	1
02NE88SB039	N	Soil	SB-22-2	08/22/02	1935	26.0-28.0	0	CAS	12,13	1	1	1	1	1	1	1
02NE88SB239	FD	Soil	SB-22-2	08/22/02	1940	-	-	CAS	12,13	1	1	1	1	1	1	1
02NE88SB040	N	Soil	SB-22-2	08/22/02	1950	28.0-30.0	0	CAS	12,13	1	1	1	1	1	1	1
02NE88SB340	QA	Soil	SB-22-2	08/22/02	1955	-	-	STL	14	1	1	1	1	1	1	1
02NE88SB041	N	Soil	MW-6	08/18/02	1140	4.0-6.0	90.8	R&M	15						1	1
02NE88SB042	N	Soil	MW-9	08/19/02	1315	10.0-12.0	-	R&M	15						1	1
02NE88SB043	N	Soil	SB-16	08/20/02	1900	8.0-10.0	-	R&M	15						1	1
02NE88SB044	N	Soil	SB-18	08/21/02	1605	8.0-11.0	-	R&M	15						1	1
02NE88GW001	N	Groundwater	MW-1	08/17/02	1400	-	-	CAS	3			1	1	1	1	1
02NE88GW002	N	Groundwater	MW-2	08/17/02	1700	-	-	CAS	3			1	1	1	1	1
02NE88GW003	N	Groundwater	MW-3	08/19/02	1230	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW004	N	Groundwater	MW-4	08/19/02	1400	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW204	FD	Groundwater	MW-4	08/19/02	1410	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW304	QA	Groundwater	MW-4	08/19/02	1420	-	-	STL	8			1	1	1	1	1
02NE88GW304	QA/MS/MSD	Groundwater	MW-4	08/19/02	1420	-	-	STL	8			1	1	1	1	1
02NE88GW005	N	Groundwater	MW-5	08/19/02	1500	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW006	N	Groundwater	MW-6	08/20/02	1300	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW007	N	Groundwater	MW-7	08/20/02	1400	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW007	MS/MSD	Groundwater	MW-7	08/20/02	1400	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW008	N	Groundwater	MW-8	08/20/02	1500	-	-	CAS	5,6,7			1	1	1	1	1
02NE88GW009	N	Groundwater	MW-9	08/21/02	1500	-	-	CAS	11			1	1	1	1	1
02NE88GW010	N	Groundwater	MW-10	08/21/02	1400	-	-	CAS	11			1	1	1	1	1
02NE88TB001	Trip Blank	Soil	-	08/14/02	2100	-	-	CAS	2							
02NE88TB002	Trip Blank	Water	-	08/17/02	2100	-	-	CAS	3							
02NE88TB003	Trip Blank	Water	-	08/19/02	2100	-	-	CAS	5							
02NE88TB004	Trip Blank	Water	-	08/19/02	2100	-	-	CAS	5							
02NE88TB005	Trip Blank	Soil	-	08/18/02	2100	-	-	STL	8							
02NE88TB006	Trip Blank	Water	-	08/19/02	2100	-	-	CAS	10							
02NE88TB007	Trip Blank	Soil	-	08/21/02	2100	-	-	CAS	12							
02NE88TB008	Trip Blank	Soil	-	08/17/02	2100	-	-	STL	14							
02NE88EB001	Equipment Blank	Water	-	08/14/02	2100	-	-	CAS	3			1	1	1		
02NE88EB002	Equipment Blank	Water	-	08/17/02	2100	-	-	CAS	3			1	1	1		
02NE88EB003	Equipment Blank	Water	-	08/18/02	2100	-	-	CAS	3			1	1	1		
02NE88EB004	Equipment Blank	Water	-	08/19/02	2100	-	-	CAS	11			1	1	1		
02NE88EB005	Equipment Blank	Water	-	08/20/02	2100	-	-	CAS	11			1	1	1		

KEY:
>- greater than
AK- Alaska Method
ASTM- American Society for Testing and Materials
BTEX- benzene, toluene, ethylbenzene, xylenes
CAS- Columbia Analytical Services
Cr- chromium
DRO/RRO- diesel range organics/residual range organics
EPA- Environmental Protection Agency
FD- field duplicate
GRO- gasoline range organics
MS/MSD- matrix spike/matrix spike duplicate
N- primary sample
Pb- lead
PID- photo-ionization detector
QA- quality assurance
R&M- R&M Geotechnical services
STL- Severn Trent Laboratories
TOC- total organic carbon
Zn- zinc

TAILGATE SAFETY MEETING FORM

Date: 8-12-02 Time: 1500 Job Number: 1850574.260120

Client: USACE

Mon
Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment: _____

Chemical Hazards: _____

Physical Hazards: Air travel

Special Equipment: _____

Other (IIPP): _____

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone: _____

Ambulance Phone: _____

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED
<u>Doug Quist</u>
<u>Bill O'Connor</u>

SIGNATURE
<u><i>[Signature]</i></u>
<u><i>[Signature]</i></u>

Meeting Conducted By: Bonnie McLean
Name Printed

[Signature]
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Date: 8-13-02 Time: 1000 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment:

Gloves (chemical resistant),
Rain gear, steel toe boots, hardhats

Chemical Hazards:

POL

Physical Hazards:

Drill Rig operations, Lifting
WIND, RAIN, SLIP FALL NAILS in board, etc

Special Equipment:

Bear watch, SAT phone, Alectra tent & stove

Other (HIPP):

Drinks, water

Emergency Procedure:

SAT phone 001-
911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED

SIGNATURE

Doug Quist
Bill O'Connell
Ralph Newland
Greg Turner

William A. O'Connell

Meeting Conducted By: Bonnie McLean
Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Date: 8-14-02 Time: 800/1000 Job Number: 1850574.260120

WED Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/ Equipment: Gloves (chemical resistant), Rain gear, steel toe boots, hardhats

Chemical Hazards: POL

Physical Hazards: Drill Rig operations WIND, RAIN slip Fall NAILS in board, Fork

Special Equipment: Bear watch, SAT phone, Acetic tent & stove

Other (IIPP): Drinks, WATER

Emergency Procedure: SAT phone 001- 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound Regional, Nome AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED

SIGNATURE

Doug Gust
Bill O'Connell
Ralph Newland
Greg Turner
Adrian May & Kengubek Jr

William A. O'Connell

Meeting Conducted By: Bonnie McLean
Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Date: 8-15-02 Time: 1100 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment:

rain gear, hard hat, boots,

Chemical Hazards:

Dev Pol

Physical Hazards:

Dec 11 Rig operation
slip fall wind blown debris

Special Equipment:

sat phone remote

Other (IIPP):

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route:

ATTENDEES

NAME PRINTED

Johanna Dreher
Douglas Rust
William A. O'Connell
RALPH NEWLAND
ONIA TURNER

SIGNATURE

Johanna Dreher
Douglas Rust
William A. O'Connell
Ralph Newland
Onia Turner

Meeting Conducted By: Bonnie McLean
Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Friday Date: 8-16-02 Time: 1540 Job Number: 1850574.260120
 Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment:

Gloves (chemical resistant),
PPE gear, steel toe boots, hardhats

Chemical Hazards:

POL

Physical Hazards:

WIND, RAIN SLIP Fall Drill Rig operations
NAILS in board, Tex

Special Equipment:

Bear watch, SAT phone, Acetic tent & stove

Other (IIPP):

Drinks, water

Emergency Procedure:

SAT phone 001-
911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED

Bill Oconnell
Doug Gust
Ralph Newland
Gregg Turner

SIGNATURE

William A. Gust
Doug Gust

Meeting Conducted By: Bonnie McLean

Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean

Name Printed

Project Manager: Bonnie McLean

Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Date: 8-17-02 Time: 1100 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/ Equipment: Gloves (chemical resistant), Rain gear, steel toe boots, hardhats

Chemical Hazards: POL

Physical Hazards: WIND, RAIN, SLIP FALL, Drilling operations, NAILS in board, Tex

Special Equipment: Bear watch, SAT phone, Arctic tent stove

Other (IIPP): Drinks, water

Emergency Procedure: SAT phone 001-911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED

B. O'Connor
Don Quest
Ralph Newland
Greg Turner

SIGNATURE

Bonnie McLean
Signature

Meeting Conducted By: Bonnie McLean
Name Printed

Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature



MWH

MONTGOMERY WATSON HARZA

TAILGATE SAFETY MEETING FORM

Date: 8-18-02 Time: 830 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/ Equipment: ATV helmets
Harzo HATS, Rain gear, eye & ear protection

Chemical Hazards: None

Physical Hazards: Drill Rig operation, ATV, fox, open flame

Special Equipment: fox, wind, cold
SAT phone
Walker Talkies

Other (IIPP): Arctic tent/shelter, heater

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound
Regional, Nome
AK

Phone:

Ambulance Phone:

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED
Ralph McLean
William A. O'Connell
Douglas Grist

Craig Turner

SIGNATURE
Ralph McLean
William A. O'Connell
Douglas Grist

Craig Turner

Meeting Conducted By: Bonnie McLean
Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature

TAILGATE SAFETY MEETING FORM

Date: 8/19/02 Time: 1005 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment: PPE

Chemical Hazards: Hexane

Physical Hazards: Slip, trip, Fall, Flying Debris

Special Equipment: _____

Other (IIPP): _____

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound Phone: _____ Ambulance Phone: _____
Regional, Nome
AK

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED	SIGNATURE
<u>Johanna L. Dreher</u>	<u>Johanna L. Dreher</u>
<u>DON MULLIKIN</u>	<u>Don Mullikin</u>
<u>Ralph Newland</u>	<u>Ralph Newland</u>
<u>William S. Connel</u>	<u>William S. Connel</u>
<u>Gregg Turner</u>	<u>Gregg Turner</u>

Meeting Conducted By: Doug Quist Bonnie McLean
Name Printed Signature

Project Safety Officer: Bonnie McLean Project Manager: Bonnie McLean
Name Printed Signature

TAILGATE SAFETY MEETING FORM

Date: 8-20-02 Time: 1630 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment: Rain gear, steel toed Boots

Chemical Hazards: PO1

Physical Hazards: Drill Rig operation, ATV travel, slip

Special Equipment: trip fall, nails in debris, wind Blown debris

Other (IIPP): Sat. phone

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound Phone: Ambulance Phone:
Regional, Nome
AK

Hospital Address Map Located in work Plan Fig. 5-1
Route:

ATTENDEES

NAME PRINTED
Copeland Turner
Johanna Dreher
William A. Kneel
Ralph Newman

SIGNATURE
Copeland Turner
Johanna Dreher
William A. Kneel
Ralph Newman

Meeting Conducted By: Bonnie McLean
Name Printed

Bonnie McLean
Signature

Project Safety Officer: Bonnie McLean
Name Printed

Project Manager: Bonnie McLean
Signature

TAILGATE SAFETY MEETING FORM

Date: 8-21-02 Time: 1310 Job Number: 1850574.260120

Client: USACE

Site-Specific Location: Northeast Cape, St. Lawrence Island

Safety Topics Presented

Protective Clothing/
Equipment: PPE

Chemical Hazards: _____

Physical Hazards: Wind, Slip, Trip, Fall

Special Equipment: Drill Rig, Pits

Other (IIPP): _____

Emergency Procedure: 911, Medevac LifeGuard Alaska Flight 1-800-478-5433

Hospital: Norton Sound Phone: _____ Ambulance Phone: _____
Regional, Nome
AK

Hospital Address Map Located in work Plan Fig. 5-1
Route: _____

ATTENDEES

NAME PRINTED	SIGNATURE
<u>Johanna Dreher</u>	<u>Johanna E. Dreher</u>
<u>William A. O'Connell</u>	<u>William A. O'Connell</u>
<u>Gregg Turner</u>	<u>Gregg Turner</u>
<u>Ralph Nowland</u>	<u>Ralph Nowland</u>
Meeting Conducted By: <u>Douglas Oust</u>	<u>[Signature]</u>
<u>Bonnie McLean</u>	Signature
Name Printed	

Project Safety Officer: Bonnie McLean Project Manager: Bonnie McLean
Name Printed Signature

Project: NEC, St Lawrence Is., 2002

Client: USACOE

Project Manager: Bonnie McLean

As a component of the Site Safety and Health Plan (SHSP) designed to provide personnel safety during this project, you are required to read and understand the SHSP. When you have fulfilled this requirement, please sign and date this personal acknowledgement.

[illegible]

LAND USE AGREEMENT COMMITMENT

The CONTRACTOR and any CONTRACTOR representative arriving on St. Lawrence Island will abide by the land-use agreement in-place between the land holders and the USACOE. Any actions not in accordance with this agreement by a CONTRACTORs representative shall require immediate removal from St. Lawrence Island at the CONTRACTORs expense. All expenses incurred by MWH Americas, Inc. (MWH) while awaiting personnel replacement shall be reimbursed by the CONTRACTOR. The following are the major points of the Land-Use Agreement which will be enforced:

- No alcohol in any form will be transported, consumed, or offered without compensation, for sale or trade on St. Lawrence Island.
- No non-prescription drugs will be transported, consumed, or offered without compensation, for sale or trade on St. Lawrence Island.
- No prescription drugs will be offered for sale, trade or provided to any others on St. Lawrence Island.
- No fire arms will be transported, carried, used or discharged by CONTRACTORs personnel on St. Lawrence Island.
- No one will collect or purchase any raw material covered under the U.S. Marine Protection Act (i.e. bones, ivory, baleen).
- No one will collect any artifact while on St. Lawrence Island.

Gregg Turner
Signature

7-29-02
Date

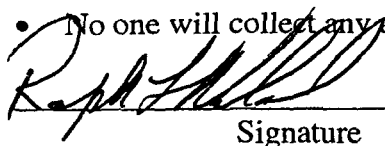
Gregg Turner
Print Name

Discovery Drilling Inc.
Representing


LAND USE AGREEMENT COMMITMENT

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- No one will collect any artifact while on St. Lawrence Island.


Signature

07-26-02
Date


Print Name


Representing

LAND USE AGREEMENT COMMITMENT

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- No one will collect any artifact while on St. Lawrence Island.

William A. O'Connell
Signature

7-26-02
Date

William A. O'Connell
Print Name

MWH
Representing

LAND USE AGREEMENT COMMITMENT

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- No prescription drugs will be offered for sale, trade or provided to any others on St. Lawrence Island.
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- No one will collect or purchase any raw material covered under the U.S. Marine Protection Act (i.e. bones, ivory, baleen).
- No one will collect any artifact while on St. Lawrence Island.

Johanna L. Dreher
Signature

7/26/02
Date

Johanna L. Dreher
Print Name

MWH
Representing

LAND USE AGREEMENT COMMITMENT

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- No prescription drugs will be offered for sale, trade or provided to any others on St. Lawrence Island.
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- No one will collect or purchase any raw material covered under the U.S. Marine Protection Act (i.e. bones, ivory, baleen).
- No one will collect any artifact while on St. Lawrence Island.

Douglas Priest
Signature

7/26/02
Date

Douglas Priest
Print Name

MWH
Representing

LAND USE AGREEMENT COMMITMENT

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- No one will collect any artifact while on St. Lawrence Island.

Bonnie McLean
Signature

7-23-02
Date

Bonnie McLean
Print Name

MWH
Representing

MONTGOMERY WATSON

PERSONAL ACKNOWLEDGEMENT FORM

Project Number:
1850574.260120

Project: NEC, St Lawrence Is., 2002

Client: USACOE

Project Manager: Bonnie McLean

As a component of the Site Safety and Health Plan (SHSP) designed to provide personnel safety during this project, you are required to read and understand the SHSP. When you have fulfilled this requirement, please sign and date this personal acknowledgement.

[illegible]

Project: NEC, St Lawrence Is., 2002

Client: USACOE

Project Manager: Bonnie McLean

As a component of the Site Safety and Health Plan (SHSP) designed to provide personnel safety during this project, you are required to read and understand the SHSP. When you have fulfilled this requirement, please sign and date this personal acknowledgement.

[illegible]

SOIL BORING LOG

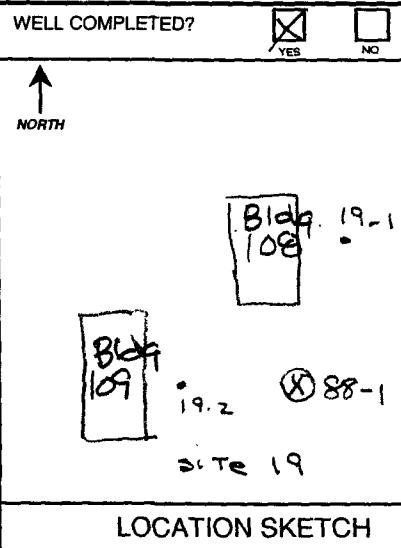
PROJECT
NO. 850574.260120

BORING NO.:
88-1

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST McLean

DATE 8/14/02 WEATHER cloudy rain AK STATE PLANE COORDINATES 96392.8914 98090.4492 (Northing) (Easting) ELEVATION DATUM MSL
DRILLING METHOD Hollow stem BORING SIZE 8 1/4" HAMMER DROP (IN/LBS) 30/360 RIG TYPE CME 45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE grab SAMPLER TYPE/DIAMETER 2 1/2" SS TOTAL DEPTH (FT) 22.5 DEPTH TO SWL (FT) 20.0 TOP OF HOLE ELEVATION 82.29

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP		1430		Fill, fine crushed rock PID 88-1 (0-2.5) 1.0	
1							(8)		Reddish brown Dry, NO odor, NO STAINING	
2										
3	11				SP		1445		88-1 (2.5-5.0) 1.0	
4	9						(1)		No change fill material Dashed crushed rock dry, No odor, No staining	
5	10									
6	12									
7	12				GM		1450		Moist, Dark olive brown sand with silt and broken rock 88-1 (5-7.5) 1.0	
8	6	10	80	10			(2)		NO odor, NO STAINING	
9	9									
10	10									
11	4						1500		88-1 (7.5-10.0) NO RETRIEVAL, lg Broken rock in sampler NO odor	
12	43									
13	35									
14	15						1500		88-1 (10-12.5) NO Retrieval, NO odor	PID 180.0
15	7						(3)		Dry	
16	31						1515		88-1 (12.5-15.0) NO retrieval, Dashed rock in front of sampler	
17	30									
18	33									
19	31				SP		1530		Dry, NO odor, NO staining 88-1 (15-17.5), grey brown crushed rock	
20	72						(4)			PID 204.0
21	34				GM				Dry, Crushed rock with fines, NO odor, NO STAINING	LAB 02NE89SB01 MS/MSD
22	36									
23	31						1600		88-1 (18-20) No change	PID 98.7
24	29				GM		(5)			LAB 02NE89SB002
25	27									
26	50						1605		88-1 (20-20.5) SAT NO recovery	20.0
27							(X)			



SOIL BORING LOG

PROJECT
NO.:

BORING NO.:
88-1


SHEET
2 of 2

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST McLean

DATE 8/14/02 WEATHER *cldy rain* AK STATE PLANE COORDINATES *See pg. 1* ELEVATION DATUM

DRILLING METHOD *hollow stem* BORING SIZE *8 1/4"* HAMMER DROP (IN/LBS) *30/360* RIG TYPE *cm 45* DRILLER/COMPANY *Discovery*

SAMPLES SAMPLE TYPE SAMPLER TYPE/DIAMETER TOTAL DEPTH (FT) DEPTH TO SWL (FT) TOP OF HOLE ELEVATION

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
20									<i>88-1 (20-22.5) - silty brown sand & silt saturated D_r 22.5' PID 18.6</i>	 NORTH <i>See pg. 1</i>
17										
16										
27										
28										
29										
30										
31										
32										
33										
34										
35										
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99										
100										

LOCATION SKETCH



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-1

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST McLean

DATE 8/14/02

WEATHER Cldy

LOCATION

COORDINATES 96392.8914 98080.4499

ELEVATION

DATUM MSL

DRILLING METHOD Hollow-Stem Auger

BORING SIZE

8 1/4"

RIG TYPE

CME 49

DRILLER/COMPANY

Discovery

(MSL/Other)

SURVEYED ELEVATIONS

GROUND SURFACE

82.29

TOP OF PROTECTIVE CASING

82.29

TOP OF PVC CASING

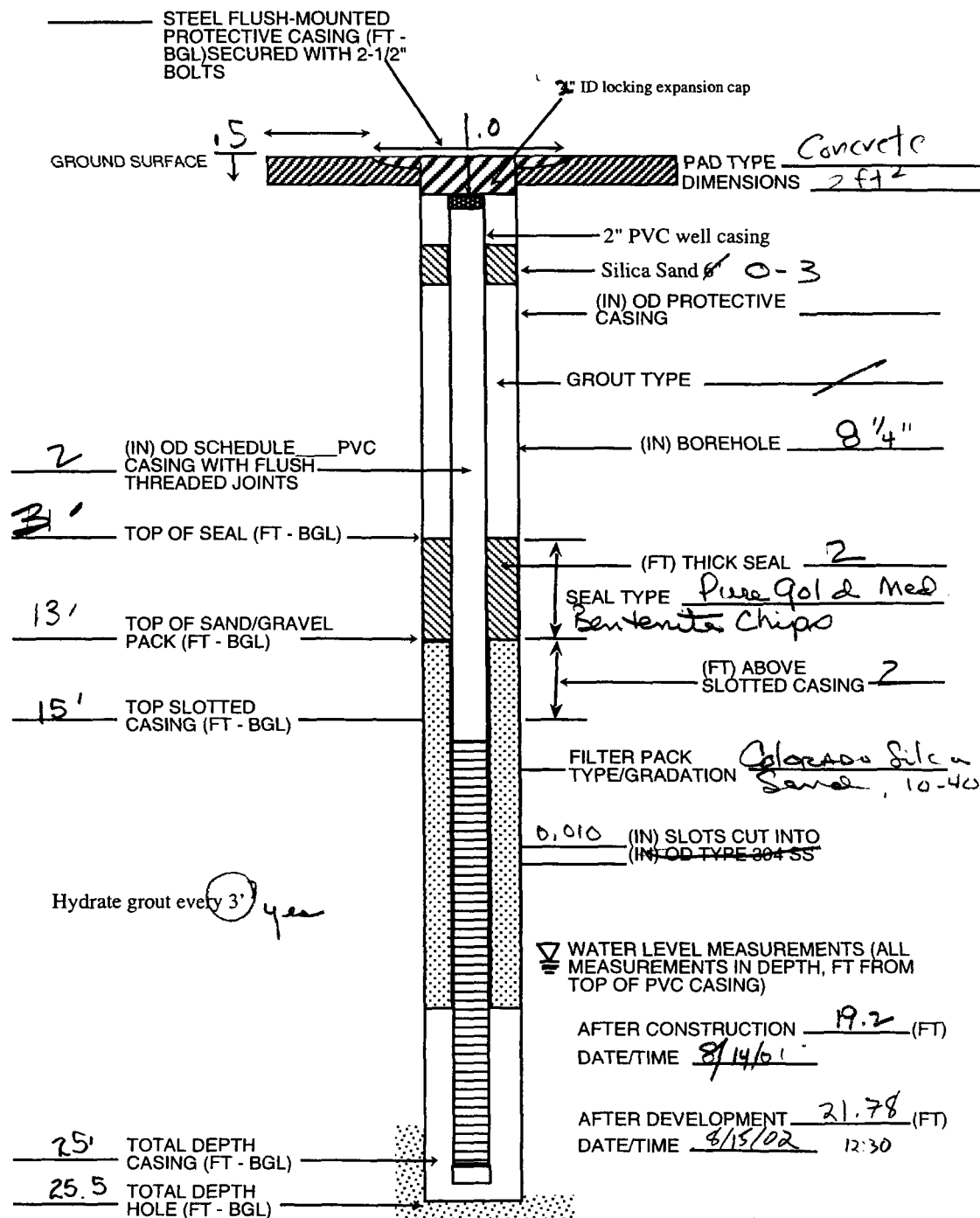
81.89

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs)	5140
Sand(lbs)	380
Grout(lbs)	
Screen(ft)	10'
Blank Casing(ft)	15'
Bottom Cap(ea)	1
Top Cap(ea)	1
Flush Mount	yes
Protective Casing(ft)	
Lock	0911
MISC.:	

NOTES



SOIL BORING LOG

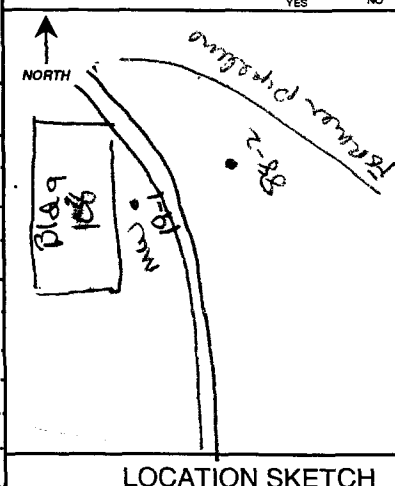
PROJECT NO.: 185741
260120

BORING NO.: 88-2

SHEET 1 OF 1

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST McLean
DATE 8/14/02 WEATHER CLDY, WINDY AK STATE PLANE COORDINATES 96155.0726 (Northing) 99257.8812 (Easting) ELEVATION DATUM MSL
DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN/LBS) 30/360 RIG TYPE CME 45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE grab SAMPLER TYPE/DIAMETER 2 1/2" SS TOTAL DEPTH (FT) 18.0 DEPTH TO SWL (FT) 14.5 TOP OF HOLE ELEVATION 71.18

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP		1620		fill, crushed/broken rock w/ sandy fines	
1										
2										
3	90				SM		1630	28-2 (2.5-5.0); Dark brown sand w/ fine	PID = 19.0	
4	60								NO ODOR, NO STAINING	
5	50									
6	50				SM		1640	29-2 (5-7.5) No change	PID = 29.8	
7	50								NO ODOR, NO STAINING	
8	60				SM		1645	38-2 (7.5-10.0)	PID = 30.9	
9	70								LAB 02 NE 88 SB 003	
10	60								NO ODOR NO STAINING	
11	90						1700	38-2 (10-12.5)	PID = 12.8	
12	20								NO RECOVERY; Rock in Spore	
13							1710		LAB 02 NE 88 SB 004	
14									Saturated No recovery	
15									14.5	
16										
17										
18										
19										
20										
21										





MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:
1850574.260120WELL NO.:
MW 88-2SHEET
1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St.. Lawrence Island

CLIENT USACE

GEOLOGIST McLean

DATE 8/14/02

WEATHER cldy winds

LOCATION
COORDINATES

96455.0726

99257.4812

ELEVATION
DATUM

145L

DRILLING
METHOD Hollow-Stem AugerBORING
SIZE

8 1/4

RIG
TYPE

CME 48

DRILLER/
COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

71.18

TOP OF PROTECTIVE
CASING

71.18

TOP OF PVC
CASING

70.88

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs)	120
Sand(lbs)	320
Grout(lbs)	—
Screer(ft)	10
Blank Casing(ft)	0
Bottom Cap(ea)	1
Top Cap(ea)	1
Flush Mount	yes
Protective Casing (ft)	—
Lock	1
MISC.:	—

NOTES

STEEL FLUSH-MOUNTED
PROTECTIVE CASING (FT -
BGL) SECURED WITH 2-1/2"
BOLTS

4" ID locking expansion cap

GROUND SURFACE

PAD TYPE Concrete
DIMENSIONS 2.5' x 2.5'

2" PVC well casing

Silica Sand 6"

(IN) OD PROTECTIVE
CASING

GROUT TYPE

(IN) BOREHOLE 8 1/4

(IN) OD SCHEDULE PVC
CASING WITH FLUSH
THREADED JOINTS

TOP OF SEAL (FT - BGL)

TOP OF SAND/GRAVEL
PACK (FT - BGL)TOP SLOTTED
CASING (FT - BGL)

(FT) THICK SEAL

SEAL TYPE Pure gold bentonite
chips, medium(FT) ABOVE
SLOTTED CASINGFILTER PACK
TYPE/GRADATION Colorado Silica
Sand 10-400.010 (IN) SLOTS CUT INTO
(IN) OD TYPE 304 SS

Hydrate grout every 3'

WATER LEVEL MEASUREMENTS (ALL
MEASUREMENTS IN DEPTH, FT FROM
TOP OF PVC CASING)

AFTER CONSTRUCTION 12.5 (FT)

DATE/TIME 8-14-02

AFTER DEVELOPMENT 2.74 (FT)

DATE/TIME 8/15/02 14:55

TOTAL DEPTH
CASING (FT - BGL)TOTAL DEPTH
HOLE (FT - BGL)

SOIL BORING LOG

PROJECT NO.: 185574
260120

BORING NO.: 88-3

SHEET 1 OF

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST O'Connell, McLean
DATE 8/15/02 WEATHER Cloudy Windy 2-30kts AK STATE PLANE COORDINATES 96458.3545 (Northing) 98169.9401 (Easting) ELEVATION DATUM MSL
DRILLING METHOD Hollow Stem Auger BORING SIZE 8 1/4" HAMMER DROP (IN/LBS) 30/360 RIG TYPE CMF45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE Grab SAMPLER TYPE/DIAMETER 2" SS TOTAL DEPTH (FT) 20 DEPTH TO SWL (FT) 15.5' TOP OF HOLE ELEVATION 77.75

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE				SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <div><div>YES</div><div>NO</div></div>
		% GRAVEL	% SAND	% FINES	MAX SIZE (in)			TIME	INTERVAL		
0						SP				Fill - Rocks + gravel	<div><div>NORTH</div><div>108</div><div>PP-3</div><div>LOCATION SKETCH</div></div>
1											
2											
3											
4	5					SW	1155	↑	No odor - greenish brown angular gravel .5 - 1.5 inches gravel 30%	PID - 67.7	
5	5										
6	5							↓	No recovery	LAB 62 NE 88 SBOAS	
7											
8	50						1203	↑	No Recovery - Rock	PID = 42.4	
9											
10	50						1210	↓	No Recovery - Rock		
11											
12	21						1221	↓	No Recovery - Rock	PID = 44.8	
13	15								Continued		
14	16								8-17-02		
15	9					SP	1110	↑	Broken Drive tip on Drill-Rig		
16	14								Shut down for 4 hr. Reg		
17	12								← grey Sandy - stops	Drilling resumed 8-17-02	
18	10								Broken Rock - odor	PID = 79.8	
19	14										
20	23					SP			Grey Sandy, slight odor	LAB ID 62 NE 88 SBOAS 6	
21	21								Angular rocks 1-2"	Q2NE88SBOAS (FD) Q2NE88SBOAS (DA)	
22	27					Δ		×	Water on spec not evident	M Samples	
23										PID = 185.8	
24											
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98											
99											
100											

Combined #4 & #5 for Lab sample

Combined (4) & (5) for LAB sample



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-3

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

O'Connell
McLean

DATE 8/17/02

WEATHER

cloudy

LOCATION
COORDINATES

96458.3545

98169.9401

ELEVATION
DATUM

MSL

DRILLING
METHOD Hollow-Stem AugerBORING
SIZE

8 1/4

RIG
TYPE CME 45

(Northing)

(Easting)

DRILLER/
COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

77.75

TOP OF PROTECTIVE
CASING

77.75

TOP OF PVC
CASING

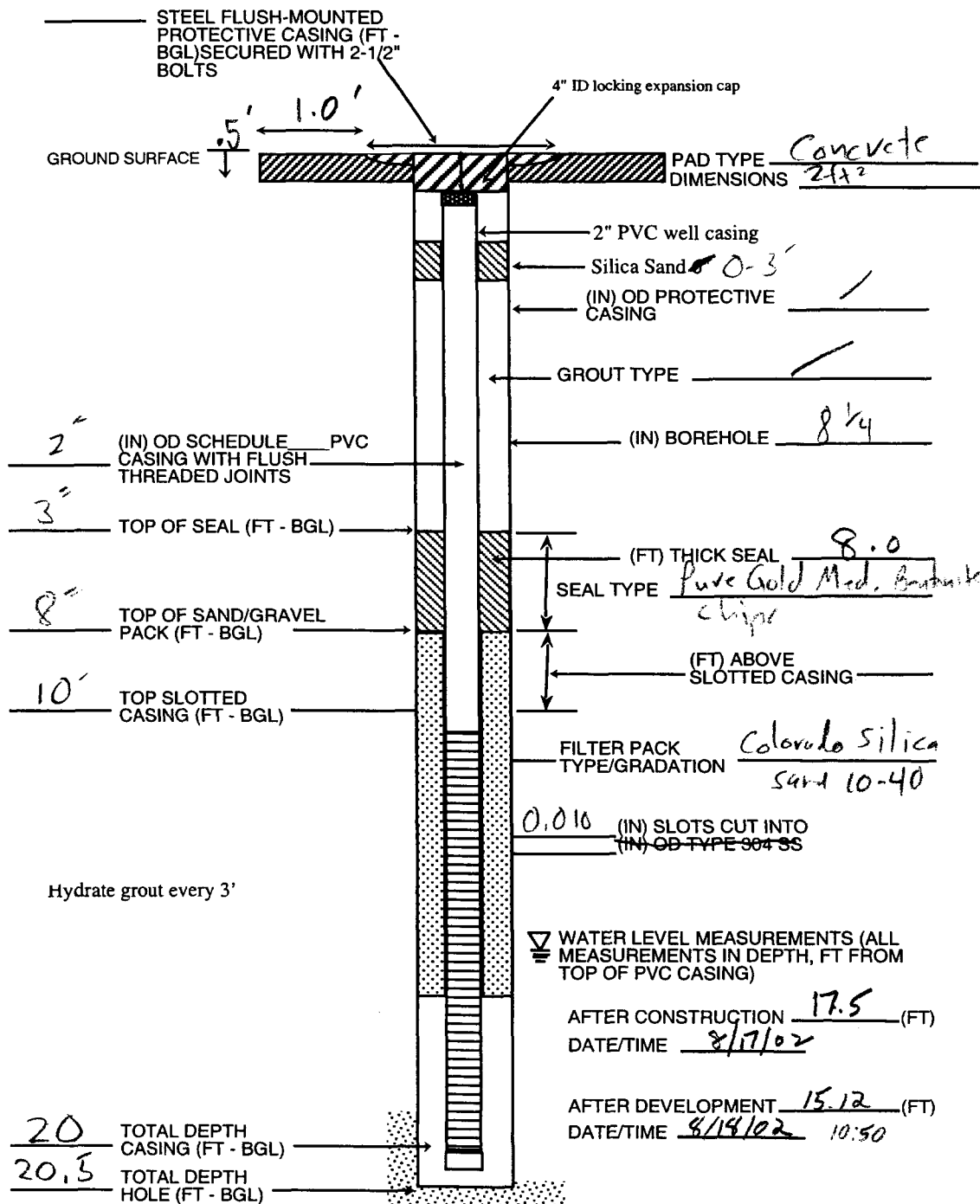
77.35

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs)	150
Sand(lbs)	330
Grout(lbs)	-
Screen(ft)	10
Blank Casing(ft)	10
Bottom Cap(ea)	1
Top Cap(ea)	1
Flush Mount	1
Protective Casing (ft)	
Lock	1
MISC.:	

NOTES



SOIL BORING LOG

PROJECT NO.:
1950578
260120

BORING NO.:
38-5

SHEET
1 OF 1

PROJECT Phase III R1

SITE Northeast Cape, St. Lawrence Is.

CLIENT USACE - Alaska

GEOLOGIST MoLean OConnell

DATE 8/11/02

WEATHER clay WINDY

AK STATE PLANE
COORDINATES 96216.7210 9292.1088
(Northing) (Easting)

ELEVATION
DATUM MSL

DRILLING
METHOD HSA

BORING
SIZE 8 1/4" HAMMER
DROP (IN/LBS) 30/300

RIG TYPE CHE45

DRILLER/
COMPANY Discovery

SAMPLES 2

SAMPLE
TYPE Grab

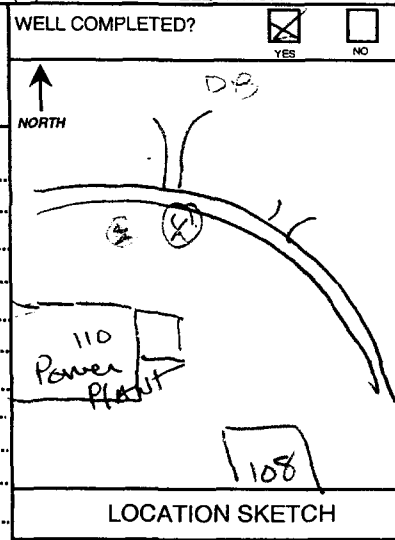
SAMPLER
TYPE/DIAMETER 2" SS

TOTAL
DEPTH (FT) 16.5

DEPTH TO
SWL (FT) 11.0

TOP OF HOLE
ELEVATION 68.37

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE				SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)
		% GRAVEL	% SAND	% FINES	MAX SIZE (mm)			TIME	INTERVAL	
21	10					SP		2000		Brown sandy with rounded silt No odor
22	5									CONE88SB009 PT D=
23	6									No recovery Lost in Soil Cap
24										
25	5					PT		2015		Organic Peat some sand strong odor PT D=
26	11									Very dense
27	6									
28	5					PT		2020		Organic Peat grading to grey sand at 8 ft Fine sand odor in Peat, Not in sand PT D=
29	6									
30	6					SW		2022		Greenish grey faint odor fine sand PT D=
31	5									
32	7					SW		2030		Dark grey coarse sand, wet - No odor CONE88B010 Water @ 11 ft
33	11									
34										
35										
36										
37										
38										
39										
240										
241										
242										



Bottom of well

CONE88SB009 1.0-3.0

CONE88B010 11.0-13.0

D-16



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:
1850574.260120WELL NO.:
88-4SHEET
1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

O'Connell
McLean

DATE 8/14/02

WEATHER Partly cloudy

LOCATION

COORDINATES 96331.1320

98365.8078

ELEVATION

DATUM MSL

DRILLING

METHOD Hollow-Stem Auger

BORING

SIZE 8-1/4

RIG

TYPE HSA

DRILLER/

COMPANY Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

68.63

TOP OF PROTECTIVE
CASING

68.63

TOP OF PVC
CASING

68.23

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs) 100

Sand(lbs) 430

Grout(lbs) -

Screen(ft) 10

Blank Casing(ft) 7

Bottom Cap(ea) 1

Top Cap(ea) 1

Flush Mount

Protective
Casing (ft)

Lock 1

MISC.: -

STEEL FLUSH-MOUNTED
PROTECTIVE CASING (FT -
BGL) SECURED WITH 2-1/2"
BOLTS

4" ID locking expansion cap

GROUND SURFACE

PAD TYPE Concrete
DIMENSIONS 2' x 2'

2" PVC well casing

Silica Sand 6"

(IN) OD PROTECTIVE
CASING

GROUT TYPE

(IN) BOREHOLE 8 1/4

2" (IN) OD SCHEDULE PVC
CASING WITH FLUSH
THREADED JOINTS

2.5' TOP OF SEAL (FT - BGL)

(FT) THICK SEAL 4.5

SEAL TYPE Pure Gold Bentonite mud
chip4.5' TOP OF SAND/GRAVEL
PACK (FT - BGL)(FT) ABOVE
SLOTTED CASING 26.5' TOP SLOTTED
CASING (FT - BGL)FILTER PACK Colorado Silica
Card 10-46
TYPE/GRADATION0.010 (IN) SLOTS CUT INTO
(IN) OD TYPE 304 SS

Hydrate grout every 3'

WATER LEVEL MEASUREMENTS (ALL
MEASUREMENTS IN DEPTH, FT FROM
TOP OF PVC CASING)AFTER CONSTRUCTION 12.0 (FT)
DATE/TIMEAFTER DEVELOPMENT 11.20 (FT)
DATE/TIME 8/18/02 12:0016.5' TOTAL DEPTH
CASING (FT - BGL)17.0' TOTAL DEPTH
HOLE (FT - BGL)

NOTES

SOIL BORING LOG

PROJECT NO.: 18051260120

BORING NO.: 88-4

SHEET 1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is

CLIENT USACE - Alaska

GEOLOGIST O'Connell, Metcalf

DATE 8/ /02

WEATHER Pt. cllds

AK STATE PLANE COORDINATES

96331.1320 98365.8078
(Northing) (Easting)

ELEVATION DATUM MSL

DRILLING METHOD HSA

BORING SIZE 8" K

HAMMER DROP (IN LBS) 30/360

RIG TYPE CME 45

DRILLER/COMPANY Discovery

SAMPLES 2

SAMPLE TYPE grab

SAMPLER TYPE/DIAMETER 2" SS

TOTAL DEPTH (FT) 17'

DEPTH TO SWL (FT) 15.3

TOP OF HOLE ELEVATION 88.63

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			MAX SIZE (IN)	SOIL CLASS	GRAPHIC LOG	SAMPLE	
		% GRAVEL	% SAND	% FINES				TIME	INTERVAL
0						SP			
1									
2									
3	4					SP		1300	
4	8								
5	12								
6	6								
7	4					PT		1315	
8	6								
9	3								
10	4					PT		1320	
11	6								
12	9								
13	10								
14	12					SM		1330	
15	12								
16	14								
17	15								
18	15								
19									
20									
21									

SOIL DESCRIPTION (ASTM 2488)

Fill - R. chs $\approx 6" - 10"$
gravel

- Brown Moist Slight odor
Angular Rocks $\approx 1"$
Some sand $\approx 20\%$ Fine gravel
PTD = 236

Dark brown Moist Slight odor
some sand $< 10\%$ Slight odor PTD = 248

Dark Brown Organic Matter on top to
Sandy grey with strong odor + rocks fragments $\approx 1"$
towards 10-11' Lys PTD = 284

grey Sandy Soil Slight odor
Rocks $\approx .5 - 1"$ No organic Matter
Sand $\approx 75\%$ PTD = 440

Wet at 13' 6"
Wet Sands strong odor
Rocks $\approx 1 - 2"$ Angular to subangular
Grey color Sand $\approx 75\%$ PTD = 424
Dry Sands at 15' strong odor

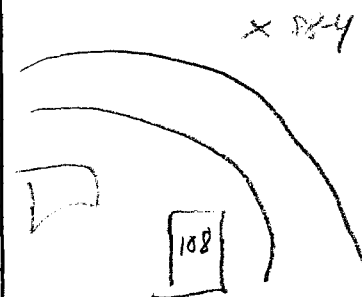
Angular Refusal Bottom of Hole

DT 17 02 NE 88 S 0007 = # 3 1320 9-11 0
02 NE 88 S 008 = # 4 1330 11-13 0

WELL COMPLETED? ☒ YES ☐ NO



NORTH



LOCATION SKETCH



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:
1850574.260120WELL NO.:
88-5SHEET
1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St.. Lawrence Island

CLIENT USACE

GEOLOGIST

O'Connell
McLean

DATE 8/17/02

WEATHER

clouds, Rain Wind

LOCATION

COORDINATES 96216.7210

98292.1098

ELEVATION
DATUM

145L

DRILLING
METHOD Hollow-Stem AugerBORING
SIZE

8 1/4

RIG
TYPE

HSA

DRILLER/
COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

68.37

TOP OF PROTECTIVE
CASING

68.37

TOP OF PVC
CASING

67.87

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite (lbs)	100
Sand (lbs)	300
Grout (lbs)	
Screen (ft)	10
Blank Casing (ft)	6
Bottom Cap (ea)	1
Top Cap (ea)	1
Flush Mount	yes
Protective Casing (ft)	0
Lock	1
MISC.:	

STEEL FLUSH-MOUNTED
PROTECTIVE CASING (FT -
BGL) SECURED WITH 2-1/2"
BOLTS

4" ID locking expansion cap

GROUND SURFACE

PAD TYPE

Concrete

DIMENSIONS

2 ft²

2" PVC well casing

Silica Sand 6' 1"

(IN) OD PROTECTIVE
CASING

GROUT TYPE

(IN) BOREHOLE

8 1/4

(IN) OD SCHEDULE
CASING WITH FLUSH
THREADED JOINTS

TOP OF SEAL (FT - BGL)

(FT) THICK SEAL

3

SEAL TYPE Pure gold Med.
Bentonite chipsTOP OF SAND/GRAVEL
PACK (FT - BGL)(FT) ABOVE
SLOTTED CASINGTOP SLOTTED
CASING (FT - BGL)FILTER PACK
TYPE/GRADATIONColorado Silica
Sand 10-400.010 (IN) SLOTS CUT INTO
(IN) OD TYPE 804 SS

Hydrate grout every 3'

WATER LEVEL MEASUREMENTS (ALL
MEASUREMENTS IN DEPTH, FT FROM
TOP OF PVC CASING)AFTER CONSTRUCTION 8-17-02 (FT)
DATE/TIME 10.5AFTER DEVELOPMENT 12.32 (FT)
DATE/TIME 8/18/02 15:45TOTAL DEPTH
CASING (FT - BGL)TOTAL DEPTH
HOLE (FT - BGL)

NOTES

SOIL BORING LOG

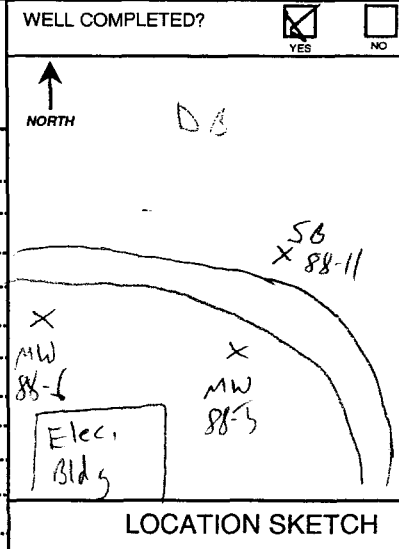
PROJECT NO.: 1850574
260120

BORING NO.: MWSP-6

SHEET 1 OF 1

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is CLIENT USACE - Alaska GEOLOGIST O'Connell, McLean
DATE 8/18/02 WEATHER Partly cldy AK STATE PLANE COORDINATES 96140.1494 98271.8042 ELEVATION DATUM MSL
DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN LBS) 30-360 RIG TYPE CME 45 DRILLER/COMPANY Discovery
SAMPLES SAMPLE TYPE Grab SAMPLER TYPE/DIAMETER 2" SS TOTAL DEPTH (FT) 15.5 DEPTH TO SWL (FT) 10.85 TOP OF HOLE ELEVATION 69.13

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP				Fill - Rocky angular 3"-5"	
1										
2										
3	4				SM		1130	↑	No odor greyish brown silt with fine sand	
4	5									
5	16						1140	↑	-Geo-tech Sample 4-6 LAB# 02NR 885B41 No odor - Greyish Brown silt with fine sand	
6	6				SM					
7	3				SP		1145	↑	-strong odor Sands & gravels unconsolidated	
8	3									
9	8				SM		1150	↑	Moist, dense silt & fine sand Grey No odor	
10	8									
11	11				SP		1155	↑	Sand & gravel, greyish brown, moist, unconsolidated strong odor	
12	11									
13	7								H ₂ O = 10.85 8-18-02 @ 14.30	
14										
15									bottom	
16									DT 15.5	
17										
18										
19										
20										
21										



SOIL BORING LOG

PROJECT NO.: 185057120

BORING NO.: MW 88-7

SHEET 1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is

CLIENT USACE - Alaska

GEOLOGIST J. Connelley

DATE 8/18/02

WEATHER Partly Cloudy

AK STATE PLANE COORDINATES

96033.1581

98271.2457

ELEVATION DATUM

MSL

DRILLING METHOD HSA

BORING SIZE 8 1/4

HAMMER DROP (IN/LBS)

30/360

RIG TYPE CME 45

DRILLER/COMPANY Discovery

SAMPLES 2

SAMPLE TYPE Grab

SAMPLER TYPE/DIAMETER 2" SS

TOTAL DEPTH (FT) 19.5

DEPTH TO SWL (FT) 14.5

TOP OF HOLE ELEVATION 72.83

DEPTH (FEET)	BLOWS (6 IN.)	% GRAVEL	% SAND	% FINES	MAX SIZE (IN.)	SOIL CLASS	GRAPHIC LOG	SAMPLE TIME	INTERVAL
0						SP			
1									
2									
3	14					SP		1320	
4	5								
5	8					SW		1330	
6	6								
7	13					SP		1335	
8	10								
9	9					SP		1342	
10	11								
11	9					SP		1350	
12	6								
13	7					SM		1355	
14	6								
15	7								
16									
17									
18									
19									
20									
21									

SOIL DESCRIPTION (ASTM 2488)

Fill - Crushed Rock + Sand

Crushed Rock + sand

No odor, Dry PID = 600

Brown Sand No odor

PID = 332

odor, crushed rock + sand, brown-grey

PID = 695 ORNE 8850013

Grey - Crushed Rock + sand odor

PID = 480

Grey sand + Gravel odor

PID = 627

ORNE 8850014

Moist Grey sand + silt odor

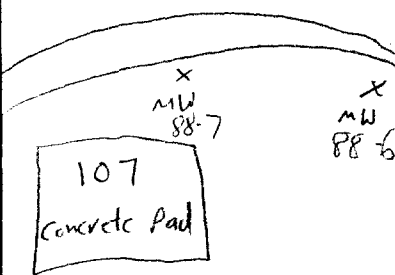
PID = 477

Bottom DT 19.0'

WELL COMPLETED? ☒ YES ☐ NO

NORTH

Site 16



LOCATION SKETCH



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-6

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

O'Connell
McLean

DATE 8/18/02

WEATHER

Partly Cloudy

LOCATION

COORDINATES 96190.1494

98271.9042

ELEVATION

DATUM

MSL

DRILLING
METHOD

Hollow-Stem Auger

BORING
SIZERIG
TYPE

CME 45

DRILLER/
COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

69.13

TOP OF PROTECTIVE
CASING

69.13

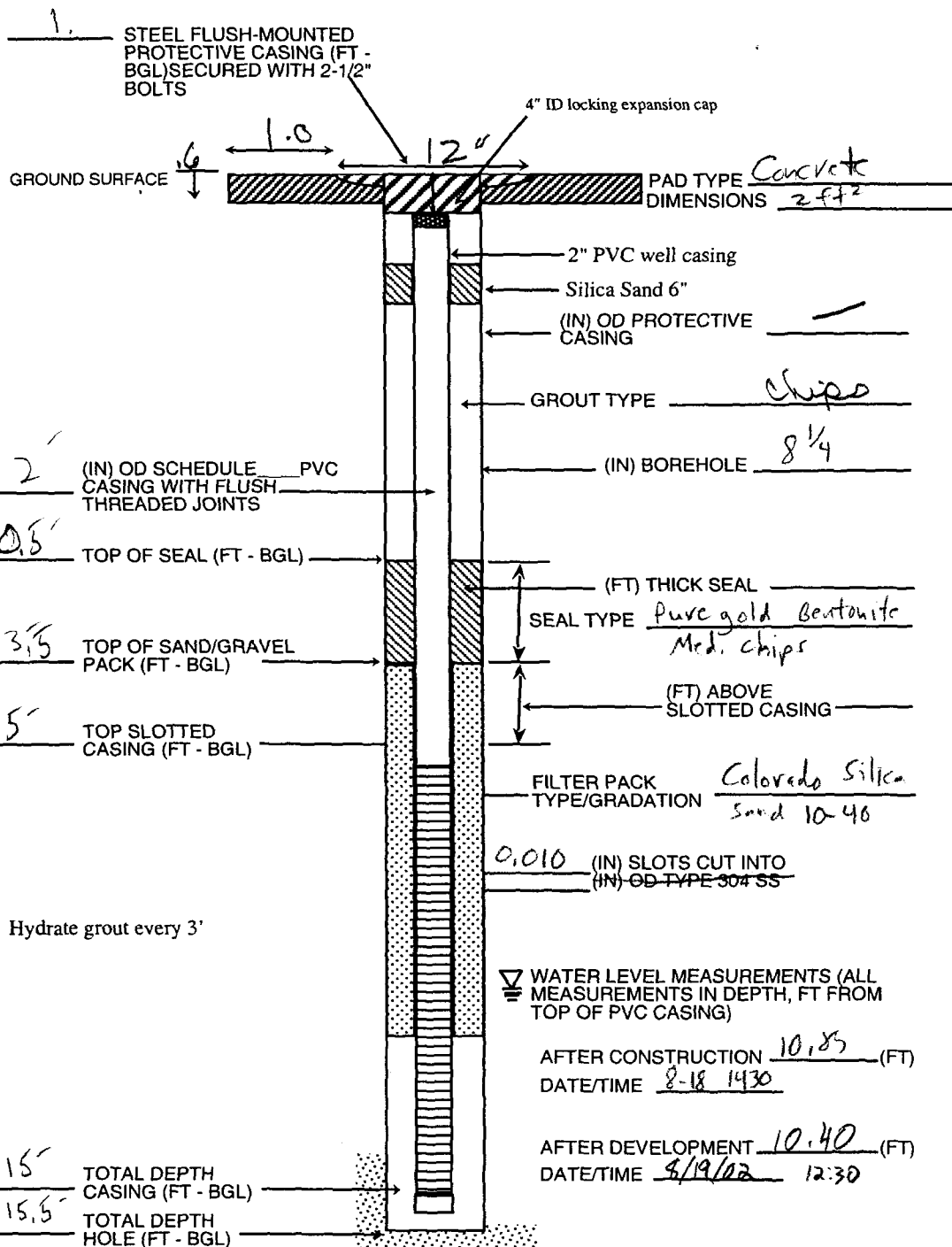
TOP OF PVC
CASING

68.83

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs)	100
Sand(lbs)	350
Grout(lbs)	✓
Screen(ft)	10
Blank Casing(ft)	5.0
Bottom Cap(ea)	1
Top Cap(ea)	1
Flush Mount	1
Protective Casing (ft)	1
Lock	1
MISC.:	



NOTES



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-7

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

McConnell
McLean

DATE 8/18/02

WEATHER

Partly cloudy

LOCATION

COORDINATES

96033.1581

98271.2457

ELEVATION

DATUM

MSL

DRILLING

METHOD Hollow-Stem Auger

BORING

SIZE

8 1/4

RIG

TYPE

HSA

DRILLER/

COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

72.83

TOP OF PROTECTIVE
CASING

72.83

TOP OF PVC
CASING

72.33

WELL SAMPLED?

☒

YES

NO

QUANTITY MATERIALS USED:

Bentonite(lbs)

160

Sand(lbs)

400

Grout(lbs)

/

Screen(ft)

10

Blank Casing(ft)

9

Bottom Cap(ea)

1

Top Cap(ea)

1

Flush Mount

1

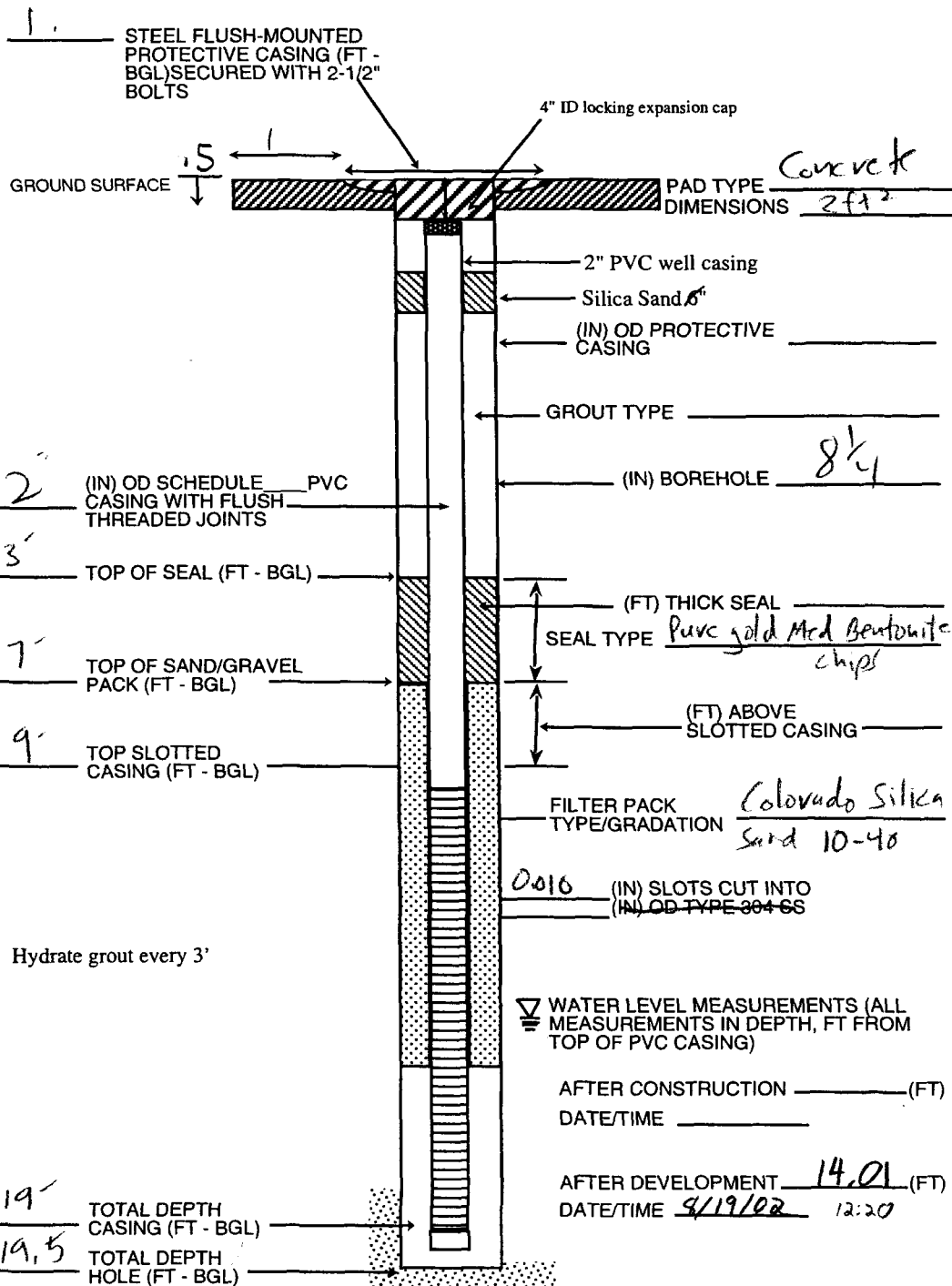
Protective

Casing (ft)

Lock

1

MISC.:



NOTES

WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS IN DEPTH, FT FROM TOP OF PVC CASING)

AFTER CONSTRUCTION _____ (FT)
DATE/TIME _____

AFTER DEVELOPMENT 14.01 (FT)
DATE/TIME 8/19/02 12:20

19' TOTAL DEPTH
CASING (FT - BGL)

19.5 TOTAL DEPTH
HOLE (FT - BGL)

SOIL BORING LOG

PROJECT NO.: 1850574-200120

BORING NO.: 88-8

SHEET 1 OF 1

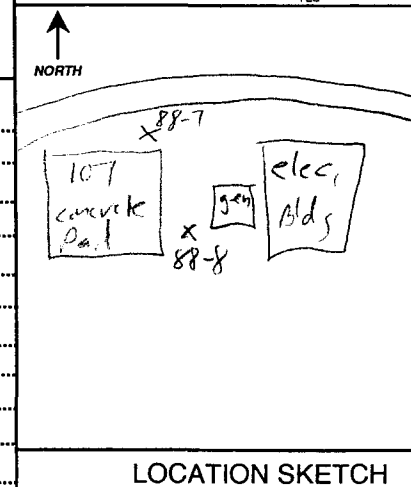
PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST ~~Connell~~ Metcalf

DATE 8/18/02 WEATHER Partly Cloudy AK STATE PLANE COORDINATES 96083.449 98195.9420 ELEVATION DATUM MSL

DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN/LBS) 30/368 RIG TYPE CME45 DRILLER/COMPANY Discovery

SAMPLES SAMPLE TYPE GRAB SAMPLER TYPE/DIAMETER 2" HSA TOTAL DEPTH (FT) 20.5 DEPTH TO SWL (FT) 15.5 TOP OF HOLE ELEVATION 73.76

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP		1620		Fill Crushed Rock Angular 3" S =	
1										
2										
3										
4	17				SP		1640		No odor, crushed Rock fill + Sand unconsolidated PFD =	
5	15									
6	20									
7	23				CP		1648		odor - Crushed Rock PFD = unconsolidated	
8	22									
9	37									
10	19				SP		1653		odor, Dark staining in Crushed rock + sand, grey unconsolidated PFD =	
11	11									
12	15									
13	21				SP		1700		odor, Crushed rock + sand grey, unconsolidated PFD = 1248*	
14	14									
15	12									
16	12				SP		1712		Strong odor, Crushed rock + sand, unconsolidated PFD =	
17	10									
18	11									
19	9				SM		1718		Grey sand wet, strong odor PFD = >10,000*	
20	10									
21	9									
22	8									
23	8									
24										
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26										
27										
28										
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* PFD Cal w/ memory
bottom DT 20.0



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-8

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St.. Lawrence Island

CLIENT USACE

GEOLOGIST

O'Connell
McLean

DATE 8/19/02

WEATHER

Partly cloudy

LOCATION COORDINATES

96083.4949

98185.9420

ELEVATION DATUM

MSL

DRILLING METHOD Hollow-Stem Auger

BORING SIZE

8 1/4

RIG TYPE

1154

(Northing)

(Easting)

DRILLER/COMPANY

Discovery

(MSL/Other)

SURVEYED ELEVATIONS

GROUND SURFACE

73.76

TOP OF PROTECTIVE CASING

73.76

TOP OF PVC CASING

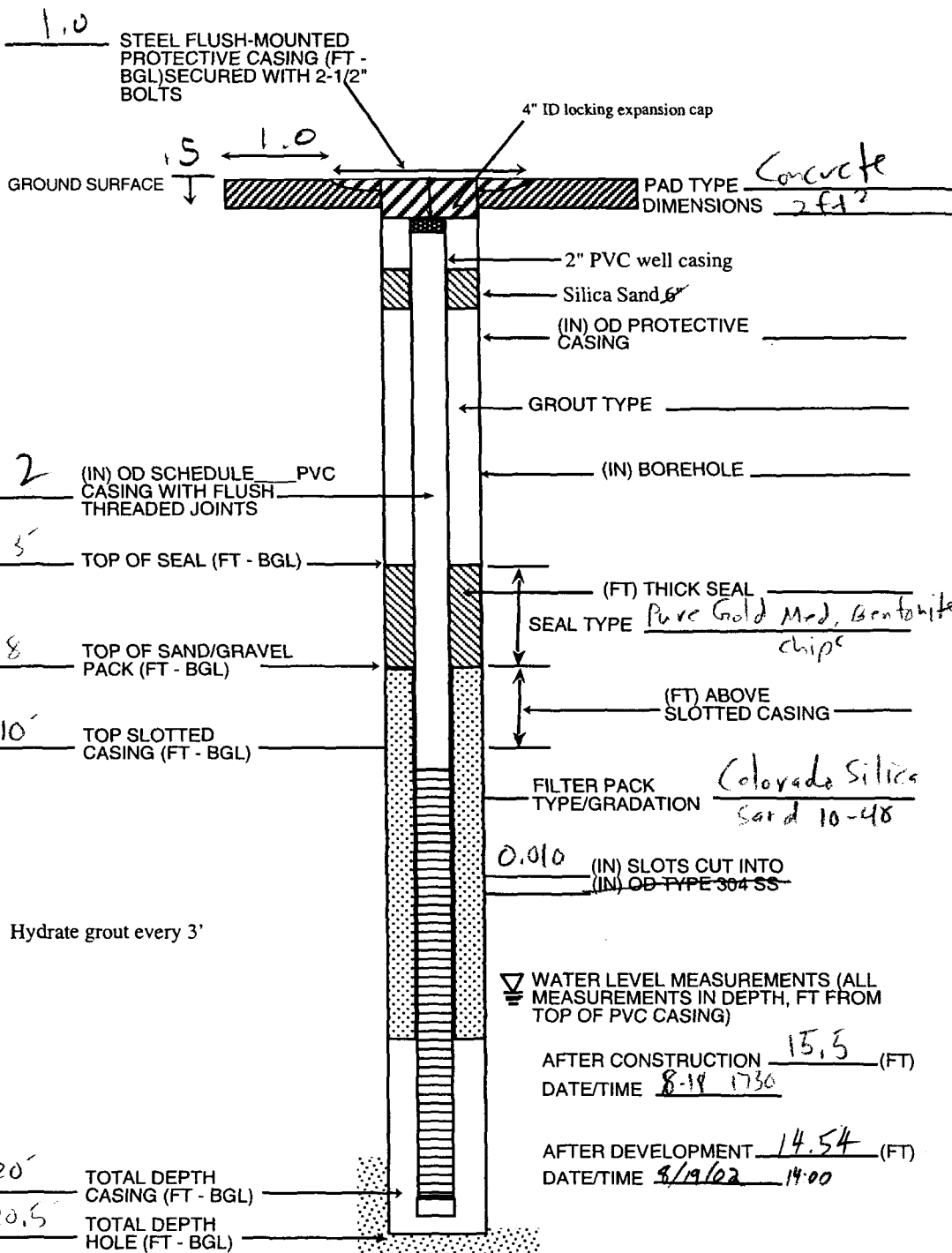
73.46

WELL SAMPLED?

YES NO

QUANTITY MATERIALS USED:

Bentonite(lbs)	160
Sand(lbs)	400
Grout(lbs)	/
Screen(ft)	10
Blank Casing(ft)	10
Bottom Cap(ea)	1
Top Cap(ea)	1
Flush Mount	1
Protective Casing (ft)	1
Lock	1
MISC.:	



NOTES

SOIL BORING LOG

PROJECT NO.:

BORING NO.:

SHEET

88-9

18 OF 21

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is.

CLIENT USACE - Alaska

GEOLOGIST Melisa Connell

DATE 8/19/02

WEATHER cloudy

AK STATE PLANE
COORDINATES

96154.1887

98044.5023

ELEVATION
DATUM

145L

DRILLING
METHOD HSA

BORING
SIZE 8 1/4

HAMMER
DROP (IN/LBS)

30/360

RIG TYPE CME 45

DRILLER/
COMPANY Discovery

SAMPLES

SAMPLE
TYPE Grab

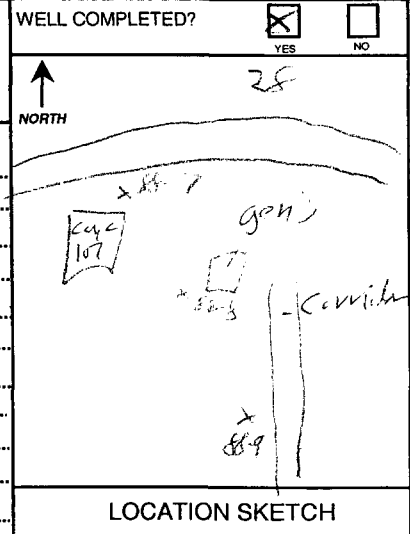
SAMPLER
TYPE/DIAMETER 2" SS

TOTAL
DEPTH (FT) 25

DEPTH TO
SWL (FT) 20.0

TOP OF HOLE
ELEVATION 81.79

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
#1					SP				Fill - brown silty, crushed rock Angular 3"-5" dia.	
#2										
#3										
#4	27				SP		1255	11	Dry, crushed rock. No odor/staining	
#5	22								PID =	
#6	24				SP		1305	11	Crushed Rock, Dry, No odor/staining	
#7	30								PID =	
#8	24				SP		1310	11	Crushed Rock + Sand No odor/stain.	
#9	24								Q2NE88SB017 ms/mjd PID = 2876*	
#10	17									
#11	11									
#12	17				SP		1315	11	Crushed Rock + Sand No odor/stain	
#13	14								PID =	
#14	10									
#15	8									
#16	7				SP		1325	11	- Geotech 11-13 Q2NE88SB042	
#17	4								No Recovery 12-14 - Rock in cap	
#18	5									
#19	7									
#20	16						1330	11	No Recovery, No odor/stain	
#21	36								Rock in cap	
#22	19									
#23	12									
#24	12						1340	11	- Moist slough on top of Dry crushed rock	
#25	8				SP		1340	11	- No Recovery thin Perched layer? thawed?	
#26	6									
#27	8									
#28	5									
#29	16				SP		1350	11	Crushed Rock + Sand No odor/stain	
#30	14								PID =	
#31	13									
#32	11									
#33	10									
#34	9									
#35	7									
#36	7						1355	11	- Moist Sand + crushed rock	
#37	17								Q2NE88SB018 PID =	
#38	14									
#39	18								Continued Next Page	



SOIL BORING LOG

PROJECT NO.: 8574-170-260120

BORING NO.: 88-9


SHEET
2 OF 2

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST Melanie Connell

DATE 8/19/02 WEATHER Seas. 1 AK STATE PLANE COORDINATES (Northing) (Easting) ELEVATION DATUM

DRILLING METHOD BORING SIZE See pg. 1 HAMMER DROP (IN/LBS) RIG TYPE DRILLER/COMPANY Discovery

SAMPLES SAMPLE TYPE SAMPLER TYPE/DIAMETER TOTAL DEPTH (FT) DEPTH TO SWL (FT) TOP OF HOLE ELEVATION

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
		% GRAVEL	% SAND	% FINES			MAX SIZE (IN)	TIME		
23-21									88-9 Continued	 NORTH See pg. 1
24-22										
25-23									X Bottom @ 25'	
26-24									D _T 25'	
27-25										
28-26										
29-27										
30-28										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										

LOCATION SKETCH



MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-9

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

OG McLean

DATE 8/19/02

WEATHER

cloudy

LOCATION COORDINATES

96154.1887

98044.5023

ELEVATION DATUM

MSL

DRILLING METHOD

Hollow-Stem Auger

BORING SIZE

8 1/4

RIG TYPE

HSA

DRILLER/COMPANY

Discovery

(MSL/Other)

SURVEYED ELEVATIONS

GROUND SURFACE

81.79

TOP OF PROTECTIVE CASING

81.79

TOP OF PVC CASING

80.99

WELL SAMPLED?

☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite(lbs) 250

Sand(lbs) 450

Grout(lbs) —

Screen(ft) 10

Blank Casing(ft) 15

Bottom Cap(ea) 1

Top Cap(ea) 1

Flush Mount 1

Protective Casing (ft) 1

Lock —

MISC.: —

NOTES

1.0 STEEL FLUSH-MOUNTED PROTECTIVE CASING (FT - BGL) SECURED WITH 2-1/2" BOLTS

GROUND SURFACE 1.0 4" ID locking expansion cap

PAD TYPE Concrete
DIMENSIONS 2 ft²

2" PVC well casing

Silica Sand

(IN) OD PROTECTIVE CASING

GROUT TYPE

(IN) BOREHOLE 8 1/4

(IN) OD SCHEDULE PVC CASING WITH FLUSH THREADED JOINTS

TOP OF SEAL (FT - BGL)

(FT) THICK SEAL

SEAL TYPE PVC gold med bentonite chips

TOP OF SAND/GRAVEL PACK (FT - BGL)

(FT) ABOVE SLOTTED CASING

TOP SLOTTED CASING (FT - BGL)

FILTER PACK TYPE/GRADATION Colovado Silica Sand 10-40

0.010 (IN) SLOTS CUT INTO (IN) OD TYPE 304 SS

Hydrate grout every 3'

WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS IN DEPTH, FT FROM TOP OF PVC CASING)

AFTER CONSTRUCTION (FT)

DATE/TIME

AFTER DEVELOPMENT 20.24 (FT)

DATE/TIME 8/20/02 16:50

TOTAL DEPTH CASING (FT - BGL)

TOTAL DEPTH HOLE (FT - BGL)

SOIL BORING LOG

PROJECT NO.: 180574.260120 BORING NO.: 88-10 SHEET 2 OF 2

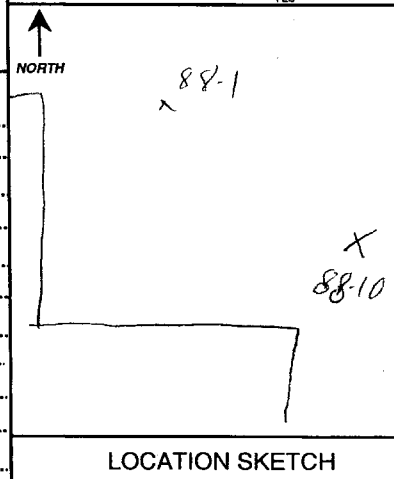
PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST McLean O'Connell

DATE 8/19/02 WEATHER Cloudy AK STATE PLANE COORDINATES 96293.0099 (Northing) 97970.2989 (Easting) ELEVATION DATUM MSL

DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN/LBS) 30/360 RIG TYPE CME 45 DRILLER/COMPANY Discovery

SAMPLES SAMPLE TYPE Grab SAMPLER TYPE/DIAMETER 2" SS TOTAL DEPTH (FT) 27.5 DEPTH TO SWL (FT) 25.0 TOP OF HOLE ELEVATION 86.86

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
1					SP		1535		Fill Rock & Gravel	
2										
3										
4	19				SP		1550		Crushed Rock & Sand, No odor/stain	
5	17								Greasy Brown	
6	12								PID=	
7	14									
8	18				SP		1600		Crushed Rock & Sand, No odor/stain	
9	17								Greasy Brown	
10	16								PID=	
11	16									
12	12				SP		1610		Crushed Rock & Sand, No odor/stain	
13	12								Greasy Brown	
14	10								PID=	
15	12									
16	11				SP		1615		Crushed Rock & Sand, No odor/stain	
17	11								Greasy Brown	
18	8								PID=	
19	9				SM		1620		Moist, Fine Sand with some iron staining, No odor/	
20	6								loose @ 13", dense @ 14" dense layer = Grey with iron filings	
21	9								PID=	
22	8									
23	8									
24	8				SM		1625		Moist @ 15" dry @ 16" -	
25	8								Fine Sand, dense with crushed rock @ 16" -	
26	8								No odor	
27	15								Greasy Brown	
28	11								PID=	
29	10									
30	10									
31	16									
32	15									
33	11								No Retrieval - Rock	
34	10									
35	10									
36	16									
37	15								Spun Refused @ 18.5'	
38	10								No Recovery - Rock	
39	11									
40	9									
41	12								No Retrieval, odor on end of spoon mud on	
42	10								end of spoon, water level meter has no readings	
43									Continued on next page	





MONTGOMERY WATSON

WELL CONSTRUCTION LOG

PROJECT NO.:

1850574.260120

WELL NO.:

88-10

SHEET

1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Island

CLIENT USACE

GEOLOGIST

J. Connel
McLean

DATE 8/19/02

WEATHER

Partly cloudy

LOCATION
COORDINATES

96293.0099

97970.2989

ELEVATION
DATUM

145L

DRILLING
METHOD Hollow-Stem AugerBORING
SIZE

8 1/4

RIG
TYPE

HSA

(Northing)

(Easting)

DRILLER/
COMPANY

Discovery

(MSL/Other)

SURVEYED
ELEVATIONSGROUND
SURFACE

86.86

TOP OF PROTECTIVE
CASING

86.86

TOP OF PVC
CASING

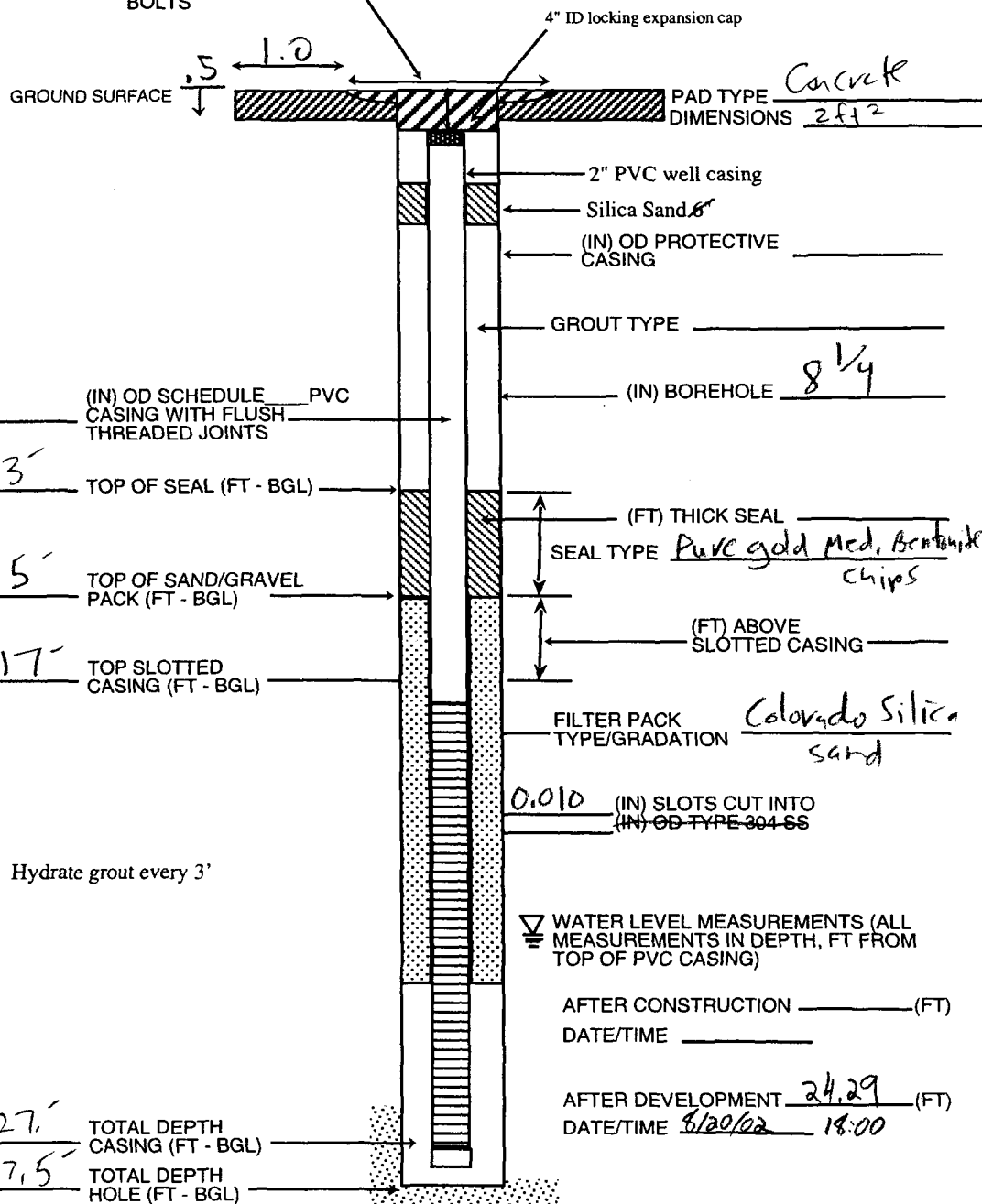
86.46

WELL SAMPLED? ☒ YES ☐ NO

QUANTITY MATERIALS USED:

Bentonite (lbs)	200
Sand (lbs)	400
Grout (lbs)	—
Screen (ft)	10
Blank Casing (ft)	7
Bottom Cap (ea)	1
Top Cap (ea)	1
Flush Mount	1
Protective Casing (ft)	1
Lock	1
MISC.:	—

1.0 STEEL FLUSH-MOUNTED
PROTECTIVE CASING (FT -
BGL) SECURED WITH 2-1/2"
BOLTS



NOTES

SOIL BORING LOG

PROJECT
NO.: 18574.260126

BORING NO.:
88-11

SHEET
1 OF

PROJECT Phase III R1 SITE Northeast Cape, St. Lawrence Is CLIENT USACE - Alaska GEOLOGIST *OCarr*
DATE 8/17/02 WEATHER *cloudy, winds* AK STATE PLANE COORDINATES 96241.8412 98320.2355 ELEVATION DATUM MSL
DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN/LBS) 30/360 RIG TYPE CME 15 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE Gravel SAMPLER TYPE/DIAMETER 2" SS TOTAL DEPTH (FT) 14' DEPTH TO SWL (FT) Frozen TOP OF HOLE ELEVATION 66.84

DEPTH (FEET)	GRAIN SIZE					SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	BLOWS (6 IN.)	% GRAVEL	% SAND	% FINES	MAX SIZE (IN.)			TIME	INTERVAL		
0								1600		Fill - Rock & Gravel	<p>LOCATION SKETCH</p>
1						SP					
2											
3	4					PT		1820	↑	Peat - Frozen, Very hard Dark Brown Slight odor, PID =	
4	6									02NE88SB021	
5	4					PT		1830	↑	Frozen Peat Slight odor PID =	
6	9									Ice x-stals in spoon	
7	10										
8	24							1840	↑	No Retrieval Rock? PID =	
9	21					SM		1850	↓	02NE88SB022 grey, Fine grained, sandy, Frozen with ice x-stals PID =	
10	15										
11	21					SM		1905	↑	greyish-brown Frozen with ice x-stals PID =	
12	16										
13	19										
14	25					SM			↓	Frozen with ice x-stals PID =	
15	27										
16	13										
17	17										
18	11										
19											
20											
21											

Bottom SB 88-11

DT #10

SOIL BORING LOG

PROJECT
NO.: 18574.260

BORING NO.:
SB 88-12

SHEET
1 OF

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST McLean
DATE 8/10/02 WEATHER Partly cloudy AK STATE PLANE COORDINATES 96398.0750 98329.4776 ELEVATION DATUM 175L
DRILLING METHOD H54 BORING SIZE 84 HAMMER DROP (IN/LBS) 30/36 RIG TYPE CME45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE Gmb SAMPLER TYPE/DIAMETER 2.55 TOTAL DEPTH (FT) 14.0 DEPTH TO SWL (FT) 13.0 TOP OF HOLE ELEVATION 69.71

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED?	
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		YES	NO
0					SP		1235		Fill - Large rocks 5"-7" + gravel	<div>Site 28</div> <div><div>NORTH</div><div><div>X</div><div>MAJ</div><div>88-2</div></div><div><div>SB 88-12</div><div>X</div></div><div><div>X</div><div>MAJ</div><div>88-1</div></div></div> <div>LOCATION SKETCH</div>	
1											
2	5				SM		1245		Crushed Rock - Brown/Grey fine sand No odor / Some iron staining PID = 65.0		
3	6				PT		1250		Peat @ 4" - with organics Brown = No odor / stain in log Grey = Very fine, dense sand/silt Brown = Peat w/ organics		
4	4				SM						
5	6				PT						
6	10										
7	8				SM		1255		No odor / stain FROZEN Very fine, dense sand/silt Grey, solid 2' core PID = 48.0		
8	12										
9	12				SM		1266		Solid Grey, FROZEN @ 8'-9" No odor, stain PID = 65.0		
10	19				SP				Crushed rock coarse sand @ 10' unfrozen		
11	11				SP		1305		Crushed Rock + coarse sand No odor / stain PID = 53.0		
12	7								Moist @ 12 Grey sand + Crushed Rock		
13	10						1310		No Recovery - Rock		
14	8								Filled w/ portlandite Frozen from 6'-9" DT 14.0		
15											
16									Sample 02NE 8853 23 = #2 4-6.0'		
17									24 = #5 10.0-12.0'		
18											
19											
20											
21											

Sample 02 NE 88 SB 23 = 42 4-6.0'
24 = 45 10.0-12.0'

18574-260120

**MONTGOMERY
WATSON**
Anchorage, Alaska

SOIL BORING LOG

PROJECT
NO.: SB 88-13

BORING NO.:
88-13

SHEET
1 OF

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska

GEOLOGIST O'Connell, McLean

DATE 8/20/02

WEATHER Partly Cloudy

AK STATE PLANE
COORDINATES

96341.182
(Northing)

98303.253
(Easting)

ELEVATION
DATUM

MSL

DRILLING
METHOD H54

BORING
SIZE 8 1/4

HAMMER
DROP (IN LBS)

30/360

RIG TYPE CHE45

DRILLER/
COMPANY Discovery

SAMPLES 2

SAMPLE
TYPE Grs

SAMPLER
TYPE/DIAMETER 2" SS

TOTAL
DEPTH (FT) 16'

DEPTH TO
SWL (FT) Frozen

TOP OF HOLE
ELEVATION 69.51

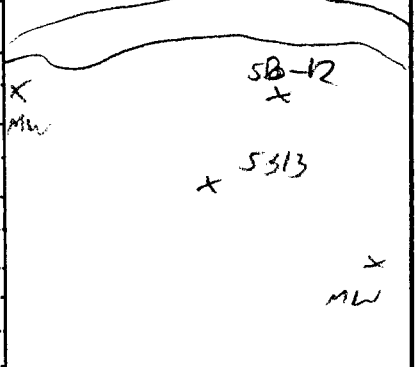
DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0										
1										
2	7				SP		1405	↑	Crushed rock + sand - odor	
3	11								No staining	
4	8				PT				peat @ 4 ft with organics	
5	2				PT		1410	↑	peat ends	
6	5				SM				Frozen dark grey w/ odor	
7	12								PID = 35.7	
8	10									
9	5				SM		1415	↑	Frozen dark grey - odor	
10	4				PT				unfrozen peat PT - odor	
11	3									
12	5				SM		1420	↑	Fine grey frozen silt/clay no odor	
13	4									
14	9								no odor	
15	9								Frozen @ 18	
16	3				SM		1425	↑	Frozen solid no odor	
17	7								Fine grey silt/sand	
18	4								PID = 55.1	
19	7									
20	7				SM		1430	↑	Frozen with ice no odor	
21	7								Fine grey sand/silt	
22	11									
23	3				SM		1435	↑	Frozen fine grey sand/silt - PID = 11.2	
24	7								no odor	
25	7				SM				Frozen	
26	7								DT 16.0	
27									End of Boring	
28										
29										
30										
31										
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34										
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36										
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99										
100										

WELL COMPLETED?

YES ☐

NO ☒

NORTH
↑



LOCATION SKETCH

Sample ORNE88SB 25 = #3 6.0-8.0
26 = #7 14.0-16.0

SOIL BORING LOG

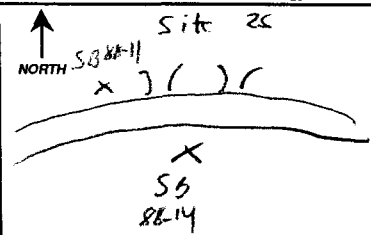
PROJECT NO.: 18574.269

BORING NO.: 88-14

SHEET 1 OF 1

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST J. Cannel - McLean
DATE 8/29/02 WEATHER Partly cloudy AK STATE PLANE COORDINATES 96251.2105 (Northing) 98292.9032 (Easting) ELEVATION DATUM MSL
DRILLING METHOD HSA BORING SIZE 8" HAMMER DROP (IN/LBS) 30-360 RIG TYPE CME 45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE Gravels SAMPLER TYPE/DIAMETER 2-SS TOTAL DEPTH (FT) 14' DEPTH TO SWL (FT) 14.0 TOP OF HOLE ELEVATION (7.1)

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE				SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
		% GRAVEL	% SAND	% FINES	MAX SIZE (IN)			TIME	INTERVAL		
0											
1											
2	6					SO		1509	↑	Fill / odor	
3	7									PID = 6080	
4	3					PT			↓	Peat w/odor	
5	3					PT		1510	↑	Peat - odor	
6	4									PID = 788	
7	7					PT		1515	↑	Peat - slight odor	
8	6					SM			↓	Dense Dark grey Fine sand/silt - odor	
9	3							1520	↑		
10	5					SA			↓	Dense grey Fine sand/silt - odor	
11	5								↓	PID = 172	
12	4					SA		1525	↑	Dense grey Fine sand/silt - odor	
13	3								↓	PID = 508	
14	2					SA		1530	↑	Dense grey-brown Fine sand + Peat w/odor	
15	1								↓	Shear on Spars	
16	5								↓	PID = 150	
17										end of boring DT 14.0	
18											
19											
20											
21											



Sample 02NE88 SB 27 = #1 2.0-4.0
" " 28 = #6 12.0-14.0

SOIL BORING LOG

PROJECT NO.: 18574.260120 8-15 BORING NO.: 8-15 SHEET 1 OF 1

PROJECT Phase III R1 SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST O'Connell, McLean
DATE 8/20/02 WEATHER Partly cloudy AK STATE PLANE COORDINATES 96253.7354 98224.4465 ELEVATION DATUM MSL
DRILLING METHOD HSA BORING SIZE 8 1/4 HAMMER DROP (IN/LBS) 30/360 RIG TYPE CME 45 DRILLER/COMPANY Discovery
SAMPLES 2 SAMPLE TYPE Gvmb SAMPLER TYPE/DIAMETER 2 SS TOTAL DEPTH (FT) 22' DEPTH TO SWL (FT) 13.0 TOP OF HOLE ELEVATION 71.21

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP		1705		Rocky fill 3'-5'	
1										
2										
3										
4	11				SP		1715	↑	Crushed rock + sand Fine @ 5' No odor/stain PID=120	
5	8							↓	Coarse sand @ 6'	
6	25				SP		1720	↑	No Recovery, slight odor on spoon	
7	25							↓		
8	17						1725	↑	No Recovery, slight odor on spoon	
9	6							↓		
10	5				SM		1730	↑	Moist, sticky Very fine sand/silt grey No odor PID=2770	
11	3							↓		
12	5							↓		
13	4				SM		1735	↑	Very fine, dense grey silt + sand No odor Some iron staining PID=133	
14	3							↓		
15	7							↓		
16	6						1740	↑	Fine, silt + sand/grey No odor Some rocks PID=	
17	6							↓		
18	7							↓		
19	25						1745	↑	Crumbly @ 16' No Recovery - Rock	
20	27							↓		
21	22							↓		
22	13						1750	↑	Very fine, dense grey silt + sand No odor Some Rock PID=	
23	7							↓		
24	9							↓		
25	12							↓		
26	10							↓		
27	7						1800	↑	Very fine dense grey silt/sand No odor PID=	
28	6							↓		
29	6							↓		
30	7							↓		
31	7							↓	Water found @ 13' - end of boring PID=	

Sample 01 NE 88 SB 29 = #2
30 = #3

SOIL BORING LOG

PROJECT

NO.: 18574.260120

BORING NO.: 88-16

SHEET

1 OF

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is

CLIENT USACE - Alaska

GEOLOGIST ~~McLean~~ ^{McNeil}

DATE 8/20/02

WEATHER Partly cloudy

AK STATE PLANE
COORDINATES

96260.0342

98182.7094

ELEVATION
DATUM

MSL

DRILLING
METHOD

HSA

BORING
SIZE

8 1/4

HAMMER
DROP (IN/LBS)

30/360

RIG TYPE

CME 45

DRILLER/
COMPANY

Discovery

SAMPLES

SAMPLE
TYPE

Gravel

SAMPLER
TYPE/DIAMETER

2" SS

TOTAL
DEPTH (FT)

14.0

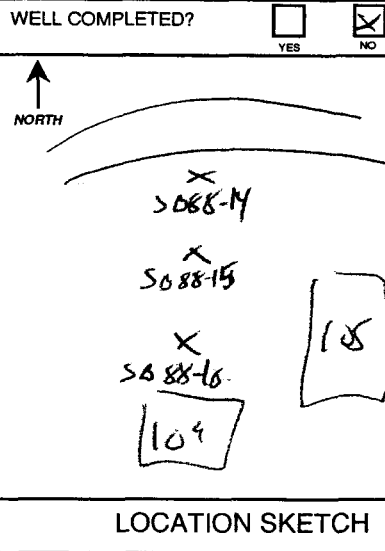
DEPTH TO
SWL (FT)

12.0

TOP OF HOLE
ELEVATION

72.95

DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	BLOWS (6 IN.)	% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
0					SP				Rocky Fill 3'-5'	
1										
2										
3										
4	12				SP		1845	1	crushed rock & Fill, odor Some Brown sand PID = 655	
5	12									
6	11									
7	12									
8	9				SP		1850	2	Crushed Rock & sand odor PID = 1558	
9	8									
10	11									
11	12									
12	13									
13	11				SP		1908	1	Geotext - 02NE88 SB 3043 odor, crushed rock & coarse sand odor = PID = 1142	
14	9									
15	8				SP		1905	2	odor, crushed rock, coarse grey sand PID = 2672	
16	14									
17	9				SP					
18	13									
19	10									
20	8									
21	18									
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
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46										
47										
48										
49										
50										
51										
52										
53										
54										
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56										
57										
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61										
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68										
69										
70										
71										
72										
73										
74										
75										
76										
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79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										
93										
94										
95										
96										
97										
98										
99										
100										



Sample 02NE88 SB 31 = #2 6.0-8.0
02 = #4 10.0-12.0

D_T 14.0

18374.260120

SOIL BORING LOG

PROJECT
NO.:

BORING NO.:
88-17

SHEET
1 OF 1

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is.

CLIENT USACE - Alaska

GEOLOGIST *James McLean*

DATE 8/1/02

WEATHER *cloudy*

AK STATE PLANE
COORDINATES 96171.5812 98270.0420

ELEVATION
DATUM MSL

DRILLING
METHOD HSA

BORING
SIZE 8 1/4

HAMMER
DROP (IN/LBS) 30/166

RIG TYPE CME 45

DRILLER/
COMPANY Discovery

SAMPLES 2

SAMPLE
TYPE *Gravel*

SAMPLER
TYPE/DIAMETER 2" SS

TOTAL
DEPTH (FT) 14.0

DEPTH TO
SWL (FT) 13.0

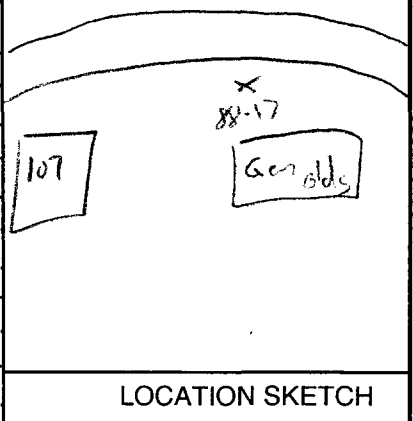
TOP OF HOLE
ELEVATION 19.65

DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	GRAPHIC LOG	SAMPLE	
	BLOWS (6 IN.)	% GRAVEL	% SAND	% FINES			TIME	INTERVAL
0								
1								
2	13						1435	
3	50							
4	X						1440	
5	22							
6	27						1450	
7	9							
8	15							
9	9							
10	5				SM		1500	
11	12							
12	6							
13	18				SP		1505	
14	9							
15	8							
16	10							
17	8							
18	12				SA		1510	
19	15							
20	16							
21	14							

SOIL DESCRIPTION (ASTM 2488)

WELL COMPLETED? ☐ YES ☒ NO

↑ Site 16
NORTH



LOCATION SKETCH

No Recovery, slight odor on Spm

No Recovery

No Recovery

Very strong odor
Dense grey sand/silt

PID = 9999+

Crushed rock - grey, odor

PID = 2315

Crushed rock + sand, odor

PID = 9999+

D_T sample 02 NE 885053 = ①
034 = ③

8.0-10.0

12.0-14.0

CONEX B234 (FD)

18574.260120

SOIL BORING LOG

PROJECT
NO.:

BORING NO.:
88-18

SHEET
1 OF

PROJECT Phase III R1

SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska

GEOLOGIST *McLean*

DATE 8/21/02

WEATHER *cloudy*

AK STATE PLANE
COORDINATES

96070.5355

98228.2167

ELEVATION
DATUM

MSL

DRILLING
METHOD

HSA

BORING
SIZE

8 1/4

HAMMER
DROP (IN LBS)

30/360

RIG TYPE

CME 45

DRILLER/
COMPANY

Discovery

SAMPLES

2

SAMPLE
TYPE

Gwb

SAMPLER
TYPE/DIAMETER

2 SS

TOTAL
DEPTH (FT)

141

DEPTH TO
SWL (FT)

13.0

TOP OF HOLE
ELEVATION

71.93

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE	
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL
0							1530	
1								
2	8				SA		1540	
3	13							
4	15				SM		1545	
5	15							
6	9							
7	11							
8	16				SP		1550	
9	16							
10	13							
11	16							
12	10				SW		1555	
13	15							
14	21							
15	15							
16	8				SM		1655	
17	4							
18	5							
19	6							
20	4							
21	11							

SOIL DESCRIPTION (ASTM 2488)

WELL COMPLETED? ☐ YES ☒ NO

NORTH

MW 88-7

SB 88-17

107

SB 88-18

LOCATION SKETCH

Slight odor, Brown sand & crushed rock

PID = 225

Brown sand, crushed rock

Slight odor

PID = 253

Odor, crushed rock & grey sand

PID = 2913

Geotech - No recovery

grey sand, odor, coarse

PID = 4903

Geotech - 02NE88SB044

moist, grey fine sand & silt

Strong odor: PID = 4113

No recovery, Strong odor on spoon

Sample 02NE88SB035 = #4

036 = #5

02NE88SB335 (QA/MS/MSD)

02NE88SB236 (FD)

SB 22-1

SOIL BORING LOG

PROJECT
NO.: 18574.2607

BORING NO.:
88-19

SHEET
1 OF 2

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is

CLIENT USACE - Alaska

GEOLOGIST O'Connell, McLean

DATE 8/22/02

WEATHER clouds

AK STATE PLANE
COORDINATES

96206.4925

97683.0309

ELEVATION
DATUM

MSL

DRILLING
METHOD HSA

BORING
SIZE 8 1/4

HAMMER
DROP (IN/LBS)

30/360

RIG TYPE CME 45

DRILLER/
COMPANY Discovery

SAMPLES 2

SAMPLE
TYPE Amb

SAMPLER
TYPE/DIAMETER 2" SS

TOTAL
DEPTH (FT) 32

DEPTH TO
SWL (FT) -

TOP OF HOLE
ELEVATION 97.75

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE	
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL
0					SP		1210	
1								
2								
3								
4								
5								
6								
7								
8	10				SP		1225	
9	21							
10	18							
11	41							
12	38				SP		1250	
13	29							
14	17							
15	14							
16	46				SP		1235	
17	16							
18	47							
19	28							
20	12				SP		1250	
21	14							
22	13							
23	19							
24	13				SP		1255	
25	15							
26	15							
27	10							
28	11				SP		1305	
29	11							
30	13							
31	15							
32	18				SP		1315	
33	26							
34	14							

SOIL DESCRIPTION

(ASTM 2488)

WELL COMPLETED? ☐ YES ☒ NO

NORTH
↑

Rotating Auger

infilled
X SB 8820
X SB 88-19

50 fids

LOCATION SKETCH

Rocky Fill

Crushed Rock + Sand No odor/stain
Brownish grey

PIED = 0

Crushed Rock + Sand No odor/stain
Brownish grey

PIED = 0

Crushed Rock, coarse grey sand, Moist/Wet
No odor/stain

PIED = 0

Crushed rock coarse sand
No odor/stain

PIED = 0

Crushed rock coarse sand No odor/stain

PIED = 0

Crushed rock + sand No odor/stain

PIED = 0

Crushed Rock, Brown sand, No odor/stain

continued ↓ ↓

SOIL BORING LOG

PROJECT NO.:
18574.260120

BORING NO.:
88-19

SHEET
2 OF 2

PROJECT Phase III RI SITE Northeast Cape, St. Lawrence Is. CLIENT USACE - Alaska GEOLOGIST ~~McLean~~ O'Connor

DATE 8/ /02 WEATHER AK STATE PLANE COORDINATES ELEVATION DATUM

DRILLING METHOD BORING SIZE HAMMER DROP (IN/LBS) RIG TYPE DRILLER/ COMPANY Discovery

SAMPLES SAMPLE TYPE SAMPLER TYPE/DIAMETER TOTAL DEPTH (FT) DEPTH TO SWL (FT) TOP OF HOLE ELEVATION

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED? YES <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/>
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL		
21									Continued 5B 88-19	
22	10						1325	↑	No Recovery	
23	12									
24	29				SP		1340	↑	Crushed rock, No clay/stain!	
25	11									
26	6								Fine Brown Sand P.D. = 0	
27	3				SW		1350	↑	Fine Brown Sand	
28	5									
29	5									
30	10				S.M.		1400	↑	Dense grey Sand/silt + MORT Silt/Sand	
31	13								Q2NE88SB037/237(FD) P.D. ~ 0	
32	23								Crushed Rock + Sand	
33	30									
34	43				SP		1410	↑	Crushed Rock + Sand	
35	20								Q2NE88SB038/338(OA) P.D. = 0	
36	25									
37	27									
38									Auger Refusal @ 32'	
39										
40										
41										
42										

LOCATION SKETCH

Sample Q2NE88SB037 = #10 + 237 FD
38 = #11 337 FH

18574.260/20 SB 88-2

MONTGOMERY
WATSON
Anchorage, Alaska

SOIL BORING LOG

PROJECT
NO.:BORING NO.:
88-20SHEET
1 OF 2

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is

CLIENT USACE - Alaska

GEOLOGIST ~~McLean~~ *Conrell*

DATE 8/21/02

WEATHER

AK STATE PLANE
COORDINATES 96233.7446 97695.3823
(Northing) (Easting)ELEVATION
DATUM 145LDRILLING
METHOD

HSA

BORING
SIZE 8 1/4HAMMER
DROP (IN LBS)

30/360

RIG TYPE CHE 45

DRILLER/
COMPANY Discovery

SAMPLES

2

SAMPLE
TYPE

Gravel

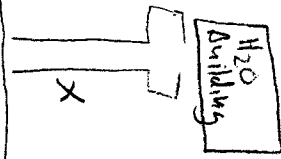
SAMPLER
TYPE/DIAMETER 2" SSTOTAL
DEPTH (FT) 36DEPTH TO
SWL (FT)TOP OF HOLE
ELEVATION 98.14

DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		SOIL DESCRIPTION (ASTM 2488)
		% GRAVEL	% SAND	% FINES			TIME	INTERVAL	
0					SP		1740		Fill Rock + Gravel
1									
2									
3									
4									
5									
6									
7									
8	26						1810	↑	No Recovery
9	50								
10	X								
11	X								
12	14				SP		1820	↑	Crushed rock No odor, Grey-Brown PID = 0
13	18								
14	16								
15	12								
16	16				SP		1825	↑	Crushed rock + sand No odor/stain Grey-Brown PID = 0
17	14								
18	15								
19	12								
20	22				SP		1835	↑	Crushed Rock No odor/stain Tan-Grey PID = 0
21	11								
22	14								
23	13								
24	9				SP		1845	↑	Crushed Rock No odor/stain PID = 0
25	22								
26	16								
27	18								
28	28						1855	↑	No Recovery
29	50								
30	X								
31	X								
32	50						1905	↑	No Recovery
33	X								
34	X								
35									Continued ↓ ↓

WELL COMPLETED?

YES ☒ NO ☒NORTH
↑

Boring Alley



LOCATION SKETCH

SOIL BORING LOG

PROJECT NO.:

BORING NO.:

SHEET

88-20

2 OF 2

PROJECT Phase III RI

SITE Northeast Cape, St. Lawrence Is.

CLIENT USACE - Alaska

GEOLOGIST McLean, J. C. (J. C. McLean)

DATE 8/2/02

WEATHER

AK STATE PLANE
COORDINATES

ELEVATION
DATUM

DRILLING
METHOD

BORING
SIZE

HAMMER
DROP (IN/LBS)

RIG TYPE

DRILLER/
COMPANY Discovery

# SAMPLES		SAMPLE TYPE		SAMPLER TYPE/DIAMETER		TOTAL DEPTH (FT)		DEPTH TO SWL (FT)		TOP OF HOLE ELEVATION	
DEPTH (FEET)	BLOWS (6 IN.)	GRAIN SIZE			SOIL CLASS	GRAPHIC LOG	SAMPLE		WELL COMPLETED?		
		% GRAVEL	% SAND	% FINES			MAX SIZE (IN)	TIME	INTERVAL	YES	NO
SOIL DESCRIPTION (ASTM 2488)											
21										<div>NORTH</div> <div>see pg. 1</div> <div>LOCATION SKETCH</div>	
22	9				SP	1915	↓	Continued - No Recovery			
23	13						↑	Crushed rock - PID=0 No clay/stain			
24	10				SP	1925	↓	Crushed rock, Brown Sand No clay			
25	6						↑	PID=0			
26	11				SU	1935	↓	Fine grey sand with some iron staining No clay, crushed rock			
27	21						↓	PID=0			
28	50				SP	1950	↓	Crushed rock, Brown Sand PID=0			
29	49						↓	End of log 10-24-02			
30	50					1030	↓	No Recovery	10-24-02 ↓		
31	X						↓				
32	50					1045	↓	No Recovery			
33	X						↓				
34	50					1055	↓	No Recovery			
35	X						↓				
36	X					1115	↓	Augur Refused @ 36' on rock			
37								Sample 02 NES8 SB039 = #7 + 239 (FD) 040 = #8 340 (DA)			
38											
39											
40											
41											
42											

**WATER SAMPLING
FIELD NOTE FORM**

SITE: <u>Northeast Cape</u>	Sample ID #: <u>MW 88-1</u>	DATE: <u>8/15/02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DQ</u>	TIME Start: <u>1030</u> End: <u>1230</u>
WEATHER: <u>SKY: P. Cloudy</u>	PRECIP: <u>0</u>	WIND: <u>5</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

 Well Condition: NEW

 Casing Ht. Above Ground: N/A FLUSH (FT.) Diameter: 2" in.

 Well Depth: 25.90 * ft. BTOC (Meas./Rec. Static Water Level: 21.78 ft. BTOC

 Casing (C) = X Well Outside Protective

* Prior to casing cut and flush must installation

 ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3 purge = 2 2 gal .67 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1030</u>	<u>7.9</u>	<u>283.1</u>	<u>5.98</u>
Bailer	<u>1</u>	<u>1032</u>	<u>4.8</u>	<u>231.1</u>	<u>6.32</u>
	<u>21</u>	<u>1040</u>	<u>4.7</u>	<u>228.6</u>	<u>6.189</u>
	<u>NO MORE WATER</u>	<u>1230</u>	<u>DRY- Sample Directly Temperature!</u>		
Ded. Pump					
Suction Pump					
<u>Recovery Pump</u>					
(other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: <u> </u>	Width: <u> </u>	Velocity: <u> </u>	Flow: <u> </u> cfs (Est./Meas.)
Temp: <u> </u>	E.C: * <u> </u>	pH: * <u> </u>	Redox (eH): <u> </u>
Temp: <u> </u>	E.C: * <u> </u>	pH: * <u> </u>	Redox (eH): <u> </u>

SAMPLE COLLECTION

Method: <u> </u>		Appearance: <u> </u>	
Analyte	Time	Analyte	Time
Sulfate EPA300	<u> </u>		
Alkalinity EPA300	<u> </u>		
DTX S100200D	<u> </u>		
GRO AK101	<u> </u>		
DRO/			
RROAK102/103	<u> </u>		
Methane/Ethane/			
Ethene RSK175	<u> </u>		
		PRODUCT	
		Viscosity <u> </u>	
		Density <u> </u>	
		Interfacial Tension <u> </u>	

 COMMENTS: QA/QC Label ID: Split Dupl. Trip Blank Other

 ** METALS FIELD FILTERED: . PHOTO TAKEN #

 Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

 Decon completed: by DQ date 8/15/02

REMARKS:

**WATER SAMPLING
FIELD NOTE FORM**

SITE: <u>Northeast Cape</u>	Sample ID #: <u>mw 88-1</u>	DATE: <u>8/16/02</u>
SAMPLE TYPE: <u>GRAB</u>	FIELD CREW: <u>DP</u>	TIME Start: <u>1310</u> End: <u>1600</u>
WEATHER: SKY: _____	PRECIP: <u>0</u>	WIND: <u>5</u> Air Temp. <u>50</u>

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: <u>New</u>					
Casing Ht. Above Ground: <u>NA Flush*</u> (FT.) Diameter: <u>2</u> in.					
Well Depth: <u>26.48</u> ft. BTOC (Meas./Rec. Static Water Level: <u>21.94</u> ft. BTOC					
Casing (C) = <u>X</u> Well _____ Outside Protective					
* Prior to casing (PVC) cut and flush install -					
ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) = $ <u>$3 \times 2.25 \text{ gal} = 75 \text{ gal.}$</u>					

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD					
<u>Bailer</u>	<u>0</u>	<u>1320</u>	<u>6.2</u>	<u>386.8</u>	<u>6.07</u>
	<u>1 dry</u>	<u>1330</u>	<u>6.0</u>	<u>387.5</u>	<u>6.03</u>
	<u>1 + dry</u>	<u>1400</u>	<u>6.0</u>	<u>207.4</u>	<u>6.89</u>
Ded. Pump					
Suction Pump					
(other)					

* TEMP. CORRECTED @ 25C DO 8.4 mg/L
TURB > 1,000 NTU
CO2 Not Readable due to turbidity

SURFACE WATER 02NE88GW001

Channel Depth: _____	Width: _____	Velocity: _____	Flow: _____ cfs (Est./Meas.)
Temp: _____	E.C: *	pH: *	Redox (eH): _____
Temp: _____	E.C: *	pH: *	Redox (eH): _____

SAMPLE COLLECTION

02NE88GW001

Method: Bailer Teflon Disposable Appearance: Very Turbid, Brown, No Green visible, Petrol Odor

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u>1400 +</u>				
Alkalinity EPA300					
BTEX SW8260B					
GRO AK101					
DRO/					
RROAK102/103					
Methane/Ethane/					
Ethene RSK175					

PRODUCT	
Viscosity	_____
Density	_____
Interfacial Tension	_____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 7 Other _____

** METALS FIELD FILTERED: _____ PHOTO TAKEN # 02NE88TB003

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DP date 8-16-02

REMARKS: Extremely Slow Recovery, Indicative of Perched Groundwater

8/19/02
2100



WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northwest Cape</u>	Sample ID #: <u>MLW 882</u>	DATE: <u>8-15-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DO</u>	TIME Start: <u>1130</u> End: <u>1455</u>
WEATHER: SKY: <u>P. Cloudy</u>	PRECIP: <u>0</u>	WIND: <u>5</u> Air Temp: <u>53</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

Well Condition: NEW
Casing Ht. Above Ground: FLUSH (FT.) Diameter: 2 in.
Well Depth: 18.06 ft. BTOC (Meas./Rec. Static Water Level: 9.71 ft. BTOC
Casing (C) = X Well Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ ^{3 purge} 7.5 1.7 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1130</u>	<u>15.7</u>	<u>226.2</u>	<u>6.50</u>
<u>Bailer</u>	<u>2 dry</u>	<u>1140</u>	<u>4.6</u>	<u>243.1</u>	<u>6.06</u>
	<u>3 dry</u>	<u>1455</u>	<u>4.8</u>	<u>237.8</u>	<u>6.10</u>
Ded. Pump					
Suction Pump					
<u>Reverse Pump</u>					
(other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: Width: Velocity: Flow: cfs (Est./Meas.)
Temp: E.C.: * pH: * Redox (eH):
Temp: E.C.: * pH: * Redox (eH):

SAMPLE COLLECTION

Method: <u> </u>	Appearance: <u> </u>
Analyte <u> </u> Time <u> </u>	Analyte <u> </u> Time <u> </u> Analyte <u> </u> Time <u> </u>
Sulfate EPA300 <u> </u>	
Alkalinity EPA300 <u> </u>	
BTEX SW8260B <u> </u>	
GRO AK101 <u> </u>	
DRO/ <u> </u>	
RROAK102/103 <u> </u>	
Methane/Ethane/ <u> </u>	
Ethene RSK175 <u> </u>	
	PRODUCT
	Viscosity <u> </u>
	Density <u> </u>
	Interfacial Tension <u> </u>

COMMENTS: <u>QA/QC Label ID: Split</u>	<u>Dupl.</u>	<u>Trip Blank</u>	<u>Other</u>
** METALS FIELD FILTERED: <u> </u> . PHOTO TAKEN # <u> </u>			
Calibration/Standard: pH <u>4.7, 10</u>	EC <u>✓</u>	DO <u>NA</u>	CO2 <u>NA</u>
Decon completed: by <u>DO</u>	date <u>8/15/02</u>		
REMARKS: <u> </u>			



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northstar Lake Sample ID #: MW 88-2 DATE: 8-17-02
SAMPLE TYPE: Grab FIELD CREW: DG TIME Start: 1645 End: 1800
WEATHER: SKY: P.C. PRECIP: RAIN WIND: 40-50 Air Temp: 90°F

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEW

Casing Ht. Above Ground: Flush (FT.) Diameter: 2 in.

Well Depth: 20.00 ft. BTOC (Meas./Rec. Static Water Level: 12.00 ft. BTOC

Casing (C) = X Well _____ Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth}-\text{W. L.}) =$ ^{3.4 ft. dia.} 2 ⁴ 1.3 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1645</u>	<u>6.0</u>	<u>335.1</u>	<u>7.09</u>
<u>Bailer</u>	<u>1</u>	<u>1650</u>	<u>5.9</u>	<u>332.7</u>	<u>7.11</u>
	<u>2 day</u>	<u>1655</u>	<u>5.3</u>	<u>230.4</u>	<u>6.79</u>
	<u>24 day</u>	<u>1700</u>	<u>5.0</u>	<u>200.7</u>	<u>6.80</u>
Ded. Pump					
Suction Pump					
(other)					

TURB - 288 NTU, LO 8.2 mg/L
CO₂ NA - Due to turbidity

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

ORNE 88 G10 C12

Method: Bailer Test on Disposable Appearance: Turbid, Brown, No Odor, No. Sheen

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u>1700</u>				
Alkalinity EPA300					
BTEX SW8260B					
GRO AK101					
DRO/					
RROAK102/103					
Methane/Ethane/					
Ethene RSK175					
			PRODUCT		
			Viscosity		
			Density		
			Interfacial Tension		

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank X Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # ORNE 88 TB002

Calibration/Standard: pH 4.7, 10 EC ✓ DO ✓ CO₂ NA

Decon completed: by DG date 8-17-02

REMARKS: Indicative of Perched water. Column appears full but once purged extremely slow to recover



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northwest Cape Sample ID #: MW 88-3 DATE: 8-18-02
 SAMPLE TYPE: NA FIELD CREW: DQ TIME Start: 1000 End: 1050
 WEATHER: SKY: P.C. PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER: DEVELOPMENT X SAMPLING

Well Condition: NEN
 Casing Ht. Above Ground: NA Flush (FT.) Diameter: 2 in.
 Well Depth: 20.10* ft. BTOC (Meas./Rec.) Static Water Level: 15.12 ft. BTOC
 Casing (C) = X Well Outside Protective
 * Prior to PVC Casing
 ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3x Purge 22.5 .83 gal.

PURGING:	Gallons	Time	Temperature °C.E.C. (µmhos/cm)*	pH*	
METHOD	<u>0</u>	<u>1000</u>	<u>4.5</u>	<u>2137.6</u>	<u>8.20</u>
	<u>1</u>	<u>1005</u>	<u>3.2</u>	<u>279.2</u>	<u>7.41</u>
Bailer	<u>2</u>	<u>1010</u>	<u>3.4</u>	<u>242.7</u>	<u>7.43</u>
	<u>3</u>	<u>1015</u>	<u>3.6</u>	<u>248.5</u>	<u>7.40</u>
Ded. Pump	<u>5</u>	<u>1030</u>	<u>3.6</u>	<u>237.0</u>	<u>7.38</u>
	<u>10</u>	<u>1050</u>	<u>3.6</u>	<u>233.7</u>	<u>7.40</u>
Suction Pump					
<u>Purging Pump</u>					
(other)					

Screen +
Cdr
Muddy Brown
Clearing up
Clearing up

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: Width: Velocity: Flow: cfs (Est./Meas.)
 Temp: E.C.: * pH: * Redox (eH):
 Temp: E.C.: * pH: * Redox (eH):

SAMPLE COLLECTION

Method: Appearance:

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u> </u>				
Alkalinity EPA300	<u> </u>				
BTEX SW8260B	<u> </u>				
GRO AK101	<u> </u>				
DRO/				PRODUCT	
RROAK102/103	<u> </u>			Viscosity	<u> </u>
Methane/Ethane/				Density	<u> </u>
Ethene RSK175	<u> </u>			Interfacial Tension	<u> </u>

COMMENTS: QA/QC Label ID: Split Dupl. Trip Blank Other
 ** METALS FIELD FILTERED: . PHOTO TAKEN #
 Calibration/Standard: pH 4.71/10 EC ✓ DO NA CO2 NA
 Decon completed: by DQ date 8/18/02
 REMARKS:



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northeast Cape Sample ID #: MW 88-3 DATE: 8-19-02
 SAMPLE TYPE: Grab FIELD CREW: DQ TIME Start: 1215 End: 1375
 WEATHER: SKY: P.C. PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEW
 Casing Ht. Above Ground: Flush / Final Elev (FT. Diameter: 2 in.
 Well Depth: 19.64 ft. BTOC (Meas./Rec. Static Water Level: 14.76 ft. BTOC
 Casing (C) = X Well _____ Outside Protective _____
 ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3x Large 2.55 .85 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1215</u>	<u>3.6</u>	<u>129.4</u>	<u>8.50</u>
Bailer	<u>1</u>	<u>1217</u>	<u>2.4</u>	<u>138.0</u>	<u>8.03</u>
	<u>2 dry</u>	<u>1220</u>	<u>2.5</u>	<u>141.6</u>	<u>7.66</u>
	<u>3 dry</u>	<u>1230</u>	<u>2.5</u>	<u>153.5</u>	<u>7.32</u>
Ded. Pump					
Suction Pump					
<u>Purging Pump</u>					
(other)					

DO 8.2 mg/L, Turb > 1,000 NTU * TEMP. CORRECTED @ 25C
CO₂ pH = 7.0 to 7.5

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

CRNE 886W003

Method: Bailer Teflon Disposable Appearance: Brownish, Sheen & Petrol Odor Present

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u>1230</u>				
Alkalinity EPA300					
BTEX SW8260B					
GRO AK101					
DRO/					
RROAK102/103					
Methane/Ethane/					
Ethene RSK175					

PRODUCT
 Viscosity _____
 Density _____
 Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank ✓ Other 8/19/02

** METALS FIELD FILTERED: _____ PHOTO TAKEN # ✓ CRNE 886W003 2100

Calibration/Standard: pH 4, 7, 10 EC ✓ DO ✓ CO₂ ✓

Decon completed: by DQ date 8-19-02

REMARKS:



WATER SAMPLING
FIELD NOTE FORM

SITE: <u>Northwest Cape</u>	Sample ID #: <u>MW 88-4</u>	DATE: <u>8-18-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DG</u>	TIME Start: <u>1100</u> End: <u>1200</u>
WEATHER: SKY: <u>P.C.</u>	PRECIP: <u>0</u>	WIND: <u>10</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

Well Condition: New
Casing Ht. Above Ground: Flush* (FT. Diameter: 2 in.
Well Depth: 17.2 * ft. BTOC (Meas./Rec. Static Water Level: 11.20 ft. BTOC
Casing (C) = X Well Outside Protective
* Prior to PVC cut.
ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 1.0 gal.
 $3 \times \text{Purge} = 3.0 \text{ gal}$

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1100</u>	<u>4.4</u>	<u>662</u>	<u>7.35</u>
Bailer	<u>5</u>	<u>1115</u>	<u>3.9</u>	<u>636</u>	<u>7.21</u>
	<u>7</u>	<u>1125</u>	<u>3.9</u>	<u>649</u>	<u>6.79</u>
	<u>10</u>	<u>1135</u>	<u>3.8</u>	<u>626</u>	<u>6.81</u>
Ded. Pump	<u>15</u>	<u>1200</u>	<u>3.8</u>	<u>621</u>	<u>6.78</u>
Suction Pump					
<u>Purge Pump</u>					
(other)					

Muddy
Muddy
1.25 Muddy
7.0 clear
(clear)

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: Width: Velocity: Flow: cfs (Est./Meas.)
Temp: E.C: * pH: * Redox (eH):
Temp: E.C: * pH: * Redox (eH):

SAMPLE COLLECTION

Method: <u> </u>	Appearance: <u> </u>				
Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u> </u>				
Alkalinity EPA300	<u> </u>				
BTEX SW8260B	<u> </u>				
GRO AK101	<u> </u>				
DRO/					
RROAK102/103	<u> </u>				
Methane/Ethane/					
Ethene RSK175	<u> </u>				

PRODUCT

Viscosity
Density
Interfacial Tension

COMMENTS: QA/QC Label ID: Split Dupl. Trip Blank Other
** METALS FIELD FILTERED: . PHOTO TAKEN #
Calibration/Standard: pH 4, 7, 10 EC DO NA CO2 NA
Decon completed: by DG date 8/18/02
REMARKS:



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northeast Cape Sample ID #: mw 88-4 DATE: 8-19-02
 SAMPLE TYPE: Grout FIELD CREW: DQ TIME Start: 1245 End: 1330
 WEATHER: SKY: P.C. PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEW

Casing Ht. Above Ground: NA - FLUSH (FT.) Diameter: 2 in.

Well Depth: 16, 14 ft. BTOC (Meas./Rec. Static Water Level: 10.41 ft. BTOC

Casing (C) = X Well _____ Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3.0 1.0 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1245</u>	<u>3.2</u>	<u>646</u>	<u>6.78</u>
Bailer	<u>1</u>	<u>1249</u>	<u>2.1</u>	<u>630</u>	<u>6.62</u>
	<u>2</u>	<u>1250</u>	<u>2.1</u>	<u>668</u>	<u>6.63</u>
	<u>3</u>	<u>1255</u>	<u>2.1</u>	<u>666</u>	<u>6.60</u>
Ded. Pump	<u>4 dry</u>	<u>1310</u>	<u>2.1</u>	<u>666</u>	<u>6.62</u>
	<u>5 dry</u>	<u>1330</u>	<u>2.1</u>	<u>625</u>	<u>6.61</u>
Suction Pump					
<u>Pacer Pump</u>					
(other)					

Turb = > 1,000 NTU, DO + CO2 NA DUE TO High Turbidity * TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

Method: Bailer (Teflon) Appearance: Gray Brown / Shien Petrol Odor

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u>1330</u>				
Alkalinity EPA300					
BTEX SW8260B					
GRO AK101					
DRO/					
RROAK102/103					
Methane/Ethane/					
Ethene RSK175					
			PRODUCT		
			Viscosity		
			Density		
			Interfacial Tension		

COMMENTS: QA/QC Label ID: Split 1340 Dupl. 1335 Trip Blank 1 Other 8/19/02

** METALS FIELD FILTERED: _____ PHOTO TAKEN # ✓ ONE 88 TB003

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DQ date 8-19-02

REMARKS:



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northeast Cape</u>	Sample ID #: <u>mw 88-5</u>	DATE: <u>8-18-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DP</u>	TIME Start: <u>1400</u> End: <u>1545</u>
WEATHER: SKY: _____	PRECIP: <u>0</u>	WIND: <u>5</u> Air Temp. <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING _____

Well Condition: <u>NEW</u>					
Casing Ht. Above Ground: <u>NA - Flush</u> (FT. Diameter: <u>2</u> in.					
Well Depth: <u>17.45 *</u> ft. BTOC (Meas./Rec. Static Water Level: <u>12.32</u> ft. BTOC					
Casing (C) = <u>X</u> Well _____ Outside Protective					
* Prior to PVC Cast - see sampling for level elevation. <u>3 X Purge @ 2.5 gal</u>					
ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth}-W. L.) =$ <u>85</u> gal.					
PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1400</u>	<u>4.4</u>	<u>239.9</u>	<u>7.34</u>
Bailer	<u>1 day</u>	<u>1410</u>	<u>3.9</u>	<u>239.2</u>	<u>7.34</u>
	<u>11 day</u>	<u>1430</u>	<u>4.2</u>	<u>242.3</u>	<u>6.53</u>
	<u>2 day</u>	<u>1450</u>	<u>4.2</u>	<u>244.5</u>	<u>6.52</u>
Ded. Pump	<u>24 day</u>	<u>1530</u>	<u>4.2</u>	<u>242.5</u>	<u>6.58</u>
	_____	_____	_____	_____	_____
Suction Pump	_____	_____	_____	_____	_____
Purging Pump	_____	_____	_____	_____	_____
(other)	_____	_____	_____	_____	_____

Very Dark
Petrol Odor
Very Slow
Clearing
Clearing

* TEMP. CORRECTED @ 25C

Shreen + Petrol Odor

SURFACE WATER

Channel Depth: _____	Width: _____	Velocity: _____	Flow: _____ cfs (Est./Meas.)
Temp: _____	E.C: * _____	pH: * _____	Redox (eH): _____
Temp: _____	E.C: * _____	pH: * _____	Redox (eH): _____

SAMPLE COLLECTION

Method: _____		Appearance: _____	
Analyte	Time	Analyte	Time
Sulfate EPA300	_____		
Alkalinity EPA300	_____		
BTEX SW8260B	_____		
GRO AK101	_____		
DRO/			
RROAK102/103	_____		
Methane/Ethane/			
Ethene RSK175	_____		
		PRODUCT	
		Viscosity _____	
		Density _____	
		Interfacial Tension _____	

COMMENTS: QA/QC Label ID: Split _____	Dupl. _____	Trip Blank _____	Other _____
** METALS FIELD FILTERED: _____ . PHOTO TAKEN # _____			
Calibration/Standard: pH <u>4, 7, 10</u>	EC <u>✓</u>	DO <u>NA</u>	CO2 <u>NA</u>
Decon completed: by <u>DR</u>	date <u>8/18/02</u>		
REMARKS:			



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northwest Cape Sample ID #: MW 88-5 DATE: 8-19-02
SAMPLE TYPE: Grab FIELD CREW: DQ TIME Start: 1315 End: 1520
WEATHER: SKY: P.C. PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER: DEVELOPMENT _____ SAMPLING X

Well Condition: NEW

Casing Ht. Above Ground: NA - FLUSH (FT.) Diameter: 2 in.

Well Depth: 14.95 (Feet) ft. BTOC (Meas./Rec.) Static Water Level: 9.8 ft. BTOC

Casing (C) = X Well _____ Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3 x 2.5 = 7.5 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>C</u>	<u>1315</u>	<u>4.1</u>	<u>236.8</u>	<u>7.60</u>
<u>Bailer</u>	<u>1 dry</u>	<u>1320</u>	<u>3.3</u>	<u>236.9</u>	<u>7.25</u>
	<u>1 dry</u>	<u>1500</u>	<u>3.3</u>	<u>236.9</u>	<u>7.16</u>
Ded. Pump					
Suction Pump					
Del. Pump					
(other)					

Turb > 1,000 NTU

DO - NA > due to turbidity
CO₂ - NA

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

Q2NE8861W005

Method: Bailer (to flow) Appearance: Dark gray, Shreen, heavy petal odor

Analyte Time Analyte Time Analyte Time

Sulfate EPA300 1500

Alkalinity EPA300 _____

BTEX SW8260B _____

GRO AK101 _____

DRO/ _____

RROAK102/103 _____

Methane/Ethane/ _____

Ethene RSK175 _____

PRODUCT

Viscosity _____

Density _____

Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank ↑ Other 8/19/02

** METALS FIELD FILTERED: _____ PHOTO TAKEN # 02N258T8003

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO₂ NA

Decon completed: by DQ date 8-19-02

REMARKS: Extremely Slow technique, Very indication of petal water



WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northeast Cape</u>	Sample ID #: <u>mw 88-6</u>	DATE: <u>8-19-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DP</u>	TIME Start: <u>1100</u> End: <u>1230</u>
WEATHER: <u>SKY: P.C.</u>	PRECIP: <u>Ø</u>	WIND: <u>10</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

Well Condition: NEW
Casing Ht. Above Ground: NA - Flush (FT. Diameter: 2 in.
Well Depth: 15.2 ft. BTOC (Meas/Rec. Static Water Level: 10.40 ft. BTOC
Casing (C) = X Well Outside Protective

3 x 1 purge = ~ 2.5 gal

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 85 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	0	1100	4.2	420.8	7.45
Bailer	1 dry	1110	4.3	454.7	7.16
	2 dry	1130	4.3	428.4	6.8
	3 dry	1145	4.0	419.8	6.95
	4 dry	1230	3.6	414.1	6.95
Ded. Pump					
Suction Pump					
Purge Pump					
(other)					

Very Dark Grey

* TEMP. CORRECTED @ 25C

SURFACE WATER

STRONG Petrol Odor

Channel Depth: _____	Width: _____	Velocity: _____	Flow: _____ cfs (Est./Meas.)
Temp: _____	E.C: * _____	pH: * _____	Redox (eH): _____
Temp: _____	E.C: * _____	pH: * _____	Redox (eH): _____

SAMPLE COLLECTION

Method: _____	Appearance: _____				
Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	_____				
Alkalinity EPA300	_____				
BTEX SW8260B	_____				
GRO AK101	_____				
DRO/					
RROAK102/103	_____				
Methane/Ethane/					
Ethene RSK175	_____				
				PRODUCT	
				Viscosity	_____
				Density	_____
				Interfacial Tension	_____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank _____ Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # _____

Calibration/Standard: pH 4.7, 7.0 EC ✓ DO NA CO2 NA

Decon completed: by DP date 8/19/02

REMARKS: _____



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northwest Cape</u>	Sample ID #: <u>MW 88-6</u>	DATE: <u>8-20-02</u>
SAMPLE TYPE: <u>Grab</u>	FIELD CREW: <u>DQ</u>	TIME Start: <u>1230</u> End: <u>1315</u>
WEATHER: <u>SKY: PC</u>	PRECIP: <u>0</u>	WIND: <u>10</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEW
Casing Ht. Above Ground: Flush (FT.) Diameter: 2 in.
Well Depth: 15.20 ft. BTOC (Meas)/Rec. Static Water Level: 10.43 ft. BTOC
Casing (C) = X Well _____ Outside Protective

$3 \times \text{purge} = 32.5 \text{ gal}$

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$.8 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1230</u>	<u>4.4</u>	<u>411.0</u>	<u>7.52</u>
	<u>1</u>	<u>1240</u>	<u>3.2</u>	<u>393.9</u>	<u>7.53</u>
<u>Bailer</u>	<u>2 dry</u>	<u>1245</u>	<u>3.0</u>	<u>419.6</u>	<u>7.00</u>
	<u>2+ dry</u>	<u>1300</u>	<u>3.0</u>	<u>413.0</u>	<u>7.09</u>
Ded. Pump					
Suction Pump					
(other)					

Turb > 1,000 NTU
DO NA
CO₂ NA > 700 TLK 610

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

02 NE 88 GW 006

Method: Teflon Bailer (Disposable) Appearance: Dark Gray, Very Turbid, Shreen, Color (strong)

Analyte	Time	Analyte	Time	Analyte	Time
---------	------	---------	------	---------	------

Sulfate EPA300 1300

Alkalinity EPA300 _____

BTEX SW8260B _____

GRO AK101 _____

DRO/ _____

RROAK102/103 _____

Methane/Ethane/ _____

Ethene RSK175 ✓

PRODUCT

Visosity _____

Density _____

Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 2100 Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # 9-19-02 02 NE 88 TA 003

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO₂ NA

Decon completed: by DQ date 8-20-02

REMARKS:



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northeast Cape Sample ID #: MW 88-7 DATE: 8-19-02
 SAMPLE TYPE: NA FIELD CREW: DQ TIME Start: 1115 End: 1220
 WEATHER: SKY: PC PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER: DEVELOPMENT X SAMPLING

Well Condition: NEW
 Casing Ht. Above Ground: Flush (FT.) Diameter: 2 in.
 Well Depth: 19.02 ft. BTOC (Meas./Rec. Static Water Level: 14.01 ft. BTOC
 Casing (C) = X Well Outside Protective
 ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3 x purge = 2.25 gal 40 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1115</u>	<u>4.5</u>	<u>403.2</u>	<u>6.99</u>
Bailer	<u>2</u>	<u>1118</u>	<u>4.3</u>	<u>424.4</u>	<u>6.86</u>
	<u>4</u>	<u>1120</u>	<u>3.1</u>	<u>418.5</u>	<u>6.89</u>
	<u>5</u>	<u>1125</u>	<u>2.7</u>	<u>406.7</u>	<u>6.81</u>
Ded. Pump	<u>10</u>	<u>1140</u>	<u>2.9</u>	<u>402.6</u>	<u>6.80</u>
	<u>15</u>	<u>1155</u>	<u>2.0</u>	<u>402.8</u>	<u>6.71</u>
Suction Pump	<u>20</u>	<u>1205</u>	<u>2.9</u>	<u>400.0</u>	<u>6.76</u>
	<u>25</u>	<u>1215</u>	<u>2.9</u>	<u>398.7</u>	<u>6.78</u>
Purging Pump (other)					

Very Dark
Petroleum Odor
Very Dark

Clearing
slightly

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: Width: Velocity: Flow: cfs (Est./Meas.)
 Temp: E.C: * pH: * Redox (eH):
 Temp: E.C: * pH: * Redox (eH):

SAMPLE COLLECTION

Method: Appearance:

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u> </u>				
Alkalinity EPA300	<u> </u>				
BTEX SW8260B	<u> </u>				
GRO AK101	<u> </u>				
DRO/ RROAK102/103	<u> </u>			PRODUCT	
Methane/Ethane/				Viscosity	<u> </u>
Ethene RSK175				Density	<u> </u>
				Interfacial Tension	<u> </u>

COMMENTS: QA/QC Label ID: Split Dupl. Trip Blank Other
 ** METALS FIELD FILTERED: . PHOTO TAKEN #
 Calibration/Standard: pH 4.7, 10 EC ✓ DO NA CO2 NA
 Decon completed: by DQ date 8/19/02
 REMARKS: Very Good Product



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northwest Cape Sample ID #: MW 88-7 DATE: 8-20-02
 SAMPLE TYPE: Grab FIELD CREW: DD TIME Start: 1320 End: 1410
 WEATHER: SKY: _____ PRECIP: 0 WIND: 20 Air Temp. 50

GROUNDWATER: DEVELOPMENT _____ SAMPLING X

Well Condition: NEW
 Casing Ht. Above Ground: FLUSH (FT.) Diameter: 2 in.
 Well Depth: 19.02 ft. BTOC (Meas./Rec. Static Water Level: 14.02 ft. BTOC
 Casing (C) = X Well _____ Outside Protective

3x Purge Vol: 2 2.5 gal

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth}-\text{W. L.}) =$ 80 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	0	1320	2.8	364.9	7.73
	2	1325	2.3	400.4	7.40
Bailer	4	1330	2.1	412.4	7.12
	5	1340	2.1	421.0	7.00
Ded. Pump	7	1400	2.1	397.1	6.73
	10	1400	2.1	398.6	6.75
Suction Pump					
<u>Purge</u>					
(other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

02NE88GW007 (MS/MSD ALL ANALYTES)

Method: Teflon Bailer (Disposable) Appearance: Gray - Petrol Odor

Analyte Time Analyte Time Analyte Time

Sulfate EPA300 1400

Alkalinity EPA300 _____

BTEX SW8260B _____

GRO AK101 _____

DRO/ _____

RROAK102/103 _____

Methane/Ethane/ _____

Ethene RSK175 ✓

PRODUCT

Viscosity _____

Density _____

Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 8-19-02 Other _____

** METALS FIELD FILTERED: _____ PHOTO TAKEN # E2100-02NE88GW007

Calibration/Standard: pH 4.7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DD date: 8-20-02

REMARKS: Very Good Purge



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northwest Cape Sample ID #: MW 88-8 DATE: 8-19-02
 SAMPLE TYPE: NA FIELD CREW: DD TIME Start: 1230 End: 1400
 WEATHER: SKY: PC PRECIP: 0 WIND: 10 Air Temp: 50

GROUNDWATER : DEVELOPMENT X SAMPLING _____

Well Condition: NEA
 Casing Ht. Above Ground: Flush (FT.) Diameter: 2 in.
 Well Depth: 18.70 ft. BTOC (Meas./Rec. Static Water Level: 14.54 ft. BTOC
 Casing (C) = _____ Well _____ Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 7 gal. 3 x purge + 2 gal

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	0	1230	4.2	412.3	7.75
	1	1235	3.9	477.7	7.13
Bailer	2	1237	2.9	466.9	7.18
	3 dny	1240	2.9	458.1	7.05
Ded. Pump	3+ dny	1245	2.9	459.0	6.74
	4 dny	1255	2.9	453.8	6.73
Suction Pump	5 dny	1320	2.9	397.4	7.06
Purge Pump	6 dny	1340	3.1	380.6	6.90
(other)	7 dny	1400	3.0	380.2	6.98

Very Dark
Petrol Color
Shreen

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

Method: _____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	_____				
Alkalinity EPA300	_____				
BTEX SW8260B	_____				
GRO AK101	_____				
DRO/				PRODUCT	
RROAK102/103	_____			Visosity	_____
Methane/Ethane/				Density	_____
Ethene RSK175	_____			Interfacial Tension	_____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank _____ Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # _____

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DD date 8/19/02

REMARKS: Shreen, Very Turbid Dark Gray, Petrol Color



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northeast Cape Sample ID #: MW 88-8 DATE: 8-20-02
SAMPLE TYPE: GRAB FIELD CREW: MD TIME Start: 1420 End: 1515
WEATHER: SKY: PC PRECIP: 0 WIND: 20 Air Temp: 50

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEC
Casing Ht. Above Ground: Flush (FT. Diameter: 2 in.
Well Depth: 18.70 ft. BTOC (Meas./Rec. Static Water Level: 14.60 ft. BTOC
Casing (C) = X Well _____ Outside Protective
3 x purg & 2 gal
ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$.7 gal.
PURGING: Gallons Time Temperature °C E.C. (µmhos/cm)* pH*
METHOD
Bailer
Ded. Pump
Suction Pump
Purging Pump
(other)

0	1420	21.9	380.1	6.99
1	1430	21.8	374.9	6.83
2 dn	1445	21.8	402.4	6.79
24 dn	1500	21.8	401.4	6.77

Turbidity > 1,000 NTU
DO not > 700 TURBID
CO₂ not

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

02NE886W 008

Method: Teflon Bailer (Disposable) Appearance: Dark Gray, Shown, Petrol Odor
Analyte Time Analyte Time Analyte Time
Sulfate EPA300 1500
Alkalinity EPA300 _____
BTEX SW8260B _____
GRO AK101 _____
DRO/
RROAK102/103 _____
Methane/Ethane/
Ethene RSK175 _____
PRODUCT
Viscosity _____
Density _____
Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 8/19/02 Other _____
** METALS FIELD FILTERED: _____ PHOTO TAKEN # E2100 - 02NE887B003
Calibration/Standard: pH 4.7, 10 EC ✓ DO N/A CO₂ N/A
Decon completed: by DQ date 8-19-02
REMARKS:

WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northeast Cape</u>	Sample ID #: <u>MW 88-9</u>	DATE: <u>8-20-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DD</u>	TIME Start: <u>1530</u> End: <u>1650</u>
WEATHER: <u>SKY: P.C.</u>	PRECIP: <u>0</u>	WIND: <u>20</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

Well Condition: NEW

Casing Ht. Above Ground: FLUSH (FT.) Diameter: 2 in.

Well Depth: 24.45 ft. BTOC (Meas./Rec. Static Water Level: 20.24 ft. BTOC

Casing (C) = X Well Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3x Purge = 2 gal 7 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1530</u>	<u>5.0</u>	<u>142.3</u>	<u>7.57</u>
	<u>2</u>	<u>1534</u>	<u>3.3</u>	<u>119.7</u>	<u>7.54</u>
Bailer	<u>4</u>	<u>1540</u>	<u>3.3</u>	<u>166.0</u>	<u>7.23</u>
	<u>5</u>	<u>1543</u>	<u>3.2</u>	<u>151.5</u>	<u>7.07</u>
Ded. Pump	<u>7</u>	<u>1547</u>	<u>2.8</u>	<u>91.7</u>	<u>6.78</u>
	<u>9</u>	<u>1550</u>	<u>2.3</u>	<u>80.0</u>	<u>6.54</u>
Suction Pump	<u>10</u>	<u>1555</u>	<u>2.3</u>	<u>85.8</u>	<u>6.46</u>
<u>Purged Pump</u>	<u>15</u>	<u>1605</u>	<u>2.3</u>	<u>72.0</u>	<u>6.45</u>
(other)	<u>20</u>	<u>1620</u>	<u>2.3</u>	<u>72.0</u>	<u>6.40</u>

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: <u> </u>	Width: <u> </u>	Velocity: <u> </u>	Flow: <u> </u> cfs (Est./Meas.)
Temp: <u> </u>	E.C: * <u> </u>	pH: * <u> </u>	Redox (eH): <u> </u>
Temp: <u> </u>	E.C: * <u> </u>	pH: * <u> </u>	Redox (eH): <u> </u>

SAMPLE COLLECTION

Method: <u> </u>	Appearance: <u> </u>				
Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u> </u>				
Alkalinity EPA300	<u> </u>				
BTEX SW8260B	<u> </u>				
GRO AK101	<u> </u>				
DRO/					
RROAK102/103	<u> </u>				
Methane/Ethane/					
Ethene RSK175	<u> </u>				

PRODUCT

Viscosity	<u> </u>
Density	<u> </u>
Interfacial Tension	<u> </u>

COMMENTS: <u> </u>	QA/QC Label ID: <u>Split</u>	Dupl. <u> </u>	Trip Blank <u> </u>	Other <u> </u>
** METALS FIELD FILTERED: <u> </u> . PHOTO TAKEN # <u> </u>				
Calibration/Standard: pH <u>4.7, 10</u>	EC <u>✓</u>	DO <u>NA</u>	CO2 <u>NA</u>	
Decon completed: by <u>DD</u>	date <u>8/20/02</u>			
REMARKS: <u>Best Producer of all New Wells- NO odor, No Shivers Tan Turbidity vs. Dark Grey at all other locations.</u>				



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: Northeast Cape Sample ID #: MW 88-9 DATE: 8-21-02
 SAMPLE TYPE: Graab FIELD CREW: DG TIME Start: 1430 End: 1520
 WEATHER: SKY: None (Clear) PRECIP: 0 WIND: 20 Air Temp: 50

GROUNDWATER : DEVELOPMENT _____ SAMPLING X

Well Condition: NEW
 Casing Ht. Above Ground: Flush (FT. Diameter: 2 in.
 Well Depth: 24.45 ft. BTOC (Meas./Rec. Static Water Level: 20.22 ft. BTOC
 Casing (C) = X Well _____ Outside Protective

3x purge @ 2 gal

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$.7 gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1430</u>	<u>4.6</u>	<u>92.9</u>	<u>8.00</u>
Bailer	<u>1</u>	<u>1435</u>	<u>2.7</u>	<u>88.1</u>	<u>7.82</u>
	<u>2</u>	<u>1440</u>	<u>2.6</u>	<u>87.1</u>	<u>7.41</u>
	<u>3</u>	<u>1442</u>	<u>2.3</u>	<u>85.4</u>	<u>7.15</u>
Ded. Pump	<u>4</u>	<u>1445</u>	<u>2.3</u>	<u>84.8</u>	<u>6.95</u>
	<u>5</u>	<u>1450</u>	<u>2.3</u>	<u>84.7</u>	<u>6.92</u>
Suction Pump	<u>10</u>	<u>1500</u>	<u>2.3</u>	<u>81.9</u>	<u>6.80</u>
<u>Purge Pump</u> (other)					

*Turbidity 220 NTU
DO 4.1 mg/L*

* TEMP. CORRECTED @ 25C

SURFACE WATER *CO2 1.9 mg/L*

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

02NE88GW009

Method: Teflon Bailer (Disposable) Appearance: Tan - NO SHEEN, NO ODOR

Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	<u>1450</u>				
Alkalinity EPA300					
BTEX SW8260B					
GRO AK101					
DRO/ RROAK102/103					
Methane/Ethane/ Ethene RSK175					
			PRODUCT		
			Viscosity		
			Density		
			Interfacial Tension		

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 9-19-02 Other _____

** METALS FIELD FILTERED: _____ PHOTO TAKEN # 02NE88TB003

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DG date 8-21-02

REMARKS: Tan Turbidity unlike any of the other MW88 series wells. No Sheen, No Odor



MWH
MONTGOMERY WATSON HARZA

WATER SAMPLING FIELD NOTE FORM

SITE: <u>Northwest Cape</u>	Sample ID #: <u>MW 88-10</u>	DATE: <u>8-28-02</u>
SAMPLE TYPE: <u>NA</u>	FIELD CREW: <u>DG</u>	TIME Start: <u>1630</u> End: <u>1800</u>
WEATHER: SKY: <u>PC</u>	PRECIP: <u>0</u>	WIND: <u>10</u> Air Temp: <u>50</u>

GROUNDWATER : DEVELOPMENT X SAMPLING

Well Condition: NEW
Casing Ht. Above Ground: Flush (FT. Diameter: 2 in.
Well Depth: 24.00 ft. BTOC (Meas./Rec. Static Water Level: 24.29 ft. BTOC
Casing (C) = X Well Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ 3x purge $\approx 3/4$ gal gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1630</u>	<u>3.6</u>	<u>382.1</u>	<u>6.02</u>
<u>Bailer</u>	<u>0.5 dn</u>	<u>1700</u>	<u>No WATER</u>		
	<u>0.5 dn</u>	<u>1800</u>	<u>No Water / about 2 cm of Mtl</u>		
Ded. Pump					
Suction Pump					
(other)					

* TEMP. CORRECTED @ 25C

Dark Gray, Muddy Silty, Sheen, Petrol Odor.

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____
Temp: _____ E.C: * _____ pH: * _____ Redox (eH): _____

SAMPLE COLLECTION

Method: _____	Appearance: _____				
Analyte	Time	Analyte	Time	Analyte	Time
Sulfate EPA300	_____				
Alkalinity EPA300	_____				
BTEX SW8260B	_____				
GRO AK101	_____				
DRO/					
RROAK102/103	_____				
Methane/Ethane/					
Ethene RSK175	_____				
			PRODUCT		
			Viscosity _____		
			Density _____		
			Interfacial Tension _____		

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank _____ Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # _____

Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA

Decon completed: by DG date 9/20/02

REMARKS: Very thick, Muddy Silty Water, Went Dry May not be able to sample. will sample directly tomorrow w/ minimal purge.

**MWH**

MONTGOMERY WATSON HARZA

**WATER SAMPLING
FIELD NOTE FORM**

SITE: Northwest Cape Sample ID #: MW 88-10 DATE: 8-21-00
 SAMPLE TYPE: Gravel FIELD CREW: DQ TIME Start: 1400 End: 1740
 WEATHER: SKY: Nice Day PRECIP: 0 WIND: 20 Air Temp: 52
Clear P.C.

GROUNDWATER: DEVELOPMENT _____ SAMPLING X

Well Condition: NEW
 Casing Ht. Above Ground: Flush (FT.) Diameter: 2 in.
 Well Depth: 24.00 ft. BTOC (Meas./Rec. Static Water Level: 24.98 ft. BTOC
 Casing (C) = X Well _____ Outside Protective

ONE PURGE VOLUME: $7.48 \times (\text{dia.}/24)^2 \times 3.14 \times (\text{Depth-W. L.}) =$ _____ gal.
3x purge @ 0.5 gal

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	<u>0</u>	<u>1400</u>	<u>31.6</u>	<u>422.1</u>	<u>7.68</u>
<u>Bailer</u>		<u>All Water Collected Used for Sample</u>			
		<u>Well is essentially dry</u>			
Ded. Pump					
Suction Pump					
(other)					

Turbidity > 1,000 NTU
DO NA
CO2 NA
> Too Turbid

* TEMP. CORRECTED @ 25C

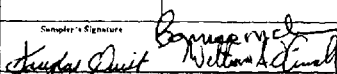
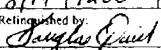
SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____
 Temp: _____ E.C.: * _____ pH: * _____ Redox (eH): _____

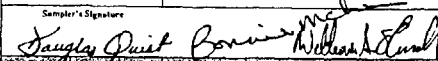
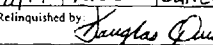
SAMPLE COLLECTION*02 NE 88 GW 010*

Method: Feltan Bailer Appearance: Very Turbid almost muddy negligible recharge
 Analyte Time Analyte Time Analyte Time
 Sulfate EPA300 1400
 Alkalinity EPA300 _____
 BTEX SW8260B _____
 GRO AK101 _____
 DRO/
 RROAK102/103 _____
 Methane/Ethane/
 Ethene RSK175 _____
 PRODUCT
 Viscosity _____
 Density _____
 Interfacial Tension _____

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank 8-19-02 Other _____
 ** METALS FIELD FILTERED: _____ PHOTO TAKEN # 02100 - 02 NE 88 T 13003
 Calibration/Standard: pH 4, 7, 10 EC ✓ DO NA CO2 NA
 Decon completed: by DQ date _____
 REMARKS: Very Slow in obtaining Sample Volume. After initial/bailer maximum of 1-2 inches muddy water available. Sample Collected from 1400 to 1730.

2002 Northeast Cape 1850574.260120				SOIL				WATER													
FROM: MWH 4100 Spenard Road Anchorage AK 99517 (907)248-8883 Fax: (907)248-8884 ATTN: Johanna Dreher		TO: Columbus Analytical Services 1317 South 13th Avenue Kelso, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068 Attn: Mingta Lin		DRORRO AK102101, PAH SIM SW827BC, PCB SW6082, Lead, Zinc, Chromium SW6030, TOC by lab SOP		BTX SW6260B		GRO AK101		Spare		Solids EPA 300 Alkalinity EPA 300		BTX SW6260B GRO AK101		Methanol, Ethanol, Ethene RSK 175		DRORRO AK102103		30 day Turn-Around-Time COELT EDD Hardcopy Deliverable ROA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907)353-7070	
Sample's Signature 																					
Date	Time	Sample ID	Matrix	Container																	
8/14	1530	02NE885B 001	S	3	X				X										MS/MSD		
8/14	1600	02NE885B 002	S	2	X				X												
8/14	1645	02NE885B 003	S	2	X				X												
8/14	1700	02NE885B 004	S	2	X				X												
8/15	1155	02NE885B 005	S	2	X				X												
8/17	1110	02NE885B 006	S	2	X				X												
8/17	1320	02NE885B 007	S	2	X				X												
8/17	1330	02NE885B 008	S	2	X				X												
8/17	2000	02NE885B 009	S	2	X				X												
8/17	2030	02NE885B 010	S	2	X				X												
8/17	1820	02NE885B 021	S	2	X				X												
8/17	1840	02NE885B 022	S	1	X																
8/17	1200	02NE885B 206	S	2	X				X												
Retained by: 				Date: 8/19/02 Time: 0830		Shipped Via Alaska Airlines Goldstream Air Bill # 4974 2803															
Received for Laboratory by				Date: _____ Time: _____		Cooler Temperature _____ °C Laboratory Notified Call or Faxed															

[illegible]

3002 Northeast Cape 1850574.260120			SOIL		WATER	
FROM: MWH 4100 Spenard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher			TO: Columbia Analytical Services 1317 South 13th Avenue Ketchikan, WA 98626 Phone: 360-577-7222 Fax: 360-636-1008 Attn: Mingta Lin		DRORRO AK102103, PAH SIM SW6270C, PCB SW6083, Lead, Zinc, Chromium SW6020, TOC by Lab SOP BTX SW62608 GRO AK101 Spare Sulfide EPA 300 Alkalinity EPA 300 BTX SW62608 GRO AK101 Methane, Ethane, Ethanol RSK 175 DRORRO AK102103	
30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070						
Sampler's Signature 						
Date	Time	Sample ID	Matrix	Result		
8/14	1530	02NE885B 001	S	6	X	X
8/14	1600	02NE885B 002	S	2	X	X
8/14	1645	02NE 885B 003	S	2	X	X
8/14	1700	02NE 885B 004	S	2	X	X
8/15	1155	02NE 885B 005	S	2	X	X
8/17	1110	02NE 885B 006	S	2	X	X
8/17	1320	02NE 885B 007	S	2	X	X
8/17	1330	02NE 885B 008	S	2	X	X
8/17	2000	02NE 885B 009	S	2	X	X
8/17	2030	02NE 885B 010	S	2	X	X
8/17	1820	02NE 885B 021	S	2	X	X
8/17	1840	02NE 885B 022	S	2	X	X
8/17	1200	02NE 885B 0206	S	2	X	X
Relinquished by 			Date 8/19/02 Time 0830		Shipped Via Alaska Airlines Goldstream Air Bill # 4974 2711	
Received for Laboratory by:			Date Time		Cooler Temperature Upon Arrival	
					°C Laboratory Notified Call or Faxed	

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Revised 1
8-27-02
B. Briche

USAED, ALASKA DISTRICT
Northeast Cape Mod 7
NPDL WO # 02-680

30 day Turn-Around-Time
COELT EDD
Hardcopy Deliverable BOA Option 2

[illegible]

[illegible]


2002 North Cape 18S0574.260120						SOIL				WATER											
FROM: MWH 4100 Spensard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher			TO: Columbia Analytical Services 1317 South 13th Avenue Kelso, WA 98626 Phone: 360-577-7212 Fax: 360-636-1068 Amy Mingia Lin			DEQ/ORRO AK102103, AR SSM SW8270C, BTEX SW6260B, Lead Zinc Arsenium SV66020, TLOC by Lab SOP				BTEX SW6260B				GRO AK101	Spare	Sulfate EPA 300 Alkalinity EPA 300	BTEX SW6260B GRO AK101	Methane Ethane, Ethene RSK 175	DEQ/ORRO AK102103	30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070	
Sample Signature 																					
Date	Time	Sample ID	Matrix	Total Containers	Fox Bore Jet	Cut Jet	Longer Jet	Short Jet	Settle bottles	DWA Vials	VOA Vials	Headspace vials									
8/18	1720	02NE88SB015	S	2	X				X												
8/18	1720	02NE88SB016	S	2	X				X												
8/19	1310	02NE88SB017	S	3	X				X				MSI MSD DRC, RRB, AAH, PCB, Pb, ONLY								
8/19	1355	02NE88SB018	S	2	X				X												
8/19	1705	02NE88SB019	S	2	X				X												
8/19	1715	02NE88SB020	S	2	X				X												
8/20	1250	02NE88SB023	S	2	X				X												
8/20	1305	02NE88SB024	S	2	X				X												
8/20	1415	02NE88SB025	S	2	X				X												
8/20	1555 ^{HBS} 1530	02NE88SB026	S	2	X				X												
8/20	1530	02NE88SB027	S	2	X				X												
8/20	1530	02NE88SB028	S	2	X				X												
8/20	1730	02NE88SB029	S	2	X				X												
Revised by: 					Date: 8-21-02 Time: 0830		Shipped Via Alaska Airlines Goldstream Air Bill # 4174 2744														
Received for Laboratory by:					Date: Time:		Cooler Temperature Upon Arrival										"C"	Laboratory Notified Call or Faxed			

TO:
Columbia Analytical Services
1317 South 13th Avenue
Kelso, WA 98626
Phone: 360-577-7222
Fax: 360-636-1068
Attn: Mingta Lin

WATER

30 day Turn-Around-Time
COELT EDD
Hardcopy Deliverable BOA Option 2
Please FAX a copy of COC and Sample Check-in form to:
Gerald Archibald at (907)753-2636 Phone: (907)753-2691
Sandra Kimbrell at (907) 353-7070

Sampler's Sig

Sampler's Signature 

DRO/RRO AK102/103,
PAH SIM SW8270C,
PCB SW8082,
Lead, Zinc, Chromium SW6020,
TOC by lab SOP

BTEX SW8260B

GRO AK101

Spare

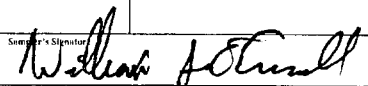
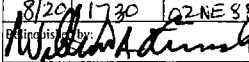
Sulfate EPA 300
Alkalinity EPA 300

BTEX SW8260B
GRO AK101


Methane, Ethane, Ethene RSK 175

DRO/RRO AK102/103

[illegible]

2002 Northeast Cape 1850574.260120				SOIL				WATER							
FROM: WWII 4100 Spenard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher		TO: Columbia Analytical Services 1317 South 13th Avenue Kelso, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068 Attn: Mingia Lin		DRORRO AK102/103, PAH SIM SW8270C, PCB SW8682, Lead, Zinc, Chromium SW6620, TOC by lab SOP				BTEX SW8260B GRO AK101 Spore				Sulfate EPA 300 Alkalinity EPA 300 BTEX SW8260B GRO AK101 Methane, Ethane, Ethene RSK 175 DRORRO AK102/103		30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070	
Sample's Signature 				TOC by lab SOP				BTEX SW8260B				DRORRO AK102/103			
Date	Time	Sample ID	Matrix	Time Container	TOC Soils	BTEX SW8260B	GRO AK101	Spore	Sulfate EPA 300	Alkalinity EPA 300	BTEX SW8260B	GRO AK101	Methane, Ethane, Ethene RSK 175	DRORRO AK102/103	
8/18	1700	02NE88SB015	S	2		X	X								
8/18	1720	02NE88SB016	S	2		X	X								MS/MSD GRO/BTEX
8/19	1310	02NE88SB017	S	2		X	X								
8/19	1355	02NE88SB018	S	2		X	X								
8/19	1705	02NE88SB019	S	2		X	X								
8/19	1715	02NE88SB020	S	2		X	X								
8/20	1250	02NE88SB023	S	2		X	X								
8/20	1305	02NE88SB024	S	2		X	X								
8/20	1415	02NE88SB025	S	2		X	X								50ml of MeOH used
8/20	1435	02NE88SB026	S	2		X	X								
8/20	1505	02NE88SB027	S	2		X	X								
8/20	1530	02NE88SB028	S	2		X	X								
8/20	1730	02NE88SB029	S	2		X	X								
Prepared by: 				Date 8/20/02		Shipped Via Alaska Airlines Goldstreak Air Bill # 41974 2733									
Received for Laboratory by:				Date 8/28		Cooler Temperature Upon Arrival				°C		Laboratory Notified Call or Faxed			

K2205832

2002 Northeast Cape 1800574.260120					SOIL				WATER							
FROM: MWH 4100 Spensard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher					TO: Columbia Analytical Services 1317 South 13th Avenue Kelson, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068 Attn: Mingta Lin					30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070						
					DRO/RO AK102/03, PAH SIM SW6270C, PCB SW9802, Lead, Zinc, Chromium SW9139, TOC by lab SOP				BTEX SW92608 ✓ GRO AK101 ✓ Spent				Sulfate EPA 309 Alkalinity EPA 300 BTEX SW92608 GRO AK101 Methane, Ethane, Ethene RSK 175 DRO/RO AK102/03			
Sample ID: <i>Walter A. Dreher</i>																
Date	Time	Sample ID	Matrix	Container	TOC	Lead	Zinc	Chromium	Sulfate	Alkalinity	BTEX	GRO	Methane	Ethane	Ethene	
8-20	1735	02 NE 855 SB030	S	2		✓X	✓X									
8-20	1850	02 NE 885 SB031	S	2		✓X	✓X									
8-20	1905	02 NE 855 SB032	S	2		✓X	✓X									
8-18	2100	02 NE 333 TB005	S	2		✓X	✓X									
<i>checked all analyses</i>																
Reproduced by: <i>Walter A. Dreher</i>																
Received for Laboratory by: <i>John Shaw</i>					Date: <i>8/21/02</i> Time: <i>0800</i>					Shipped Via Alaska Airlines Goldsreak Air Bill # <i>4974 2733</i>					°C	Laboratory Notified Call or Faxed
					Date: <i>8/22/02</i> Time: <i>1530</i>					Cooler Temperature Upon Arrival						

[illegible]

Columbia Analytical Services
1317 South 13TH AVE
Kelso, WA
98626
360-577-7222

DRO/RRO AK102/103,
PAH SIM SW8270C,
PCB SW8082,
Lead, Zinc, Chromium SW6020,
TOC by lab SOP

BTEX SW8260B

GRO AK101

Spare

Sulfate EPA 300
Alkalinity EPA 300

BTX SW82608
CRO AKI01

Methane, Ethane, Ethene RSK 175


DRO/RRO AK102/103

30 day Turn-Around-Time
COELT EDD
Hardcopy Deliverable BOA Option 2

Sampler's Signature

er's Signature
Douglas Quint

[illegible]

2002 Northeast Cape 18S0574.260120				SOIL				WATER									
FROM: MWH 4100 Spennard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher				TO: Columbia Analytical Services 1317 South 13th Avenue Kelso, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068 Attn: Mingta Lin													
				DRDPRO AK10210A PCB SW6219C, Lead, Zinc, Chromium SW6020, TOC by lab SOP				BTEX SW6260B GRO AK101 Spent				Saline EPA 309 Alkalinity EPA 309 BTEX SW6260B GRO AK101 Methane, Ethane, Ethane RSK 175 DRDPRO AK102103				30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070	
Sampler's Signature: <i>Johanna Dreher</i>																	
8/21	1500	02NE88SB033	S	42	X	X	X	X									
8/21	1510	02NE88SB034	S	42	X	X	X	X									
8/21	1515	02NE88SB034	S	42	X	X	X	X									
8/21	1555	02NE88SB035	S	42	X	X	X	X									
8/21	1605	02NE88SB036	S	42	X	X	X	X									
8/21	1607	02NE88SB036	S	42	X	X	X	X									
8/22	1400	02NE88SB037	S	42	X	X	X	X									
8/22	1405	02NE88SB037	S	42	X	X	X	X									
8/22	1410	02NE88SB038	S	42	X	X	X	X									
8/22	1935	02NE88SB039	S	42	X	X	X	X									
8/22	1440	02NE88SB039	S	42	X	X	X	X									
8/22	1450	02NE88SB040	S	42	X	X	X	X									
8/21	2100	02NE88TB007	S	22	X	X	X	X									
Relinquished by: <i>Johanna Dreher</i>				Date: 8/25/02 Time: 2315				Shipped Via Alaska Airlines Goldbreak Air Bill # 4974 2696									
Received for Laboratory by:				Date: _____ Time: _____				Cooler Temperature Upon Arrival				°C Laboratory Notified Call or Faxed					

2002 Northeast Cape 1820574.260128				SOIL				WATER					
FROM: MWH 4100 Spensard Road Anchorage AK 99517 (907)248-8883 Fax (907) 248-8884 ATTN: Johanna Dreher				TO: Columbia Analytical Services 1317 South 13th Avenue Kenai, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068 Attn: Mingra Lin				DIORRO AK102103, PALM SW820C, PCB SW8402, Lead, Zinc, Chromium SW602A, TOC by lab SOP DTES SW82608 GRO AK101 Spare Surface EPA 306 Alkalinity EPA 306 BTES SW82608 GRO AK101 Methane, Ethane, Ethane BSK 175 DIORRO AK102103				30 day Turn-Around-Time COELT EDD Hardcopy Deliverable BOA Option 2 Please FAX a copy of COC and Sample Check-in form to: Gerald Archibald at (907)753-2636 Phone: (907)753-2691 Sandra Kimbrell at (907) 353-7070	
Sampler Signature: <i>Johanna Dreher</i>													
8/21	1500	02NE 88 SB 033	S	42	X	X	X	X					
8/21	1510	02NE 88 SB 034	S	42	X	X	X	X					
8/21	1515	02NE 88 SB 034	S	42	X	X	X	X					
8/21	1555	02NE 88 SB 035	S	42	X	X	X	X					
8/21	1605	02NE 88 SB 036	S	42	X	X	X	X					
8/21	1607	02NE 88 SB 036	S	42	X	X	X	X					
8/22	1400	02NE 88 SB 037	S	42	X	X	X	X					
8/22	1405	02NE 88 SB 037	S	42	X	X	X	X					
8/22	1410	02NE 88 SB 038	S	42	X	X	X	X					
8/22	1435	02NE 88 SB 039	S	42	X	X	X	X					
8/22	1440	02NE 88 SB 039	S	42	X	X	X	X					
8/22	1450	02NE 88 SB 040	S	42	X	X	X	X					
8/22	2100	02NE 88 TB 007	S	2	X	X	X						
Relinquished by: <i>Johanna Dreher</i>				Date: 8/25/02 Time: 1315				Shipped Via Alaska Airlines Goldseal Air Bill # 4974 2700					
Received for Laboratory by:				Date:				Cooler Temperature				°C	
Date:				Upon Arrival				Laboratory Notified Call or Faxed					

Revision 1

USAED, ALASKA DISTRICT
NORTHEAST CAPE MOD 7
NPDL WO# 02-080

30 day Turn-Around-Time
COELT EDD
Hardcopy Deliverable BOA Option 2

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[illegible]

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ATTACHMENT 2

2002 Analytical Data



MWH

MONTGOMERY WATSON HARZA

Figure 2-2 (Updated)
SOILS RESULTS

Sample ID	Soil Sample Location	Sample (feet bgs)	GRO (mg/Kg)	DRO (mg/Kg)	RRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	o-Xylene (mg/Kg)	m & p- Xylene (mg/Kg)	Naphthalene (mg/Kg)	Chromium (mg/Kg)
02NE88SB001	MW 88-1	15.5-17.5	19	5000	39 VJ	ND (0.012)	ND (0.027)	ND (0.027)	ND (0.027)	0.0022 VJ	6.5
02NE88SB002	MW 88-1	17.5-20	4.9	1400	16 VJ	ND (0.011)	ND (0.025)	ND (0.025)	ND (0.025)	0.00038 VJ	4.38
02NE88SB003	MW 88-2	8-10	ND (3)	ND (12)	6 VJ	ND (0.014)	ND (0.035)	ND (0.035)	ND (0.035)	0.001 VJ	16.1
02NE88SB004	MW 88-2	10-12	ND (3.6)	ND (11)	7.1 VJ	ND (0.015)	ND (0.037)	ND (0.037)	ND (0.037)	0.00056 VJ	8
02NE88SB005	MW 88-3	4-6	ND (6)	7.6 VJ	120 VJ	ND (0.023)	ND (0.058)	ND (0.058)	ND (0.058)	0.00081 VJ	22.3
02NE88SB006	MW 88-3	16-18	51	3700	24 VJ	ND (0.021)	ND (0.051)	ND (0.051)	0.31 VJ	1.5	13.1
02NE88SB007	MW 88-4	9-11	44	12000	3700	0.047	0.083	0.89	1.6	5.9 VHB	17.3
02NE88SB008	MW 88-4	11-13	54 VHB	2600	16 VJ	ND (0.018)	ND (0.044)	0.01 VJ	0.29	2.3	3.73
02NE88SB009	MW 88-5	1-3	ND (2.8)	380	3400	ND (0.012)	ND (0.025)	ND (0.025)	ND (0.025)	0.0041 VJ	42.3
02NE88SB010	MW 88-5	11-13	ND (4)	21	25 VJ	ND (0.014)	ND (0.034)	ND (0.034)	ND (0.034)	0.0037 VJ	4.5
02NE88SB011	MW 88-6	7-9	130 VHB	3100	23 VJ	ND (0.012)	ND (0.026)	0.044	0.44	4.1	12.8
02NE88SB012	MW 88-6	11-13	83 VHB	1200	30 VJ	ND (0.012)	ND (0.028)	0.013 VJ	0.15	1.1	8.3
02NE88SB013	MW 88-7	7-9	140 VHB	12000	55 VJ	ND (0.012)	ND (0.027)	0.13	1.5	7.9	17
02NE88SB014	MW 88-7	11-13	130 VHB	9200	54 VJ	ND (0.011)	ND (0.026)	0.38	2.2	8.4	11.6
02NE88SB015	MW 88-8	10-12	68 VHB	5200	11 VJ	ND (0.018)	ND (0.044)	ND (0.044)	0.17	3.3	9.63
02NE88SB016	MW 88-8	14-16	73 VHB	2300	7.4 VJ	ND (0.018)	ND (0.045)	ND (0.045)	0.18	2.3	8.34
02NE88SB017	MW 88-9	8-10	ND (3.5)	7 VJ	8.7 VJ	ND (0.015)	ND (0.036)	ND (0.036)	ND (0.036)	0.00045 VJ	7.04
02NE88SB018	MW 88-9	20-22	ND (4.8)	7.6 VJ	12 VJ	ND (0.016)	ND (0.038)	ND (0.038)	ND (0.038)	0.0019 VJ	12.5
02NE88SB019	MW 88-10	22-24	31	1400	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.48	10
02NE88SB020	MW 88-10	24-26	19	750	ND (110)	ND (0.015)	ND (0.038)	ND (0.038)	ND (0.038)	0.11	4.8
02NE88SB021	SB 88-11	3-5	70	13000	5100	0.12	3.2	2.7	5.1	12	16.5
02NE88SB022	SB 88-11	7-9	99	51000	6000	0.19	4.5	6.2	12	81	23.7
02NE88SB023	SB 88-12	4-6	ND (5.2)	190	1500	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0045 VJ	12.4
02NE88SB024	SB 88-12	10-12	ND (3.8)	20	33 VJ	ND (0.017)	ND (0.043)	ND (0.043)	ND (0.043)	0.0011 VJ	9.62
02NE88SB025	SB 88-13	6-8	11 VJ	430	4600	0.37	ND (0.18)	0.071 VJ	0.19	0.042	16.5
02NE88SB026	SB 88-13	14-16	ND (6.1)	77	420	ND (0.022)	ND (0.054)	ND (0.054)	ND (0.054)	0.0018 VJ	14.3
02NE88SB027	SB 88-14	2-4	220 VHB	47000	3000	0.019	0.036 VJ	1.7	0.71	79	22.7
02NE88SB028	SB 88-14	12-14	62	210	900	0.024	1.4	1.7	1.3	0.41	22.8
02NE88SB029	SB 88-15	10-12	ND (4.9)	33	150	ND (0.018)	ND (0.044)	0.01 VJ	ND (0.044)	0.016	23
02NE88SB030	SB 88-15	12-14	ND (4.4)	79	590	ND (0.021)	ND (0.052)	ND (0.052)	ND (0.052)	0.0047 VJ	23.4
02NE88SB031	SB 88-16	6-8	110 VHB	16000	33 VJ	ND (0.015)	0.032 VJ	0.015 VJ	1.8	28	15.6
02NE88SB032	SB 88-16	10-12	60 VHB	4200	12 VJ	ND (0.017)	ND (0.041)	ND (0.041)	0.043	0.9 VLB	6.7
02NE88SB033	SB 88-17	8-10	130 VHB	4700	450	ND (0.013)	0.05 VHB	1.5 VHB	4 VHB	12	18.2
02NE88SB034	SB 88-17	12-14	140 VHB	4300	110 VJ	ND (0.012)	ND (0.023)	0.34 VHB	3 VHB	3.6	8.31
02NE88SB035	SB 88-18	8-10	100 VHB	7300	24 VJ	0.018 VHB	0.018 VJ	0.019 VJ	0.95 VHB	10	14
02NE88SB036	SB 88-18	10-12	170 VHB	4000 VJ	226	0.062 VJ	0.041	1.3 VJ	4.4 VJ	6.9 VJ	16.7 VJ

Notes:

Values shown in **BOLD** exceed ADEC Method 2, under 40 inch zone, migration to groundwater pathway.

Ethylbenzene results did not exceed ADEC Method 2

PCB results did not exceed ADEC Method 2

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
Analytical Results- Main Operations Complex Groundwater Sampling 2002											
02NE88GW001	8/17/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	.024	MG/L	.05	.02	1	VJ
02NE88GW001	8/17/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	1.2	MG/L	.1	.042	1	
02NE88GW001	8/17/2002	CS	W	AK103	Residual Range Organics	.43	MG/L	.2	.073	1	
02NE88GW001	8/17/2002	CS	W	E300.0	Sulfate	17	MG/L	2	0.2	10	
02NE88GW001	8/17/2002	CS	W	E310.1	Alkalinity, Total	50	MG/L	2	1	1	
02NE88GW001	8/17/2002	CS	W	RSK175	Ethane	.0017	MG/L	.0005	.0005	1	
02NE88GW001	8/17/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW001	8/17/2002	CS	W	RSK175	Methane	.0039	MG/L	.0005	.0003	1	
02NE88GW001	8/17/2002	CS	W	SW8260B	Benzene	.00058	MG/L	.0005	.00011	1	
02NE88GW001	8/17/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88GW001	8/17/2002	CS	W	SW8260B	o-Xylene	.00013	MG/L	.0005	.000079	1	VJ
02NE88GW001	8/17/2002	CS	W	SW8260B	Toluene	.00061	MG/L	.0005	.000098	1	VB
02NE88GW001	8/17/2002	CS	W	SW8260B	Xylene, Isomers m & p	.00022	MG/L	.0005	.00022	1	VJ
02NE88GW002	8/17/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88GW002	8/17/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	.71	MG/L	.1	.042	1	
02NE88GW002	8/17/2002	CS	W	AK103	Residual Range Organics	1.3	MG/L	.2	.073	1	
02NE88GW002	8/17/2002	CS	W	E300.0	Sulfate	13	MG/L	2	0.2	10	
02NE88GW002	8/17/2002	CS	W	E310.1	Alkalinity, Total	40	MG/L	2	1	1	
02NE88GW002	8/17/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW002	8/17/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW002	8/17/2002	CS	W	RSK175	Methane	.01	MG/L	.0005	.0003	1	
02NE88GW002	8/17/2002	CS	W	SW8260B	Benzene	.00092	MG/L	.0005	.00011	1	
02NE88GW002	8/17/2002	CS	W	SW8260B	Ethylbenzene	.00034	MG/L	.0005	.00013	1	VJ
02NE88GW002	8/17/2002	CS	W	SW8260B	o-Xylene	.0001	MG/L	.0005	.000079	1	VJ
02NE88GW002	8/17/2002	CS	W	SW8260B	Toluene	.00036	MG/L	.0005	.000098	1	VB
02NE88GW002	8/17/2002	CS	W	SW8260B	Xylene, Isomers m & p	.00035	MG/L	.0005	.00022	1	VJ
02NE88GW003	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	.42	MG/L	.05	.02	1	
02NE88GW003	8/19/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	34	MG/L	1.1	.43	10	
02NE88GW003	8/19/2002	CS	W	AK103	Residual Range Organics	.22	MG/L	.21	.074	1	
02NE88GW003	8/19/2002	CS	W	E300.0	Sulfate	12	MG/L	1	0.1	5	
02NE88GW003	8/19/2002	CS	W	E310.1	Alkalinity, Total	47	MG/L	2	1	1	
02NE88GW003	8/19/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW003	8/19/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW003	8/19/2002	CS	W	RSK175	Methane	.0055	MG/L	.0005	.0003	1	
02NE88GW003	8/19/2002	CS	W	SW8260B	Benzene	.00057	MG/L	.0005	.00011	1	
02NE88GW003	8/19/2002	CS	W	SW8260B	Ethylbenzene	.025	MG/L	.0005	.00013	1	
02NE88GW003	8/19/2002	CS	W	SW8260B	o-Xylene	.00008	MG/L	.0005	.000079	1	VJ
02NE88GW003	8/19/2002	CS	W	SW8260B	Toluene	.00024	MG/L	.0005	.000098	1	VB
02NE88GW003	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	.022	MG/L	.0005	.00022	1	
02NE88GW004	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	1.2	MG/L	.05	.02	1	
02NE88GW004	8/19/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	72	MG/L	1.1	.43	10	
02NE88GW004	8/19/2002	CS	W	AK103	Residual Range Organics	1.9	MG/L	.21	.074	1	
02NE88GW004	8/19/2002	CS	W	E300.0	Sulfate	1.4	MG/L	0.2	0.02	1	
02NE88GW004	8/19/2002	CS	W	E310.1	Alkalinity, Total	258	MG/L	2	1	1	
02NE88GW004	8/19/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW004	8/19/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW004	8/19/2002	CS	W	RSK175	Methane	1.7	MG/L	.0005	.0003	1	
02NE88GW004	8/19/2002	CS	W	SW8260B	Benzene	.03	MG/L	.0005	.00011	1	
02NE88GW004	8/19/2002	CS	W	SW8260B	Ethylbenzene	.12	MG/L	.005	.0013	10	
02NE88GW004	8/19/2002	CS	W	SW8260B	o-Xylene	.007	MG/L	.0005	.000079	1	
02NE88GW004	8/19/2002	CS	W	SW8260B	Toluene	.0032	MG/L	.0005	.000098	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88GW004	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	.085	MG/L	.0005	.00022	1	
02NE88GW005	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	1.3	MG/L	.05	.02	1	
02NE88GW005	8/19/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	9.8	MG/L	.11	.043	1	
02NE88GW005	8/19/2002	CS	W	AK103	Residual Range Organics	2.3	MG/L	.21	.074	1	
02NE88GW005	8/19/2002	CS	W	E300.0	Sulfate	7.8	MG/L	0.2	0.02	1	
02NE88GW005	8/19/2002	CS	W	E310.1	Alkalinity, Total	145	MG/L	2	1	1	
02NE88GW005	8/19/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW005	8/19/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW005	8/19/2002	CS	W	RSK175	Methane	.62	MG/L	.0005	.0003	1	
02NE88GW005	8/19/2002	CS	W	SW8260B	Benzene	.019	MG/L	.0005	.00011	1	
02NE88GW005	8/19/2002	CS	W	SW8260B	Ethylbenzene	.035	MG/L	.0005	.00013	1	
02NE88GW005	8/19/2002	CS	W	SW8260B	o-Xylene	.071	MG/L	.0005	.000079	1	
02NE88GW005	8/19/2002	CS	W	SW8260B	Toluene	.12	MG/L	.005	.00098	10	
02NE88GW005	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	.14	MG/L	.0005	.00022	1	
02NE88GW006	8/20/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	1.1	MG/L	.05	.02	1	
02NE88GW006	8/20/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	69	MG/L	1.1	.43	10	
02NE88GW006	8/20/2002	CS	W	AK103	Residual Range Organics	2.1	MG/L	.21	.074	1	
02NE88GW006	8/20/2002	CS	W	E300.0	Sulfate	11.7	MG/L	0.4	0.04	2	
02NE88GW006	8/20/2002	CS	W	E310.1	Alkalinity, Total	153	MG/L	2	1	1	
02NE88GW006	8/20/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW006	8/20/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW006	8/20/2002	CS	W	RSK175	Methane	2.9	MG/L	.0005	.0003	1	
02NE88GW006	8/20/2002	CS	W	SW8260B	Benzene	.00074	MG/L	.0005	.00011	1	
02NE88GW006	8/20/2002	CS	W	SW8260B	Ethylbenzene	.052	MG/L	.0005	.00013	1	
02NE88GW006	8/20/2002	CS	W	SW8260B	o-Xylene	.0038	MG/L	.0005	.000079	1	
02NE88GW006	8/20/2002	CS	W	SW8260B	Toluene	.00019	MG/L	.0005	.000098	1	VB
02NE88GW006	8/20/2002	CS	W	SW8260B	Xylene, Isomers m & p	.055	MG/L	.0005	.00022	1	
02NE88GW007	8/20/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	1.5	MG/L	.05	.02	1	
02NE88GW007	8/20/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	6.1	MG/L	.11	.043	1	VLB
02NE88GW007	8/20/2002	CS	W	AK103	Residual Range Organics	.32	MG/L	.21	.074	1	
02NE88GW007	8/20/2002	CS	W	E300.0	Sulfate	0.8	MG/L	0.2	0.02	1	
02NE88GW007	8/20/2002	CS	W	E310.1	Alkalinity, Total	179	MG/L	2	1	1	
02NE88GW007	8/20/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW007	8/20/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW007	8/20/2002	CS	W	RSK175	Methane	1.2	MG/L	.0005	.0003	1	VLB
02NE88GW007	8/20/2002	CS	W	SW8260B	Benzene	.014	MG/L	.0005	.00011	1	
02NE88GW007	8/20/2002	CS	W	SW8260B	Ethylbenzene	.072	MG/L	.0005	.00013	1	
02NE88GW007	8/20/2002	CS	W	SW8260B	o-Xylene	.024	MG/L	.0005	.000079	1	
02NE88GW007	8/20/2002	CS	W	SW8260B	Toluene	.0012	MG/L	.0005	.000098	1	VB
02NE88GW007	8/20/2002	CS	W	SW8260B	Xylene, Isomers m & p	.13	MG/L	.0005	.00022	1	
02NE88GW008	8/20/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	.52	MG/L	.05	.02	1	
02NE88GW008	8/20/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	20	MG/L	.1	.042	1	
02NE88GW008	8/20/2002	CS	W	AK103	Residual Range Organics	.18	MG/L	.2	.073	1	VJ
02NE88GW008	8/20/2002	CS	W	E300.0	Sulfate	2.6	MG/L	0.2	0.02	1	
02NE88GW008	8/20/2002	CS	W	E310.1	Alkalinity, Total	162	MG/L	2	1	1	
02NE88GW008	8/20/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW008	8/20/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW008	8/20/2002	CS	W	RSK175	Methane	.88	MG/L	.0005	.0003	1	
02NE88GW008	8/20/2002	CS	W	SW8260B	Benzene	.00012	MG/L	.0005	.00011	1	VJ
02NE88GW008	8/20/2002	CS	W	SW8260B	Ethylbenzene	.018	MG/L	.0005	.00013	1	
02NE88GW008	8/20/2002	CS	W	SW8260B	o-Xylene	.00064	MG/L	.0005	.000079	1	
02NE88GW008	8/20/2002	CS	W	SW8260B	Toluene	.00011	MG/L	.0005	.000098	1	VB

Northeast Cape Phase II Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88GW008	8/20/2002	CS	W	SW8260B	Xylene, Isomers m & p	.016	MG/L	.0005	.00022	1	
02NE88GW009	8/21/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	.064	MG/L	.05	.02	1	
02NE88GW009	8/21/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	.71	MG/L	.1	.042	1	
02NE88GW009	8/21/2002	CS	W	AK103	Residual Range Organics	ND	MG/L	.2	.073	1	
02NE88GW009	8/21/2002	CS	W	E300.0	Sulfate	5	MG/L	1	0.1	5	
02NE88GW009	8/21/2002	CS	W	E310.1	Alkalinity, Total	26	MG/L	2	1	1	
02NE88GW009	8/21/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW009	8/21/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW009	8/21/2002	CS	W	RSK175	Methane	.13	MG/L	.0005	.0003	1	
02NE88GW009	8/21/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88GW009	8/21/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88GW009	8/21/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88GW009	8/21/2002	CS	W	SW8260B	Toluene	ND	MG/L	.0005	.000098	1	
02NE88GW009	8/21/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88GW010	8/21/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	.12	MG/L	.05	.02	1	
02NE88GW010	8/21/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	55	MG/L	1.1	.43	10	
02NE88GW010	8/21/2002	CS	W	AK103	Residual Range Organics	1.3	MG/L	.21	.075	1	
02NE88GW010	8/21/2002	CS	W	E300.0	Sulfate	13	MG/L	1	0.1	5	
02NE88GW010	8/21/2002	CS	W	E310.1	Alkalinity, Total	197	MG/L	2	1	1	
02NE88GW010	8/21/2002	CS	W	RSK175	Ethane	.00064	MG/L	.0005	.0005	1	
02NE88GW010	8/21/2002	CS	W	RSK175	Ethene	.0024	MG/L	.0015	.0013	1	
02NE88GW010	8/21/2002	CS	W	RSK175	Methane	.031	MG/L	.0005	.0003	1	
02NE88GW010	8/21/2002	CS	W	SW8260B	Benzene	.0027	MG/L	.0005	.00011	1	
02NE88GW010	8/21/2002	CS	W	SW8260B	Ethylbenzene	.0017	MG/L	.0005	.00013	1	
02NE88GW010	8/21/2002	CS	W	SW8260B	o-Xylene	.00015	MG/L	.0005	.000079	1	VJ
02NE88GW010	8/21/2002	CS	W	SW8260B	Toluene	.0014	MG/L	.0005	.000098	1	
02NE88GW010	8/21/2002	CS	W	SW8260B	Xylene, Isomers m & p	.00079	MG/L	.0005	.00022	1	
02NE88GW204	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	1.2	MG/L	.05	.02	1	
02NE88GW204	8/19/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	56	MG/L	1	.42	10	
02NE88GW204	8/19/2002	CS	W	AK103	Residual Range Organics	1.3	MG/L	.2	.073	1	
02NE88GW204	8/19/2002	CS	W	E300.0	Sulfate	0.9	MG/L	0.2	0.02	1	
02NE88GW204	8/19/2002	CS	W	E310.1	Alkalinity, Total	273	MG/L	2	1	1	
02NE88GW204	8/19/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88GW204	8/19/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88GW204	8/19/2002	CS	W	RSK175	Methane	1.8	MG/L	.0005	.0003	1	
02NE88GW204	8/19/2002	CS	W	SW8260B	Benzene	.03	MG/L	.0005	.00011	1	
02NE88GW204	8/19/2002	CS	W	SW8260B	Ethylbenzene	.12	MG/L	.005	.0013	10	
02NE88GW204	8/19/2002	CS	W	SW8260B	o-Xylene	.0075	MG/L	.0005	.000079	1	
02NE88GW204	8/19/2002	CS	W	SW8260B	Toluene	.0033	MG/L	.0005	.000098	1	
02NE88GW204	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	.083	MG/L	.0005	.00022	1	
Analytical Results- Main Operation Complex Soil Sampling 2002											
02NE88SB001	8/14/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	19	MG/KG	2.7	2.2	1	
02NE88SB001	8/14/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	5000	MG/KG	110	48	10	
02NE88SB001	8/14/2002	CS	SO	AK103	Residual Range Organics	39	MG/KG	110	4.5	1	VJ
02NE88SB001	8/14/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.15	PERCENT	0.05	0.02	1	
02NE88SB001	8/14/2002	CS	SO	E160.3M	Total Solids	94.7	PERCENT			1	
02NE88SB001	8/14/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0053	.00023	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0053	.00021	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Benzo(a)anthracene	.00051	MG/KG	.0053	.00014	1	VJ
02NE88SB001	8/14/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0007	MG/KG	.0053	.00015	1	VJ

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB001	8/14/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00026	MG/KG	.0053	.00011	1	VJ
02NE88SB001	8/14/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0053	.00016	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Chrysene	.001	MG/KG	.0053	.00016	1	VJ
02NE88SB001	8/14/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0053	.0002	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0053	.00018	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0053	.00018	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00024	MG/KG	.0053	.00016	1	VJ
02NE88SB001	8/14/2002	CS	SO	SIM	Naphthalene	.0022	MG/KG	.0053	.00023	1	VJ
02NE88SB001	8/14/2002	CS	SO	SIM	Phenanthrene	ND	MG/KG	.0053	.00016	1	
02NE88SB001	8/14/2002	CS	SO	SIM	Pyrene	.0043	MG/KG	.0053	.00012	1	VJ
02NE88SB001	8/14/2002	CS	SO	SW6020	Chromium	6.5	MG/KG	0.21	0.01	5	
02NE88SB001	8/14/2002	CS	SO	SW6020	Lead	50.5	MG/KG	0.05	0.03	5	
02NE88SB001	8/14/2002	CS	SO	SW6020	Zinc	57.6	MG/KG	0.53	0.06	5	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0074	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0065	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0087	1	
02NE88SB001	8/14/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB001	8/14/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB001	8/14/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.027	0.011	1	
02NE88SB001	8/14/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.027	0.0083	1	
02NE88SB001	8/14/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.027	0.011	1	
02NE88SB001	8/14/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.027	0.02	1	
02NE88SB002	8/14/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	4.9	MG/KG	2.7	2.1	1	
02NE88SB002	8/14/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	1400	MG/KG	11	4.7	1	
02NE88SB002	8/14/2002	CS	SO	AK103	Residual Range Organics	16	MG/KG	110	4.4	1	VJ
02NE88SB002	8/14/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.13	PERCENT	0.05	0.02	1	
02NE88SB002	8/14/2002	CS	SO	E160.3M	Total Solids	96.1	PERCENT			1	
02NE88SB002	8/14/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0052	.00022	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0052	.00017	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0052	.0002	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0052	.00014	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0052	.00015	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00031	MG/KG	.0052	.00015	1	VJ
02NE88SB002	8/14/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0052	.00011	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0052	.00016	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Chrysene	.00066	MG/KG	.0052	.00016	1	VJ
02NE88SB002	8/14/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0052	.00019	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0052	.00018	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0052	.00018	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0052	.00016	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Naphthalene	.00038	MG/KG	.0052	.00022	1	VJ
02NE88SB002	8/14/2002	CS	SO	SIM	Phenanthrene	ND	MG/KG	.0052	.00016	1	
02NE88SB002	8/14/2002	CS	SO	SIM	Pyrene	.0022	MG/KG	.0052	.00012	1	VJ
02NE88SB002	8/14/2002	CS	SO	SW6020	Chromium	4.38	MG/KG	0.21	0.01	5	
02NE88SB002	8/14/2002	CS	SO	SW6020	Lead	37.7	MG/KG	0.05	0.03	5	
02NE88SB002	8/14/2002	CS	SO	SW6020	Zinc	54.5	MG/KG	0.52	0.06	5	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.042	1	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0073	1	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0064	1	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0044	1	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0086	1	
02NE88SB002	8/14/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0048	1	
02NE88SB002	8/14/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.011	0.011	1	
02NE88SB002	8/14/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.025	0.011	1	
02NE88SB002	8/14/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.025	0.0082	1	
02NE88SB002	8/14/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.025	0.011	1	
02NE88SB002	8/14/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.025	0.02	1	
02NE88SB003	8/14/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	3	2.3	1	
02NE88SB003	8/14/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	12	5.2	1	
02NE88SB003	8/14/2002	CS	SO	AK103	Residual Range Organics	6	MG/KG	120	4.9	1	VJ
02NE88SB003	8/14/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.19	PERCENT	0.05	0.02	1	
02NE88SB003	8/14/2002	CS	SO	E160.3M	Total Solids	87.5	PERCENT			1	
02NE88SB003	8/14/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0058	.00024	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0058	.00019	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0058	.00022	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0058	.00015	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0058	.00016	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00045	MG/KG	.0058	.00016	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00065	MG/KG	.0058	.00012	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0058	.00018	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0058	.00018	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	.00048	MG/KG	.0058	.00021	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0058	.0002	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0058	.0002	1	
02NE88SB003	8/14/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00048	MG/KG	.0058	.00018	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Naphthalene	.001	MG/KG	.0058	.00024	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Phenanthrene	.00026	MG/KG	.0058	.00018	1	VJ
02NE88SB003	8/14/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0058	.00013	1	
02NE88SB003	8/14/2002	CS	SO	SW6020	Chromium	16.1	MG/KG	0.23	0.01	5	
02NE88SB003	8/14/2002	CS	SO	SW6020	Lead	24.4	MG/KG	0.06	0.03	5	
02NE88SB003	8/14/2002	CS	SO	SW6020	Zinc	55.2	MG/KG	0.57	0.07	5	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.12	0.046	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.23	0.008	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.12	0.019	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.12	0.007	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.12	0.0048	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.12	0.0094	1	
02NE88SB003	8/14/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.12	0.0053	1	
02NE88SB003	8/14/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.014	0.012	1	
02NE88SB003	8/14/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.035	0.012	1	
02NE88SB003	8/14/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.035	0.009	1	
02NE88SB003	8/14/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.035	0.012	1	
02NE88SB003	8/14/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.035	0.022	1	
02NE88SB004	8/14/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	3.6	2.2	1	
02NE88SB004	8/14/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	4.8	1	
02NE88SB004	8/14/2002	CS	SO	AK103	Residual Range Organics	7.1	MG/KG	110	4.5	1	VJ
02NE88SB004	8/14/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.18	PERCENT	0.05	0.02	1	
02NE88SB004	8/14/2002	CS	SO	E160.3M	Total Solids	94.4	PERCENT			1	
02NE88SB004	8/14/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0053	.00023	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB004	8/14/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0053	.00021	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0053	.00014	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0003	MG/KG	.0053	.00015	1	VJ
02NE88SB004	8/14/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0053	.00011	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0053	.00016	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0053	.00016	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0053	.0002	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0053	.00019	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0053	.00019	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0053	.00016	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Naphthalene	.00056	MG/KG	.0053	.00023	1	VJ
02NE88SB004	8/14/2002	CS	SO	SIM	Phenanthrene	ND	MG/KG	.0053	.00016	1	
02NE88SB004	8/14/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0053	.00012	1	
02NE88SB004	8/14/2002	CS	SO	SW6020	Chromium	8	MG/KG	0.21	0.01	5	
02NE88SB004	8/14/2002	CS	SO	SW6020	Lead	14.9	MG/KG	0.05	0.03	5	
02NE88SB004	8/14/2002	CS	SO	SW6020	Zinc	36.1	MG/KG	0.53	0.06	5	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0075	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0065	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0087	1	
02NE88SB004	8/14/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB004	8/14/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.012	1	
02NE88SB004	8/14/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.037	0.011	1	
02NE88SB004	8/14/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.037	0.0084	1	
02NE88SB004	8/14/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.037	0.011	1	
02NE88SB004	8/14/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.037	0.02	1	
02NE88SB005	8/15/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	6	2.4	1	
02NE88SB005	8/15/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	7.6	MG/KG	12	5.4	1	VJ
02NE88SB005	8/15/2002	CS	SO	AK103	Residual Range Organics	120	MG/KG	120	5.1	1	VJ
02NE88SB005	8/15/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.82	PERCENT	0.05	0.02	1	
02NE88SB005	8/15/2002	CS	SO	E160.3M	Total Solids	84.1	PERCENT			1	
02NE88SB005	8/15/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.006	.00025	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.006	.0002	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.006	.00023	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.006	.00016	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.006	.00017	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00032	MG/KG	.006	.00017	1	VJ
02NE88SB005	8/15/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.006	.00012	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.006	.00018	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Chrysene	.00032	MG/KG	.006	.00018	1	VJ
02NE88SB005	8/15/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.006	.00022	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.006	.00021	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.006	.00021	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.006	.00018	1	
02NE88SB005	8/15/2002	CS	SO	SIM	Naphthalene	.00081	MG/KG	.006	.00025	1	VJ
02NE88SB005	8/15/2002	CS	SO	SIM	Phenanthrene	.00051	MG/KG	.006	.00018	1	VJ
02NE88SB005	8/15/2002	CS	SO	SIM	Pyrene	.00017	MG/KG	.006	.00014	1	VJ
02NE88SB005	8/15/2002	CS	SO	SW6020	Chromium	22.3	MG/KG	0.24	0.01	5	
02NE88SB005	8/15/2002	CS	SO	SW6020	Lead	15.1	MG/KG	0.06	0.04	5	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB005	8/15/2002	CS	SO	SW6020	Zinc	45.9	MG/KG	0.6	0.07	5	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.12	0.048	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.24	0.0084	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.12	0.02	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.12	0.0073	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.12	0.005	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.12	0.0098	1	
02NE88SB005	8/15/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.12	0.0055	1	
02NE88SB005	8/15/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.023	0.013	1	
02NE88SB005	8/15/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.058	0.012	1	
02NE88SB005	8/15/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.058	0.0094	1	
02NE88SB005	8/15/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.058	0.012	1	
02NE88SB005	8/15/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.058	0.023	1	
02NE88SB006	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	51	MG/KG	5.4	2.2	1	
02NE88SB006	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	3700	MG/KG	11	5	1	
02NE88SB006	8/17/2002	CS	SO	AK103	Residual Range Organics	24	MG/KG	110	4.6	1	VJ
02NE88SB006	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.16	PERCENT	0.05	0.02	1	
02NE88SB006	8/17/2002	CS	SO	E160.3M	Total Solids	91.7	PERCENT			1	
02NE88SB006	8/17/2002	CS	SO	SIM	Acenaphthene	.15	MG/KG	.0055	.00023	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Anthracene	.034	MG/KG	.0055	.00021	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	.0011	MG/KG	.0055	.00015	1	VJ
02NE88SB006	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00074	MG/KG	.0055	.00016	1	VJ
02NE88SB006	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Chrysene	.0027	MG/KG	.0055	.00017	1	VJ
02NE88SB006	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Fluoranthene	.0041	MG/KG	.0055	.00019	1	VJ
02NE88SB006	8/17/2002	CS	SO	SIM	Fluorene	.36	MG/KG	.0055	.00019	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Naphthalene	1.5	MG/KG	.055	.0023	10	
02NE88SB006	8/17/2002	CS	SO	SIM	Phenanthrene	.46	MG/KG	.0055	.00017	1	
02NE88SB006	8/17/2002	CS	SO	SIM	Pyrene	.011	MG/KG	.0055	.00012	1	
02NE88SB006	8/17/2002	CS	SO	SW6020	Chromium	13.1	MG/KG	0.22	0.01	5	
02NE88SB006	8/17/2002	CS	SO	SW6020	Lead	26.2	MG/KG	0.05	0.03	5	VJ
02NE88SB006	8/17/2002	CS	SO	SW6020	Zinc	52.8	MG/KG	0.55	0.07	5	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB006	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB006	8/17/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.021	0.012	1	
02NE88SB006	8/17/2002	CS	SO	SW8260B	Ethylbenzene	0.34	MG/KG	0.051	0.011	1	VJ
02NE88SB006	8/17/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.051	0.0086	1	
02NE88SB006	8/17/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.051	0.011	1	
02NE88SB006	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.31	MG/KG	0.051	0.021	1	VJ
02NE88SB007	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	44	MG/KG	6.7	2.8	1	
02NE88SB007	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	12000	MG/KG	140	62	10	
02NE88SB007	8/17/2002	CS	SO	AK103	Residual Range Organics	3700	MG/KG	1400	58	10	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB007	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	15.3	PERCENT	0.05	0.02	1	
02NE88SB007	8/17/2002	CS	SO	E160.3M	Total Solids	73.7	PERCENT			1	
02NE88SB007	8/17/2002	CS	SO	SIM	Acenaphthene	.29	MG/KG	.034	.0015	1	VHB
02NE88SB007	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.034	.0011	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Anthracene	.026	MG/KG	.034	.0013	1	VJ
02NE88SB007	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.034	.00089	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.034	.00095	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0044	MG/KG	.034	.00095	1	VJ
02NE88SB007	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00094	MG/KG	.034	.00068	1	VJ
02NE88SB007	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.034	.0011	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Chrysene	.0033	MG/KG	.034	.0011	1	VJ
02NE88SB007	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.034	.0013	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Fluoranthene	.0042	MG/KG	.034	.0012	1	VJ
02NE88SB007	8/17/2002	CS	SO	SIM	Fluorene	.8	MG/KG	.034	.0012	1	VHB
02NE88SB007	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.034	.0011	1	
02NE88SB007	8/17/2002	CS	SO	SIM	Naphthalene	5.9	MG/KG	.034	.0015	1	VHB
02NE88SB007	8/17/2002	CS	SO	SIM	Phenanthrene	.59	MG/KG	.034	.0011	1	VHB
02NE88SB007	8/17/2002	CS	SO	SIM	Pyrene	.01	MG/KG	.034	.00075	1	VJ
02NE88SB007	8/17/2002	CS	SO	SW6020	Chromium	17.3	MG/KG	0.23	0.01	5	
02NE88SB007	8/17/2002	CS	SO	SW6020	Lead	11	MG/KG	0.06	0.03	5	
02NE88SB007	8/17/2002	CS	SO	SW6020	Zinc	17.3	MG/KG	0.57	0.07	5	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.14	0.055	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.27	0.0095	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.14	0.022	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.14	0.0083	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.14	0.0057	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.14	0.012	1	
02NE88SB007	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.14	0.0063	1	
02NE88SB007	8/17/2002	CS	SO	SW8260B	Benzene	0.047	MG/KG	0.027	0.015	1	
02NE88SB007	8/17/2002	CS	SO	SW8260B	Ethylbenzene	0.54	MG/KG	0.066	0.014	1	
02NE88SB007	8/17/2002	CS	SO	SW8260B	o-Xylene	0.89	MG/KG	0.066	0.011	1	
02NE88SB007	8/17/2002	CS	SO	SW8260B	Toluene	0.083	MG/KG	0.066	0.014	1	
02NE88SB007	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	1.6	MG/KG	0.066	0.026	1	
02NE88SB008	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	54	MG/KG	3.5	2.2	1	VHB
02NE88SB008	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	2600	MG/KG	11	5	1	
02NE88SB008	8/17/2002	CS	SO	AK103	Residual Range Organics	16	MG/KG	110	4.7	1	VJ
02NE88SB008	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.18	PERCENT	0.05	0.02	1	
02NE88SB008	8/17/2002	CS	SO	E160.3M	Total Solids	91.6	PERCENT			1	
02NE88SB008	8/17/2002	CS	SO	SIM	Acenaphthene	.11	MG/KG	.0055	.00023	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Anthracene	.015	MG/KG	.0055	.00021	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	.00065	MG/KG	.0055	.00015	1	VJ
02NE88SB008	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0055	.00016	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Chrysene	.0014	MG/KG	.0055	.00017	1	VJ
02NE88SB008	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Fluoranthene	.0017	MG/KG	.0055	.00019	1	VJ
02NE88SB008	8/17/2002	CS	SO	SIM	Fluorene	.26	MG/KG	.0055	.00019	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Naphthalene	2.3	MG/KG	.11	.0046	20	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB008	8/17/2002	CS	SO	SIM	Phenanthrene	.28	MG/KG	.0055	.00017	1	
02NE88SB008	8/17/2002	CS	SO	SIM	Pyrene	.0047	MG/KG	.0055	.00013	1	VJ
02NE88SB008	8/17/2002	CS	SO	SW6020	Chromium	3.73	MG/KG	0.22	0.01	5	
02NE88SB008	8/17/2002	CS	SO	SW6020	Lead	87	MG/KG	0.05	0.03	5	
02NE88SB008	8/17/2002	CS	SO	SW6020	Zinc	56.2	MG/KG	0.55	0.07	5	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB008	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB008	8/17/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.018	0.012	1	
02NE88SB008	8/17/2002	CS	SO	SW8260B	Ethylbenzene	0.57	MG/KG	0.044	0.011	1	
02NE88SB008	8/17/2002	CS	SO	SW8260B	o-Xylene	0.01	MG/KG	0.044	0.0086	1	VJ
02NE88SB008	8/17/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.044	0.011	1	
02NE88SB008	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.29	MG/KG	0.044	0.021	1	
02NE88SB009	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	2.8	2.2	1	
02NE88SB009	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	380	MG/KG	54	25	1	
02NE88SB009	8/17/2002	CS	SO	AK103	Residual Range Organics	3400	MG/KG	540	23	1	
02NE88SB009	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.95	PERCENT	0.05	0.02	1	
02NE88SB009	8/17/2002	CS	SO	E160.3M	Total Solids	92.9	PERCENT			1	
02NE88SB009	8/17/2002	CS	SO	SIM	Acenaphthene	.0043	MG/KG	.0054	.00023	1	VJ
02NE88SB009	8/17/2002	CS	SO	SIM	Acenaphthylene	.00055	MG/KG	.0054	.00018	1	VJ
02NE88SB009	8/17/2002	CS	SO	SIM	Anthracene	.0054	MG/KG	.0054	.00021	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	.03	MG/KG	.0054	.00014	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	.028	MG/KG	.0054	.00016	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	.039	MG/KG	.0054	.00016	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.018	MG/KG	.0054	.00011	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	.023	MG/KG	.0054	.00017	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Chrysene	.087	MG/KG	.0054	.00017	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	.0043	MG/KG	.0054	.0002	1	VJ
02NE88SB009	8/17/2002	CS	SO	SIM	Fluoranthene	.073	MG/KG	.0054	.00019	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Fluorene	.0045	MG/KG	.0054	.00019	1	VJ
02NE88SB009	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.016	MG/KG	.0054	.00017	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Naphthalene	.0041	MG/KG	.0054	.00023	1	VJ
02NE88SB009	8/17/2002	CS	SO	SIM	Phenanthrene	.056	MG/KG	.0054	.00017	1	
02NE88SB009	8/17/2002	CS	SO	SIM	Pyrene	.08	MG/KG	.0054	.00012	1	
02NE88SB009	8/17/2002	CS	SO	SW6020	Chromium	42.3	MG/KG	0.22	0.01	5	
02NE88SB009	8/17/2002	CS	SO	SW6020	Lead	42.4	MG/KG	0.05	0.03	5	
02NE88SB009	8/17/2002	CS	SO	SW6020	Zinc	92.6	MG/KG	0.54	0.06	5	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0066	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB009	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.59	MG/KG	0.11	0.005	1	
02NE88SB009	8/17/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB009	8/17/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.025	0.011	1	
02NE88SB009	8/17/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.025	0.0085	1	
02NE88SB009	8/17/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.025	0.011	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB009	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.025	0.021	1	
02NE88SB010	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4	2.3	1	
02NE88SB010	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	21	MG/KG	11	5.1	1	
02NE88SB010	8/17/2002	CS	SO	AK103	Residual Range Organics	25	MG/KG	110	4.7	1	VJ
02NE88SB010	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.61	PERCENT	0.05	0.02	1	
02NE88SB010	8/17/2002	CS	SO	E160.3M	Total Solids	90	PERCENT			1	
02NE88SB010	8/17/2002	CS	SO	SIM	Acenaphthene	.0006	MG/KG	.0056	.00024	1	VJ
02NE88SB010	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0056	.00018	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0056	.00022	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0056	.00015	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0056	.00016	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0056	.00016	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0056	.00012	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0056	.00017	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0056	.00017	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0056	.0002	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0056	.00019	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Fluorene	.0021	MG/KG	.0056	.00019	1	VJ
02NE88SB010	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0056	.00017	1	
02NE88SB010	8/17/2002	CS	SO	SIM	Naphthalene	.0037	MG/KG	.0056	.00024	1	VJ
02NE88SB010	8/17/2002	CS	SO	SIM	Phenanthrene	.00081	MG/KG	.0056	.00017	1	VJ
02NE88SB010	8/17/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0056	.00013	1	
02NE88SB010	8/17/2002	CS	SO	SW6020	Chromium	4.5	MG/KG	0.22	0.01	5	
02NE88SB010	8/17/2002	CS	SO	SW6020	Lead	13.1	MG/KG	0.06	0.03	5	
02NE88SB010	8/17/2002	CS	SO	SW6020	Zinc	20.1	MG/KG	0.56	0.07	5	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.045	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0078	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0068	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0092	1	
02NE88SB010	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0052	1	
02NE88SB010	8/17/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.014	0.012	1	
02NE88SB010	8/17/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.034	0.011	1	
02NE88SB010	8/17/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.034	0.0088	1	
02NE88SB010	8/17/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.034	0.011	1	
02NE88SB010	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.034	0.021	1	
02NE88SB011	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	130	MG/KG	3.3	2.2	1	VHB
02NE88SB011	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	3100	MG/KG	11	5	1	
02NE88SB011	8/18/2002	CS	SO	AK103	Residual Range Organics	23	MG/KG	110	4.7	1	VJ
02NE88SB011	8/18/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.16	PERCENT	0.05	0.02	1	
02NE88SB011	8/18/2002	CS	SO	E160.3M	Total Solids	91.1	PERCENT			1	
02NE88SB011	8/18/2002	CS	SO	SIM	Acenaphthene	.1	MG/KG	.0055	.00024	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Anthracene	.0035	MG/KG	.0055	.00021	1	VJ
02NE88SB011	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	.00023	MG/KG	.0055	.00015	1	VJ
02NE88SB011	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0005	MG/KG	.0055	.00016	1	VJ
02NE88SB011	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Chrysene	.00064	MG/KG	.0055	.00017	1	VJ
02NE88SB011	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB011	8/18/2002	CS	SO	SIM	Fluoranthene	.0008	MG/KG	.0055	.00019	1	VJ
02NE88SB011	8/18/2002	CS	SO	SIM	Fluorene	.23	MG/KG	.0055	.00019	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Naphthalene	4.1	MG/KG	.28	.012	50	
02NE88SB011	8/18/2002	CS	SO	SIM	Phenanthrene	.11	MG/KG	.0055	.00017	1	
02NE88SB011	8/18/2002	CS	SO	SIM	Pyrene	.0022	MG/KG	.0055	.00013	1	VJ
02NE88SB011	8/18/2002	CS	SO	SW6020	Chromium	12.8	MG/KG	0.22	0.01	5	
02NE88SB011	8/18/2002	CS	SO	SW6020	Lead	13.9	MG/KG	0.05	0.03	5	
02NE88SB011	8/18/2002	CS	SO	SW6020	Zinc	34.1	MG/KG	0.55	0.07	5	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0091	1	
02NE88SB011	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB011	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB011	8/18/2002	CS	SO	SW8260B	Ethylbenzene	0.36	MG/KG	0.026	0.011	1	
02NE88SB011	8/18/2002	CS	SO	SW8260B	o-Xylene	0.044	MG/KG	0.026	0.0087	1	
02NE88SB011	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.026	0.011	1	
02NE88SB011	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.44	MG/KG	0.026	0.021	1	
02NE88SB012	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	83	MG/KG	3	2.2	1	VHB
02NE88SB012	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	1200	MG/KG	11	4.9	1	
02NE88SB012	8/18/2002	CS	SO	AK103	Residual Range Organics	30	MG/KG	110	4.6	1	VJ
02NE88SB012	8/18/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.11	PERCENT	0.05	0.02	1	
02NE88SB012	8/18/2002	CS	SO	E160.3M	Total Solids	92.4	PERCENT			1	
02NE88SB012	8/18/2002	CS	SO	SIM	Acenaphthene	.052	MG/KG	.0055	.00023	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Anthracene	.0025	MG/KG	.0055	.00021	1	VJ
02NE88SB012	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00089	MG/KG	.0055	.00016	1	VJ
02NE88SB012	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0055	.00017	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Fluoranthene	.00044	MG/KG	.0055	.00019	1	VJ
02NE88SB012	8/18/2002	CS	SO	SIM	Fluorene	.17	MG/KG	.0055	.00019	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Naphthalene	1.1	MG/KG	.055	.0023	10	
02NE88SB012	8/18/2002	CS	SO	SIM	Phenanthrene	.063	MG/KG	.0055	.00017	1	
02NE88SB012	8/18/2002	CS	SO	SIM	Pyrene	.0015	MG/KG	.0055	.00012	1	VJ
02NE88SB012	8/18/2002	CS	SO	SW6020	Chromium	8.3	MG/KG	0.22	0.01	5	
02NE88SB012	8/18/2002	CS	SO	SW6020	Lead	14	MG/KG	0.05	0.03	5	
02NE88SB012	8/18/2002	CS	SO	SW6020	Zinc	33.4	MG/KG	0.54	0.06	5	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB012	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.0097	MG/KG	0.11	0.005	1	VJ

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB012	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB012	8/18/2002	CS	SO	SW8260B	Ethylbenzene	0.11	MG/KG	0.028	0.011	1	
02NE88SB012	8/18/2002	CS	SO	SW8260B	o-Xylene	0.013	MG/KG	0.028	0.0085	1	VJ
02NE88SB012	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.028	0.011	1	
02NE88SB012	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.15	MG/KG	0.028	0.021	1	
02NE88SB013	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	140	MG/KG	2.9	2.2	1	VHB
02NE88SB013	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	12000	MG/KG	110	48	10	
02NE88SB013	8/18/2002	CS	SO	AK103	Residual Range Organics	55	MG/KG	110	4.5	1	VJ
02NE88SB013	8/18/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.16	PERCENT	0.05	0.02	1	
02NE88SB013	8/18/2002	CS	SO	E160.3M	Total Solids	94.7	PERCENT			1	
02NE88SB013	8/18/2002	CS	SO	SIM	Acenaphthene	.18	MG/KG	.0053	.00023	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Anthracene	.0097	MG/KG	.0053	.00021	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	.00077	MG/KG	.0053	.00014	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00045	MG/KG	.0053	.00015	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.0002	MG/KG	.0053	.00011	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	.00018	MG/KG	.0053	.00016	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Chrysene	.0015	MG/KG	.0053	.00016	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0053	.0002	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Fluoranthene	.0019	MG/KG	.0053	.00018	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Fluorene	.52	MG/KG	.0053	.00018	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00017	MG/KG	.0053	.00016	1	VJ
02NE88SB013	8/18/2002	CS	SO	SIM	Naphthalene	7.9	MG/KG	.27	.012	50	
02NE88SB013	8/18/2002	CS	SO	SIM	Phenanthrene	.26	MG/KG	.0053	.00016	1	
02NE88SB013	8/18/2002	CS	SO	SIM	Pyrene	.0048	MG/KG	.0053	.00012	1	VJ
02NE88SB013	8/18/2002	CS	SO	SW6020	Chromium	17	MG/KG	0.21	0.01	5	
02NE88SB013	8/18/2002	CS	SO	SW6020	Lead	17.6	MG/KG	0.05	0.03	5	
02NE88SB013	8/18/2002	CS	SO	SW6020	Zinc	42.4	MG/KG	0.53	0.06	5	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0074	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0065	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0087	1	
02NE88SB013	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB013	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB013	8/18/2002	CS	SO	SW8260B	Ethylbenzene	1	MG/KG	0.027	0.011	1	
02NE88SB013	8/18/2002	CS	SO	SW8260B	o-Xylene	0.13	MG/KG	0.027	0.0083	1	
02NE88SB013	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.027	0.011	1	
02NE88SB013	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	1.5	MG/KG	0.027	0.02	1	
02NE88SB014	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	130	MG/KG	2.4	2.1	1	VHB
02NE88SB014	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	9200	MG/KG	110	48	10	
02NE88SB014	8/18/2002	CS	SO	AK103	Residual Range Organics	54	MG/KG	110	4.4	1	VJ
02NE88SB014	8/18/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.14	PERCENT	0.05	0.02	1	
02NE88SB014	8/18/2002	CS	SO	E160.3M	Total Solids	96	PERCENT			1	
02NE88SB014	8/18/2002	CS	SO	SIM	Acenaphthene	.18	MG/KG	.0053	.00022	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Anthracene	.0094	MG/KG	.0053	.0002	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	.00076	MG/KG	.0053	.00014	1	VJ
02NE88SB014	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00094	MG/KG	.0053	.00015	1	VJ

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB014	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00015	MG/KG	.0053	.00011	1	VJ
02NE88SB014	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0053	.00016	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Chrysene	.0015	MG/KG	.0053	.00016	1	VJ
02NE88SB014	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0053	.00019	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Fluoranthene	.0019	MG/KG	.0053	.00018	1	VJ
02NE88SB014	8/18/2002	CS	SO	SIM	Fluorene	.51	MG/KG	.0053	.00018	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0053	.00016	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Naphthalene	8.4	MG/KG	.27	.011	50	
02NE88SB014	8/18/2002	CS	SO	SIM	Phenanthrene	.25	MG/KG	.0053	.00016	1	
02NE88SB014	8/18/2002	CS	SO	SIM	Pyrene	.0043	MG/KG	.0053	.00012	1	VJ
02NE88SB014	8/18/2002	CS	SO	SW6020	Chromium	11.6	MG/KG	0.21	0.01	5	
02NE88SB014	8/18/2002	CS	SO	SW6020	Lead	19.3	MG/KG	0.05	0.03	5	
02NE88SB014	8/18/2002	CS	SO	SW6020	Zinc	37.9	MG/KG	0.52	0.06	5	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.042	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0073	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0064	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0044	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0086	1	
02NE88SB014	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0048	1	
02NE88SB014	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.011	0.011	1	
02NE88SB014	8/18/2002	CS	SO	SW8260B	Ethylbenzene	1.2	MG/KG	0.026	0.011	1	
02NE88SB014	8/18/2002	CS	SO	SW8260B	o-Xylene	0.38	MG/KG	0.026	0.0082	1	
02NE88SB014	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.026	0.011	1	
02NE88SB014	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	2.2	MG/KG	0.026	0.02	1	
02NE88SB015	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	68	MG/KG	4.5	2.2	1	VHB
02NE88SB015	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	5200	MG/KG	110	50	10	
02NE88SB015	8/18/2002	CS	SO	AK103	Residual Range Organics	11	MG/KG	110	4.7	1	VJ
02NE88SB015	8/18/2002	CS	SO	E160.3M	Total Solids	91.6	PERCENT			1	
02NE88SB015	8/18/2002	CS	SO	SIM	Acenaphthene	.21	MG/KG	.0055	.00023	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Anthracene	.0086	MG/KG	.0055	.00021	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	.00038	MG/KG	.0055	.00015	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00034	MG/KG	.0055	.00016	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00025	MG/KG	.0055	.00011	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	.00017	MG/KG	.0055	.00017	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Chrysene	.00087	MG/KG	.0055	.00017	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Fluoranthene	.0012	MG/KG	.0055	.00019	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Fluorene	.69	MG/KG	.0055	.00019	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.0002	MG/KG	.0055	.00017	1	VJ
02NE88SB015	8/18/2002	CS	SO	SIM	Naphthalene	3.3	MG/KG	.28	.012	50	
02NE88SB015	8/18/2002	CS	SO	SIM	Phenanthrene	.24	MG/KG	.0055	.00017	1	
02NE88SB015	8/18/2002	CS	SO	SIM	Pyrene	.0023	MG/KG	.0055	.00013	1	VJ
02NE88SB015	8/18/2002	CS	SO	SW6020	Chromium	9.63	MG/KG	1.09	0.05	25	
02NE88SB015	8/18/2002	CS	SO	SW6020	Lead	13.4	MG/KG	0.27	0.16	25	
02NE88SB015	8/18/2002	CS	SO	SW6020	Zinc	40.7	MG/KG	2.73	0.33	25	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB015	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.0065	MG/KG	0.11	0.0051	1	VJ
02NE88SB015	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.018	0.012	1	
02NE88SB015	8/18/2002	CS	SO	SW8260B	Ethylbenzene	0.13	MG/KG	0.044	0.011	1	
02NE88SB015	8/18/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.044	0.0086	1	
02NE88SB015	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.044	0.011	1	
02NE88SB015	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.17	MG/KG	0.044	0.021	1	
02NE88SB015	8/18/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.15	PERCENT	0.05	0.02	1	
02NE88SB016	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	73	MG/KG	4.7	2.2	1	VHB
02NE88SB016	8/18/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	2300	MG/KG	11	4.9	1	
02NE88SB016	8/18/2002	CS	SO	AK103	Residual Range Organics	7.4	MG/KG	110	4.6	1	VJ
02NE88SB016	8/18/2002	CS	SO	E160.3M	Total Solids	92.5	PERCENT			1	
02NE88SB016	8/18/2002	CS	SO	SIM	Acenaphthene	.11	MG/KG	.0055	.00023	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Anthracene	.0035	MG/KG	.0055	.00021	1	VJ
02NE88SB016	8/18/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00032	MG/KG	.0055	.00016	1	VJ
02NE88SB016	8/18/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Chrysene	.00042	MG/KG	.0055	.00017	1	VJ
02NE88SB016	8/18/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Fluoranthene	.00048	MG/KG	.0055	.00019	1	VJ
02NE88SB016	8/18/2002	CS	SO	SIM	Fluorene	.35	MG/KG	.0055	.00019	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Naphthalene	2.3	MG/KG	.28	.012	50	
02NE88SB016	8/18/2002	CS	SO	SIM	Phenanthrene	.12	MG/KG	.0055	.00017	1	
02NE88SB016	8/18/2002	CS	SO	SIM	Pyrene	.00095	MG/KG	.0055	.00012	1	VJ
02NE88SB016	8/18/2002	CS	SO	SW6020	Chromium	8.34	MG/KG	1.08	0.05	25	
02NE88SB016	8/18/2002	CS	SO	SW6020	Lead	19.2	MG/KG	0.27	0.16	25	
02NE88SB016	8/18/2002	CS	SO	SW6020	Zinc	39.4	MG/KG	2.7	0.32	25	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0066	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB016	8/18/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.005	1	
02NE88SB016	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.018	0.012	1	
02NE88SB016	8/18/2002	CS	SO	SW8260B	Ethylbenzene	0.21	MG/KG	0.045	0.011	1	
02NE88SB016	8/18/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.045	0.0085	1	
02NE88SB016	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.045	0.011	1	
02NE88SB016	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.18	MG/KG	0.045	0.021	1	
02NE88SB016	8/18/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.16	PERCENT	0.05	0.02	1	
02NE88SB017	8/19/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	3.5	2.1	1	
02NE88SB017	8/19/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	7	MG/KG	11	4.7	1	VJ
02NE88SB017	8/19/2002	CS	SO	AK103	Residual Range Organics	8.7	MG/KG	110	4.4	1	VJ
02NE88SB017	8/19/2002	CS	SO	E160.3M	Total Solids	97.2	PERCENT			1	
02NE88SB017	8/19/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0052	.00022	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0052	.00017	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0052	.0002	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB017	8/19/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0052	.00014	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0052	.00015	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00023	MG/KG	.0052	.00015	1	VJ
02NE88SB017	8/19/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00014	MG/KG	.0052	.00011	1	VJ
02NE88SB017	8/19/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0052	.00016	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Chrysene	.00018	MG/KG	.0052	.00016	1	VJ
02NE88SB017	8/19/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0052	.00019	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0052	.00018	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0052	.00018	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0052	.00016	1	
02NE88SB017	8/19/2002	CS	SO	SIM	Naphthalene	.00045	MG/KG	.0052	.00022	1	VJ
02NE88SB017	8/19/2002	CS	SO	SIM	Phenanthrene	.0004	MG/KG	.0052	.00016	1	VJ
02NE88SB017	8/19/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0052	.00012	1	
02NE88SB017	8/19/2002	CS	SO	SW6020	Chromium	7.04	MG/KG	1.03	0.05	25	
02NE88SB017	8/19/2002	CS	SO	SW6020	Lead	14.4	MG/KG	0.26	0.15	25	
02NE88SB017	8/19/2002	CS	SO	SW6020	Zinc	38.2	MG/KG	2.57	0.31	25	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.042	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0073	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0063	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0044	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0085	1	
02NE88SB017	8/19/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0048	1	
02NE88SB017	8/19/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.011	1	
02NE88SB017	8/19/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.036	0.011	1	
02NE88SB017	8/19/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.036	0.0081	1	
02NE88SB017	8/19/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.036	0.011	1	
02NE88SB017	8/19/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.036	0.02	1	
02NE88SB017	8/19/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.09	PERCENT	0.05	0.02	1	
02NE88SB018	8/19/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.8	2.2	1	
02NE88SB018	8/19/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	7.6	MG/KG	11	5	1	VJ
02NE88SB018	8/19/2002	CS	SO	AK103	Residual Range Organics	12	MG/KG	110	4.6	1	VJ
02NE88SB018	8/19/2002	CS	SO	E160.3M	Total Solids	91.7	PERCENT			1	
02NE88SB018	8/19/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0055	.00023	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0055	.00021	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00034	MG/KG	.0055	.00016	1	VJ
02NE88SB018	8/19/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Chrysene	.00032	MG/KG	.0055	.00017	1	VJ
02NE88SB018	8/19/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0055	.00019	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Fluorene	.00022	MG/KG	.0055	.00019	1	VJ
02NE88SB018	8/19/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB018	8/19/2002	CS	SO	SIM	Naphthalene	.0019	MG/KG	.0055	.00023	1	VJ
02NE88SB018	8/19/2002	CS	SO	SIM	Phenanthrene	.00068	MG/KG	.0055	.00017	1	VJ
02NE88SB018	8/19/2002	CS	SO	SIM	Pyrene	.00014	MG/KG	.0055	.00012	1	VJ
02NE88SB018	8/19/2002	CS	SO	SW6020	Chromium	12.5	MG/KG	1.09	0.05	25	
02NE88SB018	8/19/2002	CS	SO	SW6020	Lead	17.8	MG/KG	0.27	0.16	25	
02NE88SB018	8/19/2002	CS	SO	SW6020	Zinc	48.4	MG/KG	2.73	0.33	25	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB018	8/19/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB018	8/19/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.016	0.012	1	
02NE88SB018	8/19/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.038	0.011	1	
02NE88SB018	8/19/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.038	0.0086	1	
02NE88SB018	8/19/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.038	0.011	1	
02NE88SB018	8/19/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.038	0.021	1	
02NE88SB018	8/19/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.11	PERCENT	0.05	0.02	1	
02NE88SB019	8/19/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	31	MG/KG	3.5	2.2	1	
02NE88SB019	8/19/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	1400	MG/KG	11	4.9	1	
02NE88SB019	8/19/2002	CS	SO	AK103	Residual Range Organics	ND	MG/KG	110	4.6	1	
02NE88SB019	8/19/2002	CS	SO	E160.3M	Total Solids	93.1	PERCENT			1	
02NE88SB019	8/19/2002	CS	SO	SIM	Acenaphthene	.045	MG/KG	.0054	.00023	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0054	.00018	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Anthracene	.0021	MG/KG	.0054	.00021	1	VJ
02NE88SB019	8/19/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0054	.00014	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0054	.00016	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00018	MG/KG	.0054	.00016	1	VJ
02NE88SB019	8/19/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0054	.00011	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0054	.00017	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Chrysene	.00035	MG/KG	.0054	.00017	1	VJ
02NE88SB019	8/19/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0054	.0002	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Fluoranthene	.00019	MG/KG	.0054	.00019	1	VJ
02NE88SB019	8/19/2002	CS	SO	SIM	Fluorene	.16	MG/KG	.0054	.00019	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0054	.00017	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Naphthalene	.48	MG/KG	.0054	.00023	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Phenanthrene	.05	MG/KG	.0054	.00017	1	
02NE88SB019	8/19/2002	CS	SO	SIM	Pyrene	.00062	MG/KG	.0054	.00012	1	VJ
02NE88SB019	8/19/2002	CS	SO	SW6020	Chromium	10	MG/KG	1.07	0.05	25	
02NE88SB019	8/19/2002	CS	SO	SW6020	Lead	43.7	MG/KG	0.27	0.16	25	
02NE88SB019	8/19/2002	CS	SO	SW6020	Zinc	92.4	MG/KG	2.69	0.32	25	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0066	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB019	8/19/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.005	1	
02NE88SB019	8/19/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.012	1	
02NE88SB019	8/19/2002	CS	SO	SW8260B	Ethylbenzene	0.018	MG/KG	0.038	0.011	1	VJ
02NE88SB019	8/19/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.038	0.0085	1	
02NE88SB019	8/19/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.038	0.011	1	
02NE88SB019	8/19/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.038	0.02	1	
02NE88SB019	8/19/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.1	PERCENT	0.05	0.02	1	
02NE88SB020	8/19/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	19	MG/KG	4.4	2.2	1	
02NE88SB020	8/19/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	750	MG/KG	11	4.9	1	
02NE88SB020	8/19/2002	CS	SO	AK103	Residual Range Organics	ND	MG/KG	110	4.6	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB020	8/19/2002	CS	SO	E160.3M	Total Solids	92.8	PERCENT			1	
02NE88SB020	8/19/2002	CS	SO	SIM	Acenaphthene	.03	MG/KG	.0054	.00023	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0054	.00018	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Anthracene	.0019	MG/KG	.0054	.00021	1	VJ
02NE88SB020	8/19/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0054	.00015	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0054	.00016	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0003	MG/KG	.0054	.00016	1	VJ
02NE88SB020	8/19/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0054	.00011	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0054	.00017	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Chrysene	.00023	MG/KG	.0054	.00017	1	VJ
02NE88SB020	8/19/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0054	.0002	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Fluoranthene	.00028	MG/KG	.0054	.00019	1	VJ
02NE88SB020	8/19/2002	CS	SO	SIM	Fluorene	.12	MG/KG	.0054	.00019	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0054	.00017	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Naphthalene	.11	MG/KG	.0054	.00023	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Phenanthrene	.047	MG/KG	.0054	.00017	1	
02NE88SB020	8/19/2002	CS	SO	SIM	Pyrene	.0005	MG/KG	.0054	.00012	1	VJ
02NE88SB020	8/19/2002	CS	SO	SW6020	Chromium	4.8	MG/KG	1.08	0.05	25	
02NE88SB020	8/19/2002	CS	SO	SW6020	Lead	60.5	MG/KG	0.27	0.16	25	
02NE88SB020	8/19/2002	CS	SO	SW6020	Zinc	87.4	MG/KG	2.69	0.32	25	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0066	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB020	8/19/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.005	1	
02NE88SB020	8/19/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.012	1	
02NE88SB020	8/19/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.038	0.011	1	
02NE88SB020	8/19/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.038	0.0085	1	
02NE88SB020	8/19/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.038	0.011	1	
02NE88SB020	8/19/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.038	0.021	1	
02NE88SB020	8/19/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.07	PERCENT	0.05	0.02	1	
02NE88SB021	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	70	MG/KG	9	4	1	
02NE88SB021	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	13000	MG/KG	390	180	10	
02NE88SB021	8/17/2002	CS	SO	AK103	Residual Range Organics	5100	MG/KG	3900	170	10	
02NE88SB021	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	16.3	PERCENT	0.05	0.02	1	
02NE88SB021	8/17/2002	CS	SO	E160.3M	Total Solids	50.8	PERCENT			1	
02NE88SB021	8/17/2002	CS	SO	SIM	Acenaphthene	.18	MG/KG	.05	.0021	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.05	.0016	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Anthracene	.012	MG/KG	.05	.0019	1	VJ
02NE88SB021	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.05	.0013	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.05	.0014	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0052	MG/KG	.05	.0014	1	VJ
02NE88SB021	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.05	.00099	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.05	.0015	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.05	.0015	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.05	.0018	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Fluoranthene	.0029	MG/KG	.05	.0017	1	VJ
02NE88SB021	8/17/2002	CS	SO	SIM	Fluorene	.33	MG/KG	.05	.0017	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.05	.0015	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Naphthalene	12	MG/KG	.5	.021	10	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB021	8/17/2002	CS	SO	SIM	Phenanthrene	.21	MG/KG	.05	.0015	1	
02NE88SB021	8/17/2002	CS	SO	SIM	Pyrene	.0059	MG/KG	.05	.0011	1	VJ
02NE88SB021	8/17/2002	CS	SO	SW6020	Chromium	16.5	MG/KG	0.39	0.02	5	
02NE88SB021	8/17/2002	CS	SO	SW6020	Lead	13.4	MG/KG	0.1	0.06	5	
02NE88SB021	8/17/2002	CS	SO	SW6020	Zinc	44.3	MG/KG	0.98	0.12	5	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.2	0.079	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.39	0.014	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.2	0.032	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.2	0.013	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.2	0.0083	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.2	0.017	1	
02NE88SB021	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.2	0.0091	1	
02NE88SB021	8/17/2002	CS	SO	SW8260B	Benzene	0.12	MG/KG	0.031	0.021	1	
02NE88SB021	8/17/2002	CS	SO	SW8260B	Ethylbenzene	1.3	MG/KG	0.078	0.02	1	
02NE88SB021	8/17/2002	CS	SO	SW8260B	o-Xylene	2.7	MG/KG	0.078	0.016	1	
02NE88SB021	8/17/2002	CS	SO	SW8260B	Toluene	3.2	MG/KG	0.078	0.02	1	
02NE88SB021	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	5.1	MG/KG	0.078	0.037	1	
02NE88SB022	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	99	MG/KG	8.1	4.4	1	
02NE88SB022	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	51000	MG/KG	260	120	10	
02NE88SB022	8/17/2002	CS	SO	AK103	Residual Range Organics	6000	MG/KG	2600	110	10	
02NE88SB022	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	14.9	PERCENT	0.05	0.02	1	
02NE88SB022	8/17/2002	CS	SO	E160.3M	Total Solids	46.3	PERCENT			1	
02NE88SB022	8/17/2002	CS	SO	SIM	Acenaphthene	2.6	MG/KG	.14	.0057	1	VHB
02NE88SB022	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.14	.0044	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Anthracene	.3	MG/KG	.14	.0052	1	VHB
02NE88SB022	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	.006	MG/KG	.14	.0036	1	VJ
02NE88SB022	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.14	.0038	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	.016	MG/KG	.14	.0038	1	VJ
02NE88SB022	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.14	.0027	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.14	.0041	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.14	.0041	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.14	.0049	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Fluoranthene	.048	MG/KG	.14	.0046	1	VJ
02NE88SB022	8/17/2002	CS	SO	SIM	Fluorene	6.9	MG/KG	.14	.0046	1	VHB
02NE88SB022	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.14	.0041	1	
02NE88SB022	8/17/2002	CS	SO	SIM	Naphthalene	81	MG/KG	2.7	.12	20	
02NE88SB022	8/17/2002	CS	SO	SIM	Phenanthrene	5.5	MG/KG	.14	.0041	1	VHB
02NE88SB022	8/17/2002	CS	SO	SIM	Pyrene	.12	MG/KG	.14	.003	1	VJ
02NE88SB022	8/17/2002	CS	SO	SW6020	Chromium	23.7	MG/KG	0.43	0.02	5	
02NE88SB022	8/17/2002	CS	SO	SW6020	Lead	61.9	MG/KG	0.11	0.06	5	
02NE88SB022	8/17/2002	CS	SO	SW6020	Zinc	110	MG/KG	1.08	0.13	5	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.22	0.087	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.43	0.016	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.22	0.035	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.22	0.014	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.22	0.0091	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.22	0.018	1	
02NE88SB022	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.22	0.01	1	
02NE88SB022	8/17/2002	CS	SO	SW8260B	Benzene	0.19	MG/KG	0.039	0.023	1	
02NE88SB022	8/17/2002	CS	SO	SW8260B	Ethylbenzene	2.8	MG/KG	0.097	0.022	1	
02NE88SB022	8/17/2002	CS	SO	SW8260B	o-Xylene	6.2	MG/KG	0.097	0.017	1	
02NE88SB022	8/17/2002	CS	SO	SW8260B	Toluene	4.5	MG/KG	0.097	0.022	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB022	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	12	MG/KG	0.097	0.041	1	
02NE88SB023	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	5.2	2.7	1	
02NE88SB023	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	190	MG/KG	14	5.9	1	
02NE88SB023	8/20/2002	CS	SO	AK103	Residual Range Organics	1500	MG/KG	140	5.6	1	
02NE88SB023	8/20/2002	CS	SO	E160.3M	Total Solids	76.6	PERCENT			1	
02NE88SB023	8/20/2002	CS	SO	SIM	Acenaphthene	.00028	MG/KG	.0066	.00028	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0066	.00021	1	
02NE88SB023	8/20/2002	CS	SO	SIM	Anthracene	.00081	MG/KG	.0066	.00025	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.00027	MG/KG	.0066	.00017	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0066	.00019	1	
02NE88SB023	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00048	MG/KG	.0066	.00019	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.0002	MG/KG	.0066	.00014	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0066	.0002	1	
02NE88SB023	8/20/2002	CS	SO	SIM	Chrysene	.00067	MG/KG	.0066	.0002	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0066	.00024	1	
02NE88SB023	8/20/2002	CS	SO	SIM	Fluoranthene	.00088	MG/KG	.0066	.00023	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Fluorene	.00068	MG/KG	.0066	.00023	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0066	.0002	1	
02NE88SB023	8/20/2002	CS	SO	SIM	Naphthalene	.0045	MG/KG	.0066	.00028	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Phenanthrene	.0022	MG/KG	.0066	.0002	1	VJ
02NE88SB023	8/20/2002	CS	SO	SIM	Pyrene	.0008	MG/KG	.0066	.00015	1	VJ
02NE88SB023	8/20/2002	CS	SO	SW6020	Chromium	12.4	MG/KG	1.09	0.05	25	
02NE88SB023	8/20/2002	CS	SO	SW6020	Lead	8.45	MG/KG	0.27	0.16	25	
02NE88SB023	8/20/2002	CS	SO	SW6020	Zinc	30	MG/KG	2.72	0.33	25	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.14	0.053	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.27	0.092	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.14	0.021	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.14	0.008	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.14	0.0055	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.14	0.011	1	
02NE88SB023	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.14	0.0061	1	
02NE88SB023	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.022	0.014	1	
02NE88SB023	8/20/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.054	0.013	1	
02NE88SB023	8/20/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.054	0.011	1	
02NE88SB023	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.054	0.013	1	
02NE88SB023	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.054	0.025	1	
02NE88SB023	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	8.09	PERCENT	0.05	0.02	1	
02NE88SB024	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	3.8	2.2	1	
02NE88SB024	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	20	MG/KG	11	4.9	1	
02NE88SB024	8/20/2002	CS	SO	AK103	Residual Range Organics	33	MG/KG	110	4.6	1	VJ
02NE88SB024	8/20/2002	CS	SO	E160.3M	Total Solids	92.3	PERCENT			1	
02NE88SB024	8/20/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0055	.00023	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0055	.00021	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00027	MG/KG	.0055	.00016	1	VJ
02NE88SB024	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0055	.00017	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Fluoranthene	.00019	MG/KG	.0055	.00019	1	VJ

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB024	8/20/2002	CS	SO	SIM	Fluorene	.00051	MG/KG	.0055	.00019	1	VJ
02NE88SB024	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB024	8/20/2002	CS	SO	SIM	Naphthalene	.0011	MG/KG	.0055	.00023	1	VJ
02NE88SB024	8/20/2002	CS	SO	SIM	Phenanthrene	.00084	MG/KG	.0055	.00017	1	VJ
02NE88SB024	8/20/2002	CS	SO	SIM	Pyrene	.00017	MG/KG	.0055	.00012	1	VJ
02NE88SB024	8/20/2002	CS	SO	SW6020	Chromium	9.62	MG/KG	1.08	0.05	25	
02NE88SB024	8/20/2002	CS	SO	SW6020	Lead	17.3	MG/KG	0.27	0.16	25	
02NE88SB024	8/20/2002	CS	SO	SW6020	Zinc	44.5	MG/KG	2.71	0.33	25	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0076	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0089	1	
02NE88SB024	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.005	1	
02NE88SB024	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.017	0.012	1	
02NE88SB024	8/20/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.043	0.011	1	
02NE88SB024	8/20/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.043	0.0086	1	
02NE88SB024	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.043	0.011	1	
02NE88SB024	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.043	0.021	1	
02NE88SB024	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.15	PERCENT	0.05	0.02	1	
02NE88SB025	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	11	MG/KG	19	7.4	1	VJ
02NE88SB025	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	430	MG/KG	40	18	1	
02NE88SB025	8/20/2002	CS	SO	AK103	Residual Range Organics	4600	MG/KG	400	17	1	
02NE88SB025	8/20/2002	CS	SO	E160.3M	Total Solids	48.5	PERCENT			1	
02NE88SB025	8/20/2002	CS	SO	SIM	Acenaphthene	.0026	MG/KG	.021	.00087	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Acenaphthylene	.0011	MG/KG	.021	.00066	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.021	.00079	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.021	.00054	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.021	.00058	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.021	MG/KG	.021	.00058	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.0088	MG/KG	.021	.00042	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.021	.00062	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.021	.00062	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.021	.00075	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Fluoranthene	.0025	MG/KG	.021	.00071	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Fluorene	.006	MG/KG	.021	.00071	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.021	.00062	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Naphthalene	.042	MG/KG	.021	.00087	2	
02NE88SB025	8/20/2002	CS	SO	SIM	Phenanthrene	.0083	MG/KG	.021	.00062	2	VJ
02NE88SB025	8/20/2002	CS	SO	SIM	Pyrene	.0026	MG/KG	.021	.00046	2	VJ
02NE88SB025	8/20/2002	CS	SO	SW6020	Chromium	16.5	MG/KG	0.83	0.04	25	
02NE88SB025	8/20/2002	CS	SO	SW6020	Lead	9.91	MG/KG	0.21	0.12	25	
02NE88SB025	8/20/2002	CS	SO	SW6020	Zinc	42	MG/KG	2.06	0.25	25	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.21	0.083	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.42	0.015	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.21	0.033	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.21	0.013	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.21	0.0087	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.21	0.017	1	
02NE88SB025	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.21	0.0095	1	
02NE88SB025	8/20/2002	CS	SO	SW8260B	Benzene	0.37	MG/KG	0.069	0.036	1	

Northeast Cape Phase III Remedial Investigation
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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB025	8/20/2002	CS	SO	SW8260B	Ethylbenzene	0.034	MG/KG	0.18	0.034	1	VJ
02NE88SB025	8/20/2002	CS	SO	SW8260B	o-Xylene	0.071	MG/KG	0.18	0.027	1	VJ
02NE88SB025	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.18	0.034	1	
02NE88SB025	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.19	MG/KG	0.18	0.064	1	
02NE88SB025	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	16.5	PERCENT	0.05	0.02	1	
02NE88SB026	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	6.1	3.1	1	
02NE88SB026	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	77	MG/KG	28	13	1	
02NE88SB026	8/20/2002	CS	SO	AK103	Residual Range Organics	420	MG/KG	280	12	1	
02NE88SB026	8/20/2002	CS	SO	E160.3M	Total Solids	66.3	PERCENT			1	
02NE88SB026	8/20/2002	CS	SO	SIM	Acenaphthene	.00037	MG/KG	.0076	.00032	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0076	.00025	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0076	.00029	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0076	.0002	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0076	.00022	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00057	MG/KG	.0076	.00022	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00021	MG/KG	.0076	.00016	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0076	.00023	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Chrysene	.0029	MG/KG	.0076	.00023	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0076	.00028	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Fluoranthene	.0004	MG/KG	.0076	.00026	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Fluorene	.00061	MG/KG	.0076	.00026	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0076	.00023	1	
02NE88SB026	8/20/2002	CS	SO	SIM	Naphthalene	.0018	MG/KG	.0076	.00032	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Phenanthrene	.0027	MG/KG	.0076	.00023	1	VJ
02NE88SB026	8/20/2002	CS	SO	SIM	Pyrene	.0004	MG/KG	.0076	.00017	1	VJ
02NE88SB026	8/20/2002	CS	SO	SW6020	Chromium	14.3	MG/KG	0.75	0.04	25	
02NE88SB026	8/20/2002	CS	SO	SW6020	Lead	21.4	MG/KG	0.19	0.11	25	
02NE88SB026	8/20/2002	CS	SO	SW6020	Zinc	77.5	MG/KG	1.89	0.23	25	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.15	0.061	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.3	0.011	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.15	0.025	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.15	0.0093	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.15	0.0064	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.15	0.013	1	
02NE88SB026	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.15	0.007	1	
02NE88SB026	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.022	0.016	1	
02NE88SB026	8/20/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.054	0.015	1	
02NE88SB026	8/20/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.054	0.012	1	
02NE88SB026	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.054	0.015	1	
02NE88SB026	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.054	0.029	1	
02NE88SB026	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	1.62	PERCENT	0.05	0.02	1	
02NE88SB027	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	220	MG/KG	5.4	2.5	1	VHB
02NE88SB027	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	47000	MG/KG	250	110	20	
02NE88SB027	8/20/2002	CS	SO	AK103	Residual Range Organics	3000	MG/KG	130	5.2	1	
02NE88SB027	8/20/2002	CS	SO	E160.3M	Total Solids	82.3	PERCENT			1	
02NE88SB027	8/20/2002	CS	SO	SIM	Acenaphthene	1.3	MG/KG	.031	.0013	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.031	.00098	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Anthracene	.12	MG/KG	.031	.0012	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.012	MG/KG	.031	.00079	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	.0032	MG/KG	.031	.00086	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.007	MG/KG	.031	.00086	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.0016	MG/KG	.031	.00061	5	VJ

Northeast Cape Phase III Remedial Investigation
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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB027	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	.0033	MG/KG	.031	.00092	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Chrysene	.024	MG/KG	.031	.00092	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.031	.0011	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Fluoranthene	.033	MG/KG	.031	.0011	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Fluorene	3.9	MG/KG	.031	.0011	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.0018	MG/KG	.031	.00092	5	VJ
02NE88SB027	8/20/2002	CS	SO	SIM	Naphthalene	79	MG/KG	3.1	.13	500	
02NE88SB027	8/20/2002	CS	SO	SIM	Phenanthrene	2.7	MG/KG	.031	.00092	5	
02NE88SB027	8/20/2002	CS	SO	SIM	Pyrene	.06	MG/KG	.031	.00067	5	
02NE88SB027	8/20/2002	CS	SO	SW6020	Chromium	22.7	MG/KG	1.22	0.06	25	
02NE88SB027	8/20/2002	CS	SO	SW6020	Lead	21.8	MG/KG	0.3	0.18	25	
02NE88SB027	8/20/2002	CS	SO	SW6020	Zinc	82.1	MG/KG	3.04	0.37	25	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.13	0.049	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.25	0.0086	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.13	0.02	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.13	0.0075	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.13	0.0052	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.13	0.01	1	
02NE88SB027	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.035	MG/KG	0.13	0.0056	1	VJ
02NE88SB027	8/20/2002	CS	SO	SW8260B	Benzene	0.019	MG/KG	0.017	0.013	1	
02NE88SB027	8/20/2002	CS	SO	SW8260B	Ethylbenzene	0.066	MG/KG	0.041	0.012	1	
02NE88SB027	8/20/2002	CS	SO	SW8260B	o-Xylene	1.7	MG/KG	0.041	0.0096	1	
02NE88SB027	8/20/2002	CS	SO	SW8260B	Toluene	0.036	MG/KG	0.041	0.012	1	VJ
02NE88SB027	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.71	MG/KG	0.041	0.023	1	
02NE88SB027	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	4.67	PERCENT	0.05	0.02	1	
02NE88SB028	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	62	MG/KG	4.5	2.8	1	
02NE88SB028	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	210	MG/KG	25	12	1	
02NE88SB028	8/20/2002	CS	SO	AK103	Residual Range Organics	900	MG/KG	250	11	1	
02NE88SB028	8/20/2002	CS	SO	E160.3M	Total Solids	72.4	PERCENT			1	
02NE88SB028	8/20/2002	CS	SO	SIM	Acenaphthene	.012	MG/KG	.0069	.0003	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0069	.00023	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Anthracene	.00076	MG/KG	.0069	.00027	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.00032	MG/KG	.0069	.00018	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0069	.0002	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0012	MG/KG	.0069	.0002	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00048	MG/KG	.0069	.00014	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0069	.00021	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Chrysene	.0029	MG/KG	.0069	.00021	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0069	.00025	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Fluoranthene	.00069	MG/KG	.0069	.00024	1	VJ
02NE88SB028	8/20/2002	CS	SO	SIM	Fluorene	.04	MG/KG	.0069	.00024	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0069	.00021	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Naphthalene	.41	MG/KG	.0069	.0003	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Phenanthrene	.025	MG/KG	.0069	.00021	1	
02NE88SB028	8/20/2002	CS	SO	SIM	Pyrene	.001	MG/KG	.0069	.00016	1	VJ
02NE88SB028	8/20/2002	CS	SO	SW6020	Chromium	22.8	MG/KG	1.15	0.06	25	
02NE88SB028	8/20/2002	CS	SO	SW6020	Lead	11.6	MG/KG	0.29	0.17	25	
02NE88SB028	8/20/2002	CS	SO	SW6020	Zinc	59.9	MG/KG	2.88	0.35	25	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.14	0.056	1	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.28	0.0097	1	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.14	0.023	1	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.14	0.0085	1	

Northeast Cape Phase II Remedial Investigation
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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.14	0.0059	1	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.14	0.012	1	
02NE88SB028	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.14	0.0064	1	
02NE88SB028	8/20/2002	CS	SO	SW8260B	Benzene	0.024	MG/KG	0.018	0.015	1	
02NE88SB028	8/20/2002	CS	SO	SW8260B	Ethylbenzene	0.19	MG/KG	0.045	0.014	1	
02NE88SB028	8/20/2002	CS	SO	SW8260B	o-Xylene	1.7	MG/KG	0.045	0.011	1	
02NE88SB028	8/20/2002	CS	SO	SW8260B	Toluene	1.4	MG/KG	0.045	0.014	1	
02NE88SB028	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	1.3	MG/KG	0.045	0.026	1	
02NE88SB028	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	2.79	PERCENT	0.05	0.02	1	
02NE88SB029	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.9	2.5	1	
02NE88SB029	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	33	MG/KG	13	5.6	1	
02NE88SB029	8/20/2002	CS	SO	AK103	Residual Range Organics	150	MG/KG	130	5.3	1	
02NE88SB029	8/20/2002	CS	SO	E160.3M	Total Solids	80.7	PERCENT			1	
02NE88SB029	8/20/2002	CS	SO	SIM	Acenaphthene	.00038	MG/KG	.0062	.00027	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0062	.0002	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Anthracene	.0003	MG/KG	.0062	.00024	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.00024	MG/KG	.0062	.00017	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0062	.00018	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0062	.00018	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00024	MG/KG	.0062	.00013	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0062	.00019	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Chrysene	.0013	MG/KG	.0062	.00019	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0062	.00023	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Fluoranthene	.00077	MG/KG	.0062	.00022	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Fluorene	.0012	MG/KG	.0062	.00022	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0062	.00019	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Naphthalene	.016	MG/KG	.0062	.00027	1	
02NE88SB029	8/20/2002	CS	SO	SIM	Phenanthrene	.0034	MG/KG	.0062	.00019	1	VJ
02NE88SB029	8/20/2002	CS	SO	SIM	Pyrene	.00066	MG/KG	.0062	.00014	1	VJ
02NE88SB029	8/20/2002	CS	SO	SW6020	Chromium	23	MG/KG	1.03	0.05	25	
02NE88SB029	8/20/2002	CS	SO	SW6020	Lead	12	MG/KG	0.26	0.16	25	
02NE88SB029	8/20/2002	CS	SO	SW6020	Zinc	61.9	MG/KG	2.58	0.31	25	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.13	0.05	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.25	0.0087	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.13	0.02	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.13	0.0076	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.13	0.0053	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.13	0.011	1	
02NE88SB029	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.13	0.0058	1	
02NE88SB029	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.018	0.014	1	
02NE88SB029	8/20/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.044	0.013	1	
02NE88SB029	8/20/2002	CS	SO	SW8260B	o-Xylene	0.01	MG/KG	0.044	0.0098	1	VJ
02NE88SB029	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.044	0.013	1	
02NE88SB029	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.044	0.024	1	
02NE88SB029	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.6	PERCENT	0.05	0.02	1	
02NE88SB030	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.4	2.6	1	
02NE88SB030	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	79	MG/KG	13	5.8	1	
02NE88SB030	8/20/2002	CS	SO	AK103	Residual Range Organics	590	MG/KG	130	5.5	1	
02NE88SB030	8/20/2002	CS	SO	E160.3M	Total Solids	78	PERCENT			1	
02NE88SB030	8/20/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0064	.00027	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0064	.00021	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0064	.00025	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB030	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0064	.00017	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0064	.00018	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0017	MG/KG	.0064	.00018	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00044	MG/KG	.0064	.00013	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0064	.0002	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Chrysene	.0021	MG/KG	.0064	.0002	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0064	.00024	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Fluoranthene	.00044	MG/KG	.0064	.00022	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Fluorene	.00087	MG/KG	.0064	.00022	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0064	.0002	1	
02NE88SB030	8/20/2002	CS	SO	SIM	Naphthalene	.0047	MG/KG	.0064	.00027	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Phenanthrene	.0055	MG/KG	.0064	.0002	1	VJ
02NE88SB030	8/20/2002	CS	SO	SIM	Pyrene	.00066	MG/KG	.0064	.00015	1	VJ
02NE88SB030	8/20/2002	CS	SO	SW6020	Chromium	23.4	MG/KG	1.07	0.05	25	
02NE88SB030	8/20/2002	CS	SO	SW6020	Lead	12.4	MG/KG	0.27	0.16	25	
02NE88SB030	8/20/2002	CS	SO	SW6020	Zinc	60.9	MG/KG	2.67	0.32	25	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.13	0.052	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.26	0.009	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.13	0.021	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.13	0.0079	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.13	0.0054	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.13	0.011	1	
02NE88SB030	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.13	0.0059	1	
02NE88SB030	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.021	0.014	1	
02NE88SB030	8/20/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.052	0.013	1	
02NE88SB030	8/20/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.052	0.011	1	
02NE88SB030	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.052	0.013	1	
02NE88SB030	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.052	0.024	1	
02NE88SB030	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	2.26	PERCENT	0.05	0.02	1	
02NE88SB031	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	110	MG/KG	4	2.2	1	VHB
02NE88SB031	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	16000	MG/KG	110	50	10	
02NE88SB031	8/20/2002	CS	SO	AK103	Residual Range Organics	33	MG/KG	110	4.7	1	VJ
02NE88SB031	8/20/2002	CS	SO	E160.3M	Total Solids	91.1	PERCENT			1	
02NE88SB031	8/20/2002	CS	SO	SIM	Acenaphthene	.85	MG/KG	.055	.0024	10	
02NE88SB031	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.055	.0018	10	
02NE88SB031	8/20/2002	CS	SO	SIM	Anthracene	.043	MG/KG	.0055	.00021	1	
02NE88SB031	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.0017	MG/KG	.0055	.00015	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	.00041	MG/KG	.0055	.00016	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0017	MG/KG	.0055	.00016	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00045	MG/KG	.0055	.00011	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	.0016	MG/KG	.0055	.00017	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Chrysene	.0038	MG/KG	.0055	.00017	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB031	8/20/2002	CS	SO	SIM	Fluoranthene	.0058	MG/KG	.0055	.00019	1	
02NE88SB031	8/20/2002	CS	SO	SIM	Fluorene	2.7	MG/KG	.055	.0019	10	
02NE88SB031	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00019	MG/KG	.0055	.00017	1	VJ
02NE88SB031	8/20/2002	CS	SO	SIM	Naphthalene	28	MG/KG	.55	.024	100	
02NE88SB031	8/20/2002	CS	SO	SIM	Phenanthrene	.95	MG/KG	.0055	.00017	1	
02NE88SB031	8/20/2002	CS	SO	SIM	Pyrene	.01	MG/KG	.0055	.00013	1	
02NE88SB031	8/20/2002	CS	SO	SW6020	Chromium	15.6	MG/KG	1.1	0.05	25	
02NE88SB031	8/20/2002	CS	SO	SW6020	Lead	12.4	MG/KG	0.27	0.17	25	
02NE88SB031	8/20/2002	CS	SO	SW6020	Zinc	46.7	MG/KG	2.74	0.33	25	

Northeast Cape Phase II Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0091	1	
02NE88SB031	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB031	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.012	1	
02NE88SB031	8/20/2002	CS	SO	SW8260B	Ethylbenzene	1	MG/KG	0.036	0.011	1	
02NE88SB031	8/20/2002	CS	SO	SW8260B	o-Xylene	0.015	MG/KG	0.036	0.0087	1	VJ
02NE88SB031	8/20/2002	CS	SO	SW8260B	Toluene	0.032	MG/KG	0.036	0.011	1	VJ
02NE88SB031	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	1.8	MG/KG	0.036	0.021	1	
02NE88SB031	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.34	PERCENT	0.05	0.02	1	
02NE88SB032	8/20/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	60	MG/KG	4.5	2.2	1	VHB
02NE88SB032	8/20/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	4200	MG/KG	11	4.9	1	
02NE88SB032	8/20/2002	CS	SO	AK103	Residual Range Organics	12	MG/KG	110	4.6	1	VJ
02NE88SB032	8/20/2002	CS	SO	E160.3M	Total Solids	93.5	PERCENT			1	
02NE88SB032	8/20/2002	CS	SO	SIM	Acenaphthene	.11	MG/KG	.0054	.00023	1	VLB
02NE88SB032	8/20/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0054	.00018	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Anthracene	.011	MG/KG	.0054	.00021	1	VLB
02NE88SB032	8/20/2002	CS	SO	SIM	Benzo(a)anthracene	.00037	MG/KG	.0054	.00014	1	VJ
02NE88SB032	8/20/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0054	.00015	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00042	MG/KG	.0054	.00015	1	VJ
02NE88SB032	8/20/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0054	.00011	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0054	.00017	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Chrysene	.00094	MG/KG	.0054	.00017	1	VJ
02NE88SB032	8/20/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0054	.0002	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Fluoranthene	.0017	MG/KG	.0054	.00019	1	VJ
02NE88SB032	8/20/2002	CS	SO	SIM	Fluorene	.47	MG/KG	.0054	.00019	1	VLB
02NE88SB032	8/20/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0054	.00017	1	
02NE88SB032	8/20/2002	CS	SO	SIM	Naphthalene	.9	MG/KG	.0054	.00023	1	VLB
02NE88SB032	8/20/2002	CS	SO	SIM	Phenanthrene	.27	MG/KG	.0054	.00017	1	VLB
02NE88SB032	8/20/2002	CS	SO	SIM	Pyrene	.0035	MG/KG	.0054	.00012	1	VJ
02NE88SB032	8/20/2002	CS	SO	SW6020	Chromium	6.7	MG/KG	1.07	0.05	25	
02NE88SB032	8/20/2002	CS	SO	SW6020	Lead	29.6	MG/KG	0.27	0.16	25	
02NE88SB032	8/20/2002	CS	SO	SW6020	Zinc	60.8	MG/KG	2.67	0.32	25	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0075	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0066	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0088	1	
02NE88SB032	8/20/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.005	1	
02NE88SB032	8/20/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.017	0.012	1	
02NE88SB032	8/20/2002	CS	SO	SW8260B	Ethylbenzene	0.025	MG/KG	0.041	0.011	1	VJ
02NE88SB032	8/20/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.041	0.0084	1	
02NE88SB032	8/20/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.041	0.011	1	
02NE88SB032	8/20/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.043	MG/KG	0.041	0.02	1	
02NE88SB032	8/20/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.12	PERCENT	0.05	0.02	1	
02NE88SB033	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	130	MG/KG	2.6	2.4	1	VHB
02NE88SB033	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	4700	MG/KG	120	53	10	
02NE88SB033	8/21/2002	CS	SO	AK103	Residual Range Organics	450	MG/KG	120	4.9	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB033	8/21/2002	CS	SO	E160.3M	Total Solids	86.5	PERCENT			1	
02NE88SB033	8/21/2002	CS	SO	SIM	Acenaphthene	.19	MG/KG	.0058	.00025	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0058	.00019	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Anthracene	.0085	MG/KG	.0058	.00022	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.001	MG/KG	.0058	.00016	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	.00028	MG/KG	.0058	.00017	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0013	MG/KG	.0058	.00017	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00054	MG/KG	.0058	.00012	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0058	.00018	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Chrysene	.0033	MG/KG	.0058	.00018	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0058	.00021	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Fluoranthene	.0021	MG/KG	.0058	.0002	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Fluorene	.44	MG/KG	.0058	.0002	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00023	MG/KG	.0058	.00018	1	VJ
02NE88SB033	8/21/2002	CS	SO	SIM	Naphthalene	.12	MG/KG	.29	.013	50	
02NE88SB033	8/21/2002	CS	SO	SIM	Phenanthrene	.25	MG/KG	.0058	.00018	1	
02NE88SB033	8/21/2002	CS	SO	SIM	Pyrene	.0049	MG/KG	.0058	.00013	1	VJ
02NE88SB033	8/21/2002	CS	SO	SW6020	Chromium	18.2	MG/KG	0.23	0.03	5	
02NE88SB033	8/21/2002	CS	SO	SW6020	Lead	14.7	MG/KG	0.06	0.03	5	
02NE88SB033	8/21/2002	CS	SO	SW6020	Zinc	50.8	MG/KG	0.6	0.1	5	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.12	0.047	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.24	0.0081	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.12	0.019	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.12	0.0071	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.12	0.0049	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.12	0.0095	1	
02NE88SB033	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.12	0.0054	1	
02NE88SB033	8/21/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.013	0.013	1	
02NE88SB033	8/21/2002	CS	SO	SW8260B	Ethylbenzene	1.2	MG/KG	0.021	0.012	1	VHB
02NE88SB033	8/21/2002	CS	SO	SW8260B	o-Xylene	1.5	MG/KG	0.021	0.0091	1	VHB
02NE88SB033	8/21/2002	CS	SO	SW8260B	Toluene	0.05	MG/KG	0.021	0.012	1	VHB
02NE88SB033	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	4	MG/KG	0.022	0.022	1	VHB
02NE88SB033	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	1.1	PERCENT	0.05	0.02	1	
02NE88SB034	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	140	MG/KG	3	2.3	1	VHB
02NE88SB034	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	4300	MG/KG	120	51	10	
02NE88SB034	8/21/2002	CS	SO	AK103	Residual Range Organics	110	MG/KG	120	4.8	1	VJ
02NE88SB034	8/21/2002	CS	SO	E160.3M	Total Solids	89.3	PERCENT			1	
02NE88SB034	8/21/2002	CS	SO	SIM	Acenaphthene	.11	MG/KG	.0056	.00024	1	
02NE88SB034	8/21/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0056	.00018	1	
02NE88SB034	8/21/2002	CS	SO	SIM	Anthracene	.0041	MG/KG	.0056	.00022	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.00043	MG/KG	.0056	.00015	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	.00025	MG/KG	.0056	.00016	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0038	MG/KG	.0056	.00016	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00041	MG/KG	.0056	.00012	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	.0036	MG/KG	.0056	.00017	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Chrysene	.0013	MG/KG	.0056	.00017	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	.00026	MG/KG	.0056	.00021	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Fluoranthene	.001	MG/KG	.0056	.0002	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Fluorene	.24	MG/KG	.0056	.0002	1	
02NE88SB034	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00034	MG/KG	.0056	.00017	1	VJ
02NE88SB034	8/21/2002	CS	SO	SIM	Naphthalene	3.6	MG/KG	.28	.012	50	
02NE88SB034	8/21/2002	CS	SO	SIM	Phenanthrene	.11	MG/KG	.0056	.00017	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB034	8/21/2002	CS	SO	SIM	Pyrene	.0024	MG/KG	.0056	.00013	1	VJ
02NE88SB034	8/21/2002	CS	SO	SW6020	Chromium	8.31	MG/KG	0.22	0.03	5	
02NE88SB034	8/21/2002	CS	SO	SW6020	Lead	15	MG/KG	0.06	0.03	5	
02NE88SB034	8/21/2002	CS	SO	SW6020	Zinc	31.8	MG/KG	0.6	0.1	5	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.12	0.045	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.23	0.0079	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.12	0.018	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.12	0.0069	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.12	0.0048	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.12	0.0092	1	
02NE88SB034	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.12	0.0052	1	
02NE88SB034	8/21/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	
02NE88SB034	8/21/2002	CS	SO	SW8260B	Ethylbenzene	0.94	MG/KG	0.023	0.011	1	VHB
02NE88SB034	8/21/2002	CS	SO	SW8260B	o-Xylene	0.34	MG/KG	0.023	0.0088	1	VHB
02NE88SB034	8/21/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.023	0.011	1	
02NE88SB034	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	3	MG/KG	0.023	0.021	1	VHB
02NE88SB034	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.33	PERCENT	0.05	0.02	1	VJ
02NE88SB035	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	100	MG/KG	2.5	2.2	1	VHB
02NE88SB035	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	7300	MG/KG	110	48	10	
02NE88SB035	8/21/2002	CS	SO	AK103	Residual Range Organics	24	MG/KG	110	4.5	1	VJ
02NE88SB035	8/21/2002	CS	SO	E160.3M	Total Solids	94.2	PERCENT			1	
02NE88SB035	8/21/2002	CS	SO	SIM	Acenaphthene	.15	MG/KG	.0054	.00023	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Acenaphthylene	.052	MG/KG	.0054	.00017	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Anthracene	.0059	MG/KG	.0054	.00021	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.00044	MG/KG	.0054	.00014	1	VJ
02NE88SB035	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0054	.00015	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00062	MG/KG	.0054	.00015	1	VJ
02NE88SB035	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00043	MG/KG	.0054	.00011	1	VJ
02NE88SB035	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0054	.00016	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Chrysene	.0013	MG/KG	.0054	.00016	1	VJ
02NE88SB035	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0054	.0002	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Fluoranthene	.0013	MG/KG	.0054	.00019	1	VJ
02NE88SB035	8/21/2002	CS	SO	SIM	Fluorene	.42	MG/KG	.0054	.00019	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0054	.00016	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Naphthalene	10	MG/KG	.27	.012	50	
02NE88SB035	8/21/2002	CS	SO	SIM	Phenanthrene	.18	MG/KG	.0054	.00016	1	
02NE88SB035	8/21/2002	CS	SO	SIM	Pyrene	.0027	MG/KG	.0054	.00012	1	VJ
02NE88SB035	8/21/2002	CS	SO	SW6020	Chromium	14	MG/KG	0.21	0.03	5	
02NE88SB035	8/21/2002	CS	SO	SW6020	Lead	18.4	MG/KG	0.05	0.03	5	
02NE88SB035	8/21/2002	CS	SO	SW6020	Zinc	49	MG/KG	0.5	0.1	5	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0075	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0065	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0088	1	
02NE88SB035	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB035	8/21/2002	CS	SO	SW8260B	Benzene	0.018	MG/KG	0.012	0.012	1	VHB
02NE88SB035	8/21/2002	CS	SO	SW8260B	Ethylbenzene	1.1	MG/KG	0.025	0.011	1	VHB
02NE88SB035	8/21/2002	CS	SO	SW8260B	o-Xylene	0.019	MG/KG	0.025	0.0084	1	VJ
02NE88SB035	8/21/2002	CS	SO	SW8260B	Toluene	0.018	MG/KG	0.025	0.011	1	VJ
02NE88SB035	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.95	MG/KG	0.025	0.02	1	VHB

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB035	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.22	PERCENT	0.05	0.02	1	
02NE88SB036	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	170	MG/KG	3.3	2.6	1	VHB
02NE88SB036	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	4000	MG/KG	13	5.7	1	VJ
02NE88SB036	8/21/2002	CS	SO	AK103	Residual Range Organics	220	MG/KG	130	5.3	1	
02NE88SB036	8/21/2002	CS	SO	E160.3M	Total Solids	79.6	PERCENT			1	
02NE88SB036	8/21/2002	CS	SO	SIM	Acenaphthene	.13	MG/KG	.0063	.00027	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0063	.00021	1	
02NE88SB036	8/21/2002	CS	SO	SIM	Anthracene	.0039	MG/KG	.0063	.00024	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.00021	MG/KG	.0063	.00017	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0063	.00018	1	
02NE88SB036	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00056	MG/KG	.0063	.00018	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00031	MG/KG	.0063	.00013	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0063	.00019	1	
02NE88SB036	8/21/2002	CS	SO	SIM	Chrysene	.0014	MG/KG	.0063	.00019	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0063	.00023	1	
02NE88SB036	8/21/2002	CS	SO	SIM	Fluoranthene	.00097	MG/KG	.0063	.00022	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Fluorene	.38	MG/KG	.0063	.00022	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0063	.00019	1	
02NE88SB036	8/21/2002	CS	SO	SIM	Naphthalene	6.9	MG/KG	.32	.014	50	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Phenanthrene	.14	MG/KG	.0063	.00019	1	VJ
02NE88SB036	8/21/2002	CS	SO	SIM	Pyrene	.002	MG/KG	.0063	.00014	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW6020	Chromium	16.7	MG/KG	0.25	0.04	5	VJ
02NE88SB036	8/21/2002	CS	SO	SW6020	Lead	21.1	MG/KG	0.06	0.04	5	VJ
02NE88SB036	8/21/2002	CS	SO	SW6020	Zinc	57.5	MG/KG	0.6	0.1	5	VJ
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.13	0.051	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.25	0.0088	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.13	0.021	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.13	0.0077	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.13	0.0053	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.13	0.011	1	
02NE88SB036	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.033	MG/KG	0.13	0.0058	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW8260B	Benzene	0.062	MG/KG	0.014	0.014	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW8260B	Ethylbenzene	2.2	MG/KG	0.03	0.013	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW8260B	o-Xylene	1.3	MG/KG	0.03	0.0099	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW8260B	Toluene	0.041	MG/KG	0.03	0.013	1	
02NE88SB036	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	4.4	MG/KG	0.03	0.024	1	VJ
02NE88SB036	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.81	PERCENT	0.05	0.02	1	VJ
02NE88SB206	8/17/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	41	MG/KG	6.1	2.5	1	
02NE88SB206	8/17/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	2900	MG/KG	11	5	1	
02NE88SB206	8/17/2002	CS	SO	AK103	Residual Range Organics	23	MG/KG	110	4.7	1	VJ
02NE88SB206	8/17/2002	CS	SO	D4129	Total Organic Carbon (TOC)	0.15	PERCENT	0.05	0.02	1	
02NE88SB206	8/17/2002	CS	SO	E160.3M	Total Solids	90.6	PERCENT			1	
02NE88SB206	8/17/2002	CS	SO	SIM	Acenaphthene	.13	MG/KG	.0056	.00024	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0056	.00018	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Anthracene	.029	MG/KG	.0056	.00021	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Benzo(a)anthracene	.0011	MG/KG	.0056	.00015	1	VJ
02NE88SB206	8/17/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0056	.00016	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0056	.00016	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0056	.00012	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0056	.00017	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Chrysene	.0027	MG/KG	.0056	.00017	1	VJ
02NE88SB206	8/17/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0056	.0002	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB206	8/17/2002	CS	SO	SIM	Fluoranthene	.004	MG/KG	.0056	.00019	1	VJ
02NE88SB206	8/17/2002	CS	SO	SIM	Fluorene	.33	MG/KG	.0056	.00019	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0056	.00017	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Naphthalene	1	MG/KG	.056	.0024	10	
02NE88SB206	8/17/2002	CS	SO	SIM	Phenanthrene	.43	MG/KG	.0056	.00017	1	
02NE88SB206	8/17/2002	CS	SO	SIM	Pyrene	.01	MG/KG	.0056	.00013	1	
02NE88SB206	8/17/2002	CS	SO	SW6020	Chromium	10.8	MG/KG	0.22	0.01	5	
02NE88SB206	8/17/2002	CS	SO	SW6020	Lead	61.1	MG/KG	0.06	0.03	5	
02NE88SB206	8/17/2002	CS	SO	SW6020	Zinc	55.9	MG/KG	0.55	0.07	5	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.045	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0078	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0068	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0091	1	
02NE88SB206	8/17/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB206	8/17/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.021	0.012	1	
02NE88SB206	8/17/2002	CS	SO	SW8260B	Ethylbenzene	0.092	MG/KG	0.053	0.011	1	
02NE88SB206	8/17/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.053	0.0087	1	
02NE88SB206	8/17/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.053	0.011	1	
02NE88SB206	8/17/2002	CS	SO	SW8260B	Xylene, Isomers m & p	0.094	MG/KG	0.053	0.021	1	
02NE88SB234	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	110	MG/KG	2.3	2.2	1	VHB
02NE88SB234	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	3100	MG/KG	11	5	1	
02NE88SB234	8/21/2002	CS	SO	AK103	Residual Range Organics	54	MG/KG	110	4.7	1	VJ
02NE88SB234	8/21/2002	CS	SO	E160.3M	Total Solids	91.2	PERCENT			1	
02NE88SB234	8/21/2002	CS	SO	SIM	Acenaphthene	.089	MG/KG	.0055	.00024	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Anthracene	.0033	MG/KG	.0055	.00021	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.00021	MG/KG	.0055	.00015	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00041	MG/KG	.0055	.00016	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Chrysene	.00091	MG/KG	.0055	.00017	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	.00031	MG/KG	.0055	.0002	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Fluoranthene	.00079	MG/KG	.0055	.00019	1	VJ
02NE88SB234	8/21/2002	CS	SO	SIM	Fluorene	.2	MG/KG	.0055	.00019	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Naphthalene	3.8	MG/KG	.28	.012	50	
02NE88SB234	8/21/2002	CS	SO	SIM	Phenanthrene	.091	MG/KG	.0055	.00017	1	
02NE88SB234	8/21/2002	CS	SO	SIM	Pyrene	.0018	MG/KG	.0055	.00013	1	VJ
02NE88SB234	8/21/2002	CS	SO	SW6020	Chromium	10.8	MG/KG	0.22	0.03	5	
02NE88SB234	8/21/2002	CS	SO	SW6020	Lead	15.3	MG/KG	0.05	0.03	5	
02NE88SB234	8/21/2002	CS	SO	SW6020	Zinc	40.2	MG/KG	0.5	0.1	5	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB234	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB234	8/21/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.012	0.012	1	

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sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB234	8/21/2002	CS	SO	SW8260B	Ethylbenzene	0.83	MG/KG	0.025	0.011	1	VHB
02NE88SB234	8/21/2002	CS	SO	SW8260B	o-Xylene	0.27	MG/KG	0.025	0.0087	1	VHB
02NE88SB234	8/21/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.025	0.011	1	
02NE88SB234	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	2.8	MG/KG	0.025	0.021	1	VHB
02NE88SB234	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.19	PERCENT	0.05	0.02	1	
02NE88SB236	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	88	MG/KG	2.5	2.2	1	VHB
02NE88SB236	8/21/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	13000	MG/KG	110	50	10	
02NE88SB236	8/21/2002	CS	SO	AK103	Residual Range Organics	180	MG/KG	110	4.7	1	
02NE88SB236	8/21/2002	CS	SO	E160.3M	Total Solids	91.3	PERCENT			1	
02NE88SB236	8/21/2002	CS	SO	SIM	Acenaphthene	.25	MG/KG	.0055	.00024	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Anthracene	.013	MG/KG	.0055	.00021	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Benzo(a)anthracene	.001	MG/KG	.0055	.00015	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Benzo(b)fluoranthene	.0016	MG/KG	.0055	.00016	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00034	MG/KG	.0055	.00011	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Chrysene	.0021	MG/KG	.0055	.00017	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Fluoranthene	.0027	MG/KG	.0055	.00019	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Fluorene	.74	MG/KG	.0055	.00019	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00019	MG/KG	.0055	.00017	1	VJ
02NE88SB236	8/21/2002	CS	SO	SIM	Naphthalene	.23	MG/KG	.55	.024	100	
02NE88SB236	8/21/2002	CS	SO	SIM	Phenanthrene	.44	MG/KG	.0055	.00017	1	
02NE88SB236	8/21/2002	CS	SO	SIM	Pyrene	.005	MG/KG	.0055	.00013	1	VJ
02NE88SB236	8/21/2002	CS	SO	SW6020	Chromium	9.64	MG/KG	0.22	0.03	5	
02NE88SB236	8/21/2002	CS	SO	SW6020	Lead	12.6	MG/KG	0.05	0.03	5	
02NE88SB236	8/21/2002	CS	SO	SW6020	Zinc	31.9	MG/KG	0.5	0.1	5	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB236	8/21/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	0.059	MG/KG	0.11	0.0051	1	VJ
02NE88SB236	8/21/2002	CS	SO	SW8260B	Benzene	0.023	MG/KG	0.012	0.012	1	
02NE88SB236	8/21/2002	CS	SO	SW8260B	Ethylbenzene	0.66	MG/KG	0.023	0.011	1	
02NE88SB236	8/21/2002	CS	SO	SW8260B	o-Xylene	0.58	MG/KG	0.023	0.0086	1	
02NE88SB236	8/21/2002	CS	SO	SW8260B	Toluene	0.022	MG/KG	0.023	0.011	1	VJ
02NE88SB236	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	1.5	MG/KG	0.023	0.021	1	
02NE88SB236	8/21/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.48	PERCENT	0.05	0.02	1	
Analytical Results-Site 22 Soil Sampling 2002											
02NE88SB037	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.1	2.3	1	
02NE88SB037	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	5	1	
02NE88SB037	8/22/2002	CS	SO	AK103	Residual Range Organics	13	MG/KG	110	4.7	1	VJ
02NE88SB037	8/22/2002	CS	SO	E160.3M	Total Solids	90.5	PERCENT			1	
02NE88SB037	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0056	.00024	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0056	.00018	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0056	.00021	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	.00017	MG/KG	.0056	.00015	1	VJ
02NE88SB037	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0056	.00016	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0056	.00016	1	

Northeast Cape Phase Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB037	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0056	.00012	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0056	.00017	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Chrysene	.00036	MG/KG	.0056	.00017	1	VJ
02NE88SB037	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0056	.0002	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Fluoranthene	.00073	MG/KG	.0056	.00019	1	VJ
02NE88SB037	8/22/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0056	.00019	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0056	.00017	1	
02NE88SB037	8/22/2002	CS	SO	SIM	Naphthalene	.00092	MG/KG	.0056	.00024	1	VJ
02NE88SB037	8/22/2002	CS	SO	SIM	Phenanthrene	.0012	MG/KG	.0056	.00017	1	VJ
02NE88SB037	8/22/2002	CS	SO	SIM	Pyrene	.00044	MG/KG	.0056	.00013	1	VJ
02NE88SB037	8/22/2002	CS	SO	SW6020	Chromium	7.26	MG/KG	0.22	0.03	5	
02NE88SB037	8/22/2002	CS	SO	SW6020	Lead	30.5	MG/KG	0.06	0.03	5	
02NE88SB037	8/22/2002	CS	SO	SW6020	Zinc	69.8	MG/KG	0.6	0.1	5	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.045	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0078	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0068	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0091	1	
02NE88SB037	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB037	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.019	0.012	1	
02NE88SB037	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.047	0.011	1	
02NE88SB037	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.047	0.0087	1	
02NE88SB037	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.047	0.011	1	
02NE88SB037	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.047	0.021	1	
02NE88SB037	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.1	PERCENT	0.05	0.02	1	
02NE88SB038	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.3	2.2	1	
02NE88SB038	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	4.8	1	
02NE88SB038	8/22/2002	CS	SO	AK103	Residual Range Organics	5.4	MG/KG	110	4.5	1	VJ
02NE88SB038	8/22/2002	CS	SO	E160.3M	Total Solids	94.4	PERCENT			1	
02NE88SB038	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0053	.00023	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0053	.00021	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0053	.00014	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0053	.00015	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00015	MG/KG	.0053	.00011	1	VJ
02NE88SB038	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0053	.00016	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0053	.00016	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0053	.0002	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0053	.00019	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0053	.00019	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0053	.00016	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Naphthalene	ND	MG/KG	.0053	.00023	1	
02NE88SB038	8/22/2002	CS	SO	SIM	Phenanthrene	.00022	MG/KG	.0053	.00016	1	VJ
02NE88SB038	8/22/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0053	.00012	1	
02NE88SB038	8/22/2002	CS	SO	SW6020	Chromium	7.87	MG/KG	0.21	0.03	5	
02NE88SB038	8/22/2002	CS	SO	SW6020	Lead	41.3	MG/KG	0.05	0.03	5	
02NE88SB038	8/22/2002	CS	SO	SW6020	Zinc	90.3	MG/KG	0.5	0.1	5	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.043	1	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0075	1	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0065	1	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0045	1	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0087	1	
02NE88SB038	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB038	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.017	0.012	1	
02NE88SB038	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.042	0.011	1	
02NE88SB038	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.042	0.0084	1	
02NE88SB038	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.042	0.011	1	
02NE88SB038	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.042	0.02	1	
02NE88SB038	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.06	PERCENT	0.05	0.02	1	
02NE88SB039	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4	2.2	1	
02NE88SB039	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	5	1	
02NE88SB039	8/22/2002	CS	SO	AK103	Residual Range Organics	ND	MG/KG	110	4.7	1	
02NE88SB039	8/22/2002	CS	SO	E160.3M	Total Solids	91.6	PERCENT			1	
02NE88SB039	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0055	.00023	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0055	.00021	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00056	MG/KG	.0055	.00016	1	VJ
02NE88SB039	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Chrysene	.00027	MG/KG	.0055	.00017	1	VJ
02NE88SB039	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Fluoranthene	.00024	MG/KG	.0055	.00019	1	VJ
02NE88SB039	8/22/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0055	.00019	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB039	8/22/2002	CS	SO	SIM	Naphthalene	.00072	MG/KG	.0055	.00023	1	VJ
02NE88SB039	8/22/2002	CS	SO	SIM	Phenanthrene	.00053	MG/KG	.0055	.00017	1	VJ
02NE88SB039	8/22/2002	CS	SO	SIM	Pyrene	.00021	MG/KG	.0055	.00013	1	VJ
02NE88SB039	8/22/2002	CS	SO	SW6020	Chromium	9.09	MG/KG	0.22	0.03	5	VJ
02NE88SB039	8/22/2002	CS	SO	SW6020	Lead	31.4	MG/KG	0.05	0.03	5	
02NE88SB039	8/22/2002	CS	SO	SW6020	Zinc	62.9	MG/KG	0.5	0.1	5	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB039	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB039	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.016	0.012	1	
02NE88SB039	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.038	0.011	1	
02NE88SB039	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.038	0.0086	1	
02NE88SB039	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.038	0.011	1	
02NE88SB039	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.038	0.021	1	
02NE88SB039	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.07	PERCENT	0.05	0.02	1	
02NE88SB040	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.1	2.1	1	
02NE88SB040	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	4.8	1	
02NE88SB040	8/22/2002	CS	SO	AK103	Residual Range Organics	ND	MG/KG	110	4.5	1	
02NE88SB040	8/22/2002	CS	SO	E160.3M	Total Solids	95.5	PERCENT			1	
02NE88SB040	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0053	.00022	1	
02NE88SB040	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0053	.00017	1	

Northeast Cape Phase I Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB040	8/22/2002	CS	SO	SIM	Anthracene	.0002	MG/KG	.0053	.0002	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0053	.00014	1	
02NE88SB040	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0053	.00015	1	
02NE88SB040	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	.00035	MG/KG	.0053	.00015	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	.00033	MG/KG	.0053	.00011	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0053	.00016	1	
02NE88SB040	8/22/2002	CS	SO	SIM	Chrysene	.0002	MG/KG	.0053	.00016	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	.00032	MG/KG	.0053	.00019	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Fluoranthene	.0007	MG/KG	.0053	.00018	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Fluorene	.0002	MG/KG	.0053	.00018	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	.00032	MG/KG	.0053	.00016	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Naphthalene	.00031	MG/KG	.0053	.00022	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Phenanthrene	.001	MG/KG	.0053	.00016	1	VJ
02NE88SB040	8/22/2002	CS	SO	SIM	Pyrene	.00051	MG/KG	.0053	.00012	1	VJ
02NE88SB040	8/22/2002	CS	SO	SW6020	Chromium	7.88	MG/KG	0.21	0.03	5	
02NE88SB040	8/22/2002	CS	SO	SW6020	Lead	32.2	MG/KG	0.05	0.03	5	
02NE88SB040	8/22/2002	CS	SO	SW6020	Zinc	75.2	MG/KG	0.5	0.1	5	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.042	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.21	0.0074	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.017	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0064	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0044	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0086	1	
02NE88SB040	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0049	1	
02NE88SB040	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.015	0.011	1	
02NE88SB040	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.037	0.011	1	
02NE88SB040	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.037	0.0083	1	
02NE88SB040	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.037	0.011	1	
02NE88SB040	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.037	0.02	1	
02NE88SB040	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.04	PERCENT	0.05	0.02	1	VJ
02NE88SB237	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4	2.2	1	
02NE88SB237	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	5	1	
02NE88SB237	8/22/2002	CS	SO	AK103	Residual Range Organics	5.6	MG/KG	110	4.7	1	VJ
02NE88SB237	8/22/2002	CS	SO	E160.3M	Total Solids	91.4	PERCENT			1	
02NE88SB237	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0055	.00023	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0055	.00018	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0055	.00021	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0055	.00015	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0055	.00016	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0055	.00016	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0055	.00011	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0055	.00017	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Chrysene	.00019	MG/KG	.0055	.00017	1	VJ
02NE88SB237	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0055	.0002	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0055	.00019	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0055	.00019	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0055	.00017	1	
02NE88SB237	8/22/2002	CS	SO	SIM	Naphthalene	.00048	MG/KG	.0055	.00023	1	VJ
02NE88SB237	8/22/2002	CS	SO	SIM	Phenanthrene	.00056	MG/KG	.0055	.00017	1	VJ
02NE88SB237	8/22/2002	CS	SO	SIM	Pyrene	ND	MG/KG	.0055	.00013	1	
02NE88SB237	8/22/2002	CS	SO	SW6020	Chromium	8.11	MG/KG	0.22	0.03	5	
02NE88SB237	8/22/2002	CS	SO	SW6020	Lead	33.7	MG/KG	0.05	0.03	5	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88SB237	8/22/2002	CS	SO	SW6020	Zinc	69.1	MG/KG	0.5	0.1	5	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.044	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0077	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0067	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0046	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.009	1	
02NE88SB237	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB237	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.017	0.012	1	
02NE88SB237	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.041	0.011	1	
02NE88SB237	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.041	0.0086	1	
02NE88SB237	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.041	0.011	1	
02NE88SB237	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.041	0.021	1	
02NE88SB237	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.09	PERCENT	0.05	0.02	1	
02NE88SB239	8/22/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	4.2	2.3	1	
02NE88SB239	8/22/2002	CS	SO	AK102	Diesel Range Organics (C10-C25)	ND	MG/KG	11	5.1	1	
02NE88SB239	8/22/2002	CS	SO	AK103	Residual Range Organics	5	MG/KG	110	4.7	1	VJ
02NE88SB239	8/22/2002	CS	SO	E160.3M	Total Solids	90.2	PERCENT			1	
02NE88SB239	8/22/2002	CS	SO	SIM	Acenaphthene	ND	MG/KG	.0056	.00024	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Acenaphthylene	ND	MG/KG	.0056	.00018	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Anthracene	ND	MG/KG	.0056	.00022	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Benzo(a)anthracene	ND	MG/KG	.0056	.00015	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Benzo(a)pyrene	ND	MG/KG	.0056	.00016	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Benzo(b)fluoranthene	ND	MG/KG	.0056	.00016	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Benzo(g,h,i)perylene	ND	MG/KG	.0056	.00012	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Benzo(k)fluoranthene	ND	MG/KG	.0056	.00017	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Chrysene	ND	MG/KG	.0056	.00017	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Dibenzo(a,h)anthracene	ND	MG/KG	.0056	.0002	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Fluoranthene	ND	MG/KG	.0056	.00019	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Fluorene	ND	MG/KG	.0056	.00019	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Indeno(1,2,3-cd)pyrene	ND	MG/KG	.0056	.00017	1	
02NE88SB239	8/22/2002	CS	SO	SIM	Naphthalene	.00046	MG/KG	.0056	.00024	1	VJ
02NE88SB239	8/22/2002	CS	SO	SIM	Phenanthrene	.00048	MG/KG	.0056	.00017	1	VJ
02NE88SB239	8/22/2002	CS	SO	SIM	Pyrene	.00015	MG/KG	.0056	.00013	1	VJ
02NE88SB239	8/22/2002	CS	SO	SW6020	Chromium	7.71	MG/KG	0.22	0.03	5	
02NE88SB239	8/22/2002	CS	SO	SW6020	Lead	31.2	MG/KG	0.06	0.03	5	
02NE88SB239	8/22/2002	CS	SO	SW6020	Zinc	57	MG/KG	0.6	0.1	5	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1016 (Aroclor 1016)	ND	MG/KG	0.11	0.045	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1221 (Aroclor 1221)	ND	MG/KG	0.22	0.0078	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1232 (Aroclor 1232)	ND	MG/KG	0.11	0.018	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1242 (Aroclor 1242)	ND	MG/KG	0.11	0.0068	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1248 (Aroclor 1248)	ND	MG/KG	0.11	0.0047	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1254 (Aroclor 1254)	ND	MG/KG	0.11	0.0091	1	
02NE88SB239	8/22/2002	CS	SO	SW8082	PCB-1260 (Aroclor 1260)	ND	MG/KG	0.11	0.0051	1	
02NE88SB239	8/22/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.019	0.012	1	
02NE88SB239	8/22/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.046	0.011	1	
02NE88SB239	8/22/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.046	0.0088	1	
02NE88SB239	8/22/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.046	0.011	1	
02NE88SB239	8/22/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.046	0.021	1	
02NE88SB239	8/22/2002	CS	SO	SW9060	Total Organic Carbon (TOC)	0.08	PERCENT	0.05	0.02	1	
Analytical Results-Trip Blanks and Equipment Blanks 2002											
02NE88TB001	8/14/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	5.1	2.1	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88TB001	8/14/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.02	0.011	1	
02NE88TB001	8/14/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.05	0.0098	1	
02NE88TB001	8/14/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.05	0.0079	1	
02NE88TB001	8/14/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.05	0.0098	1	
02NE88TB001	8/14/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.05	0.019	1	
02NE88TB002	8/17/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88TB002	8/17/2002	CS	W	RSK175	Ethane	ND	MG/L	.0005	.0005	1	
02NE88TB002	8/17/2002	CS	W	RSK175	Ethene	ND	MG/L	.0015	.0013	1	
02NE88TB002	8/17/2002	CS	W	RSK175	Methane	ND	MG/L	.0005	.0003	1	
02NE88TB002	8/17/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88TB002	8/17/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88TB002	8/17/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88TB002	8/17/2002	CS	W	SW8260B	Toluene	.00015	MG/L	.0005	.000098	1	VJ
02NE88TB002	8/17/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88TB003	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88TB003	8/19/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88TB003	8/19/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88TB003	8/19/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88TB003	8/19/2002	CS	W	SW8260B	Toluene	.00013	MG/L	.0005	.000098	1	VB
02NE88TB003	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88TB005	8/18/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	5.1	2.1	1	
02NE88TB005	8/18/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.02	0.011	1	
02NE88TB005	8/18/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.05	0.0098	1	
02NE88TB005	8/18/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.05	0.0079	1	
02NE88TB005	8/18/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.05	0.0098	1	
02NE88TB005	8/18/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.05	0.019	1	
02NE88TB006	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88TB006	8/19/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88TB006	8/19/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88TB006	8/19/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88TB006	8/19/2002	CS	W	SW8260B	Toluene	.00011	MG/L	.0005	.000098	1	VJ
02NE88TB006	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88TB007	8/21/2002	CS	SO	AK101	Gasoline Range Organics (C6-C10)	ND	MG/KG	5.1	2.1	1	
02NE88TB007	8/21/2002	CS	SO	SW8260B	Benzene	ND	MG/KG	0.02	0.011	1	
02NE88TB007	8/21/2002	CS	SO	SW8260B	Ethylbenzene	ND	MG/KG	0.05	0.0098	1	
02NE88TB007	8/21/2002	CS	SO	SW8260B	o-Xylene	ND	MG/KG	0.05	0.0079	1	
02NE88TB007	8/21/2002	CS	SO	SW8260B	Toluene	ND	MG/KG	0.05	0.0098	1	
02NE88TB007	8/21/2002	CS	SO	SW8260B	Xylene, Isomers m & p	ND	MG/KG	0.05	0.019	1	
02NE88EB001	8/14/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88EB001	8/14/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	ND	MG/L	.1	.042	1	
02NE88EB001	8/14/2002	CS	W	AK103	Residual Range Organics	.081	MG/L	.2	.073	1	VJ
02NE88EB001	8/14/2002	CS	W	SW8260B	Benzene	.00021	MG/L	.0005	.00011	1	VJ
02NE88EB001	8/14/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88EB001	8/14/2002	CS	W	SW8260B	o-Xylene	.00009	MG/L	.0005	.000079	1	VJ
02NE88EB001	8/14/2002	CS	W	SW8260B	Toluene	.00045	MG/L	.0005	.000098	1	VB
02NE88EB001	8/14/2002	CS	W	SW8260B	Xylene, Isomers m & p	.00022	MG/L	.0005	.00022	1	VJ
02NE88EB002	8/17/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88EB002	8/17/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	ND	MG/L	.11	.043	1	
02NE88EB002	8/17/2002	CS	W	AK103	Residual Range Organics	ND	MG/L	.21	.075	1	
02NE88EB002	8/17/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88EB002	8/17/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88EB002	8/17/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	

Northeast Cape Phase III Remedial Investigation
2002 Analytical Results

sample	Date Collected	Sample Type	matrix	Method	analyte	Result	units	Reporting Limit	Detection Limit	dilution	valid_flag
02NE88EB002	8/17/2002	CS	W	SW8260B	Toluene	.00013	MG/L	.0005	.000098	1	VB
02NE88EB002	8/17/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88EB003	8/18/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88EB003	8/18/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	ND	MG/L	.1	.042	1	
02NE88EB003	8/18/2002	CS	W	AK103	Residual Range Organics	ND	MG/L	.2	.073	1	
02NE88EB003	8/18/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88EB003	8/18/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88EB003	8/18/2002	CS	W	SW8260B	o-Xylene	.00008	MG/L	.0005	.000079	1	VJ
02NE88EB003	8/18/2002	CS	W	SW8260B	Toluene	.00013	MG/L	.0005	.000098	1	VB
02NE88EB003	8/18/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88EB004	8/19/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88EB004	8/19/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	ND	MG/L	.1	.042	1	
02NE88EB004	8/19/2002	CS	W	AK103	Residual Range Organics	ND	MG/L	.2	.073	1	
02NE88EB004	8/19/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88EB004	8/19/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88EB004	8/19/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88EB004	8/19/2002	CS	W	SW8260B	Toluene	.00013	MG/L	.0005	.000098	1	VB
02NE88EB004	8/19/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
02NE88EB005	8/20/2002	CS	W	AK101	Gasoline Range Organics (C6-C10)	ND	MG/L	.05	.02	1	
02NE88EB005	8/20/2002	CS	W	AK102	Diesel Range Organics (C10-C25)	ND	MG/L	.11	.043	1	
02NE88EB005	8/20/2002	CS	W	AK103	Residual Range Organics	ND	MG/L	.21	.074	1	
02NE88EB005	8/20/2002	CS	W	SW8260B	Benzene	ND	MG/L	.0005	.00011	1	
02NE88EB005	8/20/2002	CS	W	SW8260B	Ethylbenzene	ND	MG/L	.0005	.00013	1	
02NE88EB005	8/20/2002	CS	W	SW8260B	o-Xylene	ND	MG/L	.0005	.000079	1	
02NE88EB005	8/20/2002	CS	W	SW8260B	Toluene	.00015	MG/L	.0005	.000098	1	VB
02NE88EB005	8/20/2002	CS	W	SW8260B	Xylene, Isomers m & p	ND	MG/L	.0005	.00022	1	
Key:											
	CS-	Corps sample									
	MG/KG-	milligrams per kilogram									
	MG/L-	milligrams per liter									
	ND	not detected									
	SIM-	select ion monitoring									
	SO-	soil									
	VB-	analyte detected in the blank and the sample									
	VHB-	biased high									
	VLB-	biased low									
	VJ-	estimated value									

ATTACHMENT 3

Survey Information



MWH
MONTGOMERY WATSON HARZA

MULLIKIN SURVEYS

Physical Address: 381 E. Bonanza Ave.

Mail: P.O. Box 790, Homer, AK 99603-0790

Ph. & Fax: (907) 235-8975

E-mail: mullikin@xyz.ne

RECEIVED

SEP 25 2002

MONTGOMERY WATSON HARZA

September 19, 2002

Attention: Bonnie McLean
MWH Americas, Inc.
4100 Spenard Road
Anchorage, AK 99517

Re: Northeast Cape 2002


Dear Bonnie:

Please find enclosed an AutoCAD version 200i drawing file of Northeast Cape 2002.

"Ptsground" layer contains the ground elevation at monitor wells (#737 to 746).
"Ptsmeas-2002" depicts "shots" for top of PVC pipe and bore hole locations. Also included on disk is a comma delineated point file. Small and large paper plot enclosed.

The preliminary drawing also shows the two rebar and aluminum caps set on site this year, points 3201 and 3202, and several building corners located (the garage and building 107).

Thank you for selecting Mullikin Surveys for this project.


Donald E. Mullikin, P.L.S.

DEM:jvm

C:\Documents and Settings\Administrator\My Documents\Montgomery-Watson\NorthEast Cape\NECape2002.wpd

2002.txt

737,98080.4499,96392.8914,82.29,ground 88-1
 738,98257.8812,96455.0726,71.18,ground 88-2
 739,98169.9401,96458.3585,77.75,ground 88-3
 740,98365.8078,96331.1320,68.63,ground 88-4
 741,98292.1088,96216.7210,68.37,ground 88-5
 742,98271.8042,96140.1494,69.13,ground 88-6
 743,98271.2457,96033.1581,72.83,ground 88-7
 744,98185.9420,96083.4849,73.76,ground 88-8mw
 745,98044.5023,96154.1887,81.79,ground 88-9
 746,97970.2989,96293.0099,86.86,ground rb rp to 88-10
 3110,98340.6943,96869.6889,72.84,fa12057
 3201,98372.5080,96436.6413,67.29,SET 2" AL. CAP
 3202,98447.3543,95922.5384,72.65,SET 2" AL. CAP
 3206,98376.2296,96448.9517,66.14,BM ROCK
 3208,98228.2467,96070.5355,71.93,88-18
 3209,98185.5809,96079.5093,73.46,88-8mw
 3212,98271.8042,96138.1732,68.83,88-6
 3213,98270.0480,96171.5812,69.65,88-17
 3214,98292.8156,96213.3614,67.87,88-5
 3216,98320.2355,96241.8412,66.84,88-11
 3217,98292.8032,96251.2105,67.11,88-14
 3218,98224.4465,96253.7354,71.21,88-15
 3219,98182.7094,96260.0342,72.95,88-16
 3220,98044.5023,96150.7453,80.99,88-9
 3222,98365.8078,96328.0254,68.23,88-4
 3224,98303.2553,96341.1182,69.51,88-13
 3225,98329.8776,96398.0750,69.71,88-12
 3227,98258.6814,96450.2677,70.88,88-2
 3228,98170.3266,96455.0710,77.35,88-3
 3230,98080.6147,96389.9459,81.89,88-1
 3232,97685.3823,96233.7486,98.14,22-2
 3233,97683.0309,96206.4925,97.75,22-1
 3234,97707.5250,96277.2986,95.15,se bldg cor
 3235,97772.6025,96268.1874,94.13,ne bldg cor
 3236,97909.4993,96375.6140,89.46,se bldg cor
 3237,97980.2479,96365.9765,89.89,ne bldg cor
 3238,97973.9268,96320.5867,89.46,nw bldg cor
 3239,98271.2457,96029.4259,72.33,88-7
 3241,98250.4944,96035.9200,73.99,bldg107 ne
 3243,98213.0639,96337.5979,74.11,garage ne
 3244,98139.2229,96375.9385,75.12,garage se
 3501,99641.3824,97547.3059,45.82,fsp708
 3506,97970.3921,96289.2790,86.86,rb rp to 88-10

Loc ID								
		East	North	"Elevation, ft. msl"		PVC	Water level	
				Ground	PVC	bgs	bt pvc	elevation
MW 88-1		98080.45	96392.89	82.29	81.89	-0.4	0	81.89
MW 88-2		98257.88	96455.07	71.18	70.88	-0.3	9.71	61.17
MW 88-3		98169.94	96458.36	77.75	77.35	-0.4	12	65.35
MW 88-4		98365.81	96331.13	68.63	68.23	-0.4	14.76	53.47
MW 88-5		98292.11	96216.72	68.37	67.87	-0.5	10.41	57.46
MW 88-6		98271.8	96140.15	69.13	68.83	-0.3	9.8	59.03
MW 88-7		98271.25	96033.16	72.83	72.33	-0.5	14.02	58.31
MW 88-8		98185.94	96083.48	73.76	73.46	-0.3	14.6	58.86
MW 88-9		98044.5	96154.19	81.79	80.99	-0.8	20.22	60.77
MW 88-10		97970.3	96293.01	86.86	86.46	-0.4	24.98	61.48
							Est.	Est.
SB 88-11		98320.24	96241.84	66.84		Frozen	12	54.84
SB 88-12		98329.88	96398.08	69.71		Frozen	6	63.71
SB 88-13		98303.26	96341.12	69.51		Frozen	4	65.51
SB 88-14		98292.8	96251.21	67.11			14	53.11
SB 88-15		98224.45	96253.74	71.21			13	58.21
SB 88-16		98182.71	96260.03	72.95			12	60.95
SB 88-17		98270.05	96171.58	69.65			13	56.65
SB 88-18		98228.25	96070.54	71.93			13	58.93
SB 22-1		97683.03	96206.49	97.75		Refusal	32	65.75
SB 22-2		97685.38	96233.75	98.14		Refusal	36	62.14

Sivuqaq, Inc.**FAX TRANSMITTAL**

DATE:	March 21, 2002		
TO:	Ms. Lisa K. Geist CEPOA-EN-FE-A	FROM:	Morgan Apatiki Liaison
FAX:	(907) 753-2820	FAX:	(907) 985-5426
TEL:	(907) 753-5742	TEL:	(907) 985-5826
CC:	Sivuqaq, Inc. Board	PAGES:	Fourteen (14)

COMMENTS:

Finally, done with my review & comments. I
will send the hard copies as of Today.
Please, excuse my typical errors. Thank You!



SIVUQAQ INCORPORATED

P.O. BOX 101
GAMBELL, ALASKA 99742-0101
(907) 985-5826

TO: Lisa K. Geist
CEPOA-EN-EE-A

FROM: Morgan L. Apatiki
Liaison

DATE: March 21, 2002

SUBJECT: SRI/GAM. Review & Comments

Dear Ms. Geist

Enclosed, Please, find my Review and Comments on the 2001 Supplemental Remedial Investigation, Gambell, St. Lawrence Island, Alaska. Draft, December 2001.

If you have any further questions, Please, feel free to call me. Thank-You! for your time and efforts, working with us.

Sincerely,

LIAYSON

Morgan Apatiki
SIVUQAQ INCORPORATED

CC: Sivuqaq, Inc. Board
Gambell, Alaska

DOCUMENT: Gambell Draft 2001 Supplemental Remedial Investigation Report

REVIEWER: Morgan Apatiki, Community Liaison (March 21, 2002)

DATE: March 21, 2002

RESPONSES FROM: U.S. Army Corps of Engineers, Alaska District

Item 1: Section 1.1, Page 1-1

Comment: Data gaps from 1998 RI...

It has been mentioned that in 1998 RI, that some data gaps would be filled. What are those gaps? Have they been identified and characterized? What about those individual sites that were recommended for no further action. Can you specify or indicate their locations? Or have their identifications been specified in section 4.0 Table 4-1, page 4-1.

Response:

It is unclear what data gaps the reviewer is referring to. At the conclusion of the Phase I remedial investigation (1994), the following sites were recommended for no further action (with the exception of eligible hazardous debris removal): Sites 1, 8, 12, 13, 16, 17 and 18. The 1998 Phase II Remedial Investigation Report by Montgomery Watson concluded that no significant environmental risks were exhibited by the contamination at any of the Gambell sites. No remedial responses were recommended except for soil removal at Site 4/Area 4B. However, the report did identify and recommend several Gambell sites for removal of debris (BDDR) and containerized hazardous/toxic waste (ConHTRW) under the DERP-FUDS program. Therefore, all data gaps were resolved at that time. At the conclusion of the Phase II investigation, no further action was recommended for Sites 2, 3 and 4D, except for the eligible hazardous debris removal actions. Site 5 was recommended for no further action following the additional geophysical investigation, and soil/groundwater sampling.

Explain about Site 6, 7, 9, 11, 14, and 15. (e.g.) Several sites were deemed ineligible for the DERP-FUDS program due to lack of identified hazardous debris or contamination.

New information presented in the Strategic Project Implementation Plan (SPIP), Historical Photographic Analysis (TEC Report), and Oil Spill Consultants Final Removal Action Report led to the 2001 Supplemental Remedial Investigation. The information presented in Table 4-1 only refers to sites investigated during this investigation.

The following sites are (will be?) recommended for no further action: include complete list??
Site 8, 16, 24, 25A, 25B, 26, 27, 28.

Item 1: Para 2 – Reports of new information of buried military debris, mapping...

Response: Although buried debris cannot be addressed by the FUDS program, it may be addressed through a cooperative agreement between the Native Village of Gambell and the Department of Defense under the NALEMP program. The Golder Associates report was generated as part of the planning process for the NALEMP cooperative agreement.

The reviewer is correct that the most current aerial photograph (contained in the GIS-Based Historical Time Sequence Analysis) of Gambell dates from 1994. However, the basemaps utilized by Montgomery Watson in the 2001 Supplemental Report do depict the newer housing

units and contain other updated details. Please specify which areas of concern are improperly placed on Figure 1-2 and 3-1.

Item 1: Section 1.1/1.2/1.5.2

Comment: The description of these sections that are listed on the left, seem to have the same wording since the Year 2000. The clean-up project is recommended as contemplative and speculative of the remedial and removal actions.

Response: Comment noted.

Item 2: Section 2.2.2.2 – Subsurface borehole soil sampling was insufficient

Response: Insert MWH response.

Site 25B was located with the assistance of local community members, and based on a recommendation from the Sivuqaq Board. The borehole samples were not intended to and cannot penetrate permafrost conditions. *in depression areas*

Item 2: para 2

Comment: Soil borings that were planned to terminate at frozen soils indicated different depths of the frozen soil that were encountered... At which level of frozen layer are you indicating the boreholes that were drilled beyond the frozen soil interface? Etc.

Response: Insert MWH response.

Permafrost levels tend to vary with depth, but are fairly consistent throughout the Village of Gambell. Permafrost levels also vary from year to year, between seasons.

Item 3: Section 1.1 – Groundwater flow/level variation

Comment: The groundwater flow level is high in early spring and in the fall season. The degradation of water level is during the summer season. The water level can be varied and caused by the high tide from south and north currents, especially during the high wind. The water level seems to disappear in late summer and tend to elevate when the fall season arrives. The frozen soil begins to rise to the surface when the temperature falls. The groundwater flow is from the East to West and intersects to the South end of the ponds beyond the end of the Troutman Lake.

In regards to the contamination that is underground in the vicinity of the village of Gambell; The repetition of the elevating water level during the fall and frozen soil during winter and spring can cause the DRO, etc. to rise up and down in the layered section of the drainage basin followed with the stain resulted into the RRO. The results of the rusted or discolored gravel on the soil surface indicates the presence of the chemical or eroding of heavy metal objects underneath that section. Both the water level and frozen soil during the fall can elevate the organic compounds to the surface. The oily substance can always be on top of the water level and on flux of the frozen soil. There are several areas of rusted and orange colored gravel on top of the surface besides the exposing military debris.

Response: Comments noted. We agree that rising and falling permafrost and groundwater levels can cause a “smear” zone over which contamination may be present.

Item 3: Continued

Comment:

Local Issues and expressed concerns	Response
Photoionization detector not working well	This device was working properly, field notes document regular calibration of the device.
Sampling procedures do not seem accurate	The field crew followed the approved workplan

Missing drilling rig part	According to the field crew (and field notes), this equipment was in good working order.
Site which are declared highly contaminated	No sites have been declared as highly contaminated.
Environmental Impact Statement caused by military demobilization from 1951 to 1957	We are unaware of such a statement.
Aware of highly contaminated areas identified by URS (1985) and Golder Associates (1994).	Please provide more specifics on these sites. A review of the URS report indicates that no highly contaminated areas were identified.
Aware of DRO/GRO/RRO encountered by construction crew during installation of mains. Reported to be on top of permafrost, eye irritating substance was encountered at Site 16 and 25A.	Observations noted.
Aware of houses and buildings built over and near military buried debris and contamination. Need coordination provided beforehand.	Information is available to the public, and any other stakeholders involved with construction projects at Gambell can access reports at the 4 Information Repositories.
Aware of precaution given by military officers before site demobilization to not go near burial sites.	Comment noted. We are not aware of such a precaution.
Community imperiled regarding the presence of contamination in the vicinity of Gambell, why not included in the National Priority List.	Contamination has been identified above generic state cleanup levels (ADEC Method 2) at Sites 4A, 4B, 6, 7, 12, and 18A. However, the primary contaminants of concern are elevated levels of diesel range organics, and some metals.
Recommendation from community that geophysical surveys and remedial investigation not thorough enough, and proceeded without logic.	Comment noted. The Alaska District has followed the CERCLA process for investigating and remediating hazardous waste sites, and the Alaska Department of Environmental Conservation has been overseeing our efforts.

Item 4: Section 2.2.2.3 – Fuel fingerprinting

Comment: As you may have known and understood, the following soil borings designated for the finger printing, are under and near the buildings inflicted by the military debris and contamination. The locals handling of the petroleum products for many years with small amounts of oil spill reported and stained from the intense fume of the products have been affiliated with the spoilage done by the FUDS activities.

Response: Comment noted. The purpose of the fuel fingerprint analyses was to help determine if non-military sources of contamination were contributing to any detected contaminants. The Corps' responsibility is to evaluate and remediate former military impacts, only. If contamination from several sources is co-mingled or mixed together, a different process must be followed.

Item 5: Section 2.3.1 – Freezing level occurs in mid September, groundwater levels... recommendation from community of Gambell to reconsider assumption that groundwater flow level is at lowest in September.

Comment: As it has been mentioned in the subsequent sections, the freezing level occurs in mid September, followed by the formation of the 4 to 6 inches thick frozen soil, from two to six feet

intervals in depth measurement. The Community of Gambell is Recommending the CORPS to Reconsider Evaluation of the FS/RI regarding the statement mentioned in Item 4 and Groundwater Flow Level is at the lowest level and the formation of the frozen soil tends to surface during the Month of September. The spoilage done by the FUDS actions believed to be further down than the sample depth collected by MW's performance. Can you tell me why the groundwater samples were not collected?

Response: Insert MWH response. Groundwater was not encountered in any location, except for soil boring 18A.

Item 6: Section 3.1 – Site 4A and 4B contaminated with oil spills, etc.

Comment: Both Radar Sites, 4A and 4B are considered contaminated with oil spills, etc. caused by the poor handling of fuel products, dumping of waste oil, and other canistered oil substance, according to locals perspective's that worked and familiar with the Military Activities. The local laborers that worked during the MW clean-up activities in 1990's report a smell of intense fumes present on these two sites. It is known to have oil drainage at those two sites.

Response: Comment noted. Soils were removed from Site 4B during the removal actions conducted by Oil Spill Consultants in 1999. Initial confirmation sampling conducted after the soil removal was completed indicated additional contamination remained. Montgomery Watson conducted additional sampling in 2001 to verify Oil Spill's results, and their data also shows some residual petroleum contamination. However, high levels of metals (chromium) were not confirmed. In addition, earlier investigations did not show evidence of contamination downgradient of Site 4.

Item 7: Section 3.2 – Origin of DRO, etc at Site 4B

Comment: The burning of Site 4B Radar Site, not only caused the Ordnance to explode, it also ignited the diesel and gasoline. The explosion mushroomed like a bomb, after the other viewed from the village of Gambell and local that are close contact with the radar site. And that is where the originated DRO, GRO, and RRO mostly come from. The potable drinking water source has been Noted. The local people use the stream for water, for many years coming down from those contaminated areas. It is recommended that these mentioned, tested for compatibility.

Response: It is unclear where these drainages exist, how intermittent are they, and does the comment include the already investigated former infiltration gallery. Groundwater has already been monitored at base of Sevuokuk Mountain.

Item 8: Section 3.3

Comment: Inconsistencies in Report, Inaccurate Figure 1-2 and 3-1

Response: Please specify in more detail what information is incorrect.

Comment: Boreholes drilled outside of landfills, buried debris, area of contamination.

Response: It is impossible to drill exactly over buried sewer/utility line areas. We realize the new housing units are not depicted on the 1994 aerial photo, however they are included on more recent basemaps.

Comment: Site 6 one of the potentially impacted sites....Site 27 under new BSHA housing...Oil spill from AVEC tank farm and ANILCA store tank farms has been affiliated with area Site 25B. Thickness of oil spill substance estimated at 12 inches in depth. Black substance is believed to be a result from military activities...

Response: There is no evidence to suggest that any contamination is present at Site 25B. Contamination must be of military origin to be eligible for investigation and cleanup under the FUDS program.

Item 9: Section 3.4

Comment: This site [Site 7] was one of the two reported to be messiest and littered with waste oil and fuel products...transformer burial sites have not been removed...

Response: No evidence of significant contamination, some fuels have been documented at Site 7, MWH recommends "hot spot" surface soil removal.

Item 10: Section 3.5

Comment: Site 8 also burial site for OE anomaly.

Response: I believe the reviewer is referring to Area D, the beach burial site for small arms ammunition documented by Huntsville/Earth Tech in the ordnance investigation.

Item 11: Section 3.6

Comment: Sites 12, 28 and Area D should be combined and considered contaminated. Plants are harvested in this vicinity by Gambell residents for subsistence purposes. Recommend testing of the plants.

Response: Comment noted. No evidence of significant contamination, some elevated levels of metals documented by MWH, they recommended "hot spot" removal of surface soils. We do not recommend plant sampling, perhaps could be addressed under NALEMP program?

Item 12: Section 3.7

Comment: Stained gravel by Site 16, congeals on warm days, since snow covered most of year, cannot be result of local ATV traffic.

Response: Sampling has not revealed significant contamination.

Item 13: Section 3.8

Comment: Site 18 known as the military camp...recommend conducting air quality testing in this area. Army camp facility pumphouse has not been identified and documented. Explain word "biased" as it relates to subsurface sampling results at borehole 18A.

Response: Air quality testing is not recommended at this time, no evidence of PCBs documented in soils of this site or nearby sites. No reason to believe contamination exists by the pumphouse. Sample collected at borehole 18A was gravel subsurface soil, laboratory qualified the chemical sampling results due to matrix interference.

Item 14: Section 3.9

Comment: Site 24 is one of the other contaminated sites

Response: Comment noted.

Item 15: Section 3.10

Comment: Construction crews encountered DRO, GRO, waste oil and RRO in area of Site 25A, on top of permafrost, believed to have migrated east from area of Sites 16, 18 and 24. Thickness of organic material is about 12 inches in depth. Eye irritating, smell.

Response: Comment noted.

Item 16: Section 3.11

Comment: This drainage basin [Site 25B] is believed to be migrated from military facilities and DRO, etc. disposal at Sites 6 and 27. It is now accumulated with oil-spill incidents described in item 7, para 5 [village store and fuel tank farm].

Response: Analytical results from the 2001 investigation did not indicate petroleum contamination in this area above ADEC cleanup levels. Fuel-fingerprinting analysis were also

inconclusive as the potential source of any residual petroleum. Contamination from non-military sources cannot be addressed by the FUDS program.

Item 17: Section 3.12

Comment: This site [Site 26] was a very active and prominent anomaly.

Response: Comment noted. Site 26 was selected based on review of the Historical Photo Analysis (TEC Report).

Item 18: Section 3.13

Comment: Site 27 was storage area for drums of diesel, gasoline, and other lubricants. When the military demobilized, some of the diesel was distributed to local U.S. Army, most of the stacked drums were pierced and drained to the ground, leftover free product was buried with some OE anomaly. Empty drums were gathered and loaded onto ship, dumped into the sea about 285 miles southwest of Gambell. Houses are built over these contaminated sites, several rust and orange-colored degraded soil on the surface, and deteriorated exposed drums are present.

Response: Comment noted. A rust colored location in this area was sampled by MW during the 2001 field investigation, at the request of the Sivuqaq Board. The analytical results indicated no evidence of contamination.

Item 19: Section 3.14

Comment: Site 28 is also described in Section 3.6 (Site 12)

Response: Comment noted.

Item 20: Section 4.0

Comment: In regards to the insufficient confirmation samples stated on this Memorandum of Report; It is recommended that the Geophysical Verification Plot and Geophysical Prove-Out be ruled out until the complete Sample Analytical Results are Applicable.

Response: It is unclear what is being referred to with this comment. Concerns with the ordnance investigation and results should be raised during the public review of the EECA, which is anticipated to be available in April. New confirmation samples were collected from areas remediated during 1999 by Oil Spill Consultants to determine residual contamination levels, and address concerns raised by ADEC regarding the original sampling procedures used by Oil Spill Consultants.

NOTE:

Comment: URS surface and subsurface water sampling observations of interest, indicated chemical oxygen demand for site 1, 6 and 28 are particularly interesting...

Response:

NOTE:

Comment: The natural Environmental Habitat was affected and the Archaeological Grave Sites were disturbed by the Military Activities.

Response: Comment noted.

GENERAL:

Comment: The Communities Recommendation for 2001 Supplemental Remedial Investigation is Gambell, St. Lawrence Island, Alaska is considered as rival to the risk assessment work plan that is performed at Northeast Cape. It is RECOMMENDED that a thorough investigation be executed to characterize and identify the Characteristics of PCB Analysis by Physical, Biological and Chemical Testing.

Response: Testing for PCBs has been conducted during previous investigations, no evidence of contamination has been documented.