MONTHLY OPERATIONS SUMMARY FOR THE NAVAL EXCHANGE (NEX) AND DOLPHIN MART AIR SPARGING/SOIL VAPOR EXTRACTION SYSTEMS AND OT-8 PASSIVE FREE PRODUCT RECOVERY SYSTEM

NEW LONDON NAVAL SUBMARINE BASE
GROTON, CONNECTICUT

Month: March 1998

Prepared By:

Fluor Daniel GTI, Inc.
Prepared by:

Barry A. Kline, P.E.
Lead Engineer

Foster Wheeler Environmental Corp.
Reviewed by:

Susan R. Leach

Susan R. Leach, P.E.
Environmental Site Technical Manager

OPERATIONAL SUMMARY

DOLPHIN MART AIR SPARGE/SVE SYSTEM

System Status - The remediation system at the site has been operating since June 29, 1996. As of March 25, 1998, thirteen (13) horizontal vapor extraction trenches (VET-1, VET-2, VET-3, VET-4, VET-5, VET-6, VET-7, VET-8, VET-9, VET-10, VET-11, VET-12, and VET-17) and seven (7) air sparge points (ASP-A, ASP-B, ASP-C, ASP-D, ASP-E, ASP-F, and ASP-G were operating. VET-13 through VET-16 and air sparge points ASP-H through ASP-Q are currently not operating due to high groundwater conditions and low dissolved VOC concentrations in their vicinity. The SVE system is currently extracting subsurface air at a flow rate of approximately 245 scfm. The air sparge system is currently injecting air at a flow rate of approximately 30 scfm. A site map has been included as **Figure 1**. The site monitoring forms for O&M conducted during the month of March, 1998 are included in **Attachment 1**. A weekly break-down of the month's field activities has been included as **Attachment 2**.

Mass Removal - The total hydrocarbon mass removal rate, based on the SVE system influent sample collected March 24, 1998, was 0.03 lbs/hour. During the period from February 12, 1998 to March 24, 1998, approximately 25 lbs of hydrocarbons were extracted by the remediation system. The total hydrocarbon mass extracted by the remediation system, as of March 24, 1998, was approximately 1,981 lbs. The system database has been included in **Attachment 3**. Mass removal graphs have been included as **Figures 3A, 3B and 4**. Based on the hydrocarbon mass removal rate, no exceedance of CTDEP air quality guidelines was observed.

Carbon Usage - No carbon change-out occurred during the month of March, 1998. The last carbon change at the site occurred August 27, 1996.

Discharge Monitoring Sampling - Discharge sampling for the system was conducted on March 24, 1998.

Monitoring Well Gauging - The site monitoring wells were last gauged on February 11,1998 during the quarterly groundwater sampling event. Depth to groundwater at the site ranged from 1.31 feet in OBG-9A to 8.33 feet in WE-3. Historical well gauging data has been included in **Attachment 4**.

Monitoring Well Sampling - Monitoring well sampling was conducted on February 12, 1998 and March 25, 1998. The Quarterly Groundwater Sampling Report will be issued under separate cover. The historical groundwater sampling results have been summarized in **Attachment 5**.

Additional Activities - Sampling of Monitoring wells MW-3 and OBG-8A for TPH.

NEX AIR SPARGE/SVE SYSTEM

System Status - The remediation system at the site has been operating since July 31, 1996. As of March 25, 1998, all thirty-five (35) soil vapor extraction wells were operating. The SVE system is currently extracting subsurface air at an average flow rate of approximately 249 scfm. The air sparge system was activated April 17, 1997. As of March 25, 1998, twenty-one (21) air sparge points (SPA-28 through SPA-34, SPA-36, SPA-37, and SPB-15 through SPB-26) were operating. The air sparge system is currently injecting air at a flow rate of approximately 53 scfm. The air sparge system has periodically shut down due to the deactivation of the extraction blowers on moisture trap high liquid level alarms. During the period from March 3, 1998 to March 24, 1998, approximately 1,182 gallons of groundwater were extracted by the SVE system, treated and discharged. Approximately 75,121 gallons of water have been discharged by the NEX system as of March 24, 1998.

A site map has been included as **Figure 2.** The site monitoring forms for O&M conducted during the month of March, 1998 are included in **Attachment 1.** A weekly break-down of the monthly field activities has been included in **Attachment 2.**

Mass Removal - The total hydrocarbon mass removal rate, based on the SVE system influent sample collected March 24, 1998, was 0.04 lbs/hour. During the period from February 12, 1998 to March 24, 1998, an estimated 34 lbs of hydrocarbons were extracted by the remediation system. The total hydrocarbon mass extracted by the remediation system, as of March 24, 1998, is approximately 1,930 lbs. The system database has been included in **Attachment 3.** Mass removal graphs have been included as **Figures 5A, 5B and 6.** Based on the hydrocarbon mass removal rate, no exceedance of CTDEP air quality guidelines was observed.

Carbon Usage - No carbon change-out occurred during the month of March, 1998. The last carbon change occurred August 8, 1996.

Discharge Monitoring Sampling - Discharge monitoring sampling at the site was conducted on March 24, 1998.

Monitoring Well Gauging - The last full round of site monitoring well gauging was conducted on February 12,1998 during the quarterly groundwater sampling event. Depth to groundwater at the site ranged from 2.54 feet in HNU-17 to 8.19 feet in OBG-1. On March 24, 1998, OBG-9, ERM-12, ERM-14, and ERM-16 (wells historically containing LNAPL) were gauged. An LNAPL sheen was detected in OBG-9 and ERM-14. The product recovered from the petroleum absorbent "socks" previously placed in the wells was approximately 0.1 pint. Historical well gauging data is included in **Attachment 4.**

Monitoring Well Sampling - Monitoring well sampling was last conducted on February 12, 1998. The Quarterly Groundwater Sampling Report for the February sampling event will be issued under separate cover. The historical groundwater sampling results have been summarized in **Attachment 5.**

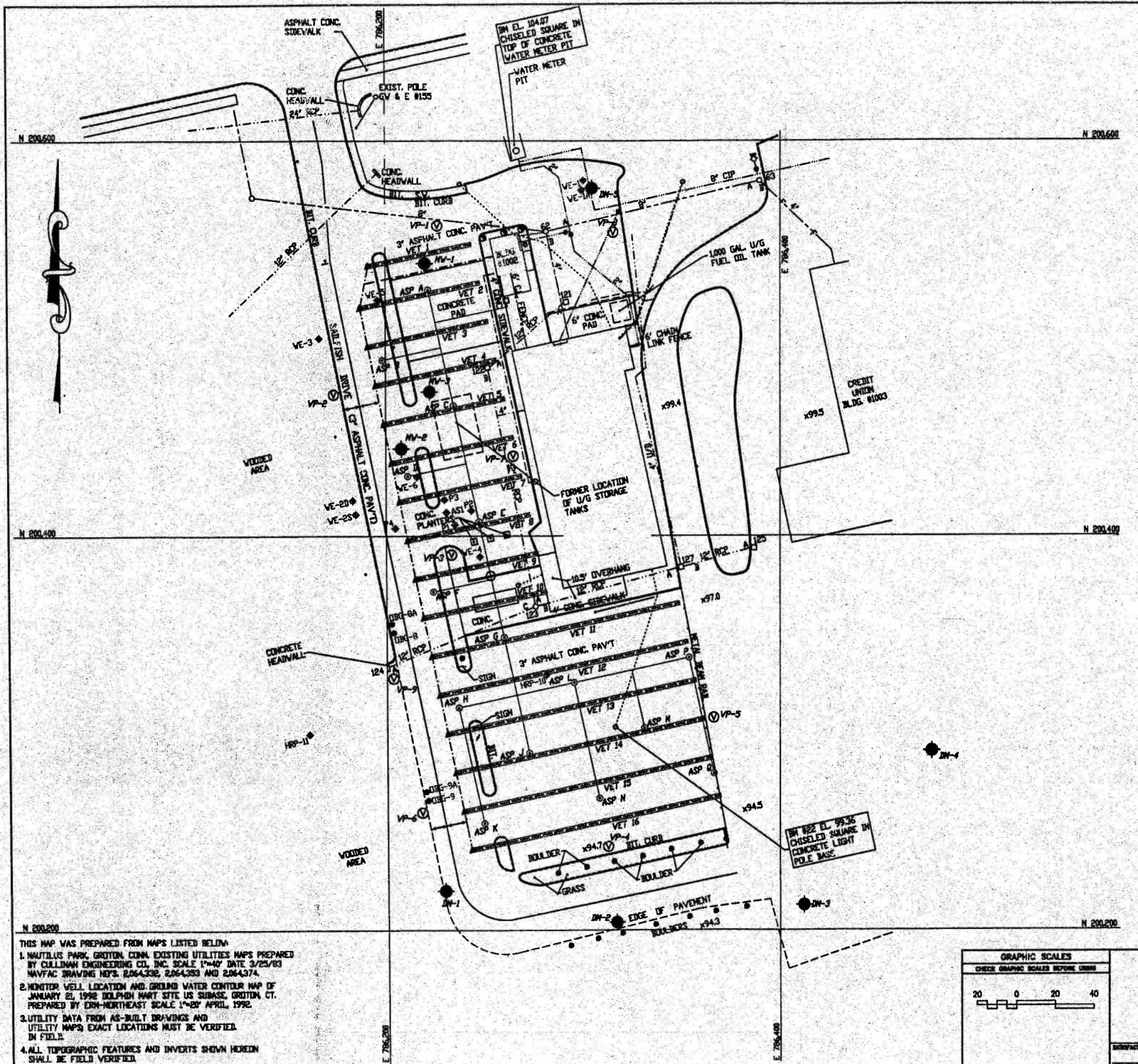
Additional Activities - On March 10, 1998, at the request of Base personnel, Fluor Daniel GTI modified the cover to vault for VEA-12.

On March 25, 1998, Fluor Daniel GTI oversaw the abandonment and replacement of three monitoring wells (OBG-3, OBG-5, and OBG-6) and the abandonment of two sets of microwells by AM Drilling Services. Well logs for the three replacement wells FD-1, FD-2, and FD-3 are included in **Attachment 6.** The locations of the wells are shown on **Figure 2.**

OT-8 PASSIVE FREE PRODUCT RECOVERY SYSTEM

System Status - The OT-8 system has been decommissioned and removed. MW-7 was destroyed during excavation activities at the OT-8 area. The petroleum hydrocarbon impact has been addressed by soil excavation activities conducted by Foster Wheeler Environmental Corporation Inc.

FIGURES



REVISIONS				
LTR	DESCRIPTION	PREP'D BY	DATE	APPROVED

HIGHEST RECORDED GROUND WATER ELEVATIONS

WELL NO.	GROUNDWATER ELEVATION
WE-1A	96.84
WE-2S	94.25
WE-2D	94.31
WE-3	93.93
WE-4	94.11
WE-5	95.40
WE-6	95.41
DBG-8A	93.70
DBG-9A	94.80
HRP-10	93.5 (ESTIMATED)
HRP-11	92.5 (ESTIMATED)

NOTE:
GROUND WATER DATA SHOWN ON PLANS ARE APPROXIMATELY AS SHOWN FOR BIDDING PURPOSES. ACTUAL WELL ELEVATIONS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

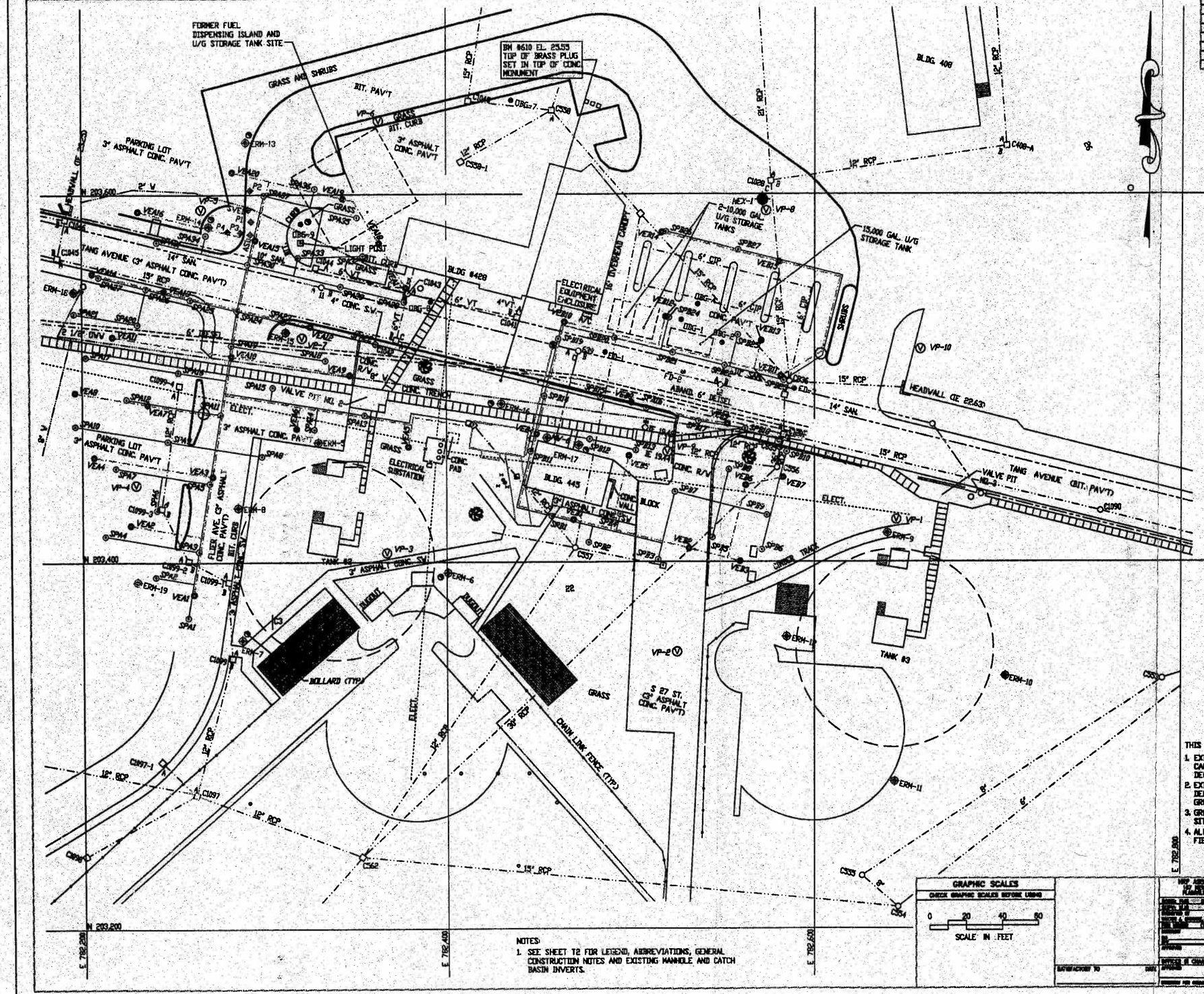
SOIL VAPOR EXTRACTION TRENCH PIPE ELEVATIONS - DOLPHIN MART

TRENCH NO.	INV. ELEV. 6" VAPOR COLLECTION PIPE	INV. ELEV. 2" PIPE @ WEST END OF TRENCH	INV. ELEV. 2" PIPE @ EAST END OF TRENCH
VET 1	94.64	99.41	99.46
VET 2	94.64	98.80	98.85
VET 3	94.48	98.19	98.24
VET 4	94.32	97.50	97.62
VET 5	94.16	96.78	97.30
VET 6	94.00	96.20	97.20
VET 7	93.84	95.65	97.00
VET 8	93.68	95.13	96.80
VET 9	93.52	94.62	96.60
VET 10	93.36	93.52	96.40
VET 11	93.20	93.37	95.80
VET 12	93.04	93.23	95.22
VET 13	92.88	93.09	94.64
VET 14	92.72	92.95	94.04
VET 15	92.56	92.80	93.56
VET 16	92.40	92.66	93.08

NOTES:
1. SEE SHEET T2 FOR LEGEND, ABBREVIATIONS GENERAL CONSTRUCTION NOTES AND EXISTING MANHOLE AND CATCH BASIN INVERTS.

GRAPHIC SCALES
CHECK GRAPHIC SCALES BEFORE USING
20 0 20 40

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND			
LOCATION: NORTHERN DIVISION			
NAVAL SUBMARINE BASE — NEW LONDON, CONNECTICUT			
REMEDIATION OF CONTAMINATED SOIL/GROUND WATER			
FIGURE 1 - SITE PLAN DOLPHIN MART			
DES.	CONT. IDENT. NO.	DRAWING NO.	REV. NO.
F	80091	2166440	C2-1
CONTR. CONTR. NO. N62472-89-C-0950			
SPEC. NO. 94-SB-0950 SHEET 6 OF 34			



REVISIONS				
LTR	DESCRIPTION	PREP'D BY	DATE	APPROVED

HIGHEST RECORDED GROUND WATER ELEVATION

WELL NO.	GROUND WATER EL.	WELL NO.	GROUND WATER EL.
OBG-1	16.73	ERM-18	16.97
OBG-2	17.09	ERM-19	16.06
OBG-4	16.63	ERM-1	17.09
OBG-5	16.85	ERM-2	16.31
OBG-6	16.76	ERM-3	14.76
OBG-7	18.40	ERM-4	16.86
OBG-8	17.96	ERM-5	17.78
OBG-9	17.63	ERM-6	16.79
ERM-10	18.68	ERM-7	15.81
ERM-11	17.84	ERM-8	17.14
ERM-12	16.69	ERM-9	17.00
ERM-13	17.58		
ERM-14	17.46		
ERM-15	17.59		
ERM-16	17.71		
ERM-17	16.91		

NOTE:
GROUND WATER DATA SHOWN ON PLANS ARE APPROXIMATELY AS SHOWN FOR BIDDING PURPOSES. ACTUAL WELL ELEVATIONS TO BE DETERMINED IN FIELD BY CONTRACTOR.

THIS MAP WAS PREPARED FROM MAPS LISTED BELOW:

1. EXISTING TOPOGRAPHY FROM MAP BY JAMES S. MINGES & ASSOCIATES, CARLSON & SWEATT FARMINGTON, CT & NEW YORK, N.Y. DATED 31 DEC. 1974.
2. EXISTING UTILITIES FROM 40 SCALE UTILITY MAPS SUPPLIED BY THE DEPARTMENT OF PUBLIC WORKS, NAVAL SUBMARINE BASE, NEW LONDON, GROTON, CT.
3. GROUND WATER ANALYTICAL RESULTS, JANUARY, 1992 NEX STATION SITE US SUBBASE, GROTON, CT PREPARED FOR ERM-PNC.
4. ALL TOPOGRAPHIC FEATURES AND INVERTS SHOWN HEREON SHALL BE FIELD VERIFIED.

NOTES:
1. SEE SHEET T2 FOR LEGEND, ABBREVIATIONS, GENERAL CONSTRUCTION NOTES AND EXISTING MANHOLE AND CATCH BASIN INVERTS.

GRAPHIC SCALES
CHECK GRAPHIC SCALES BEFORE USING
0 20 40 60
SCALE IN FEET

BACKCHECKED TO

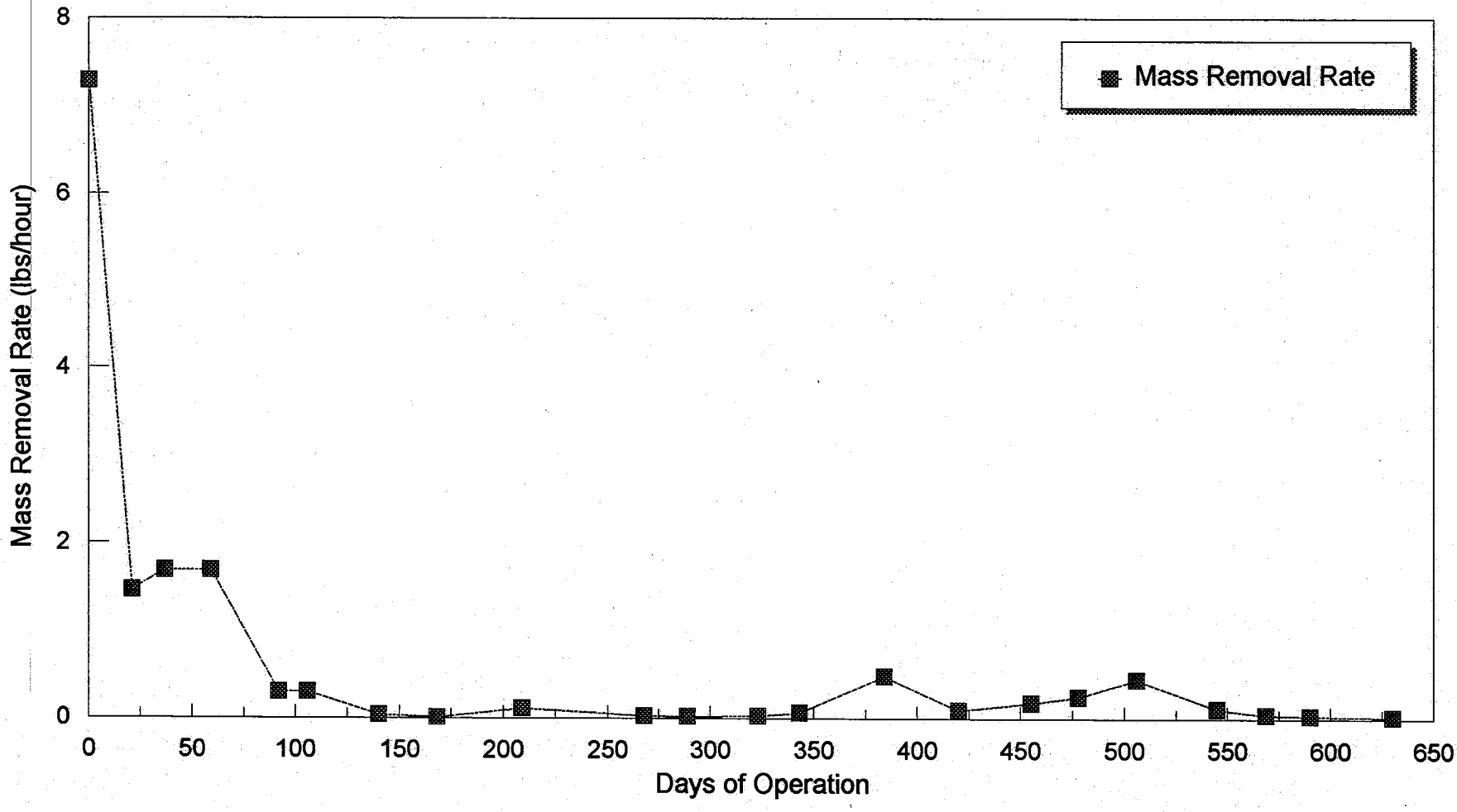
NAVFAC ENGINEERING COMMAND
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
NORTHERN DIVISION
NAVAL SUBMARINE BASE — NEW LONDON, CONNECTICUT
REMEDIATION OF CONTAMINATED SOIL/GROUND WATER
PHASE 2 - SITE PLAN
NAVAL DISCHARGE (NEX)

SIZE	CONTR. IDENT. NO.	DRAWING NO.	REV. NO.
F	80091	2166439	C1-1

CONTR. NUMBER N62472-90-C-0936
SPEC. NO. 94-90-0936 SHEET 4 OF 34

Figure 3A- Mass Removal Rate

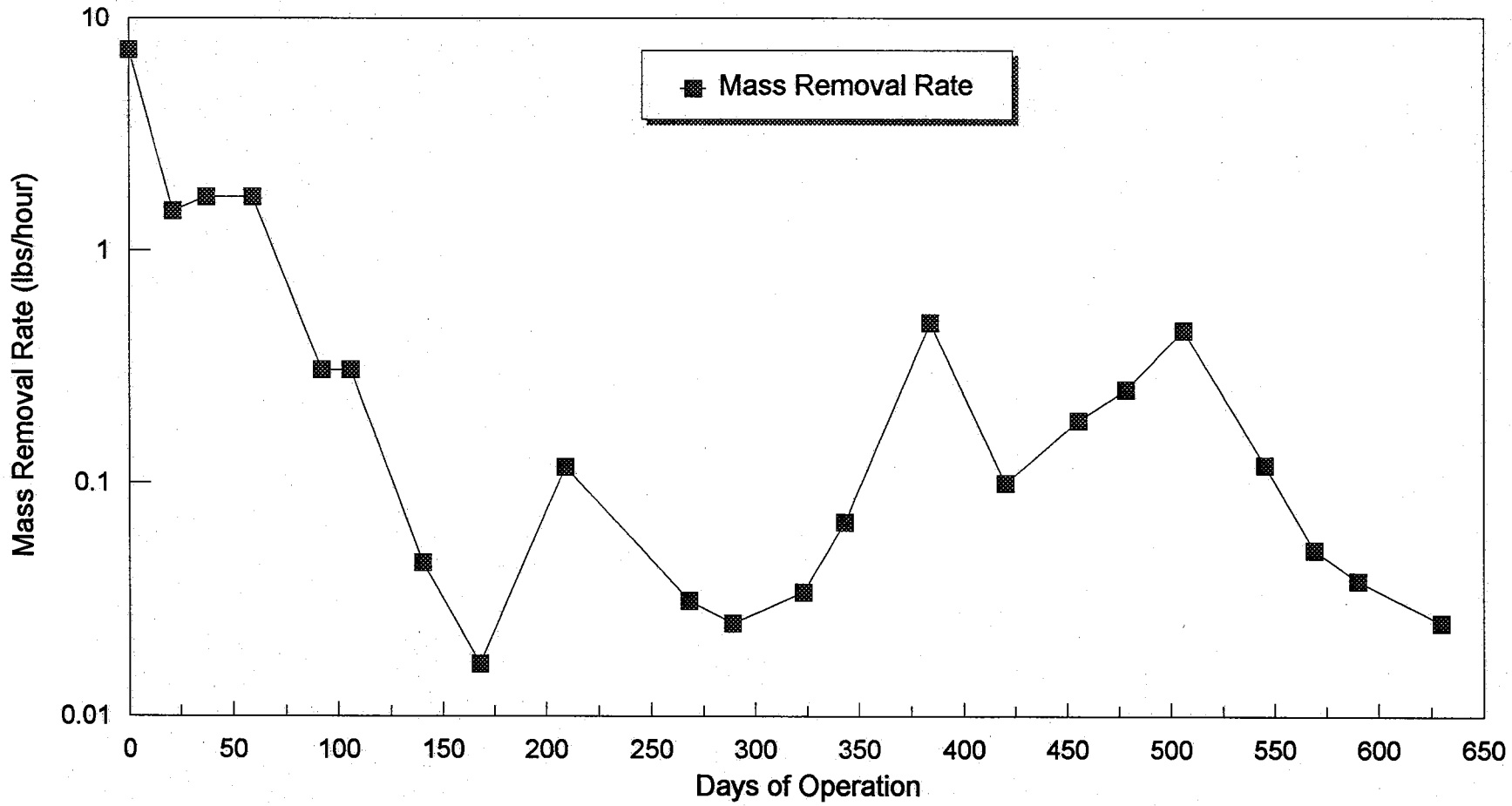
Dolphin Mart Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

Figure 3B- Mass Removal Rate

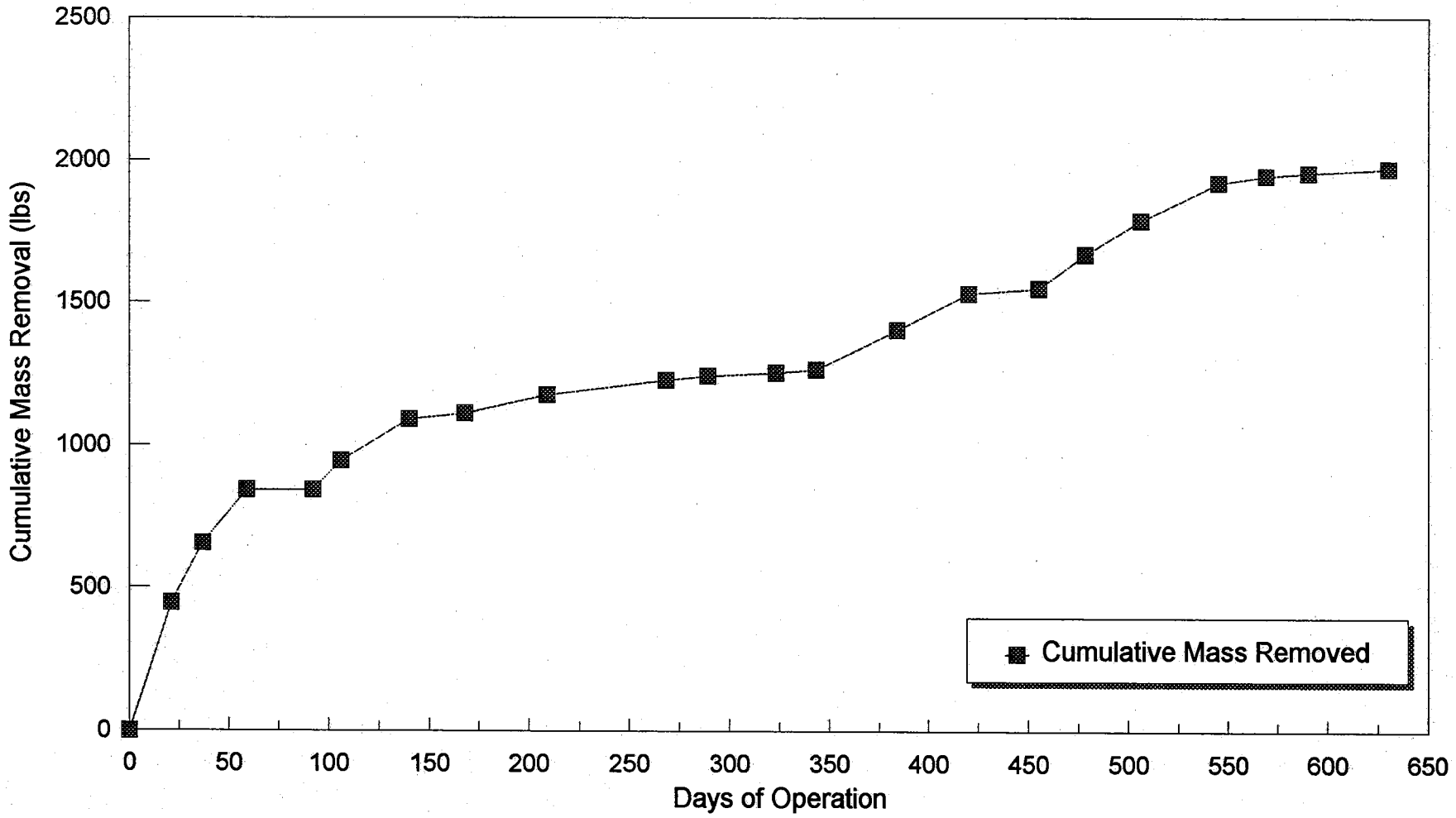
Dolphin Mart Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

Figure 4 - Cumulative Mass Removed versus Time

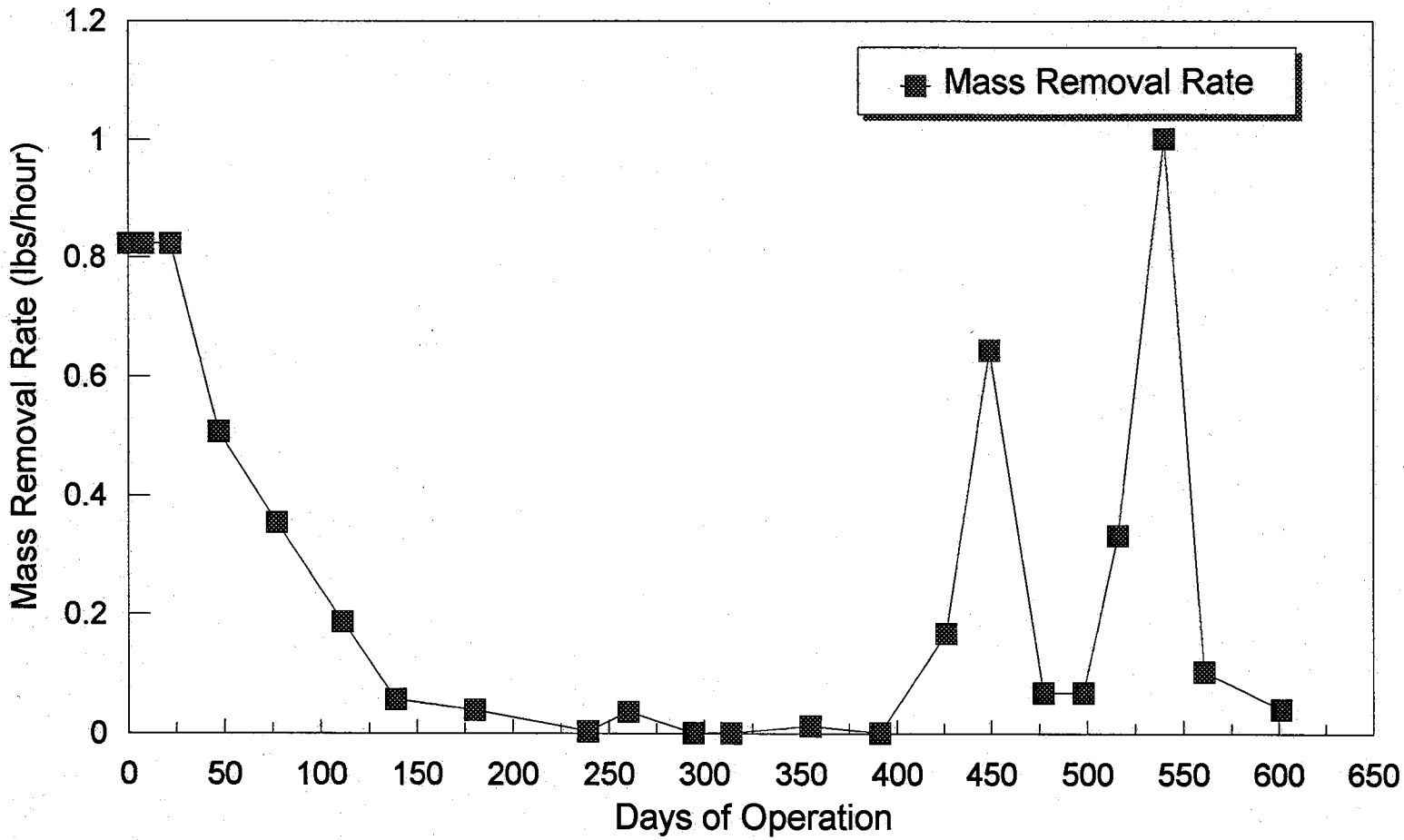
Dolphin Mart Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

Figure 5A - Mass Removal Rate

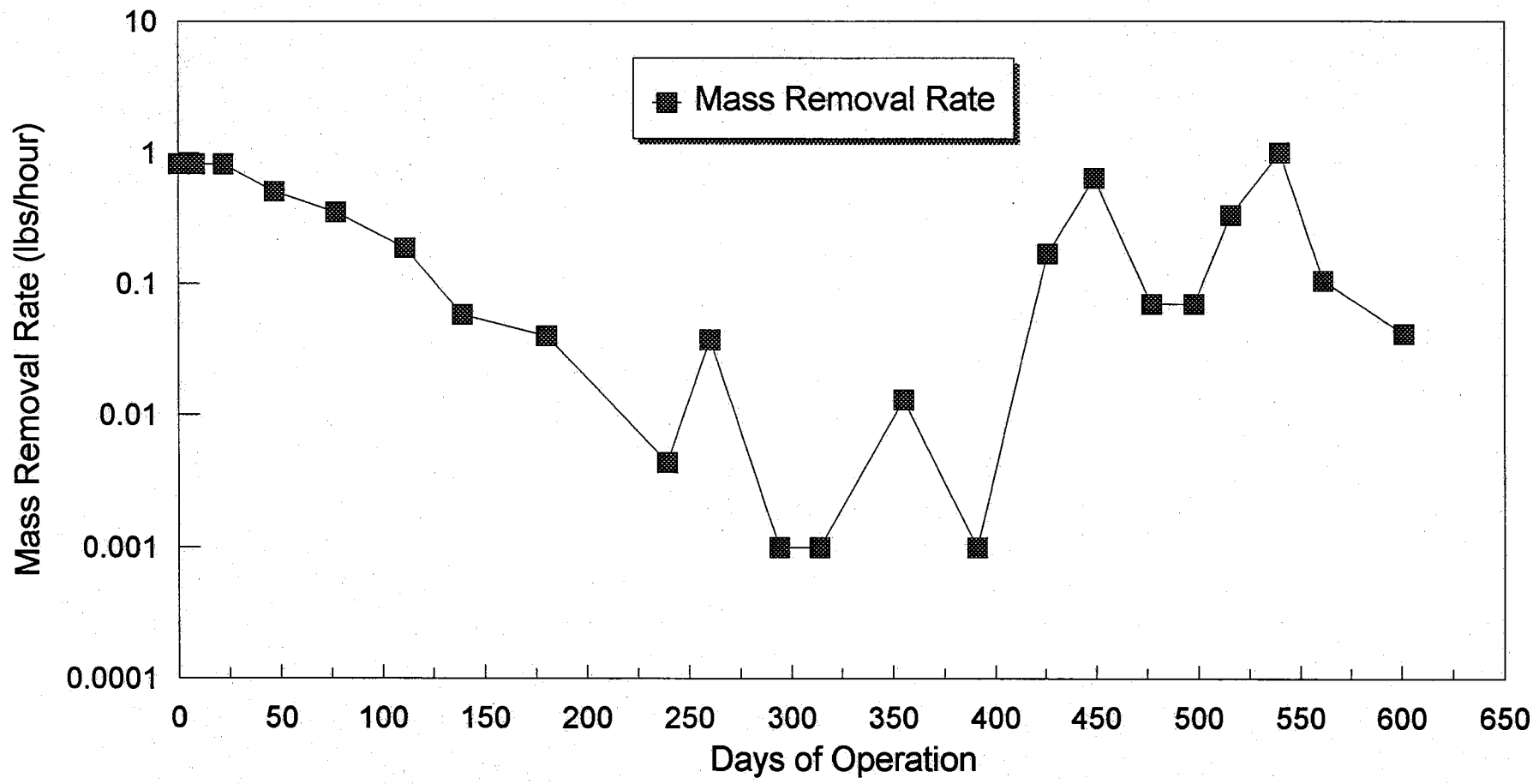
NEX Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

Figure 5B - Mass Removal Rate

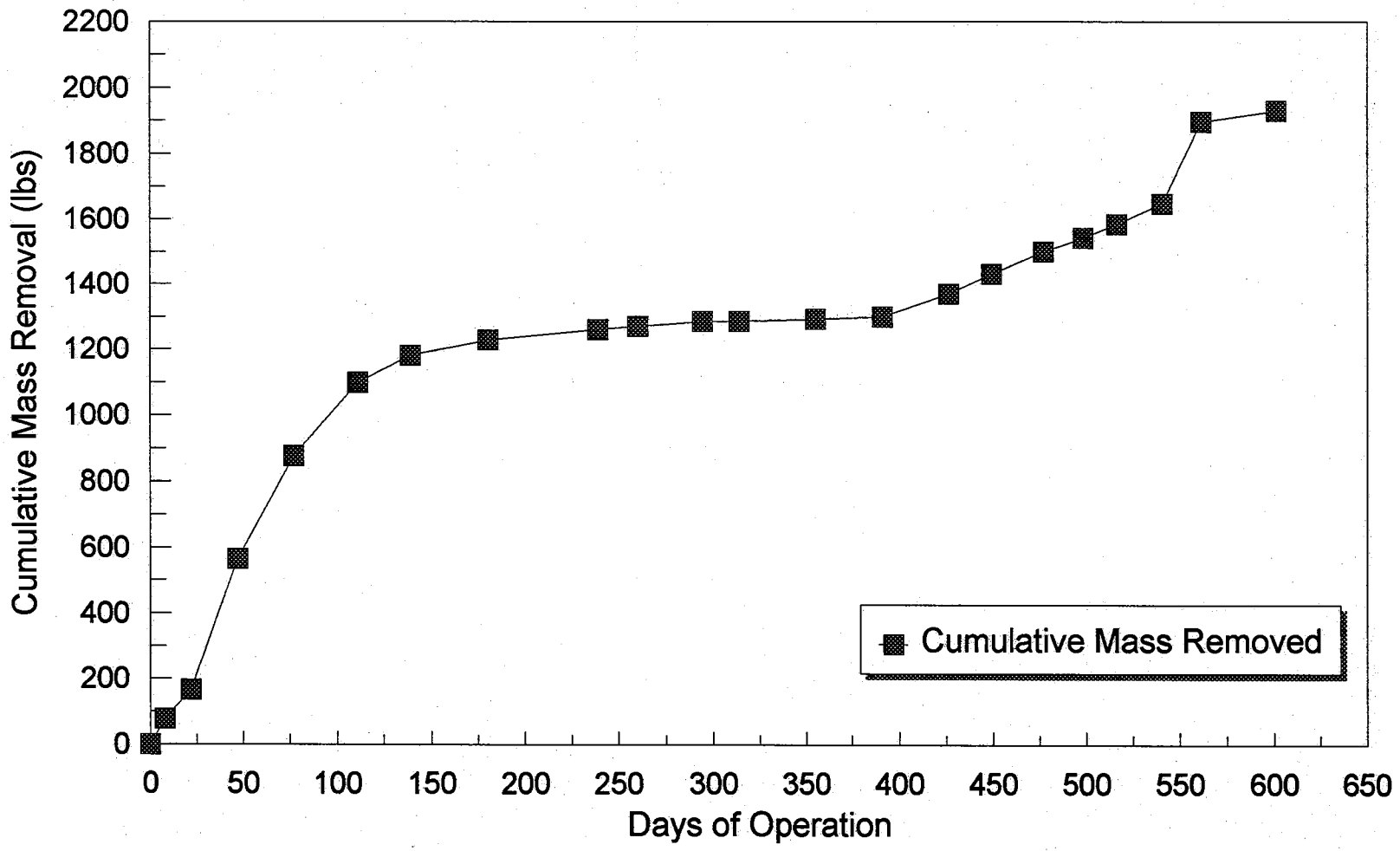
NEX Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

Figure 6 - Cumulative Mass Removed versus Time

NEX Site, New London Naval Submarine Base, Groton, CT



MASSREM.WK4

ATTACHMENT 1

SITE VISIT FORMS

OPERATIONAL DATA FORM
Air Sparging/Soil Vapor Extraction System
Dolphin Mart
Naval Submarine Base -Groton, CT
Project #83001-9999

Date: ~~3/24~~ 3/24/98
Time: 10:55
Technician: John Rowzun, Jr.

AIR COMPRESSOR SYSTEM

Flow Rate: 30 SCFM
Total Flow: 3456866 SCFM

	Air Compressor C-1	Air Compressor C-2
Pressure	6.5 psi	N/A psi
Temperature	140 °F	°F
Flow Control Valve Setting	100 %	
Bleed Valve	50 %	
Radiator	(ON) / OFF	(ON) / OFF

SOIL VAPOR EXTRACTION SYSTEM

Flow Rate: 1250 SCFM (use anemometer in hole in pipe near Hersey flowmeter)

	Vacuum Pump V-1	Vacuum Pump V-2	Vacuum Pump V-3	Vacuum Pump V-4
Vacuum	N/A "Hg	6.5 "Hg	N/A "Hg	N/A "Hg
Temperature	°F	122 °F	°F	°F
Particulate Filter		OK		
Flow Control Valve Setting		100 %		
Bleed Air Valve Setting		25 %		
Liquid Level		OK		

ACTIVATED CARBON ADSORPTION SYSTEM

	Carbon Adsorber A/B	Carbon Adsorber C/D
Pressure	N/A psi	29 psi
Inf. VOC Level	ppm	0 ppm
Mid. VOC Level	ppm	0 ppm
Eff. VOC Level	ppm	0 ppm
Change out Date	N/A	8-22-96

WATER TREATMENT

Flowmeter Reading: 3920.2 Gallons — After discharge, 4003.8

COMMENTS

OPERATIONAL DATA FORM
Air Sparging/Soil Vapor Extraction System
Naval Exchange
Naval Submarine Base -Groton, CT
Project #83001-9999

Date: 3/24/98
Time: 15:20
Technician: John Kowzun, Jr.

AIR COMPRESSOR SYSTEM

Flow Rate	0 SCFM	Total Flow	2799130 SCFM

Air Compressor C-1		Air Compressor C-2	
Pressure	NA psi	Pressure	NA psi
Temperature	°F	Temperature	°F
Flow Control Valve Setting		Flow Control Valve Setting	
Bleed Valve		Bleed Valve	
Radiator	(ON) / OFF	Radiator	ON / OFF

SOIL VAPOR EXTRACTION SYSTEM

Eastern Flow Rate	140 - 174 SCFM	Total Flow	82570830 SCFM
Western Flow Rate	83 - 100 SCFM	Total Flow	23209875 SCFM

Vacuum Pump V-1		Vacuum Pump V-2	
Vacuum	3.5 "Hg	Vacuum	205 "Hg
Temperature	160 °F	Temperature	120 °F
Particulate Filter	OK	Particulate Filter	OK
Flow Control Valve Setting	100 %	Flow Control Valve Setting	100 %
Bleed Air Valve Setting	23	Bleed Air Valve Setting	25 %
Liquid Level	OK	Liquid Level	OK

Vacuum Pump V-3		Vacuum Pump V-4	
Vacuum	NA "Hg	Vacuum	N/A "Hg
Temperature	NA °F	Temperature	°F
Particulate Filter	OK	Particulate Filter	
Flow Control Valve Setting	100 %	Flow Control Valve Setting	
Bleed Air Valve Setting	23	Bleed Air Valve Setting	
Liquid Level	OK	Liquid Level	

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B		Carbon Adsorber C/D	
Pressure	NA psi	Pressure	psi
Inf. VOC Level	NA ppm	Inf. VOC Level	0 ppm
Mid. VOC Level	NA ppm	Mid. VOC Level	NA ppm
Eff. VOC Level	0 ppm	Eff. VOC Level	0 ppm
Change out Date	N/A	Change out Date	8-22-96

WATER TREATMENT

Flowmeter Reading 7486.8 Gallons (prior to discharge) Flowmeter Reading 7512.0 Gallons (after discharge)

COMMENTS

* FILL IN ALL SPACES WITH THE APPROPRIATE READING OR "NA".

OPERATIONAL DATA FORM
Air Sparging/Soil Vapor Extraction System
Dolphin Mart
Naval Submarine Base -Groton, CT
Project #83001-9999

Date: 3-3-98
Time: 10:00 AM
Technician: John Kowzun, Jr.

AIR COMPRESSOR SYSTEM

Flow Rate: 29 SCFM
Total Flow: 2877335 SCFM

Air Compressor C-1		Air Compressor C-2	
Pressure	6 psi	Pressure	NA psi
Temperature	197 °F	Temperature	°F
Flow Control Valve Setting	100 %	Flow Control Valve Setting	
Bleed Valve	50 %	Bleed Valve	
Radiator	(ON) OFF	Radiator	ON (OFF)

SOIL VAPOR EXTRACTION SYSTEM

Flow Rate: SCFM (use anemometer in hole in pipe near Hersey flowmeter)

Vacuum Pump V-1		Vacuum Pump V-2	
Vacuum	NA "Hg	Vacuum	6.5 "Hg
Temperature	°F	Temperature	126 °F
Particulate Filter		Particulate Filter	OK
Flow Control Valve Setting		Flow Control Valve Setting	100
Bleed Air Valve Setting		Bleed Air Valve Setting	23
Liquid Level		Liquid Level	0

Vacuum Pump V-3		Vacuum Pump V-4	
Vacuum	NA "Hg	Vacuum	NA "Hg
Temperature	°F	Temperature	°F
Particulate Filter		Particulate Filter	
Flow Control Valve Setting		Flow Control Valve Setting	
Bleed Air Valve Setting		Bleed Air Valve Setting	
Liquid Level		Liquid Level	

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B		Carbon Adsorber C/D	
Pressure	NA psi	Pressure	~~NA~~ 28 psi
Inf. VOC Level	ppm	Inf. VOC Level	22 ppm
Mid. VOC Level	ppm	Mid. VOC Level	10 ppm
Eff. VOC Level	ppm	Eff. VOC Level	8 ppm
Change out Date	N/A	Change out Date	~~NA~~ 8/22/96

WATER TREATMENT

Flowmeter Reading 3920.2 Gallons

COMMENTS

OPERATIONAL DATA FORM
Air Sparging/Soil Vapor Extraction System
Naval Exchange
Naval Submarine Base -Groton, CT
Project #83001-9999

Date: 3-3-98
Time: 12:00 PM
Technician: John Kowzun, Jr.

AIR COMPRESSOR SYSTEM

Flow Rate	0	SCFM	Total Flow	2799130	SCFM
Air Compressor C-1			**Air Compressor C-2**		
Pressure	NA	psi	Pressure	N/A	psi
Temperature		°F	Temperature		°F
Flow Control Valve Setting			Flow Control Valve Setting		
Bleed Valve			Bleed Valve		
Radiator	(ON) / OFF		Radiator	ON / (OFF)	

SOIL VAPOR EXTRACTION SYSTEM

Eastern Flow Rate	264 - 305	SCFM	Total Flow	~~2~~ 7699 6150	SCFM
Western Flow Rate	0	SCFM	Total Flow	231 98432	SCFM
Vacuum Pump V-1			**Vacuum Pump V-2**		
Vacuum	4.5	"Hg	Vacuum	4	"Hg
Temperature	130	°F	Temperature	134	°F
Particulate Filter	OK		Particulate Filter	OK	
Flow Control Valve Setting	100	%	Flow Control Valve Setting	100	%
Bleed Air Valve Setting	25	%	Bleed Air Valve Setting	25	%
Liquid Level	OK		Liquid Level	OK	
Vacuum Pump V-3			**Vacuum Pump V-4**		
Vacuum	7.5	"Hg	Vacuum	N/A	"Hg
Temperature	180	°F	Temperature		°F
Particulate Filter	OK		Particulate Filter		
Flow Control Valve Setting	100 %		Flow Control Valve Setting		
Bleed Air Valve Setting	25 %		Bleed Air Valve Setting		
Liquid Level	OK		Liquid Level		

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B			**Carbon Adsorber C/D**		
Pressure	10	psi	Pressure	40	psi
Inf. VOC Level	54	ppm	Inf. VOC Level	44	ppm
Mid. VOC Level	25 ~~88~~	ppm	Mid. VOC Level	N A	ppm
Eff. VOC Level	17	ppm	Eff. VOC Level	44	ppm
Change out Date	NA		Change out Date	5-22-96	

WATER TREATMENT

Flowmeter Reading 73939.0 Gallons (prior to discharge) Flowmeter Reading _____ Gallons (after discharge)

COMMENTS

* FILL IN ALL SPACES WITH THE APPROPRIATE READING OR "NA".

11:35 AM - 74100.0
12:02 PM - 74217.6

ATTACHMENT 2

MONTHLY FIELD ACTIVITY SUMMARY

Field Activity Summary
March 1998

New London Naval Submarine Base
Groton, Connecticut

Week Ending	Site	Period	Field Activities	Comments
3/6/98	Dolphin Mart	Monthly Monitoring	Conducted system monitoring and maintenance.	System operating normally.
	NEX		Conducted system monitoring and maintenance.	SVE blowers V-2, V-3 and air compressor AC-1 down due to high liquid levels in V-2 and V-3 moisture separators.
3/13/98	NEX	Monthly Monitoring	Modification of vault cover for VEA-12.	
3/27/98	Dolphin Mart	Monthly Monitoring	Conducted system monitoring, maintenance, air discharge sampling and water DMR sampling. Conducted additional TPH sampling at MW-3 and OBG-8A.	System operating normally.
	NEX		Conducted system monitoring, maintenance, air discharge sampling and water DMR sampling. Oversaw the abandonment and replacement of three monitoring wells and the abandonment of two sets of microwells.	SVE blower V-2 and air compressor AC-1 down due to high liquid level in V-3 moisture separator.

ATTACHMENT 3

AIR SPARGE/SVE SYSTEM DATABASES

SYSTEM MONITORING DATA
SOIL VAPOR EXTRACTION/AIR SPARGE SYSTEM

New London Naval Submarine Base
Dolphin Mart Site
Groton, CT

Date	Air Sparge Flowrate (scfm)	Extraction Flowrate (scfm)	Influent Concentration BTEX (ppmv)	Removal Rate BTEX (lb/hr)	Influent Concentration MTBE (mg/m3)	Influent Concentration MTBE (ppmv)	Removal Rate MTBE (lb/hr)	Influent Concentration Aliphatics (ppmv)	Removal Rate Aliphatics (lb/hr)	Influent Concentration Aromatics (ppmv)	Removal Rate Aromatics (lb/hr)	Influent Concentratio TVPH (mg/m3)	Influent Concentration TVPH (ppmv)	Removal Rate TVPH (lb/hr)	Total Mass Removal Rate (lbs/hr)	Period Mass Removed (lbs)	Cumulative Mass Removed (lbs)	Comments
07/02/96	25	450	24.00	0.187	NA	33.00	0.232	1000.00	6.876	0.00	0.000	—	—	0.000	7.295	0.00	0.00	
07/23/96	20	449	11.40	0.091	NA	0.00	0.000	200.00	1.375	0.00	0.000	—	—	0.000	1.467	446.86	446.86	system operated approx. 102 hrs between 7/2 and 7/23
08/08/96	32	454	18.00	0.142	NA	—	0.000	210.00	1.444	12.00	0.102	—	—	0.000	1.687	209.75	656.61	system operated approx. 133 hrs between 7/23 and 8/8
08/30/96	0	450	18.00	0.142	NA	—	0.000	210.00	1.444	12.00	0.102	—	—	0.000	1.687	187.31	843.92	system operated approx. 111 hrs between 8/8 and 8/30
10/02/96	30	448	2.30	0.019	NA	0.00	0.000	—	0.000	—	0.000	NA	36.00	0.287	0.306	0.00	843.92	system not in operation from 8/30 to 10/2 due to flow meter problem
10/16/96	30	450	2.30	0.019	NA	0.00	0.000	—	0.000	—	0.000	NA	36.00	0.287	0.306	102.81	946.74	system reactivated 10/2/96
11/19/96	30	450	0.38	0.003	0.00	0.00	0.000	—	0.000	—	0.000	22.00	5.29	0.042	0.045	143.33	1090.06	
12/17/96	30	450	0.12	0.001	0.00	0.00	0.000	—	0.000	—	0.000	8.20	1.97	0.016	0.017	20.84	1110.90	
01/27/97	30	450	1.35	0.011	0.00	0.00	0.000	—	0.000	—	0.000	55.00	13.23	0.106	0.117	65.56	1176.46	
03/27/97	30	450	0.00	0.000	NA	0.00	0.000	—	0.000	—	0.000	0.00	3.90	0.031	0.031	104.53	1228.73	assume 50% up-time, blowers shutting down due to influent water
04/17/97	30	450	0.00	0.000	NA	0.00	0.000	—	0.000	—	0.000	13.00	3.13	0.025	0.025	14.13	1242.86	
05/21/97	15	329	0.00	0.000	NA	0.00	0.000	—	0.000	—	0.000	24.00	5.77	0.034	0.034	11.96	1254.82	assume 50% up-time, blowers shutting down due to influent water
06/10/97	15	329	0.25	0.002	NA	0.00	0.000	—	0.000	—	0.000	47.00	11.31	0.066	0.067	12.14	1266.96	assume 50% up-time, blowers shutting down due to influent water
07/21/97	15	329	1.89	0.011	NA	0.00	0.000	—	0.000	—	0.000	340.00	81.79	0.477	0.488	136.76	1403.71	assume 50% up-time, blowers shutting down due to influent water
08/26/97	15	482	0.73	0.007	0.00	0.00	0.000	—	0.000	—	0.000	45.00	10.82	0.092	0.099	126.91	1530.63	assume 50% up-time, blowers shutting down due to influent water
09/30/97	15	482	0.34	0.003	0.00	0.00	0.000	—	0.000	—	0.000	88.00	21.17	0.181	0.184	17.84	1548.46	assume ~15% up-time, blowers shutting down due to influent water
10/23/97	14	589	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	100.00	24.06	0.251	0.251	120.10	1668.56	
11/20/97	32	590	0.00	0.000	20.00	5.45	0.050	—	0.000	—	0.000	160.00	38.49	0.403	0.453	118.28	1786.84	assume 50% up-time, blowers shutting down due to influent water
12/29/97	28	590	0.45	0.005	0.00	0.00	0.000	—	0.000	—	0.000	45.00	10.82	0.113	0.118	133.65	1920.49	assume 50% up-time, blowers shutting down due to influent water
01/22/98	27	471	0.32	0.003	0.00	0.00	0.000	—	0.000	—	0.000	24.00	5.77	0.048	0.051	24.38	1944.87	assume 50% up-time, blowers shutting down due to influent water
02/12/98	23	295	0.23	0.001	0.00	0.00	0.000	—	0.000	—	0.000	29.00	6.98	0.036	0.038	11.19	1956.06	assume 50% up-time, blowers shutting down due to influent water
03/24/98	30	245	0.45	0.002	0.00	0.00	0.000	—	0.000	—	0.000	22.00	5.29	0.023	0.025	24.89	1980.95	system down for approximatley one week due to influent water

Notes:
1) Aliphatics are weighted using a response factor of hexane. (MW = 86.2)
2) Aromatics are weighted using a response factor of o-xylene. (MW=106.16)
3) Analytical data for 8/30/96 is assumed based on results of sampling conducted 8/8/96. System was deactivated 8/30/96 due to flow meter failure.
4) Flow rate of 10/16/96 through 4/17/97, 6/10/97 and 7/21/97 is assumed. Air flow meter not in operation.
5) Analytical data for 10/2 is assumed based on data from 10/16/96.
6) Beginning 10/16/96 lab analysis was performed by Mitkem Laboratory. Prior to 10/16/96 air analysis performed by NEI/GTEL
7) Mitkem results report total volatile petroleum hydrocarbons, not misc. aromatics and aliphatics.
Total Volatile Petroleum Hydrocarbons are weighted to molecular weight of 100.
8) Laboratory results from 11/19/96 to present are reported in mg/m3.

SYSTEM MONITORING DATA
SOIL VAPOR EXTRACTION/AIR SPARGE SYSTEM

New London Naval Submarine Base
NEX Site
Groton, CT

Date	Air Sparge Flowrate (scfm)	Extraction Flowrate (total) (scfm)	Extraction Flowrate (cfm)	Influent Concentration BTEX (ppmv)	Removal Rate BTEX (lb/hr)	Influent Concentration MTBE (mg/m3)	Influent Concentration MTBE (ppmv)	Removal Rate MTBE (lb/hr)	Influent Concentration Aliphatics (ppmv)	Removal Rate Aliphatics (lb/hr)	Influent Concentration Aromatics (ppmv)	Removal Rate Aromatics (lb/hr)	Influent Concentration TVPH (mg/m3)	Influent Concentration TVPH (ppmv)	Removal Rate TVPH (lb/hr)	Total Mass Removal Rate (lbs/hr)	Period Mass Removed (lbs)	Cumulative Mass Removed (lbs)	Comments
07/31/96	NA*	253	288.00	1.80	0.013	NA	—	0.000	130.00	0.810	0.00	0.000	—	—	0.000	0.823	0.00	0.00	
08/06/96	NA*	270	307.35	1.80	0.013	NA	—	0.000	130.00	0.810	0.00	0.000	—	—	0.000	0.823	78.21	78.21	system operated approx. 92 hrs between 7/31 and 8/6
08/22/96	NA*	270	307.35	1.80	0.013	NA	—	0.000	130.00	0.810	0.00	0.000	—	—	0.000	0.823	88.09	166.30	24-hour per day system operation began 8/6
09/16/96	NA*	320	364.27	2.70	0.021	NA	0.00	0.000	—	0.000	—	0.000	—	61.00	0.487	0.508	399.38	565.68	
10/16/96	NA*	320	364.27	2.50	0.020	NA	0.00	0.000	—	0.000	—	0.000	—	42.00	0.335	0.355	310.76	876.44	
11/19/96	NA*	324	368.83	0.95	0.008	0.00	0.00	0.000	—	0.000	—	0.000	94.00	22.61	0.180	0.188	221.67	1098.10	
12/17/96	NA*	310	352.89	0.18	0.001	0.24	0.07	0.000	—	0.000	—	0.000	29.00	6.98	0.056	0.058	82.54	1180.65	
01/27/97	NA*	321	365.41	0.14	0.001	0.00	0.00	0.000	—	0.000	—	0.000	20.00	4.81	0.038	0.040	47.78	1228.42	
03/27/97	NA**	384	437.13	0.00	0.000	NA	0.00	0.000	—	0.000	—	0.000	—	0.55	0.004	0.004	31.10	1259.52	
04/17/97	NA**	721	820.75	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	12.00	2.89	0.037	0.037	10.40	1269.92	
05/21/97	6***	360	409.81	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	15.46	1285.39	
06/10/97	2***	300	341.51	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	0.48	1285.87	
07/21/97	36***	358	407.53	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	8.50	2.04	0.013	0.013	6.88	1292.74	
08/26/97	28***	223	253.28	0.00	0.000	0.00	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	6.04	1298.78	One blower down due to high water level in moisture trap.
09/30/97	27***	221	251.58	2.37	0.016	22.00	6.00	0.021	—	0.000	—	0.000	140.00	33.68	0.132	0.169	71.24	1370.01	One blower down due to high water level in moisture trap.
10/23/97	47***	322	366.55	2.47	0.016	62.50	17.05	0.086	—	0.000	—	0.000	395.00	95.02	0.542	0.644	60.92	1430.93	Two blowers down due to high water level in moisture trap.
11/20/97	47***	213	242.47	0.50	0.004	4.10	1.12	0.004	—	0.000	—	0.000	68.00	16.36	0.062	0.069	70.19	1501.12	One blower down due to high water level in moisture trap.
12/11/97	47	213	242.47	0.50	0.004	4.10	1.12	0.004	—	0.000	—	0.000	68.00	16.36	0.062	0.069	41.42	1542.54	
12/29/97	47	520	591.37	0.78	0.006	8.00	2.18	0.018	—	0.000	—	0.000	140.00	33.68	0.310	0.334	42.40	1584.93	
01/22/98	53	479	544.70	2.46	0.019	16.50	4.50	0.034	—	0.000	—	0.000	465.00	111.86	0.949	1.002	62.99	1647.92	
02/12/98	NA****	324	368.26	0.77	0.006	3.85	1.05	0.005	—	0.000	—	0.000	67.50	16.24	0.093	0.104	248.62	1896.55	
03/24/98	53	249	282.88	0.44	0.003	3.00	0.82	0.003	—	0.000	—	0.000	33.00	7.94	0.035	0.041	33.60	1930.15	

Notes:
* Air sparge compressor not activated due to elevated SVE influent concentrations.
** Air sparge compressor not activated due to improperly sized pressure switch.
*** Air sparge compressor activated, but high water levels in the moisture separators cause frequent compressor shut-down.
**** Air sparge compressor deactivated on 1/28/98 due to lack of vapor recovery from western portion of site.
1) Aliphatics are weighted using a response factor of hexane. (MW = 86.2)
2) Aromatics are weighted using a response factor of o-xylene. (MW=106.16)
3) Analytical data for 7/31/96 is assumed based on results of sampling conducted 8/8/96.
4) Analytical data for 8/22/96 is assumed based on results of sampling conducted 8/8/96.
5) Air flow rate from 10/16/96 assumed for 9/16/96, due to a broken flow meter
6) Beginning 9/16/96 lab analysis was performed by Mitkem Laboratory. Prior to 9/16/96 air analysis performed by NEI/GTEL
7) Mitkem results report total volatile petroleum hydrocarbons, not misc. aromatics and aliphatics.
Total Volatile Petroleum Hydrocarbons are weighted to molecular weight of 100.
8) System modificatons to allow continuous dewatering were conducted on December 11, 1997.
The data for this date was assumed to be the same as November that for November 20, 1997.
Flow rates for this date have been interpolated from 11/20/97 and 12/29/97 data.

ATTACHMENT 4

HISTORICAL WELL GAUGING DATA

Well Gauging Data
Dolphin Mart Site
Groton Naval Submarine Base
Groton, Connecticut

Date	Depth to Water (ft) Well ID																		
	DM-1	DM-2	DM-3	DM-4	DM-5	HRP-10	HRP-11	MW-1	MW-2	MW-3	OBG8A	OBG9A	WE-1	WE-1A	WE-2D	WE-2S	WE-3	WE-4	WE-5	WE-6
07/02/96	6.37	NG	NG	NG	NG	4.65	NG	4.65	3.55	3.12	NG	0.82	DRY	DRY	6.56	6.78	8.67	4.24	4.80	3.40
07/03/96	NG	NG	NG	NG	NG	5.19	NG	4.63	2.86	0.00	NG	0.89	NG	NG	6.35	6.58	8.69	6.38	4.33	2.30
07/12/96	NG	NG	NG	NG	NG	5.81	NG	5.01	3.82	1.95	NG	1.85	NG	NG	6.83	6.96	8.93	6.38	4.98	3.60
07/16/96	NG	NG	NG	NG	NG	4.33	NG	4.55	2.89	0.74	NG	0.69	NG	NG	6.24	6.47	8.50	6.27	4.08	2.76
07/17/96	NG	NG	NG	NG	NG	2.73	NG	4.94	1.63	2.79	NG	0.00	NG	NG	5.88	6.30	8.62	6.47	3.62	1.72
07/19/96	NG	NG	NG	NG	NG	4.38	NG	5.21	0.61	0.00	NG	0.00	NG	NG	5.53	6.18	8.45	NG	3.19	1.08
07/22/96	NG	NG	NG	NG	NG	4.54	NG	4.82	1.95	1.17	NG	0.00	NG	NG	6.42	6.45	8.64	3.68	3.73	1.96
07/23/96	NG	NG	NG	NG	NG	4.55	NG	4.75	3.33	0.00	NG	0.20	NG	NG	6.33	6.70	8.72	8.72	4.49	2.40
07/24/96	NG	NG	NG	NG	NG	4.33	NG	5.22	1.18	0.00	NG	0.00	NG	NG	5.67	6.31	8.45	3.38	3.33	1.49
07/25/96	NG	NG	NG	NG	NG	4.46	NG	5.31	NG	NG	NG	0.16	NG	NG	NG	NG	NG	NG	NG	2.12
07/26/96	NG	NG	NG	NG	NG	4.43	NG	4.79	NG	NG	NG	0.00	NG	NG	NG	NG	NG	NG	NG	2.95
08/01/96	NG	NG	NG	NG	NG	3.93	NG	4.96	2.20	1.28	NG	NG	NG	NG	6.09	6.39	8.55	3.22	4.06	1.15
08/02/96	NG	NG	NG	NG	NG	4.08	NG	5.24	1.82	1.31	NG	0.00	NG	NG	5.73	6.30	8.56	2.96	3.76	0.86
08/05/96	NG	NG	NG	NG	NG	4.35	NG	5.08	NG	1.08	NG	0.00	NG	NG	NG	NG	NG	NG	NG	1.28
09/04/96	NG	NG	NG	NG	NG	5.43	NG	6.07	4.59	DRY	NG	NG	NG	NG	7.51	7.39	9.73	5.11	6.23	4.59
10/02/96	NG	NG	NG	NG	NG	3.53	NG	5.43	NG	3.86	NG	NG	NG	NG	5.82	6.41	8.41	3.11	3.96	1.60
10/21/96	NG	NG	NG	NG	NG	3.98	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	2.43
11/19/96	1.90	NG	2.06	2.68	5.37	4.15	NG	3.85	3.00	DRY	NG	NG	NG	NG	5.89	6.46	8.32	3.53	3.87	2.90
12/17/96	2.53	NG	1.60	NG	3.67	NG	NG	3.85	2.17	NG	NG	NG	NG	NG	NG	6.10	7.92	2.17	2.96	2.10
01/27/97	1.91	NG	1.89	NG	4.26	3.29	NG	2.53	2.13	NG	NG	NG	NG	NG	5.73	6.24	7.94	3.08	3.26	1.53
02/18/97	1.93	NG	1.90	2.04	NG	4.04	NG	2.98	2.56	2.28	NG	NG	NG	NG	5.84	6.32	7.95	3.49	3.21	2.55
03/27/97	1.89	2.27	1.86	2.41	4.60	4.04	3.21	2.91	1.86	1.27	NG	NG	5.03	DRY	5.45	6.21	8.08	1.66	3.51	1.15
04/17/97	NG	NG	NG	NG	NG	5.25	NG	3.48	1.94	1.39	NG	NG	NG	NG	NG	NG	NG	3.00	3.18	1.30
05/21/97	2.04	2.39	2.08	3.08	5.19	4.11	3.43	3.14	2.93	2.44	NG	NG	DRY	DRY	6.11	NG	8.20	3.73	4.07	2.84
08/27/97	NG	NG	NG	NG	NG	5.01	4.10	3.60	4.28	DRY	NG	2.46	NG	NG	7.03	NG	9.54	4.69	5.77	4.07
11/21/97	2.26	3.20	2.56	3.33	6.83	4.43	3.77	5.33	3.84	3.06	2.26	0.95	DRY	DRY	6.66	6.97	8.86	7.53	5.29	3.56
02/11/98	1.79	2.63	1.61	1.84	3.87	3.64	3.08	3.23	1.34	1.88	1.47	1.31	NG	NG	5.49	6.29	8.33	2.14	2.87	1.35

Notes: WE-2D, WE-2S, and WE-3 are covered by stand pipes.
NG = Not Gauged

grubbas\123\190.wk4

Well Data

New London Naval Submarine Base
Groton, Connecticut

Date	Depth to Water/Depth to Product (ft) Well ID																								
	ERM-5	ERM-6	ERM-7	ERM-8	ERM-9	ERM-10	ERM-11	ERM-12	ERM-13	ERM-14	ERM-15	ERM-16	ERM-17	ERM-18	ERM-19	NEX-1	OBG-1	OBG-2	OBG-4	OBG-6	OBG-7	OBG-8	OBG-9	MW-4	MW-6
09/16/96	3.82	5.14	5.27	NG	NG	NG	NG	8.38	7.01	6.89	4.30	8.51	5.62	3.65	5.28	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
10/16/96	NG	4.82	4.75	NG	NG	NG	6.4	8.13	7.15	6.92	3.94	8.49	5.56	3.96	5.17	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
11/18/96	3.72	4.64	4.93	NG	NG	NG	6.36	8.09	7.13	7.10/6.91	4.03	8.43	5.53	NG	5.19	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
12/16/96	3.10	4.08	4.21	NG	NG	NG	5.02	7.83	6.55	6.35	NG	7.8	3.73	NG	4.23	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
02/17/97	3.00	4.34	4.29	NG	NG	NG	4.89	7.65	6.03	5.89	NG	7.85	4.53	NG	4.18	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
03/27/97	2.89	4.28	4.19	NG	NG	NG	5.19	7.63	5.98	5.82	NG	7.79	4.87	NG	4.06	5.81	8.12	7.95	7.75	7.95	5.61	NG	5.54	4.91	4.49
04/15/97	NG	NG	NG	NG	NG	NG	NG	NG	5.86	5.7	3.39	7.84	4.84	NG	NG	5.74	NG	7.92	7.75	NG	NG	NG	5.54	NG	NG
04/17/97	2.73	NG	NG	NG	NG	NG	NG	NG	NG	5.66	3.31	NG	4.67	NG	3.91	NG	NG	7.91	7.78	NG	NG	NG	5.58	NG	NG
04/24/97	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	7.74	NG	NG	NG	NG	NG	NG
05/21/97	NG	4.72	4.61	NG	NG	NG	6.27	7.81/7.80	6.15	6.04/5.99	NG	8.16	5.26	NG	4.46	5.80	7.98	7.81	7.64	NG	5.79	5.60	5.84/5.31	NG	4.85
08/28/97	NG	5.29	6.49	NG	NG	NG	7.65	NG	7.24	7.24/7.01	NG	sheen/8.63	5.77	NG	5.41	6.15	8.22	8.03	7.9	NG	6.49	NG	6.56/6.45	NG	5.34
11/20/97	4.35	5.24	5.35	NG	NG	NG	6.89	8.23	7.84	7.63	4.46	8.77	5.77	NG	5.79	6.45	8.43	8.23	8.07	NG	7.09	NG	7.06	NG	5.33
02/12/98	3.59	4.68	4.71	NG	NG	NG	5.04	7.99	6.71	6.59	3.54	8.18	5.14	NG	4.44	5.28	8.19	8.01	7.84	NG	5.84	NG	NG	NG	4.92

Notes: NG = Not Gauged

grsubbas\123\gr190a.wk4

MW-7 Well Gauging Data
OT-8 Site
New London Naval Submarine Base
Groton, Connecticut

Date	Depth to Product (feet)	Depth to Water (feet)	LNAPL Thickness (feet)	LNAPL Recovered (gallons)	Cumulative LNAPL Recovered (gallons)
09/26/96	4.26	6.02	1.76	0.00	0.00
10/02/96	NS	NS	0.00	4.00	4.00
10/08/96	NS	NS	0.00	0.00	4.00
10/16/96	NS	NS	0.00	0.00	4.00
10/21/96	1.65	1.66	0.01	0.00	4.00
10/25/96	3.06	3.18	0.12	0.00	4.00
10/28/96	3.46	3.55	0.09	0.00	4.00
12/17/96	NA	0.00	0.00	0.00	4.00
01/13/97	7.76	7.86	0.10	0.00	4.00
01/27/97	NA	0.00	0.00	0.00	4.00
02/19/97	2.96	2.97	0.01	0.00	4.00
03/27/97	3.30	3.99	0.69	UNK*	4.00
04/17/97	3.12	3.34	0.22	0.00	4.00
05/21/97	4.09	5.07	0.98	0.25	4.25
06/10/97	sheen	4.64	sheen	0.00	4.25
07/21/97	5.43	5.55	0.12	0.00	4.25
08/04/97	5.62	5.73	0.11	0.00	4.25
08/26/97	5.28	5.31	0.03	0.00	4.25
10/09/97	6.14	6.75	0.61	0.00	4.25
10/23/97	6.38	6.75	0.37	0.00	4.25
11/20/97	4.73	4.74	0.01	0.00	4.25
01/20/98	NA	3.29	0.00	0.00	4.25
02/11/98	NA	3.68	0.00	0.00	4.25

Notes: Gauging on 10/02/96 and 10/16/96 was with a clear bailer, to visually confirm product thickness.
The well and vault were flooded on 12/17/96
NA = Not Applicable
NG = Not Gauged
* Product was recovered, but the volume was insufficient to fill the product piping and discharge into the recovery drum.

ATTACHMENT 5

HISTORICAL GROUNDWATER SAMPLING RESULTS

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediaiton Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
DM-1	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	4.0	<473	NS	NS	NS
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	5	1,000	<500
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediaiton Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
DM-2	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	4.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	<1.0	8	<500	8	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	5	<500	5	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
DM-3	3/95	<1.0	<1.0	<1.0	<1.0	7.90	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	7	<500	<500
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
DM-4	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	5	600	<500
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	**2**	<1.0	<1.0	<1.0	3	<500	5	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**800**	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediaiton Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
DM-5	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	6	<500	<500
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**700**	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
HRP-10	3/95	**304**	35.2	257	**1140**	<50	**6,080**	NS	NS	NS
	5/96	**125**	21	54	329	<20	**1,740**	NS	NS	NS
	11/96	**9**	<1.0	65	<1.0	7	<1,000	81	600	<500
	2/97	<1.0	<1.0	<1.0	<1.0	3	<500	3	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	3.0	**800**	3.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**700**	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 9010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
HRP-11	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	1.0	<1.0	<1.0	3.0	<2.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	500	<1.0	NS	NS
MW-1	11/96	**3**	<1.0	5	<1.0	<1.0	<1,000	11	1,000	<500
	2/97	<1.0	<1.0	4	<1.0	<1.0	<500	4	<500	600
	5/97	<1.0	<1.0	4	<1.0	<1.0	<500	6	700	760
	8/97	<1.0	<1.0	16	28	<1.0	**1,000**	18	800	600
	11/97	**2**	<1.0	9	<1.0	<1.0	<500	11	NS	NS
	2/98	<1.0	1	4	<1.0	<1.0	**800**	5	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
MW-2	11/96	**4**	<1.0	14	<1.0	4	<1,000	28	1,200	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	**1,000**	1 B	1,200	1,200
	5/97	<1.0	<1.0	3	<1.0	<1.0	<500	3	500	580
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	**2**	<1.0	3	1	3	<500	9	NS	NS
	2/98	**2**	1	6	<1.0	<1.0	**700**	9	NS	NS
MW-3	2/97	**36**	23	72	500	5	**2,000**	645 B	3,300	1,600
	5/97	**60**	38	69	**730D**	<1.0	**5,000**	897D	7,900	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	2	3	56	<1.0	<500	61	NS	NS
	2/98	<1.0	<1.0	<1.0	1.0	<1.0	**21,000**	1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
OBG-8A	3/95	**72**	24.6	25.9	62.4	9.29	<473	NS	NS	NS
	5/96	**12.0**	<1.0	9.0	4.0	<2.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	**3**	25	5	5	<1.0	<500	38	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**9,300**	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
OBG-9A	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	**3,000**	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	3.0	**11,000**	3.0	2,200	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**3,100**	<1.0	NS	NS
WE-2D(B)	11/96	1	<1.0	<1.0	<1.0	<1.0	<1,000	3	<500	<500
	2/97	**2**	<1.0	<1.0	<1.0	3	<500	5	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	4.0	**11,000**	4.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,000**	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
WE-2S	3/95	**37.9**	24.2	60.3	126.4	21.3	**725**	NS	NS	NS
	5/96	**50**	22	101	144	<10	**1,570**	NS	NS	NS
	11/96	**7**	<1.0	9	4	14	<1,000	34	<500	<500
	2/97	**5**	<1.0	14	3	10	<500	32	500	600
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	**4**	<1.0	<1.0	15	7	<500	26	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
WE-3	3/95	<1.0	<1.0	<1.0	<1.0	8.70	<473	NS	NS	NS
	5/96	**2.0**	<1.0	<1.0	<1.0	14.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	<1.0	<1.0	<1.0	<1.0	6	<500	6	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	**220**	**3,000**	220	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	38	<500	38	NS	NS
	2/98	**2**	<1.0	<1.0	<1.0	**160D**	<500	162	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
WE-4	3/95	**267**	29.8	392	**712**	<40	**5,180**	NS	NS	NS
	5/96	**160**	16	301	**617**	<40	**3,680**	NS	NS	NS
	11/96	**41**	1.0	100	2	19	<1,000	166	1,100	500
	2/97	**21**	<1	27	1	17	<500	66	500	700
	5/97	**13**	<1.0	13	<1.0	19	<500	45	700	540
	8/97	**7.0**	<1.0	19	3B	3B	**700**	44	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,300**	<1.0	NS	NS
WE-5	11/96	**240D**	410D	**720D**	**4,300E**	27	**9,000**	5,697	12,000	8,900
	2/97	**42D**	10	89D	490D	6	**2,000**	637	2,000	1,200
	5/97	**370**	190	**840**	**3,900D**	<1.0	**4,000**	5,300	11,000	16,000
	8/97	**210D**	<1.0	210D	470DB	63D	**5,000**	953	3,900	2,500
	11/97	**11**	<1.0	2	6	27	**1,100**	46	NS	NS
	2/98	**11**	<1.0	10	14	3	**1,800**	38	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO (by EPA Method 8100M)	GRO (by EPA Method 8015M)
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	630	100	500	NA	NA	NA
Well	Date									
WE-6	11/96	**5**	210D	71D	**630D**	<1.0	<1,000	916	2,000	1,400
	2/97	**3**	4	8	12	2	<500	29	800	700
	5/97	**3**	1.0	12	<1.0	<1.0	<500	15	1,200	1,200
	8/97	<1.0	1.0	<1.0	28	<1.0	**1,000**	29	<500	<500
	11/97	**2**	<1.0	3	2	4	<500	11	NS	NS
	2/98	**2**	<1.0	5	3	4	500	14	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
B = Analyte detected in method blank, **D** = Analyte concentration was obtained from a diluted analysis, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-5	3/95	**967**	431	390	1,340	<100	NS	3,295.1	430	8,250
	5/96	112	6	34	28	<10	NS	196	159	554
	11/96	**370D**	14	33	61D	<1.0	3,000	480	1,100	1,600
	2/97	**1,100**	1,100	580	1,600	<50	3,000	4,440 B	3,900	9,100
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	**730**	250	870	620	<10	2,300	2,470	NS	NS
	2/98	**310**	460	300	710	<10	5,400	1,780	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	80,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-6	5/96	15	<1.0	<1.0	<1.0	<2.0	NS	35	63	<473
	11/96	**610**	230	770	2,400E	<40	5,000	4,054	500	7,800
	2/97	**430D**	21	300	1,000D	<10	2,000	1,763 B	2,200	4,800
	5/97	**430D**	21	640D	2,300D	<1.0	1,000	3,391D	1,500	6,700
	8/97	**470**	90	650	2,000	<1.0	2,000	3,210	3,500	6,200
	11/97	**250D**	23	260D	530D	<1.0	<500	1,063	NS	NS
	2/98	97D	13	110D	240D	<1.0	<500	460	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-7	5/96	5	<1.0	<1.0	<1.0	<2.0	NS	8	38	<473
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	4	<500	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	1	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-8 (destroyed)	3/95	109	11.5	272	157	<50	NS	665.4	464	2,350
	5/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	40,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-9	5/96	<1.0	<1.0	<1.0	<1.0	2	NS	4	3,310	<473
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
ERM-11	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	3	<500	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	2	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-12	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	NS	1	27	<473
	5/96	1	2	7	14	<2.0	NS	61	4,300	1,390
	11/96	<1.0	2	<1.0	9	<1.0	3,000	16	7,300	6,700
	2/97	<1.0	1	2	9	<1.0	15,000	13	4,800	1,300
	5/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	4	<1.0	7,100	4	NS	NS
	2/98	<1.0	<1.0	<1.0	1	<1.0	23,000	1	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-13	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	NS	534	50	<473
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	NS	9	<100	<473
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	2	<500	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-14	3/95	292	4,880	8,190	6,020	<2.0	NS	19,995	4,840	3,670
	5/96	305	5,670	1,250	8,350	<2.0	NS	22,543	7,290	3,890
	11/96	270	8,300D	1,700D	11,000D	<25	7,000	21,270	12,000	30,000
	2/97	140	4,500D	980	7,100	<100	60,000	12,840	20,000	20,000
	5/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	11/97	40	2,300D	700D	2,500D	<1.0	4,600	5,540	NS	NS
	2/98	<1.0	930	210	2,800	<1.0	28,000	3,940	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-15	11/96	280	760	330	1,100	<40	1,000	2,517	2,300	4,500
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	210	630	240	120	<10	<500	1,200	NS	NS
	2/98	8	9	4	25	<1.0	600	46	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-16	11/96	37	<2.0	13	16	30	<1,000	68	4,400	2,000
	2/97	56D	<1.0	16	34	27	6,000	136	11,000	1,400
	5/97	34	<1.0	20	42	11	26,000	107	60,000	2,000
	8/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	11/97	5	<1.0	7	30	<1.0	15,000	42	NS	NS
	2/98	8	<1.0	3	15	6	25,000	32	NS	NS
ERM-17	11/96	10	<1.0	<1.0	<1.0	9	<1,000	11	600	600
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	<1.0	500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	1,500	<500
	8/97	12	<1.0	<1.0	<1.0	<1.0	1,000	12	1,000	500
	11/97	2	<1.0	<1.0	<1.0	<1.0	<500	2	NS	NS
	2/98	3	<1.0	<1.0	<1.0	<1.0	<500	3	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
ERM-19	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	1	<500	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
MW-4	2/97	29	1	<1.0	3	<1.0	NS	33	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		216	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
MW-6	2/97	<1.0	9	<1.0	<1.0	<1.0	NS	9	NS	NS
	5/97	18	<1.0	2	8.0	<1.0	<500	28	<500	<500
	8/97	35D	1.0	<1.0	8.0	<1.0	<500	46	<500	<500
	11/97	6	<1.0	<1.0	3	<1.0	<500	9	NS	NS
	2/98	8	<1.0	<1.0	3	<1.0	<500	11	NS	NS
NEX-1	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	NS	7	35	<143
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	NS	8	<122	<143
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	2	11	4	34	<1.0	<500	57	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	3.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
OBG-1	5/97	**480**	3,300D	1,100D	10,000D	540	110,000	15,420	260,000	49,000
	8/97	**1,600**	6,200	1,700	12,000	810	220,000	**22,310**	580,000	56,000
	11/97	**1,600**	8,800	2,300	16,000	38,000	21,000	66,700	NS	NS
	2/98	**1,400**	7,100D	2,200	15,000D	24,000D	160,000	49,700	NS	NS
OBG-2	5/97	77	280	530	9,800D	290	87,000	10,977	120,000	44,000
	8/97	**470**	410	1,100	11,000	830	180,000	13,990	99,000	75,000
	11/97	**370**	380	960	9,200	40,000	23,000	50,910	NS	NS
	2/98	**410**	340	680	7,900	26,000D	120,000	35,330	NS	NS
OBG-4	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0	NS	NS
	5/97	<1.0	<1.0	<1.0	2	<1.0	6,000	2	3,100	<500
	8/97	<1.0	<1.0	<1.0	<1.0	4.0	1,000	4.0	3,500	<500
	11/97	<1.0	3	<1.0	7	8	NS	18	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - February 1998
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		210	23,500	21,300	50,000	50,000	NA	NA	NA	NA
Well	Date									
OBG-7	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
OBG-8	5/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
OBG-9	5/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/97	LP	LP	LP	LP	LP	LP	LP	LP	LP
	11/97	**490**	4,800	2,100	16,000	<200	24,000	23,390	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NS = Not sampled (NS results have been shaded)
Bold numbers indicate an exceedance of State of CT Clean-up Standards
D = Analyte concentration was obtained from a diluted analysis, **B** = Analyte detected in method blank, **E** = Analyte concentration exceeded the calibration range
DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled

ATTACHMENT 6

WELL CONSTRUCTION LOGS

Drilling Log

Monitoring Well **FD-1**

Project *U.S. Navy Submarine Base* Owner _____
Location *Groton, Connecticut* Proj. No. *83001-9999*
Surface Elev. _____ Total Hole Depth *15 ft.* Diameter *6 in.*
Top of Casing _____ Water Level Initial *7 ft.* Static *7 ft.*
Screen: Dia *2 in.* Length *10 ft.* Type/Size *SCH40 PVC/0.010 in.*
Casing: Dia *2 in.* Length *5 ft.* Type *SCH40 PVC*
Fill Material *#1 Sand* Rig/Core *CME-75*
Drill Co. *AM Drilling Services* Method *Hollow Stem Auger*
Driller *M. Thibodeau* Log By *J. Pickard* Date *3/25/98* Permit # _____
Checked By *B. Kline* License No. _____

See Site Map For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	Sample ID		Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2						
0						
2						
4						
6						
8						
10						
12						
14						
16						

Drilling Log

Monitoring Well **FD-2**

Project *U.S. Navy Submarine Base* Owner _____
Location *Groton, Connecticut* Proj. No. *83001-9999*
Surface Elev. _____ Total Hole Depth *15 ft.* Diameter *6 in.*
Top of Casing _____ Water Level Initial *7 ft.* Static *7 ft.*
Screen: Dia *2 in.* Length *10 ft.* Type/Size *SCH40 PVC/0.010 in.*
Casing: Dia *2 in.* Length *5 ft.* Type *SCH40 PVC*
Fill Material *#1 Sand* Rig/Core *CME-75*
Drill Co. *AM Drilling Services* Method *Hollow Stem Auger*
Driller *M. Thibodeau* Log By *J. Pickard* Date *3/25/98* Permit # _____
Checked By *B. Kline* License No. _____

See Site Map For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	Sample ID	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2					
0					
2					
4					
6					
8					
10					
12					
14					
16					

Drilling Log

Monitoring Well FD-3

Project U.S. Navy Submarine Base Owner
Location Groton, Connecticut Proj. No. 83001-9999
Surface Elev. Total Hole Depth 15 ft. Diameter 6 in.
Top of Casing Water Level Initial 7 ft. Static 7 ft.
Screen: Dia 2 in. Length 10 ft. Type/Size SCH40 PVC/0.010 in.
Casing: Dia 2 in. Length 5 ft. Type SCH40 PVC
Fill Material #1 Sand Rig/Core CME-75
Drill Co. AM Drilling Services Method Hollow Stem Auger
Driller M. Thibodeau Log By J. Pickard Date 3/25/98 Permit #
Checked By B. Kline License No.

See Site Map
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	Sample ID		Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2						
0						
2						
4						
6						
8						
10						
12						
14						
16						