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NSB NEW LONDON  
5090.3a

**MONTHLY OPERATIONS SUMMARY  
FOR THE NAVAL EXCHANGE (NEX) AND DOLPHIN MART  
AIR SPARGING/SOIL VAPOR EXTRACTION SYSTEMS**

**NEW LONDON NAVAL SUBMARINE BASE  
GROTON, CONNECTICUT**

**Month: July 1999**

**Prepared by:**

**IT Corporation**

Prepared by:

*Jonathan D. Sorrow*

Jonathan D. Sorrow  
Lead Geologist

**Reviewed By:**

**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 in operation since June 29, 1996. The remediation system is composed of eight (8) horizontal vapor extraction trenches (VET-1, VET-2, VET-3, VET-4, VET-5, VET-6, VET-7 and VET-8), fifteen air sparge points (ASP-A through ASP-H, ASP-J through ASP-N, ASP-P, and ASP-Q) along with associated equipment. At the conclusion of the site visit on May 21, 1999, and as directed by the client, the SVE system was deactivated. The air sparge system has been deactivated since January 30, 1999. The site is visited bi-weekly in order to maintain site safety and security.

A site map has been included as **Figure 1**. The site visit form documenting any site activities conducted during the month of July 1999 are included in **Attachment 1**. A weekly breakdown of the month's field activities has been included as **Attachment 2**.

**Mass Removal** - Because the SVE system is deactivated no SVE influent sample was collected for analysis during the July 1999 site visits, therefore, no hydrocarbon mass removal rate was calculated. The total hydrocarbon mass extracted by the remediation system, as of April 1999, was approximately 2153.85 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 the Connecticut Department of Environmental Protection (CTDEP) air quality guidelines were reported.

**Carbon Usage** - No carbon change-out occurred during the month of July 1999. The last vapor phase carbon change-out at the site occurred August 27, 1997. No liquid phase carbon change-out has occurred to date.

**Discharge Monitoring Sampling** - As stated above, no air discharge sampling of the SVE system was conducted during the July 1999 site visits. In addition, no water discharge occurred during the month of July 1999.

**Monitoring Well Gauging** - The most recent round of site monitoring well gauging was conducted on May 21, 1999 during the quarterly groundwater sampling event. Depth to groundwater at the site ranged from 1.71 feet in OBG-8A to 8.57 feet in WE-3. Historical well gauging data has been included in **Attachment 4**.

**Monitoring Well Sampling** - The last round of site monitoring well sampling was conducted on May 21, 1999. The May Quarterly Groundwater Sampling Report was issued under separate cover. The historical groundwater sampling results have been summarized in **Attachment 5**.

**Additional Activities** - None.

## **NEX AIR SPARGE/SVE SYSTEM**

**System Status** - The remediation system at the site has been operating since July 31, 1997. As of May 26, 1999, 17 vapor extraction points (VEA-12 through VEA-16, VEA-18 through VEA-20, VEB-4, and VEB-8 through VEB-15) and 19 air sparge points (SPA-30 through SPA-37, SPB-14, SPB-16, and SPB-19 through SPB-27) were operating. The soil vapor extraction system was repaired and reactivated during the July 8, 1999 site visit. The submersible pump in the VE-3 moisture trap, and the V-1 blower were replaced utilizing equipment from the DM system. The site was revisited on July 14, 1999 to check the status of the repaired system. The system was reported to be operating properly. Approximately 225,150 gallons of water had been extracted, treated, and discharged by the NEX system as of July 14, 1999.

A site map has been included as **Figure 2**. The site monitoring forms for operation and maintenance (O&M) conducted during the month of July 1999 is included in **Attachment 1**. A weekly breakdown of the month's field activities has been included as **Attachment 2**.

**Mass Removal** - SVE influent samples were collected for analysis during the July 14, 1999 site visit. The total hydrocarbon mass extracted by the SVE system, as of July 1999, was approximately 3,768.52 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** - The liquid phase granular activated carbon was last changed-out on February 25, 1999. The last vapor-phase carbon change-out occurred September 8, 1997.

**Discharge Monitoring Sampling** - The most recent round of water discharge sampling was conducted on July 8, 1999. Air sampling was conducted on July 14, 1999.

**Monitoring Well Gauging** - The most recent round of site monitoring well gauging was conducted on May 26, 1999, during the quarterly groundwater sampling event. Depth to groundwater at the site ranged from 3.47 feet in ERM-15 to 9.02 feet in ERM-12. Suspected petroleum based sheens were detected in monitoring wells ERM-12 and ERM-16.

**Monitoring Well Sampling** - The most recent round of site monitoring well sampling was conducted on May 26, 1999. The May Quarterly Groundwater Sampling Report was issued under separate cover. The historical groundwater sampling results have been summarized in **Attachment 5**.

**Additional Activities** - None

**FIGURES**

IMAGE X-REF OFFICE WIN DRAWN BY L. Amery CHECKED BY 3/30/89 APPROVED BY 1405-17 DRAWING NUMBER

DATE: 3/25/89 TIME: 2:25 PM PROJECT: GROTTON 2/25/88

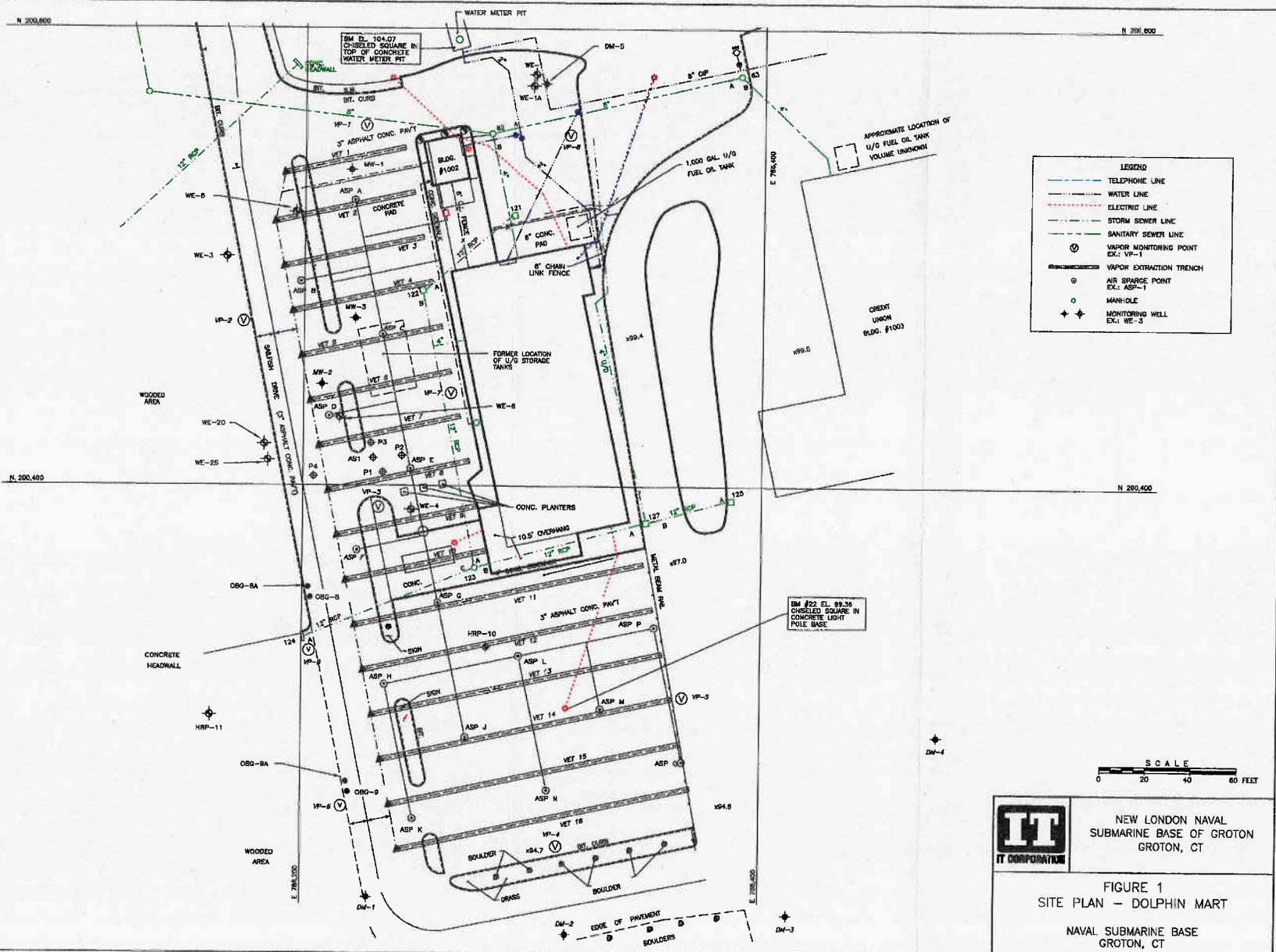
THIS MAP WAS PREPARED FROM MAPS LISTED BELOW:

1. MANTULUS PARK, GROTON, CONN. - EXISTING UTILITIES MAPS PREPARED BY SULLIVAN ENGINEERING CO., INC. SCALE: 1"=40' DATE: 3/25/83 NAVFAC DRAWING NO'S: 2,094,232, 2,094,283 AND 2,094,374.

2. MONITOR WELL LOCATION AND GROUND WATER CONTOUR MAP OF JANUARY 21, 1982 DOLPHIN MART SITE (IS SUBMERSIBLE) DRAWING BY DM-NORTH-EAST SCALE: 1"=20' APRIL, 1982.

3. UTILITY DATA FROM AS-BUILT DRAWINGS AND UTILITY MAPS; EXACT LOCATIONS MUST BE VERIFIED IN FIELD.

4. ALL TOPOGRAPHIC FEATURES AND OBVERTS SHOWN HEREON SHALL BE FIELD VERIFIED.



LEGEND	
	TELEPHONE LINE
	WATER LINE
	ELECTRIC LINE
	STORM SEWER LINE
	SANITARY SEWER LINE
	VAPOR MONITORING POINT EX.: VP-1
	VAPOR EXTRACTION TRENCH EX.: VP-1
	AIR SPARSE POINT EX.: ASP-1
	MAN-HOLE
	MONITORING WELL EX.: WE-3

SCALE  
0 20 40 60 FEET



NEW LONDON NAVAL  
SUBMARINE BASE OF GROTON  
GROTON, CT

FIGURE 1  
SITE PLAN - DOLPHIN MART

NAVAL SUBMARINE BASE  
GROTON, CT

DATE: 2/20/99  
TIME: 2:07 PM  
PROJECT: 1405-16

IMAGE: X-REF

OFFICE: WIN

DRAWN BY: L. AMERY

CHECKED BY:

APPROVED BY:

DRAWING NUMBER: 1405-16



LEGEND	
--- (dashed blue)	TELEPHONE LINE
--- (dashed black)	WATER LINE
--- (dashed red)	ELECTRIC LINE
--- (dashed green)	STORM SEWER LINE
--- (dashed purple)	SANITARY SEWER LINE
⊙	VAPOR MONITORING POINT EX: VP-1
⊖	VAPOR EXTRACTION TRENCH
⊙	AIR SPARGE POINT EX: ASP-1
○	MANHOLE
⊕	MONITORING WELL EX: ERM-8



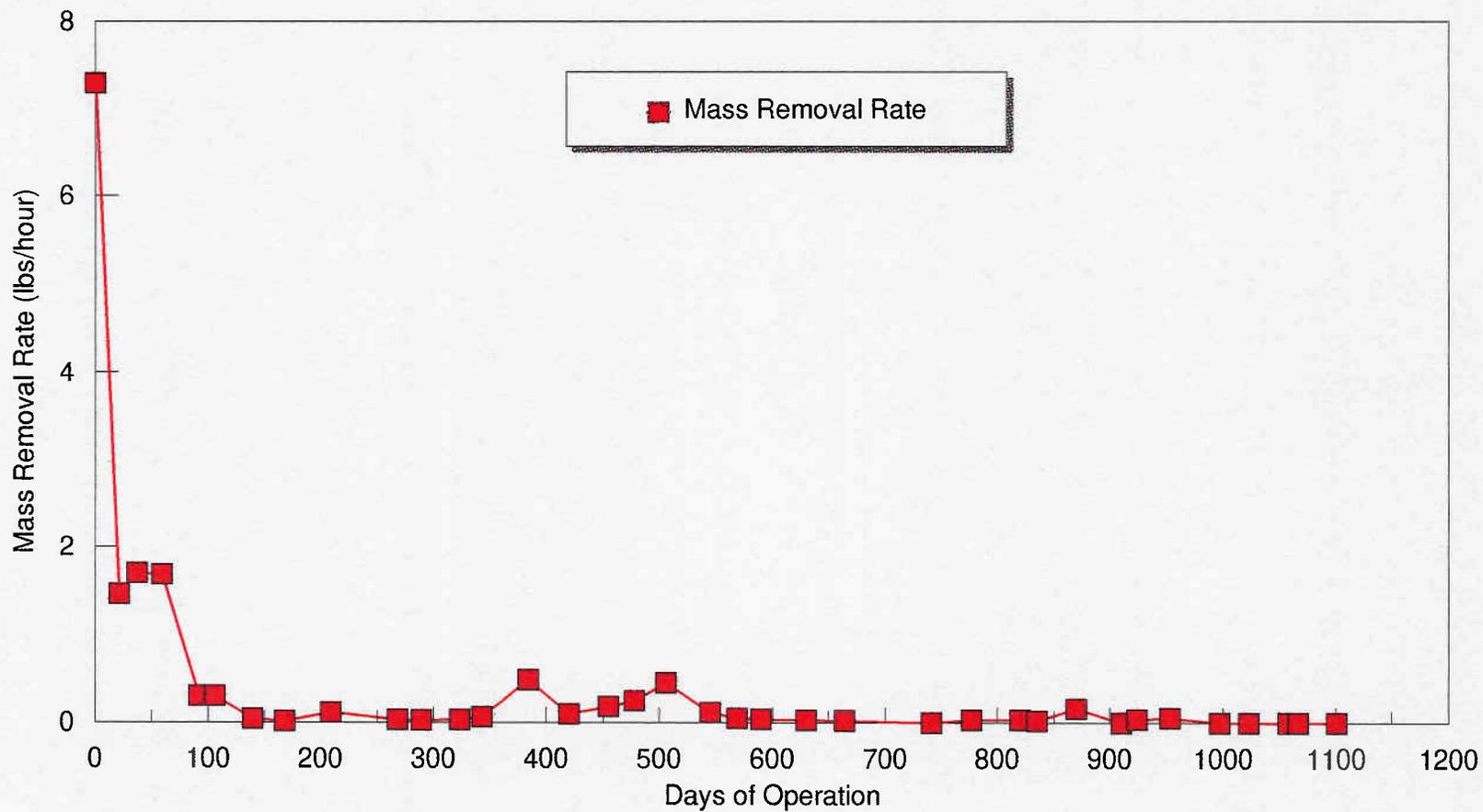
NEW LONDON NAVAL  
SUBMARINE BASE OF GROTON  
GROTON, CT

FIGURE 2  
SITE PLAN - NEX

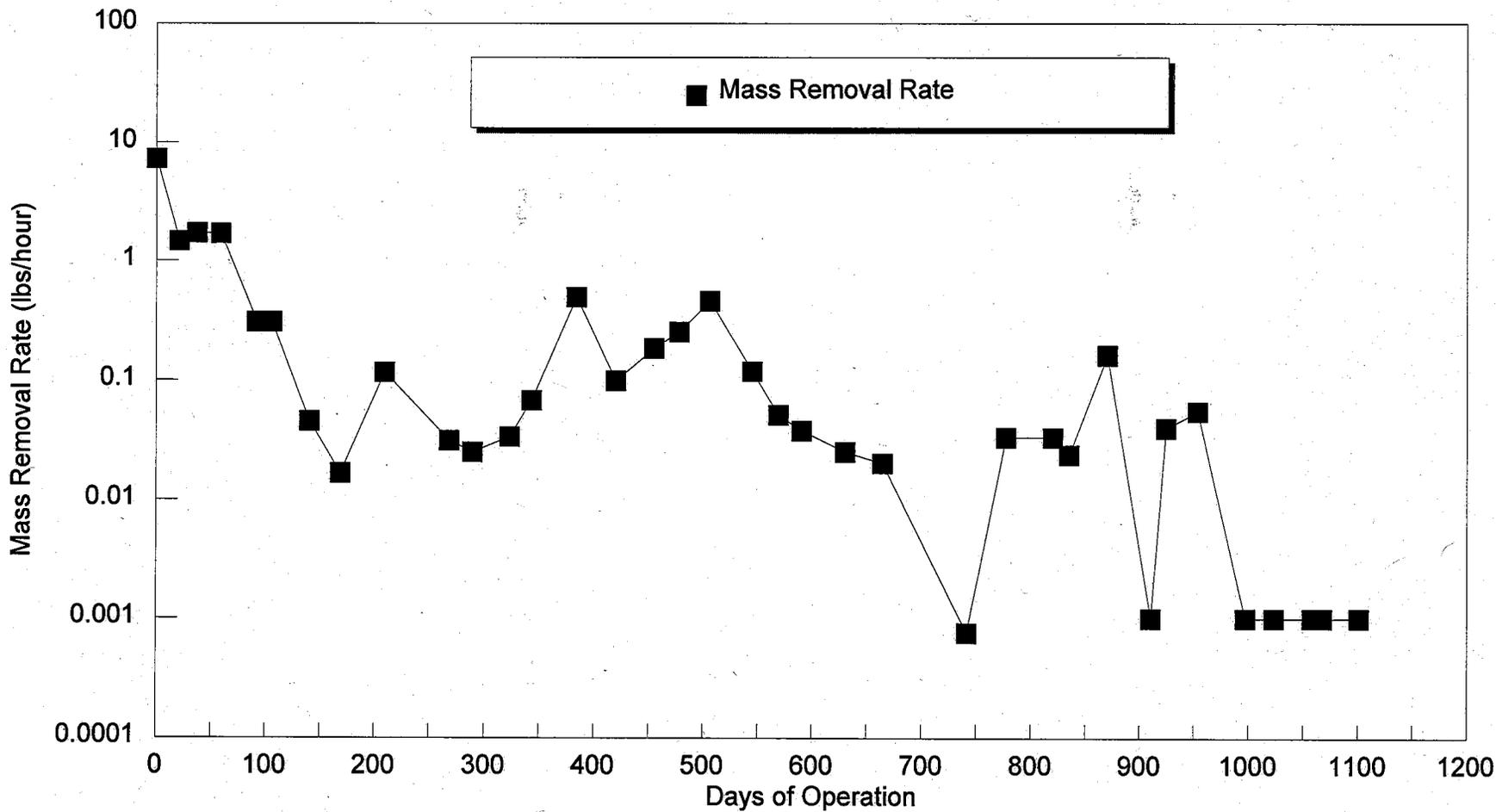
NAVAL SUBMARINE BASE  
GROTON, CT

- THIS MAP WAS PREPARED FROM MAPS LISTED BELOW:
1. EXISTING TOPOGRAPHY FROM MAP BY JAMES S. WARD & ASSOCIATES, CALDWAY & STREET 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, 1993, NEX STATION SITE US SUBBASE, GROTON, CT PREPARED FOR SW-PAE.
  4. ALL TOPOGRAPHIC FEATURES AND INVERTS SHOWN HEREON SHALL BE FIELD VERIFIED.

Figure 3A- Mass Removal Rate  
Dolphin Mart Site, New London Naval Submarine Base, Groton, CT

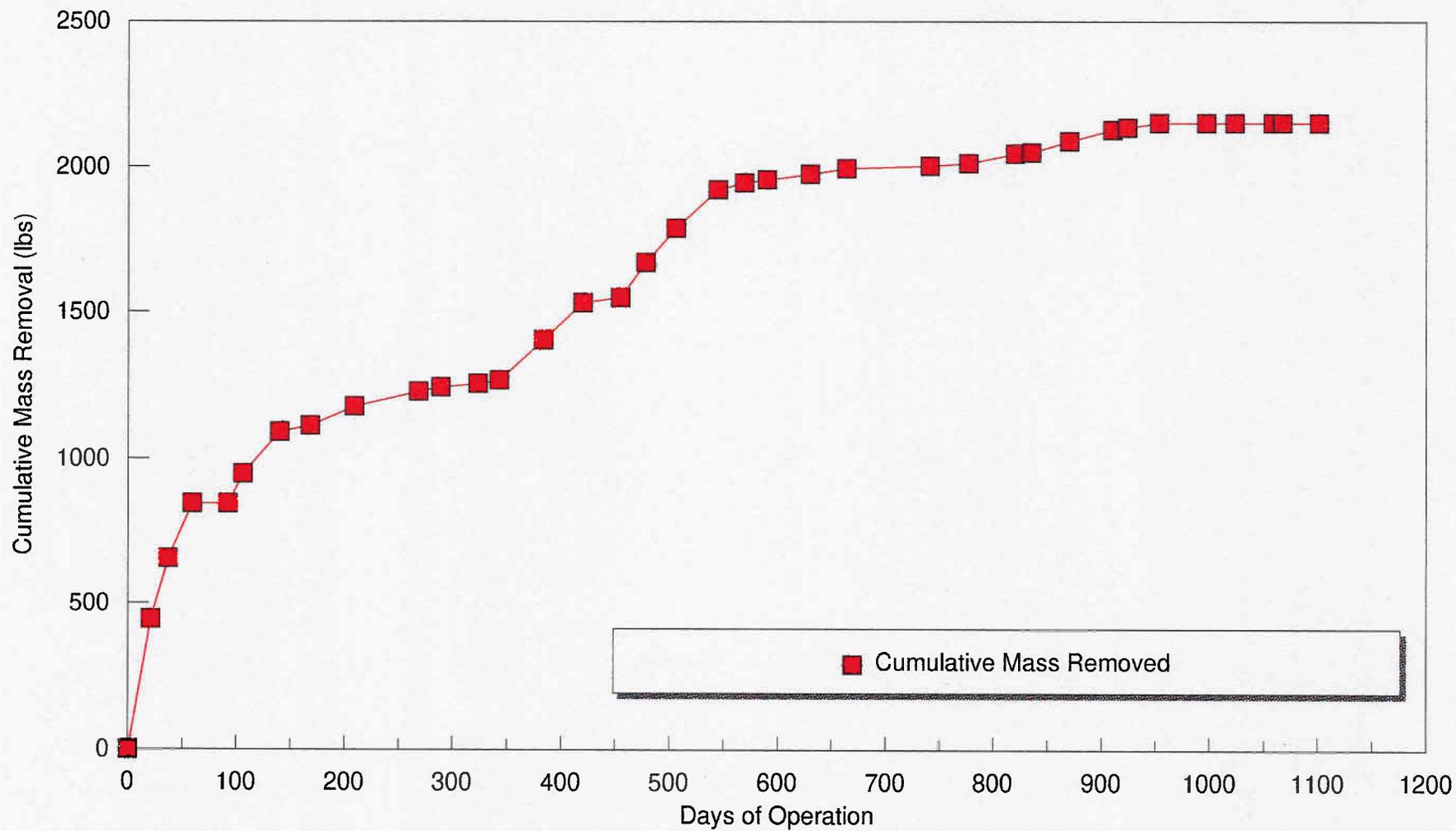


**Figure 3B- Mass Removal Rate**  
Dolphin Mart Site, New London Naval Submarine Base, Groton, CT



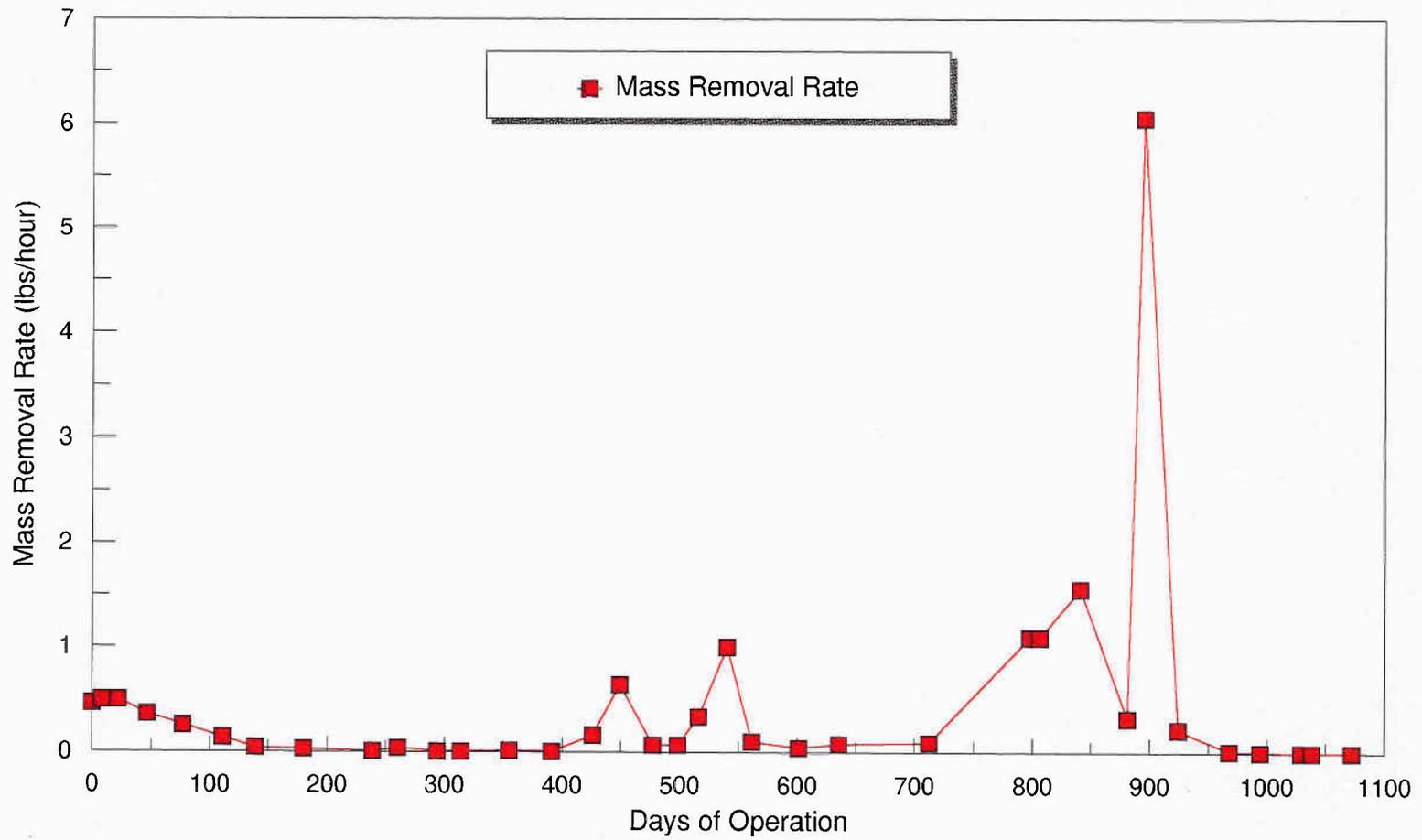
# Figure 4 - Cumulative Mass Removed versus Time

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



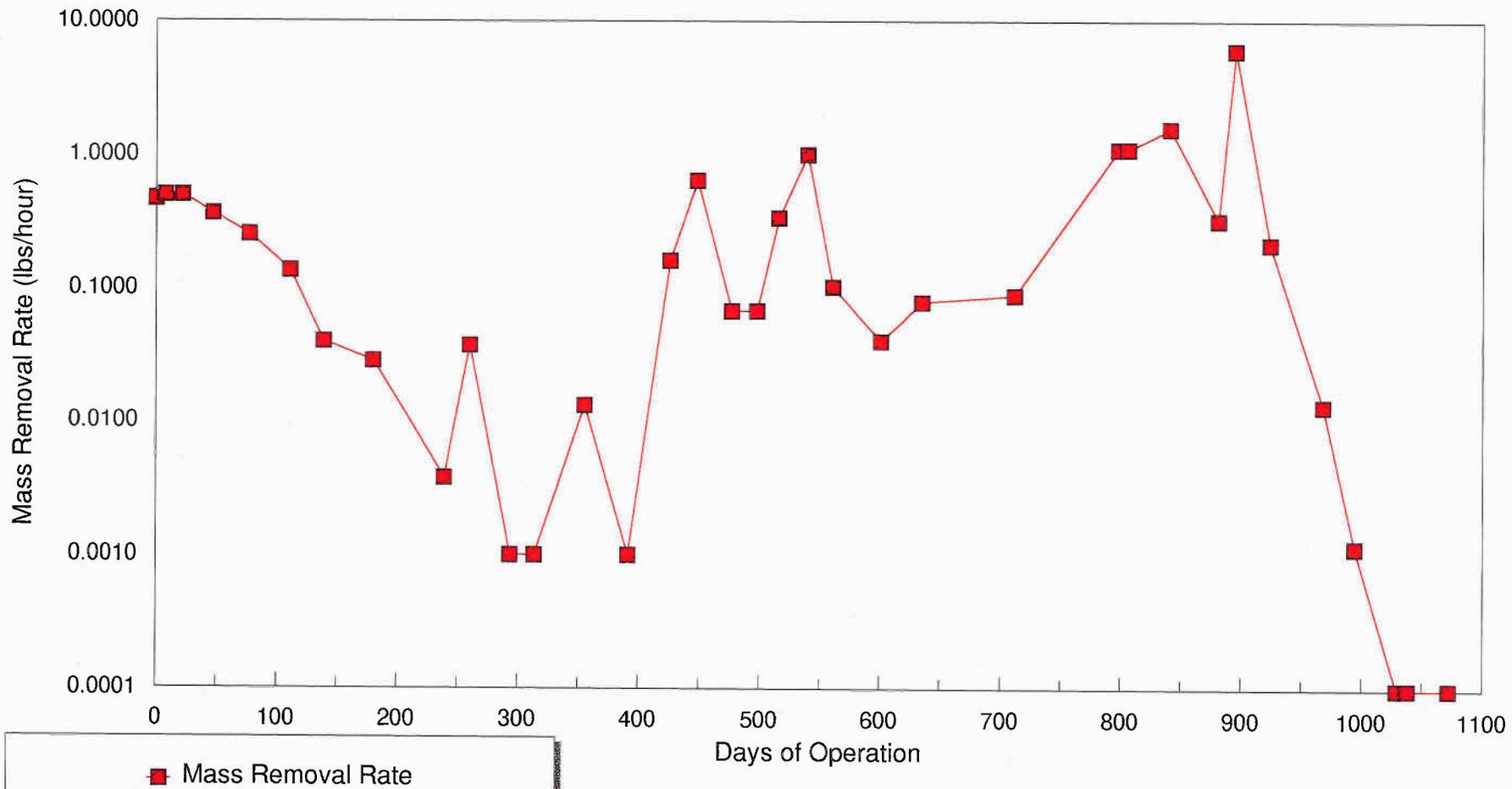
# Figure 5A - Mass Removal Rate

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



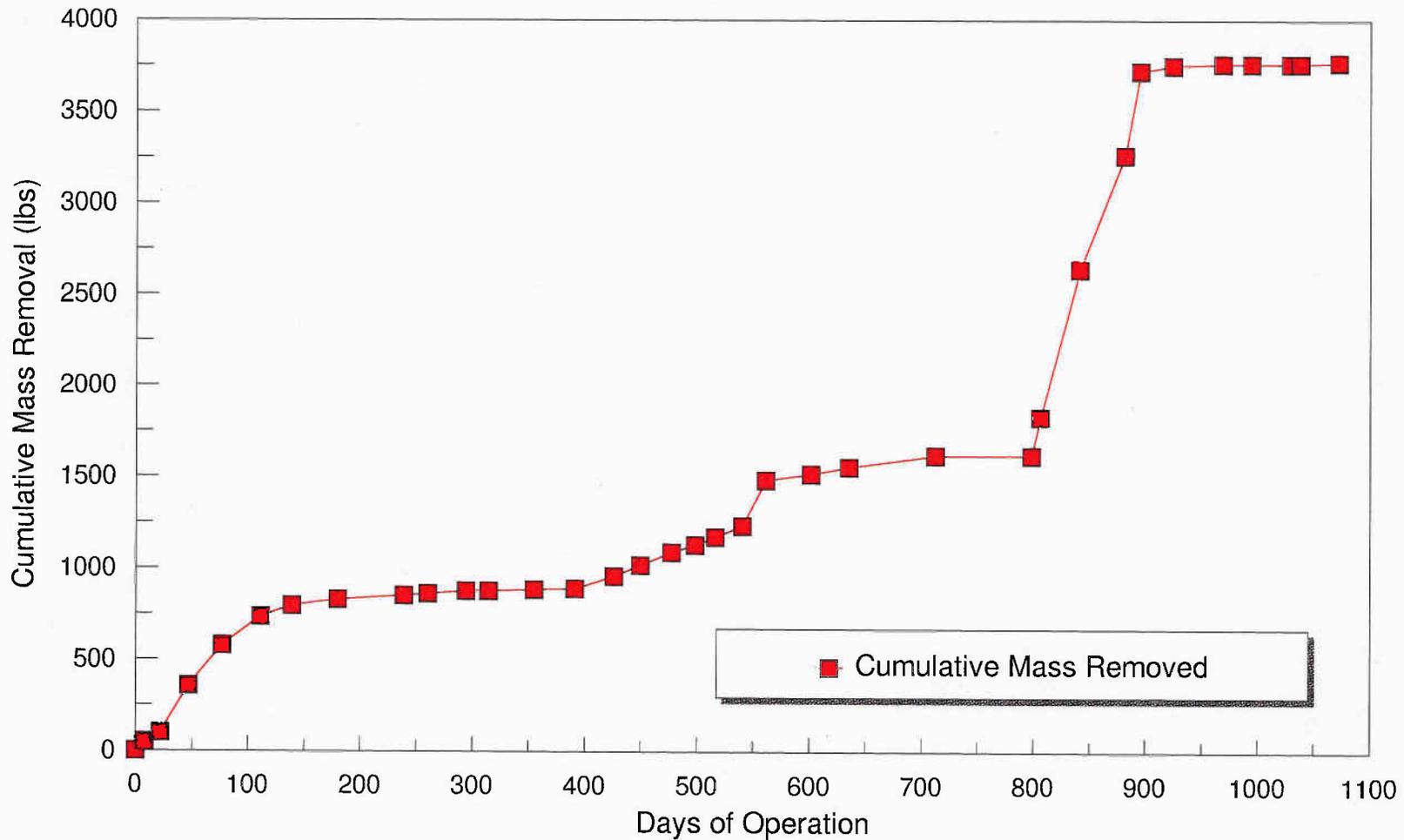
# Figure 5B - Mass Removal Rate

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



# Figure 6 - Cumulative Mass Removed versus Time

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



**ATTACHMENT 1**  
**SITE VISIT FORMS**

NAVAL SUBMARINE BASE  
GROTON, CT.  
87260014

Date: 7/8/99  
Project Number: 87260014  
DB/SCA Box Check: (Yes) No  
Site Arrival Time: 1000  
Total Hours on Site: 7.0

Staff: Bill / Jonathan  
Task Number: 0401000d  
Bill Code Override: \_\_\_\_\_  
Site Departure Time: 1700  
Total Hours Billed: \_\_\_\_\_

Please complete the following requested work scope and check off each task as it's completed:  
R = Requested C = Completed

**DOLPHIN MART:**

- COMPLETE OPERATIONAL DATA FORM
- GAUGE MONITORING WELLS
- MEASURE FID AND VACUUM AT VAPOR MONITORING WELLS
- COMPLETE SVE EXTRACTION POINT FORMS
- COMPLETE SPARGE POINT FORMS
- COLLECT AIR AND WATER DMR SAMPLES
- COMPLETE PH FORM
- COMPLETE QUARTERLY GROUNDWATER SAMPLING
- Check Site Security
- \_\_\_\_\_

**NEX:**

- COMPLETE OPERATIONAL DATA FORM
- GAUGE MONITORING WELLS
- MEASURE FID AND VACUUM AT VAPOR MONITORING WELLS
- COMPLETE SVE EXTRACTION POINT FORMS
- COMPLETE SPARGE POINT FORMS
- COLLECT AIR AND WATER DMR SAMPLES
- COMPLETE PH FORM
- COMPLETE QUARTERLY GROUNDWATER SAMPLING
- Trouble Shoot SVE system and activate both SVE & AS if possible

**EQUIPMENT NEEDED:** HASP, PPE, FID, PH METER, TEDLAR BAGS, VELOCITY METER,  
MAGNEHELICS, IP, SORBENT PADS, DMR SAMPLE COOLERS AND CONTAINERS

**TASK NUMBERS:** Monthly O&M = 04010000      Unscheduled Maintenance = 07010000  
Quarterly Sampling = 05010000      Sys. Modification/Roadbox Repair = 08010000  
Carbon Change-out = 06010000

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

Date: 7/8/99  
 Time: 1100  
 Technician: Bill Jones

**AIR COMPRESSOR SYSTEM**

Flow Rate	SCFM	Total Flow	SCFM
<b>Air Compressor C-1</b>		<b>Air Compressor C-2</b>	
Pressure	_____ psi	Pressure	_____ 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**

Flow Rate	SCFM	(use anemometer in hole in pipe near Hersey flowmeter)	
<b>Vacuum Pump V-1</b>		<b>Vacuum Pump V-2</b>	
Vacuum	_____ °Hg	Vacuum	_____ °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	_____
<b>Vacuum Pump V-3</b>		<b>Vacuum Pump V-4</b>	
Vacuum	_____ °Hg	Vacuum	_____ °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**

<b>Carbon Adsorber A/B</b>		<b>Carbon Adsorber C/D</b>	
Pressure	_____ psi	Pressure	_____ psi
Inf. VOC Level	_____ ppm	Inf. VOC Level	_____ ppm
Mid. VOC Level	_____ ppm	Mid. VOC Level	_____ ppm
Eff. VOC Level	_____ ppm	Eff. VOC Level	_____ ppm
Change out Date	_____	Change out Date	_____

**WATER TREATMENT**

Flowmeter Reading 4667.5 Gallons (arrival reading)      Flowmeter Reading \_\_\_\_\_ Gallons (departure reading)

**COMMENTS**

*System deactivated as per client request. Conducted site walk and checked security*

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

Date: 7/8/99  
 Time: 1420-1700  
 Technician: B:11 / Jonathan

**AIR COMPRESSOR SYSTEM**

Flow Rate	<u>32 CFM</u> SCFM	Total Flow	SCFM
<b>Air Compressor C-1</b>		<b>Air Compressor C-2</b>	
Pressure	<u>9</u> psi	Pressure	_____ psi
Temperature	<u>209</u> °F	Temperature	_____ °F
Flow Control Valve Setting	<u>100 % Open</u>	Flow Control Valve Setting	_____
Bleed Valve	<u>100 % Open</u>	Bleed Valve	_____
Radiator	<u>(ON) OFF</u>	Radiator	<u>ON / OFF</u>

**SOIL VAPOR EXTRACTION SYSTEM**

Eastern Flow Rate	<u>186 CFM</u> SCFM	Total Flow	<u>128244200</u> SCFM
Western Flow Rate	<u>104 CFM</u> SCFM	Total Flow	<u>29445800</u> SCFM
<b>Vacuum Pump V-1</b>		<b>Vacuum Pump V-3</b>	
Vacuum	<u>-4</u> "Hg	Vacuum	<u>-5</u> "Hg
Temperature	<u>130</u> °F	Temperature	<u>175</u> °F
Particulate Filter	<u>0</u> "H <sub>2</sub> O	Particulate Filter	<u>22</u> "H <sub>2</sub> O
Flow Control Valve Setting	<u>100 % Open</u>	Flow Control Valve Setting	<u>100 % Open</u>
Bleed Air Valve Setting	<u>25 % Open</u>	Bleed Air Valve Setting	<u>25 % Open</u>
Liquid Level	<u>0</u>	Liquid Level	<u>0</u>
<b>Vacuum Pump V-2</b>		<b>Vacuum Pump V-4</b>	
Vacuum	_____ "Hg	Vacuum	_____ "Hg
Temperature	_____ °F	Temperature	_____ °F
Particulate Filter	_____ "H <sub>2</sub> O	Particulate Filter	_____ "H <sub>2</sub> O
Flow Control Valve Setting	_____	Flow Control Valve Setting	_____
Bleed Air Valve Setting	_____	Bleed Air Valve Setting	_____
Liquid Level	_____	Liquid Level	_____

**ACTIVATED CARBON ADSORPTION SYSTEM**

<b>Carbon Adsorber A/B</b>		<b>Carbon Adsorber C/D</b>	
Pressure	<u>1.4</u> "H <sub>2</sub> O psi	Pressure	<u>0.6</u> "H <sub>2</sub> O psi
Inf. VOC Level	<u>31</u> ppm	Inf. VOC Level	<u>NA</u> ppm
Mid. VOC Level	<u>31</u> <u>11.5</u> ppm	Mid. VOC Level	<u>NA</u> ppm
Eff. VOC Level	<u>7.8</u> ppm	Eff. VOC Level	<u>31</u> ppm
Change out Date	_____	Change out Date	_____

**WATER TREATMENT**

Flowmeter Reading 225020.5 Gallons (arrival reading)      Flowmeter Reading 22516.0 Gallons (departure reading)

**COMMENTS**

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

System off upon arrival

Replaced submersible pump in UE-3 moisture trap, adjusted probe height in drum

Replaced V-1 blower with Dolphin Mart V-4 blower, seized

pH-7.2

Groton Sub Base

7/8/99

pl of 2

Site Visit

- Jonathan & Bill

0830 Departed office

1005 OS, met with Bob Umashankar

- Went to security for pass application process

1030 Met Keith Christman

- Has friend wants job

1110 Dolphin Mart Tour

- 5 gal can of Peaseo on floor of <sup>Comp Oil</sup> equip shed

- Fire Ext (2) Oct 98 expiration

- Flowmeter 4667.5 gal

- ~~WE-25~~ 20 & 3 Need locks, WE-20 need <sup>cap</sup> cap

- 55 gal Regen Drums outside, need manual

1238 NEX Tour

- Flowmeter 225020.5

7 55-gal drums Spent Carbon outside in fence <sup>area</sup>

4 SVE Blowers; 2 SP Compressors

Walked site, spoke with construction firm

about new 20k UL UST, water tested ok

DTW 7-9'

- Found suspected w/o UST under NEX bldg

Groton Sub Base Tour p 2 of 2  
UEX (cont)

Bill thinks that the probes installed within the moisture traps were too deep causing the pumps to cavitate and burn out - Brought pump from Dolphin Mart floor sump and replaced pump in UE-3 moisture trap

1430 Adjusted height of probe in both U-1 & U-3 moisture traps

1500 Had to go to Dolphin Mart and get the blower off U-4 to replace seized blower ~~same~~ on U-1 (UEX)

1515 Activated U-1 & 3 AS-1 & 2

Pulled water through SUE East & West lines, bled a lot of water from sponge lines main valve outside of shed

1550 Deactivated systems to collect DMR samples. Collected by hand pump open

1555-1615 Collected DMR water samples

1630 Collected SUE air samples

1645 System Monitoring completed

1700 Departed Site

1815 Arrived office, sent out samples to Mittkam via Airborne

Graton

wed

7.14.99

10:15 - Arr on site, picked up new truck pass + proceeded to shed.

- Everything Ok.

Cl - 19879387 39 cfm

West - 30114366 170 cfm

East - 129774915 243 cfm

Total - 2251529 gal

- took Infl. air samples as spec.

- checked pumps + controls Ok.

- sparge running hot 258° (a little High)

- Secured shed

- No safety plans on site.

11:35 - Dep site.

3.25 hrs

\* Samples shipped (Picked up by Mitkem 3:00 pm 7.14)

**ATTACHMENT 2**  
**MONTHLY FIELD ACTIVITY SUMMARY**

**Field Activity Summary  
July 1999**

**New London Naval Submarine Base  
Groton, Connecticut**

<b>Week Ending</b>	<b>Site</b>	<b>Period</b>	<b>Field Activities</b>	<b>Comments</b>
7/8/99	Dolphin Mart	Monthly Monitoring	Conducted site walk and checked security.	WE-2S, 2D, & 3 need locks. WE-2D needs metal cap.
	NEX		Troubleshoot SVE system and attempt to activate both SVE & air sparge	Replaced pump in VE-3 moisture trap; Replaced V-1 blower. SVE is reactivated

<b>Week Ending</b>	<b>Site</b>	<b>Period</b>	<b>Field Activities</b>	<b>Comments</b>
7/14/99	NEX	Monthly Monitoring	Check SVE system Drive-by to check operation of reactivated SVE system	System is operating properly

**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	Days of Operation	Air Sparge Flowrate (scfm)	Extraction Flowrate (scfm)	Influent Concentration BTEX (ppmv)	Removal Rate BTEX (lb/hr)	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 (ppmv)	Removal Rate TVPH (lb/hr)	Total Mass Removal Rate (lbs/hr)	Period Mass Removed (lbs)	Cumulative Mass Removed (lbs)	Comments
07/02/96	0	25	450	24.00	0.187	33.00	0.232	1000.00	6.876	0.00	0.000	—	0.000	7.295	0.00	0.00	
07/23/96	21	20	449	11.40	0.091	0.00	0.000	200.00	1.372	0.00	0.000	—	0.000	1.463	446.70	446.70	system operated approx. 102 hrs between 7/2 and 7/23
08/08/96	37	32	454	18.00	0.143	—	0.000	210.00	1.457	12.00	0.103	—	0.000	1.702	210.53	657.23	system operated approx. 133 hrs between 7/23 and 8/8
08/30/96	59	0	450	18.00	0.142	—	0.000	210.00	1.444	12.00	0.102	—	0.000	1.687	188.14	845.37	system operated approx. 111 hrs between 8/8 and 8/30
10/02/96	92	30	448	2.30	0.019	0.00	0.000	—	0.000	—	0.000	36.00	0.286	0.305	0.00	845.37	system not in operation from 8/30 to 10/2 due to flow meter problem
10/16/96	106	30	450	2.30	0.019	0.00	0.000	—	0.000	—	0.000	36.00	0.287	0.306	102.58	947.95	system reactivated 10/2/96
11/19/96	140	30	450	0.38	0.003	0.00	0.000	—	0.000	—	0.000	5.29	0.042	0.045	143.33	1091.28	
12/17/96	168	30	450	0.12	0.001	0.00	0.000	—	0.000	—	0.000	1.97	0.016	0.017	20.84	1112.12	
01/27/97	209	30	450	1.35	0.011	0.00	0.000	—	0.000	—	0.000	13.23	0.106	0.117	65.56	1177.68	
03/27/97	268	30	450	0.00	0.000	0.00	0.000	—	0.000	—	0.000	3.90	0.031	0.031	104.53	1229.95	assume 50% up-time, blowers shutting down due to influent water
04/17/97	289	30	450	0.00	0.000	0.00	0.000	—	0.000	—	0.000	3.13	0.025	0.025	14.13	1244.08	
05/21/97	323	15	329	0.00	0.000	0.00	0.000	—	0.000	—	0.000	5.77	0.034	0.034	11.96	1256.03	assume 50% up-time, blowers shutting down due to influent water
06/10/97	343	15	329	0.25	0.002	0.00	0.000	—	0.000	—	0.000	11.31	0.066	0.067	12.14	1268.17	assume 50% up-time, blowers shutting down due to influent water
07/21/97	384	15	329	1.89	0.011	0.00	0.000	—	0.000	—	0.000	81.79	0.477	0.488	136.76	1404.93	assume 50% up-time, blowers shutting down due to influent water
08/26/97	420	15	482	0.73	0.007	0.00	0.000	—	0.000	—	0.000	10.82	0.092	0.099	126.91	1531.85	assume 50% up-time, blowers shutting down due to influent water
09/30/97	455	15	482	0.34	0.003	0.00	0.000	—	0.000	—	0.000	21.17	0.181	0.184	17.84	1549.68	assume ~15% up-time, blowers shutting down due to influent water
10/23/97	478	14	589	0.00	0.000	0.00	0.000	—	0.000	—	0.000	24.06	0.251	0.251	120.10	1669.78	
11/20/97	506	32	590	0.00	0.000	5.45	0.050	—	0.000	—	0.000	38.49	0.403	0.453	118.28	1788.06	assume 50% up-time, blowers shutting down due to influent water
12/29/97	545	28	590	0.45	0.005	0.00	0.000	—	0.000	—	0.000	10.82	0.113	0.118	133.65	1921.71	assume 50% up-time, blowers shutting down due to influent water
01/22/98	569	27	471	0.32	0.003	0.00	0.000	—	0.000	—	0.000	5.77	0.048	0.051	24.38	1946.09	assume 50% up-time, blowers shutting down due to influent water
02/12/98	590	23	295	0.23	0.001	0.00	0.000	—	0.000	—	0.000	6.98	0.036	0.038	11.19	1957.28	assume 50% up-time, blowers shutting down due to influent water
03/24/98	630	30	245	0.45	0.002	0.00	0.000	—	0.000	—	0.000	5.29	0.023	0.025	19.91	1977.19	system down for approximately one week due to influent water
04/27/98	664	30	215	0.00	0.000	0.00	0.000	—	0.000	—	0.000	5.29	0.020	0.020	18.47	1995.65	
07/13/98	741	13	294	0.14	0.001	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.001	9.67	2005.32	assume 50% up-time, blowers shutting down due to influent water
08/18/98	777	10	294	0.14	0.001	0.00	0.000	—	0.000	—	0.000	6.25	0.033	0.033	7.37	2012.69	assume 50% up-time, AS blower shut down due to high pressure
09/30/98	820	14	294	0.07	0.0004	0.00	0.000	—	0.000	—	0.000	6.25	0.033	0.033	34.22	2046.92	
10/15/98	835	0	231	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	5.77	0.024	0.024	5.10	2052.01	assume 50% up-time, AS blower shut down due to high pressure
11/19/98	870	14	223	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	40.89	0.162	0.162	38.89	2090.90	assume 50% up-time, AS blower shut down due to high pressure
12/29/98	910	0	442	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.001	39.01	2129.91	assume 50% up-time, AS blower shut down due to high pressure
01/12/99	924	0	255	0.07	0.0003	0.00	0.000	—	0.000	—	0.000	8.66	0.039	0.040	6.81	2136.72	
02/10/99	953	0	346	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	8.90	0.055	0.055	16.37	2153.09	assume 50% up-time, blowers shutting down due to influent water
03/26/99	997	0	160	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.000	0.38	2153.47	
04/21/99	1023	0	160	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.000	0.38	2153.85	
05/26/99	1058	0	0	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.000	0.00	2153.85	system deactivated May 1999
06/04/99	1067	0	0	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.000	0.00	2153.85	system deactivated May 1999
07/08/99	1101	0	0	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.000	0.000	0.00	2153.85	system deactivated May 1999

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 Milkem Laboratory. Prior to 10/16/96 air analysis performed by NEI/GTEL
- 7) Milkem 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	Day of Operation	Air Sparge Flowrate (scfm)	Extraction Flowrate (total) (scfm)	Influent Concentration BTEX (ppmv)	Removal Rate BTEX (lb/hr)	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	0	NA*	253	1.80	0.007	—	0.000	130.00	0.455	0.00	0.000	—	—	0.000	0.463	0.00	0.00	
08/08/96	8	NA*	270	1.80	0.008	—	0.000	130.00	0.486	0.00	0.000	—	—	0.000	0.494	46.93	46.93	system operated approx. 92 hrs between 7/31 and 8/8
08/22/96	22	NA*	270	1.80	0.008	—	0.000	130.00	0.486	0.00	0.000	—	—	0.000	0.494	52.85	99.78	24-hour per day system operation began 8/8
09/16/96	47	NA*	320	2.70	0.015	0.00	0.000	—	0.000	—	0.000	—	61.00	0.346	0.361	256.56	356.34	
10/16/96	77	NA*	320	2.50	0.014	0.00	0.000	—	0.000	—	0.000	—	42.00	0.238	0.253	220.98	577.32	
11/19/96	111	NA*	324	0.95	0.006	0.00	0.000	—	0.000	—	0.000	94.00	22.61	0.130	0.135	158.31	735.63	
12/17/96	139	NA*	310	0.18	0.001	0.00	0.000	—	0.000	—	0.000	29.00	6.98	0.038	0.040	58.83	794.47	
01/27/97	180	NA*	321	0.14	0.001	0.00	0.000	—	0.000	—	0.000	20.00	4.81	0.027	0.028	33.39	827.85	
03/27/97	239	NA**	384	0.00	0.000	0.00	0.000	—	0.000	—	0.000	—	0.55	0.004	0.004	22.62	850.47	
04/17/97	260	NA**	721	0.00	0.000	0.00	0.000	—	0.000	—	0.000	12.00	2.89	0.037	0.037	10.24	860.71	
05/21/97	294	6***	360	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	15.46	876.17	
06/10/97	314	2***	300	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	0.48	876.65	
07/21/97	355	36***	358	0.00	0.000	0.00	0.000	—	0.000	—	0.000	8.50	2.04	0.013	0.013	6.88	883.53	
08/26/97	391	28***	223	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.00	6.04	889.57	One blower down due to high water level in moisture trap.
09/30/97	426	27***	221	2.37	0.009	6.00	0.021	—	0.000	—	0.000	140.00	33.68	0.132	0.161	68.15	957.72	One blower down due to high water level in moisture trap.
10/23/97	449	47***	322	2.47	0.013	17.05	0.086	—	0.000	—	0.000	395.00	95.02	0.542	0.641	60.12	1017.84	Two blowers down due to high water level in moisture trap.
11/20/97	477	47***	213	0.50	0.002	1.12	0.004	—	0.000	—	0.000	68.00	16.36	0.062	0.067	69.68	1087.51	One blower down due to high water level in moisture trap.
12/11/97	498	47	213	0.50	0.002	1.12	0.004	—	0.000	—	0.000	68.00	16.36	0.062	0.067	40.27	1127.78	
12/29/97	516	47	520	0.78	0.007	2.18	0.018	—	0.000	—	0.000	140.00	33.68	0.310	0.335	42.29	1170.07	
01/22/98	540	53	479	2.46	0.020	4.50	0.034	—	0.000	—	0.000	465.00	111.86	0.949	1.003	63.09	1233.15	
02/12/98	561	NA****	324	0.77	0.004	1.05	0.005	—	0.000	—	0.000	67.50	16.24	0.093	0.103	248.54	1481.70	
03/24/98	601	53	249	0.44	0.002	0.82	0.003	—	0.000	—	0.000	33.00	7.94	0.035	0.040	32.99	1514.68	
04/27/98	635	53	170	0.57	0.002	8.32	0.022	—	0.000	—	0.000	76.50	18.40	0.055	0.079	36.71	1551.39	
07/13/98	712	53	154	1.96	0.005	0.00	0.000	39.42	0.084	0.00	0.000	—	0.00	0.000	0.089	63.76	1615.16	
10/07/98	798	0	278	8.40	0.042	0.00	0.000	0.00	0.000	0.00	0.000	890.43	214.19	1.054	1.096	0.00	1615.16	System modification/repair completed, system reactivated.
10/15/98	806	0	278	8.40	0.042	0.00	0.000	0.00	0.000	0.00	0.000	890.43	214.19	1.056	1.098	210.77	1825.92	
11/19/98	841	41	216	4.67	0.018	0.46	0.002	0.00	0.000	0.00	0.000	1679.20	403.93	1.543	1.563	812.98	2638.91	
12/29/98	881	41	148	0.90	0.002	0.00	0.000	0.00	0.000	0.00	0.000	507.90	122.18	0.321	0.323	621.50	3260.40	One blower and air compressor down due to high water.
01/12/99	895	82	307	3.22	0.018	0.34	0.002	0.00	0.000	0.00	0.000	4607.80	1108.41	6.032	6.052	459.46	3719.87	
02/10/99	924	70	294	0.81	0.004	0.54	0.002	0.00	0.000	0.00	0.000	165.78	39.88	0.207	0.214	31.67	3751.54	
03/26/99	968	79	255	0.08	0.000	0.27	0.001	0.00	0.000	0.00	0.000	10.50	2.53	0.011	0.013	6.31	3759.85	One blower and air compressor down due to tripped breaker
04/21/99	994	38	244	0.26	0.001	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.000	0.001	0.54	3760.40	
05/26/99	1029	***	0	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.000	0.000	0.00	3760.40	
06/04/99	1038	***	0	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.000	0.000	0.00	3760.40	System is non-operational
07/08/99	1072	32	290	3.64	0.000	3.64	0.000	0.00	0.000	0.00	0.000	0.00	0.00	0.000	0.000	7.75	3768.15	System reactivated 7/8/99

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 1/29/98 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 modifications 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.
- 9) 4/27/98 TVPH results reported as C5-C12 Aliphatics and C9-C10 Aromatics. Ppmv equivalents have been estimated.
- 10) The system was found to be inactive on 8/19/98 due to water in the moisture traps and was not restarted. No samples were taken.
- 11) System modifications and repairs completed on 10/7/98. System reactivated. Influent concentrations assumed to be the same as sampled on 10/15/98.
- 12) On 10/7/98 the east side flowmeter was found to be inoperable. West and East flowrates were subsequently assumed to be equal for mass removal calculation purposes.
- 13) A flow rate weighted average was used to calculate the SVE system influent beginning 10/15/98.
- 14) On 3/26/99 the air sparge compressor was not operating. The air sparge flow rate is based on the March 8 data.
- 15) Air flow data from 4/2/99 used for April's flow rate.

**ATTACHMENT 4**  
**HISTORICAL WELL GAUGING DATA**

Date	DM-1			DM-2			DM-3			DM-4		
	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation
07/02/96	94.23	6.37	87.86	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/03/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/12/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/16/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/17/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/19/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/22/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/23/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/24/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/25/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/26/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/01/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/02/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/05/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
09/04/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
10/02/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
10/21/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
11/19/96	94.23	1.90	92.33	94.30	NG	NA	94.02	2.06	91.96	94.81	2.68	92.13
12/17/96	94.23	2.53	91.70	94.30	NG	NA	94.02	1.60	92.42	94.81	NG	NA
01/27/97	94.23	1.91	92.32	94.30	NG	NA	94.02	1.89	92.13	94.81	NG	NA
02/18/97	94.23	1.93	92.30	94.30	NG	NA	94.02	1.90	92.12	94.81	2.04	92.77
03/27/97	94.23	1.89	92.34	94.30	2.27	92.03	94.02	1.86	92.16	94.81	2.41	92.40
04/17/97	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
05/21/97	94.23	2.04	92.19	94.30	2.39	91.91	94.02	2.08	91.94	94.81	3.08	91.73
08/27/97	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
11/21/97	94.23	2.26	91.97	94.30	3.20	91.10	94.02	2.56	91.46	94.81	3.33	91.48
02/11/98	94.23	1.79	92.44	94.30	2.63	91.67	94.02	1.61	92.41	94.81	1.84	92.97
05/11/98	94.23	1.80	92.43	94.30	1.85	92.45	94.02	1.50	92.52	94.81	2.34	92.47
08/17/98	94.23	2.70	91.53	94.30	3.75	90.55	94.02	3.30	90.72	94.81	1.25	93.56
11/18/98	94.23	2.32	91.91	94.30	2.88	91.42	94.02	2.60	91.42	94.81	3.35	91.46
02/19/99	94.23	2.06	92.17	94.30	2.61	91.69	94.02	1.88	92.14	94.81	2.03	92.78
05/21/99	94.23	2.04	92.19	94.30	2.57	91.73	94.02	2.26	91.76	94.81	3.83	90.98

Notes: WE-2D, WE-2S, and WE-3 are covered by stand pipes.

NG = Not Gauged

\* Possible interference due to AS/SVE system

## Well Gauging Data

## Dolphin Mart Site

## New London Naval Submarine Base, Groton, CT

Date	DM-5			HRP-10			HRP-11			MW-1		
	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation
07/02/96	101.06	NG	NA	97.05	4.65	92.40	96.79	NG	NA		4.65	
07/03/96	101.06	NG	NA	97.05	5.19	91.86	96.79	NG	NA		4.63	
07/12/96	101.06	NG	NA	97.05	5.81	91.24	96.79	NG	NA		5.01	
07/16/96	101.06	NG	NA	97.05	4.33	92.72	96.79	NG	NA		4.55	
07/17/96	101.06	NG	NA	97.05	2.73	94.32	96.79	NG	NA		4.94	
07/19/96	101.06	NG	NA	97.05	4.38	92.67	96.79	NG	NA		5.21	
07/22/96	101.06	NG	NA	97.05	4.54	92.51	96.79	NG	NA		4.82	
07/23/96	101.06	NG	NA	97.05	4.55	92.50	96.79	NG	NA		4.75	
07/24/96	101.06	NG	NA	97.05	4.33	92.72	96.79	NG	NA		5.22	
07/25/96	101.06	NG	NA	97.05	4.46	92.59	96.79	NG	NA		5.31	
07/26/96	101.06	NG	NA	97.05	4.43	92.62	96.79	NG	NA		4.79	
08/01/96	101.06	NG	NA	97.05	3.93	93.12	96.79	NG	NA		4.96	
08/02/96	101.06	NG	NA	97.05	4.08	92.97	96.79	NG	NA		5.24	
08/05/96	101.06	NG	NA	97.05	4.35	92.70	96.79	NG	NA		5.08	
09/04/96	101.06	NG	NA	97.05	5.43	91.62	96.79	NG	NA		6.07	
10/02/96	101.06	NG	NA	97.05	3.53	93.52	96.79	NG	NA		5.43	
10/21/96	101.06	NG	NA	97.05	3.98	93.07	96.79	NG	NA		NG	
11/19/96	101.06	5.37	95.69	97.05	4.15	92.90	96.79	NG	NA		3.85	
12/17/96	101.06	3.67	97.39	97.05	NG	NA	96.79	NG	NA		3.85	
01/27/97	101.06	4.26	96.80	97.05	3.29	93.76	96.79	NG	NA		2.53	
02/18/97	101.06	NG	NA	97.05	4.04	93.01	96.79	NG	NA		2.98	
03/27/97	101.06	4.60	96.46	97.05	4.04	93.01	96.79	3.21	93.58		2.91	
04/17/97	101.06	NG	NA	97.05	5.25	91.80	96.79	NG	NA		3.48	
05/21/97	101.06	5.19	95.87	97.05	4.11	92.94	96.79	3.43	93.36		3.14	
08/27/97	101.06	NG	NA	97.05	5.01	92.04	96.79	4.10	92.69		3.60	
11/21/97	101.06	6.83	94.23	97.05	4.43	92.62	96.79	3.77	93.02		5.33	
02/11/98	101.06	3.87	97.19	97.05	3.64	93.41	96.79	3.08	93.71		3.23	
05/11/98	101.06	2.41	98.65	97.05	3.65	93.40	96.79	3.16	93.63		1.81	
08/17/98	101.06	7.69	93.37	97.05	5.11	91.94	96.79	3.99	92.80		6.32	
11/18/98	101.06	7.46	93.60	97.05	5.13	91.92	96.79	3.85	92.94		5.74	
02/19/99	101.06	4.38	96.68	97.05	4.15	92.90	96.79	3.33	93.46		2.95	
05/21/99	101.06	5.63	95.43	97.05	4.36	92.69	96.79	3.55	93.24		3.96	

NA = Not Available NG = Not Gauged

## Well Gauging Data

## Dolphin Mart Site

## New London Naval Submarine Base, Groton, CT

Date	MW-2		MW-3		OBG8A		OBG9A		
	Well Casing Elevation	Depth to Groundwater							
07/02/96		3.55		3.12	95.20	NG	94.67	0.82	93.85
07/03/96		2.86		0.00	95.20	NG	94.67	0.89	93.78
07/12/96		3.82		1.95	95.20	NG	94.67	1.85	92.82
07/16/96		2.89		0.74	95.20	NG	94.67	0.69	93.98
07/17/96		1.63		2.79	95.20	NG	94.67	0.00	94.67
07/19/96		0.61		0.00	95.20	NG	94.67	0.00	94.67
07/22/96		1.95		1.17	95.20	NG	94.67	0.00	94.67
07/23/96		3.33		0.00	95.20	NG	94.67	0.20	94.47
07/24/96		1.18		0.00	95.20	NG	94.67	0.00	94.67
07/25/96		NG		NG	95.20	NG	94.67	0.16	94.51
07/26/96		NG		NG	95.20	NG	94.67	0.00	94.67
08/01/96		2.20		1.28	95.20	NG	94.67	NG	NA
08/02/96		1.82		1.31	95.20	NG	94.67	0.00	94.67
08/05/96		NG		1.08	95.20	NG	94.67	0.00	94.67
09/04/96		4.59		DRY	95.20	NG	94.67	NG	NA
10/02/96		NG		3.86	95.20	NG	94.67	NG	NA
10/21/96		NG		NG	95.20	NG	94.67	NG	NA
11/19/96		3.00		DRY	95.20	NG	94.67	NG	NA
12/17/96		2.17		NG	95.20	NG	94.67	NG	NA
01/27/97		2.13		NG	95.20	NG	94.67	NG	NA
02/18/97		2.56		2.28	95.20	NG	94.67	NG	NA
03/27/97		1.86		1.27	95.20	NG	94.67	NG	NA
04/17/97		1.94		1.39	95.20	NG	94.67	NG	NA
05/21/97		2.93		2.44	95.20	NG	94.67	NG	NA
08/27/97		4.28		DRY	95.20	NG	94.67	2.46	92.21
11/21/97		3.84		3.06	95.20	2.26	92.94	0.95	93.72
02/11/98		1.34		1.88	95.20	1.47	93.73	1.31	93.36
05/11/98		1.99		4.08	95.20	0.31	94.89	0.98	93.69
08/17/98		4.95		4.96	95.20	2.35	92.85	2.58	92.09
11/18/98		5.27		3.27	95.20	2.30	92.90	1.91	92.76
02/19/99		2.59		1.92	95.20	0.50	94.70	1.77	92.90
05/21/99		3.23		2.20	95.20	1.71	93.49	2.42	92.25

NA = Not Available NG = Not Gauged

## Well Gauging Data

## Dolphin Mart Site

## New London Naval Submarine Base, Groton, CT

Date	WE-1			WE-1A			WE-2D			WE-2S		
	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation
07/02/96		DRY			DRY		100.84	6.56	94.28	100.86	6.78	94.08
07/03/96		NG			NG		100.84	6.35	94.49	100.86	6.58	94.28
07/12/96		NG			NG		100.84	6.83	94.01	100.86	6.96	93.90
07/16/96		NG			NG		100.84	6.24	94.60	100.86	6.47	94.39
07/17/96		NG			NG		100.84	5.88	94.96	100.86	6.30	94.56
07/19/96		NG			NG		100.84	5.53	95.31	100.86	6.18	94.68
07/22/96		NG			NG		100.84	6.42	94.42	100.86	6.45	94.41
07/23/96		NG			NG		100.84	6.33	94.51	100.86	6.70	94.16
07/24/96		NG			NG		100.84	5.67	95.17	100.86	6.31	94.55
07/25/96		NG			NG		100.84	NG	NA	100.86	NG	NA
07/26/96		NG			NG		100.84	NG	NA	100.86	NG	NA
08/01/96		NG			NG		100.84	6.09	94.75	100.86	6.39	94.47
08/02/96		NG			NG		100.84	5.73	95.11	100.86	6.30	94.56
08/05/96		NG			NG		100.84	NG	NA	100.86	NG	NA
09/04/96		NG			NG		100.84	7.51	93.33	100.86	7.39	93.47
10/02/96		NG			NG		100.84	5.82	95.02	100.86	6.41	94.45
10/21/96		NG			NG		100.84	NG	NA	100.86	NG	NA
11/19/96		NG			NG		100.84	5.89	94.95	100.86	6.46	94.40
12/17/96		NG			NG		100.84	NG	NA	100.86	6.10	94.76
01/27/97		NG			NG		100.84	5.73	95.11	100.86	6.24	94.62
02/18/97		NG			NG		100.84	5.84	95.00	100.86	6.32	94.54
03/27/97		5.03			DRY		100.84	5.45	95.39	100.86	6.21	94.65
04/17/97		NG			NG		100.84	NG	NA	100.86	NG	NA
05/21/97		DRY			DRY		100.84	6.11	94.73	100.86	NG	NA
08/27/97		NG			NG		100.84	7.03	93.81	100.86	NG	NA
11/21/97		DRY			DRY		100.84	6.66	94.18	100.86	6.97	93.89
02/11/98		NG			NG		100.84	5.49	95.35	100.86	6.29	94.57
05/11/98		NG			NG		100.84	5.16	95.68	100.86	6.18	94.68
08/17/98		NG			NG		100.84	7.50	93.34	100.86	7.53	93.33
11/18/98		DRY			DRY		100.84	7.23	93.61	100.86	7.62	93.24
02/19/99		NG			NG		100.84	5.72	95.12	100.86	6.44	94.42
05/21/99		NG			NG		100.84	6.26	94.58	100.86	6.69	94.17

NA = Not Available NG = Not Gauged

## Well Gauging Data

## Dolphin Mart Site

## New London Naval Submarine Base, Groton, CT

Date	WE-3			WE-4			WE-5			WE-6		
	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater	Groundwater Elevation
07/02/96	103.14	8.67	103.14	97.52	4.24	93.28	99.72	4.80	94.92	97.32	3.40	93.92
07/03/96	103.14	8.69	94.47	97.52	6.38	91.14	99.72	4.33	95.39	97.32	2.30	95.02
07/12/96	103.14	8.93	94.45	97.52	6.38	91.14	99.72	4.98	94.74	97.32	3.60	93.72
07/16/96	103.14	8.50	94.21	97.52	6.27	91.25	99.72	4.08	95.64	97.32	2.76	94.56
07/17/96	103.14	8.62	94.64	97.52	6.47	91.05	99.72	3.62	96.10	97.32	1.72	95.60
07/19/96	103.14	8.45	94.52	97.52	NG	NA	99.72	3.19	96.53	97.32	1.08	96.24
07/22/96	103.14	8.64	94.69	97.52	3.68	93.84	99.72	3.73	95.99	97.32	1.96	95.36
07/23/96	103.14	8.72	94.50	97.52	8.72	88.80	99.72	4.49	95.23	97.32	2.40	94.92
07/24/96	103.14	8.45	94.42	97.52	3.38	94.14	99.72	3.33	96.39	97.32	1.49	95.83
07/25/96	103.14	NG	NA	97.52	NG	NA	99.72	NG	NA	97.32	2.12	95.20
07/26/96	103.14	NG	NA	97.52	NG	NA	99.72	NG	NA	97.32	2.95	94.37
08/01/96	103.14	8.55	103.14	97.52	3.22	94.30	99.72	4.06	95.66	97.32	1.15	96.17
08/02/96	103.14	8.56	94.59	97.52	2.96	94.56	99.72	3.76	95.96	97.32	0.86	96.46
08/05/96	103.14	NG	NA	97.52	NG	NA	99.72	NG	NA	97.32	1.28	96.04
09/04/96	103.14	9.73	103.14	97.52	5.11	92.41	99.72	6.23	93.49	97.32	4.59	92.73
10/02/96	103.14	8.41	93.41	97.52	3.11	94.41	99.72	3.96	95.76	97.32	1.60	95.72
10/21/96	103.14	NG	NA	97.52	NG	NA	99.72	NG	NA	97.32	2.43	94.89
11/19/96	103.14	8.32	103.14	97.52	3.53	93.99	99.72	3.87	95.85	97.32	2.90	94.42
12/17/96	103.14	7.92	94.82	97.52	2.17	95.35	99.72	2.96	96.76	97.32	2.10	95.22
01/27/97	103.14	7.94	95.22	97.52	3.08	94.44	99.72	3.26	96.46	97.32	1.53	95.79
02/18/97	103.14	7.95	95.20	97.52	3.49	94.03	99.72	3.21	96.51	97.32	2.55	94.77
03/27/97	103.14	8.08	95.19	97.52	1.66	95.86	99.72	3.51	96.21	97.32	1.15	96.17
04/17/97	103.14	NG	NA	97.52	3.00	94.52	99.72	3.18	96.54	97.32	1.30	96.02
05/21/97	103.14	8.20	103.14	97.52	3.73	93.79	99.72	4.07	95.65	97.32	2.84	94.48
08/27/97	103.14	9.54	94.94	97.52	4.69	92.83	99.72	5.77	93.95	97.32	4.07	93.25
11/21/97	103.14	8.86	93.60	97.52	7.53	89.99	99.72	5.29	94.43	97.32	3.56	93.76
02/11/98	103.14	8.33	94.28	97.52	2.14	95.38	99.72	2.87	96.85	97.32	1.35	95.97
05/11/98	103.14	7.91	94.81	97.52	7.51	*	99.72	2.50	97.22	97.32	2.02	95.30
08/17/98	103.14	9.78	95.23	97.52	7.45	*	99.72	5.81	93.91	97.32	4.61	92.71
11/18/98	103.14	8.88	93.36	97.52	8.65	*	99.72	6.15	93.57	97.32	5.42	91.90
02/19/99	103.14	8.49	94.65	97.52	3.49	94.03	99.72	3.51	96.21	97.32	2.50	94.82
05/21/99	103.14	8.57	94.57	97.52	4.95	92.57	99.72	4.66	95.06	97.32	3.06	94.26

NA = Not Available NG = Not Gauged

Date	ERM-5			ERM-6			ERM-7		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96		3.82		22.09	5.14	16.95	21.98	5.27	16.71
10/16/96		NG		22.09	4.82	17.27	21.98	4.75	17.23
11/18/96		3.72		22.09	4.64	17.45	21.98	4.93	17.05
12/16/96		3.10		22.09	4.08	18.01	21.98	4.21	17.77
02/17/97		3.00		22.09	4.34	17.75	21.98	4.29	17.69
03/27/97		2.89		22.09	4.28	17.81	21.98	4.19	17.79
04/15/97		NG		22.09	NG	NA	21.98	NG	NA
04/17/97		2.73		22.09	NG	NA	21.98	NG	NA
04/24/97		NG		22.09	NG	NA	21.98	NG	NA
05/21/97		NG		22.09	4.72	17.37	21.98	4.61	17.37
08/28/97		NG		22.09	5.29	16.80	21.98	6.49	15.49
11/20/97		4.35		22.09	5.24	16.85	21.98	5.35	16.63
02/12/98		3.59		22.09	4.68	17.41	21.98	4.71	17.27
05/12/98		2.09		22.09	2.69	19.40	21.98	3.32	18.66
08/19/98		3.43		22.09	5.26	16.83	21.98	5.19	16.79
11/19/98		4.58		22.09	5.80	16.29	21.98	5.80	16.18
02/18/99		3.80		22.09	4.74	17.35	21.98	NG	NG
05/26/99		3.52		22.09	5.16	16.93	21.98	5.02	16.96

Date	ERM-8			ERM-9			ERM-10		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96		NG			NG			NG	
10/16/96		NG			NG			NG	
11/18/96		NG			NG			NG	
12/16/96		NG			NG			NG	
02/17/97		NG			NG			NG	
03/27/97		NG			NG			NG	
04/15/97		NG			NG			NG	
04/17/97		NG			NG			NG	
04/24/97		NG			NG			NG	
05/21/97		NG			NG			NG	
08/28/97		NG			NG			NG	
11/20/97		NG			NG			NG	
02/12/98		NG			NG			NG	
05/12/98		NG			NG			NG	
08/19/98		NG			NG			NG	
11/19/98		NG			NG			NG	
02/18/99		NG			NG			NG	
05/26/99		NG			NG			NG	

Date	ERM-11			ERM-12			ERM-13		
	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation
09/16/96	23.19	NG	NA	23.16	8.38	14.78	26.01	7.01	19.00
10/16/96	23.19	6.4	16.79	23.16	8.13	15.03	26.01	7.15	18.86
11/18/96	23.19	6.36	16.83	23.16	8.09	15.07	26.01	7.13	18.88
12/16/96	23.19	5.02	18.17	23.16	7.83	15.33	26.01	6.55	19.46
02/17/97	23.19	4.89	18.30	23.16	7.65	15.51	26.01	6.03	19.98
03/27/97	23.19	5.19	18.00	23.16	7.63	15.53	26.01	5.98	20.03
04/15/97	23.19	NG	NA	23.16	NG	NA	26.01	5.86	20.15
04/17/97	23.19	NG	NA	23.16	NG	NA	26.01	NG	NA
04/24/97	23.19	NG	NA	23.16	NG	NA	26.01	NG	NA
05/21/97	23.19	6.27	16.92	23.16	7.81/7.80	15.35	26.01	6.15	19.86
08/28/97	23.19	7.65	15.54	23.16	NG	NA	26.01	7.24	18.77
11/20/97	23.19	6.89	16.30	23.16	8.23	14.93	26.01	7.84	18.17
02/12/98	23.19	5.04	18.15	23.16	7.99	15.17	26.01	6.71	19.30
05/12/98	23.19	4.39	18.80	23.16	7.90	15.26	26.01	5.23	20.78
08/19/98	23.19	7.56	15.63	23.16	8.34/sheen	14.82	26.01	6.51	19.50
11/19/98	23.19	7.65	15.54	23.16	8.22	14.94	26.01	8.06	17.95
02/18/99	23.19	NG	NG	23.16	8.37	14.79	26.01	NG	NG
05/26/99	23.19	6.92	16.27	23.16	9.02/sheen	14.14	26.01	6.88	19.13

Date	ERM-14			ERM-15			ERM-16		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96	25.56	6.89	18.67		4.30			8.51	
10/16/96	25.56	6.92	18.64		3.94			8.49	
11/18/96	25.56	7.10/6.91	18.61		4.03			8.43	
12/16/96	25.56	6.35	19.21		NG			7.8	
02/17/97	25.56	5.89	19.67		NG			7.85	
03/27/97	25.56	5.82	19.74		NG			7.79	
04/15/97	25.56	5.7	19.86		3.39			7.84	
04/17/97	25.56	5.66	19.90		3.31			NG	
04/24/97	25.56	NG	NA		NG			NG	
05/21/97	25.56	6.04/5.99	19.56		NG			8.16	
08/28/97	25.56	7.24/7.01	18.49		NG			8.63/sheen	
11/20/97	25.56	7.63	17.93		4.46			8.77	
02/12/98	25.56	6.59	18.97		3.54			8.18	
05/12/98	25.56	5.09	20.47		2.63			7.32	
08/19/98	25.56	6.37/sheen	19.19		4.02			8.79/8.75	
11/19/98	25.56	7.80	17.76		4.59			9.03/9.00	
02/18/99	25.56	7.47	18.09		4.29			8.00	
05/26/99	25.56	6.62	18.94		3.47			8.58/sheen	

Date	ERM-17			ERM-18			ERM-19		
	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation
09/16/96		5.62			3.65		22.42	5.28	17.14
10/16/96		5.56			3.96		22.42	5.17	17.25
11/18/96		5.53			NG		22.42	5.19	17.23
12/16/96		3.73			NG		22.42	4.23	18.19
02/17/97		4.53			NG		22.42	4.18	18.24
03/27/97		4.87			NG		22.42	4.06	18.36
04/15/97		4.84			NG		22.42	NG	NA
04/17/97		4.67			NG		22.42	3.91	18.51
04/24/97		NG			NG		22.42	NG	NA
05/21/97		5.26			NG		22.42	4.46	17.96
08/28/97		5.77			NG		22.42	5.41	17.01
11/20/97		5.77			NG		22.42	5.79	16.63
02/12/98		5.14			NG		22.42	4.44	17.98
05/12/98		2.98			NG		22.42	3.43	18.99
08/19/98		5.83			NG		22.42	5.11	17.31
11/19/98		6.05			NG		22.42	6.29	16.13
02/18/99		NG			NG		22.42	NG	NG
05/26/99		5.20			NG		22.42	5.06	17.36

Date	FD-1			FD-2			FD-3		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96	NI	NI	NI	NI	NI	NI	NI	NI	NI
10/16/96	NI	NI	NI	NI	NI	NI	NI	NI	NI
11/18/96	NI	NI	NI	NI	NI	NI	NI	NI	NI
12/16/96	NI	NI	NI	NI	NI	NI	NI	NI	NI
02/17/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
03/27/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
04/15/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
04/17/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
04/24/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
05/21/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
08/28/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
11/20/97	NI	NI	NI	NI	NI	NI	NI	NI	NI
02/12/98	NI	NI	NI	NI	NI	NI	NI	NI	NI
05/12/98	NI	NI	NI	NI	NI	NI	NI	NI	NI
08/19/98	NI	NI	NI	NI	NI	NI	NI	NI	NI
11/19/98	NI	NI	NI	NI	NI	NI	NI	NI	NI
02/18/99	NI	NI	NI	NI	NI	NI	NI	NI	NI
05/26/99	14.80	8.05	6.75	14.76	8.26	6.50	14.20	8.43	5.77

NI = Not Installed

Date	MW-4		MW-6		NEX-1				
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96		NG			NG		24.16	NG	NA
10/16/96		NG			NG		24.16	NG	NA
11/18/96		NG			NG		24.16	NG	NA
12/16/96		NG			NG		24.16	NG	NA
02/17/97		NG			NG		24.16	NG	NA
03/27/97		4.91			4.49		24.16	5.81	18.35
04/15/97		NG			NG		24.16	5.74	18.42
04/17/97		NG			NG		24.16	NG	NA
04/24/97		NG			NG		24.16	NG	NA
05/21/97		NG			4.85		24.16	5.80	18.36
08/28/97		NG			5.34		24.16	6.15	18.01
11/20/97		NG			5.33		24.16	6.45	17.71
02/12/98		NG			4.92		24.16	5.28	18.88
05/12/98		4.16			3.74		24.16	5.20	18.96
08/19/98		NG			5.41		24.16	5.99	18.17
11/19/98		6.99			5.64		24.16	6.31	17.85
02/18/99		6.12			4.72		24.16	NG	NG
05/26/99		6.02			4.83		24.16	6.42	17.74

Date	OBG-1			OBG-2			OBG-4		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96		NG		25.36	NG	NA	25.22	NG	NA
10/16/96		NG		25.36	NG	NA	25.22	NG	NA
11/18/96		NG		25.36	NG	NA	25.22	NG	NA
12/16/96		NG		25.36	NG	NA	25.22	NG	NA
02/17/97		NG		25.36	NG	NA	25.22	NG	NA
03/27/97		8.12		25.36	7.95	17.41	25.22	7.75	17.47
04/15/97		NG		25.36	7.92	17.44	25.22	7.75	17.47
04/17/97		NG		25.36	7.91	17.45	25.22	7.78	17.44
04/24/97		NG		25.36	NG	NA	25.22	7.74	17.48
05/21/97		7.98		25.36	7.81	17.55	25.22	7.64	17.58
08/28/97		8.22		25.36	8.03	17.33	25.22	7.9	17.32
11/20/97		8.43		25.36	8.23	17.13	25.22	8.07	17.15
02/12/98		8.19		25.36	8.01	17.35	25.22	7.84	17.38
05/12/98		7.88/7.87		25.36	7.71	17.65	25.22	7.51	17.71
08/19/98		8.13		25.36	7.94	17.42	25.22	7.76	17.46
11/19/98		8.21		25.36	8.03	17.33	25.22	7.91	17.31
02/18/99		7.97		25.36	7.78	17.58	25.22	7.26	17.96
05/26/99		8.35		25.36	8.17	17.19	25.22	8.05	17.17

Date	OBG-6			OBG-7			OBG-8		
	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation
09/16/96	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
10/16/96	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
11/18/96	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
12/16/96	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
02/17/97	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
03/27/97	24.76	7.95	16.81	25.47	5.61	19.86	24.87	NG	NA
04/15/97	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
04/17/97	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
04/24/97	24.76	NG	NA	25.47	NG	NA	24.87	NG	NA
05/21/97	24.76	NG	NA	25.47	5.79	19.68	24.87	5.60	19.27
08/28/97	24.76	NG	NA	25.47	6.49	18.98	24.87	NG	NA
11/20/97	24.76	NG	NA	25.47	7.09	18.38	24.87	NG	NA
02/12/98	24.76	NG	NA	25.47	5.84	19.63	24.87	NG	NA
05/12/98	24.76	NG	NA	25.47	4.56	20.91	24.87	NG	NA
08/19/98	24.76	NG	NA	25.47	5.83	19.64	24.87	NG	NA
11/19/98	24.76	NG	NA	25.47	7.22	18.25	24.87	NG	NA
02/18/99	24.76	NG	NG	25.47	NG	NG	24.87	NG	NG
05/26/99	24.76	NG	NG	25.47	6.04	19.43	24.87	NG	NG

Date	OBG-9			VEA-4			VEA-7		
	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/Product	Groundwater Elevation
09/16/96	24.93	NG	NA		NG			NG	
10/16/96	24.93	NG	NA		NG			NG	
11/18/96	24.93	NG	NA		NG			NG	
12/16/96	24.93	NG	NA		NG			NG	
02/17/97	24.93	NG	NA		NG			NG	
03/27/97	24.93	5.54	19.39		NG			NG	
04/15/97	24.93	5.54	19.39		NG			NG	
04/17/97	24.93	5.58	19.35		NG			NG	
04/24/97	24.93	NG	NA		NG			NG	
05/21/97	24.93	5.84/5.31	19.49		NG			NG	
08/28/97	24.93	6.56/6.45	18.45		NG			NG	
11/20/97	24.93	7.06	17.87		NG			NG	
02/12/98	24.93	NG	NA		NG			NG	
05/12/98	24.93	4.60/4.58	20.35		NG			NG	
08/19/98	24.93	5.81	19.12		NG			NG	
11/19/98	24.93	7.34	17.59		NG			NG	
02/18/99	24.93	6.36	18.57		NG			NG	
05/26/99	24.93	6.05	18.88	3.25	2.73	0.52		NG	

**ATTACHMENT 5**

**HISTORICAL GROUNDWATER SAMPLING RESULTS**

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 1 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation 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	<1.0	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
	5/98	<1.0	3.0	<1.0	3.0	<1.0	<500	6.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	3.0	<500	3.0	NS	NS
	11/98	<1.0	<1.0	<1.0	2.0	3.0	<400	5.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	1.0	<400	1.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	1.0	<400	1.0	NS	NS	

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 2 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	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	8.0	<500	8.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	5.0	<500	5.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	2.0	<b>1,500</b>	2.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	19	<500	19	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	9.0	<400	9.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	4.0	<400	4.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	3.0	<400	3.0	NS	NS	

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 3 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		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	7.9	<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	7.0	<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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	1.0	<500	1.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS	

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	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	5.0	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	<b>2.0</b>	<1.0	<1.0	<1.0	3.0	<500	5.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	800	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	700	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	<1.0	4.0	1.0	5.0	<1.0	600	10	NS	NS
	2/99	<1.0	3.0	<1.0	<1.0	1.0	<400	4.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	500	<1.0	NS	NS	

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 5 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	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	6.0	<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	<b>700</b>	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1,200</b>	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	<1.0	1.0	<1.0	<1.0	2.0	<400	3.0	NS	NS
	2/99	<1.0	3.0	<1.0	<1.0	<1.0	<400	3.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS	

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 6 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
HRP-10	3/95	<b>304</b>	35.2	257	<b>1140</b>	<50	<b>6,080</b>	NS	NS	NS
	5/96	<b>125</b>	21	54	329	<20	<b>1,740</b>	NS	NS	NS
	11/96	<b>9.0</b>	<1.0	65	<1.0	7.0	<1,000	81	600	<500
	2/97	<1.0	<1.0	<1.0	<1.0	3.0	<500	3.0	<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	3.0	<b>800</b>	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	<b>700</b>	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	1.0	<500	1.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	2/99	<1.0	3.0	<1.0	<1.0	2.0	<400	5.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
page 7 of 18

Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	2/99	<1.0	3.0	<1.0	<1.0	<1.0	<400	3.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	1.0	<400	1.0	NS	NS

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
MW-1	11/96	<b>3.0</b>	<1.0	5.0	<1.0	<1.0	<1,000	11	1,000	<500
	2/97	<1.0	<1.0	4.0	<1.0	<1.0	<500	4.0	<500	600
	5/97	<1.0	<1.0	4.0	<1.0	<1.0	<500	6.0	700	760
	8/97	<1.0	<1.0	16	2B	<1.0	<b>1,000</b>	18	800	600
	11/97	<b>2.0</b>	<1.0	9.0	<1.0	<1.0	<500	11	NS	NS
	2/98	<1.0	1.0	4.0	<1.0	<1.0	<b>800</b>	5.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<b>3.0</b>	<1.0	1.0	<1.0	<1.0	<500	4.0	NS	NS
	11/98	<b>4.0</b>	1.0	1.0	1.0	<1.0	<b>600</b>	7.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS	

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound	BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO	
	Benzene	Toluene	Ethylbenzene	Xylenes						
Remediation Standard	1.0	1,000	700	530	100	500	NA	NA	NA	
Well	Date									
MW-2	11/96	<b>4.0</b>	<1.0	14	<1.0	4.0	<1,000	28	1,200	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1,000</b>	1.0 B	1,200	1,200
	5/97	<1.0	<1.0	3.0	<1.0	<1.0	<500	3.0	500	580
	8/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<500	<500
	11/97	<b>2.0</b>	<1.0	3.0	1.0	3.0	<500	9.0	NS	NS
	2/98	<b>2.0</b>	1.0	6.0	<1.0	<1.0	<b>700</b>	9.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	3.0	500	3.0	NS	NS
	8/98	<1.0	<1.0	<1.0	2.0	1.0	<500	3.0	NS	NS
	11/98	<b>2.0</b>	2.0	<1.0	2.0	4.0	<400	10	NS	NS
	2/99	<1.0	<1.0	2.0	1.0	4.0	<b>700</b>	7.0	NS	NS
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<b>500</b>	<1.0	NS	NS	

Notes: NA = Not Analyzed

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

<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
MW-3	2/97	36	23	72	500	5.0	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	2.0	3.0	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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/98	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0	NS	NS
	2/99	4.0	5.0	39	75	2.0	800	125	NS	NS
	5/99	6.0	15	<1.0	2.0	16	900	39	NS	NS

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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  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
OBG-8A	3/95	<b>72</b>	24.6	25.9	62.4	9.29	<473	NS	NS	NS
	5/96	<b>12.0</b>	<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	<b>3.0</b>	25	5.0	5.0	<1.0	<500	38	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	<b>9,300</b>	<1.0	NS	NS
	5/98	<1.0	2.0	<1.0	2.0	<1.0	<b>3,800</b>	4.0	NS	NS
	8/98	<b>2.0</b>	<1.0	3.0	<1.0	1.0	<b>2,400</b>	6.0	NS	NS
	11/98	1.0	<1.0	<1.0	1.0	2.0	<b>2,300</b>	4.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	2.0	<b>4,400</b>	2.0	NS	NS
5/99	<b>6.0</b>	<1.0	8.0	<1.0	5.0	<b>800</b>	19	NS	NS	

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DRO=Diesel Range Organics, GRO=Gasoline Range Organics  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	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	<b>3,000</b>	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	3.0	<b>11,000</b>	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	<b>3,100</b>	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<b>2,100</b>	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	3.0	<b>1,000</b>	3.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	3.0	<b>800</b>	3.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1,300</b>	<1.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	1.0	<b>800</b>	1.0	NS	NS

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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
WE-2D(B)	11/96	1.0	<1.0	<1.0	<1.0	<1.0	<1,000	3.0	<500	<500
	2/97	<b>2.0</b>	<1.0	<1.0	<1.0	3.0	<500	5.0	<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	4.0	<b>11,000</b>	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	<b>1,000</b>	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	3.0	<b>1500.0</b>	3.0	NS	NS
	8/98	<b>2.0</b>	<1.0	<1.0	<1.0	5.0	<500	7.0	NS	NS
	11/98	<b>2.0</b>	<1.0	<1.0	1.0	3.0	400.0	6.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		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	<b>50</b>	22	101	144	<10	<b>1,570</b>	NS	NS	NS
	11/96	<b>7.0</b>	<1.0	9.0	4.0	14	<1,000	34	<500	<500
	2/97	<b>5.0</b>	<1.0	14	3.0	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	<b>4.0</b>	<1.0	<1.0	15	7.0	<500	26	NS	NS
	5/98	<b>2.0</b>	<1.0	10	<1.0	7.0	<b>1,200</b>	19	NS	NS
	8/98	<b>2.0</b>	<1.0	3.0	<1.0	6.0	<500	11	NS	NS
	11/98	<1.0	1.0	<1.0	<1.0	4.0	<400	5.0	NS	NS
	2/99	<b>2.0</b>	<1.0	11	5.0	8.0	<400	26	NS	NS
5/99	<b>2.0</b>	2.0	13	1.0	<1.0	<400	18	NS	NS	

Notes: NA = Not Analyzed  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	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	<b>2.0</b>	<1.0	<1.0	<1.0	14	<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	6.0	<500	6.0	<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	<b>220</b>	<b>3,000</b>	220	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	38	<500	38	NS	NS
	2/98	<b>2.0</b>	<1.0	<1.0	<1.0	<b>160D</b>	<500	162	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	2.0	<500	2.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	94D	<500	94	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	36	500	36	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	9.0	<400	9.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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Bold numbers indicate an exceedance of State of CT Clean-up Standards  
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DRO=Diesel Range Organics, GRO=Gasoline Range Organics  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
WE-4	3/95	<b>267</b>	29.8	392	<b>712</b>	<40	<b>5,180</b>	NS	NS	NS
	5/96	<b>160</b>	16	301	<b>617</b>	<40	<b>3,680</b>	NS	NS	NS
	11/96	<b>41</b>	1.0	100	2.0	19	<1,000	166	1,100	500
	2/97	<b>21</b>	<1.0	27	1.0	17	<500	66	500	700
	5/97	<b>13</b>	<1.0	13	<1.0	19	<500	45	700	540
	8/97	<b>7.0</b>	<1.0	19	<b>3B</b>	<b>3B</b>	<b>700</b>	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	<b>1,300</b>	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<b>600</b>	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	1.0	<500	1.0	NS	NS
	11/98	<b>5.0</b>	<1.0	7.0	<1.0	4.0	400	16	NS	NS
	2/99	<1.0	<1.0	<1.0	1.0	<1.0	<400	1.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		1.0	1,000	700	530	100	500	NA	NA	NA
Well	Date									
WE-5	11/96	<b>240D</b>	410D	<b>720D</b>	<b>4,300E</b>	27	<b>9,000</b>	5,697	12,000	8,900
	2/97	<b>42D</b>	10	89D	490D	6.0	<b>2,000</b>	637	2,000	1,200
	5/97	<b>370</b>	190	<b>840</b>	<b>3,900D</b>	<1.0	<b>4,000</b>	5,300	11,000	16,000
	8/97	<b>210D</b>	<1.0	210D	470DB	63D	<b>5,000</b>	953	3,900	2,500
	11/97	<b>11</b>	<1.0	2.0	6.0	27	<b>1,100</b>	46	NS	NS
	2/98	<b>11</b>	<1.0	10	14	3.0	<b>1,800</b>	38	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1,400</b>	<1.0	NS	NS
	8/98	<b>94</b>	1.0	30	28	31	<b>2,400</b>	184	NS	NS
	11/98	<b>4.0</b>	<1.0	<1.0	1.0	37	<b>1,500</b>	42	NS	NS
	2/99	<b>12</b>	1.0	6.0	78	5.0	<b>1,000</b>	102	NS	NS
	5/99	<b>99</b>	2.0	8.0	49	<1.0	<b>1,700</b>	158	NS	NS

Notes: NA = Not Analyzed  
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  
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**Table 1**  
**Historical Groundwater Sampling Results**  
**Dolphin Mart - March 1995 - May 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound	BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO	
	Benzene	Toluene	Ethylbenzene	Xylenes						
Remediation Standard	1.0	1,000	700	530	100	500	NA	NA	NA	
Well	Date									
WE-6	11/96	5.0	210 D	71 D	<b>630 D</b>	<1.0	<1,000	916	2,000	1,400
	2/97	3.0	4.0	8.0	12	2.0	<500	29	800	700
	5/97	3.0	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	2.0	<1.0	3.0	2.0	4.0	<500	11	NS	NS
	2/98	2.0	<1.0	5.0	3.0	4.0	500	14	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	<1.0	NS	NS
	8/98	3.0	4.0	9.0	44	<1.0	<500	60	NS	NS
	11/98	2.0	<1.0	<1.0	2.0	5.0	<400	9.0	NS	NS
	2/99	<1.0	1.0	3.0	12	2.0	400	18	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (By EPA Method 6010/6020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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	6.0	34	28	<10	NS	196	159	554
	11/96	370D	14	33	61 D	<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
	5/98	790	280	1,200	4,900	<100	9,200	7,170	NS	NS
	8/98	130	16	330	1,100	<10	2,200	1,576	NS	NS
	11/98	140	8.0	32	75	<1.0	4,200	255	NS	NS
	2/99	56	2.0	2.0	3.0	2.0	1,900	65	NS	NS
	5/99	590	74	560	2,000	<20	1,900	3,224	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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	2,400 E	<40	5,000	4,054	500	7,800
	2/97	430 D	21	300	1,000 D	<10	2,000	1,763 B	2,200	4,800
	5/97	430 D	21	640 D	2,300 D	<1.0	1,000	3,391 D	1,500	6,700
	8/97	470	90	650	2,000	<1.0	2,000	3,210	3,500	6,200
	11/97	250 D	23	260 D	530 D	<1.0	<500	1,063	NS	NS
	2/98	97 D	13	110 D	240 D	<1.0	<500	460	NS	NS
	5/98	21	4.0	28	78	<1.0	<500	131	NS	NS
	8/98	63	8.0	170D	<190 D	<1.0	800	431	NS	NS
	11/98	1.0	<1.0	3.0	<1.0	<1.0	<400	4.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	5.0	<400	5.0	NA	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (By EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-7	5/96	5.0	<1.0	<1.0	<1.0	<2.0	NS	8.0	38	<473
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	4.0	<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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound	BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO	
	Benzene	Toluene	Ethylbenzene	Xylenes						
Remediation Standard	215	23,500	50,000	21,300	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
	5/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS	

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-9 (destroyed)	5/96	<1.0	<1.0	<1.0	<1.0	2.0	NS	4.0	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
	5/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

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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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-11	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	3.0	<500	<500
	2/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	2.0	<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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO	
		Benzene	Toluene	Ethylbenzene	Xylenes						
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA	
Well	Date										
ERM-12	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	NS	1.0	27	<473	
	5/96	1.0	2.0	7.0	14	<2.0	NS	61	4,300	1,390	
	11/96	<1.0	2.0	<1.0	9.0	<1.0	3,000	16	7,300	6,700	
	2/97	<1.0	1.0	2.0	9.0	<1.0	15,000	13	4,800	1,300	
	5/97	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	<1.0	<1.0	<1.0	4.0	<1.0	7,100	4.0	NS	NS	
	2/98	<1.0	<1.0	<1.0	1.0	<1.0	23,000	1.0	NS	NS	
	5/98	<1.0	<1.0	2.0	2.0	<1.0	5,400	4.0	NS	NS	
	8/98	<5.0	<5.0	<5.0	<5.0	<5.0	5,200	<5.0	NS	NS	
	11/98	<1.0	<1.0	<1.0	2.0	<1.0	5,100	2.0	NS	NS	
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	<1.0	NS	NS	
5/99	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	<1.0	NS	NS		

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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	9.0	<100	<473
	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	2.0	<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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	1.0	<1.0	<500	1.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-14	3/95	<b>292</b>	4,880	8,190	6,020	<2.0	NS	19,995	4,840	3,670
	5/96	<b>305</b>	5,670	1,250	8,350	<2.0	NS	22,543	7,290	3,890
	11/96	<b>270</b>	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
	5/98	80	2,200	690	5,400	<1.0	11,000	8,370	NS	NS
	8/98	<b>270</b>	5,900	1,600	16,000	<100	24,000	23,770	NS	NS
	11/98	<50	1,000	730	7,300	<50	16,000	9,030	NS	NS
	2/99	<100	420	160	5,300	<100	20,000	5,880	NS	NS
	5/99	<50	590	500	4,200	<50	15,000	5,290	NS	NS

Notes: NA = Not Analyzed  
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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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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	8.0	9.0	4.0	25	<1.0	600	46	NS	NS
	5/98	<b>1,100</b>	2,700	810	3,200	<50	11,000	7,810	NS	NS
	8/98	<b>1,000</b>	2,200	1,100	3,600	<100	5,900	7,900	NS	NS
	11/98	150 D	270 D	280 D	1,300 D	<1.0	3,100	2,000	NS	NS
	2/99	38	64	48	170	1.0	600	321	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2  
Historical Groundwater Sampling Results  
NEX - March 1995 - June 1999  
Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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	5.0	<1.0	7.0	30	<1.0	15,000	42	NS	NS
	2/98	8.0	<1.0	3.0	15	6.0	25,000	32	NS	NS
	5/98	25	<1.0	9.0	18	13	4,800	65	NS	NS
	8/98	LP	LP	LP	LP	LP	LP	LP	LP	LP
	11/98	LP	LP	LP	LP	LP	LP	LP	LP	LP
	2/99	12	<1.0	7.0	29	9.0	57,000	57	NS	NS
	5/99	8.0	<1.0	2.0	3.0	14	1,900	27	NS	NS

Notes: NA = Not Analyzed  
 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  
 LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2  
Historical Groundwater Sampling Results  
NEX - March 1995 - June 1999  
Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-17	11/96	10	<1.0	<1.0	<1.0	9.0	<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	2.0	<1.0	<1.0	<1.0	<1.0	<500	2.0	NS	NS
	2/98	3.0	<1.0	<1.0	<1.0	<1.0	<500	3.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	13	<1.0	<1.0	<1.0	3.0	900	16	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
 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  
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**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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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	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
ERM-19	11/96	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	1.0	<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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<10	<10	<10	13	<10	<500	13	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
FD-1	5/98	210	3.0	140	29	66	48,000	448	NS	NS
	8/98	160	<10	55	<10	140	3,300	355	NS	NS
	11/98	42	<5.0	5.0	<5.0	220	9,000	267	NS	NS
	2/99	<50	<50	<50	<50	780	38,000	780	NS	NS
	5/99	160	6.0	55	11	410	11,000	642	NS	NS

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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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 416.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
FD-2	5/98	63	<1.0	<1.0	3.0	31	14,000	97	NS	NS
	8/98	62	1.0	3.0	<1.0	36	3,300	102	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	4.0	4,000	4.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	25	5,000	25	NS	NS
	5/99	58	<1.0	1.0	<1.0	30	2,500	89	NS	NS
FD-3	5/98	<1.0	<1.0	<1.0	<1.0	9.0	<500	9.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	4.0	<600	4.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	3.0	<1,300	4.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	10	<400	10	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	4.0	<400	4.0	NS	NS

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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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
MW-4	2/97	29	1.0	<1.0	3.0	<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
	5/98	15	2.0	<1.0	<1.0	<1.0	1,000	17	NS	NS
	8/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/98	<b>490</b>	3,000	280	3,100	<50	NS	6,870	NS	NS
	2/99	<250	6,500	470	6,500	<250	8,800	13,470	NS	NS
	5/99	<b>230</b>	1,000	410	3,700	<20	NA	5,340	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 6010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
MW-6	2/97	<1.0	9.0	<1.0	<1.0	<1.0	NS	9.0	NS	NS
	5/97	18	<1.0	2.0	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	6.0	<1.0	<1.0	3.0	<1.0	<500	9.0	NS	NS
	2/98	8.0	<1.0	<1.0	3.0	<1.0	<500	11	NS	NS
	5/98	1.0	<1.0	<1.0	<1.0	<1.0	<500	1.0	NS	NS
	8/98	170	8.0	13	62	<2.0	<500	253	NS	NS
	11/98	5.0	<1.0	<1.0	2.0	<1.0	<400	7.0	NS	NS
	2/99	71	<1.0	<1.0	3.0	3.0	<400	77	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/6020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
NEX-1	3/95	<1.0	<1.0	<1.0	<1.0	<2.0	NS	7.0	35	<143
	5/96	<1.0	<1.0	<1.0	<1.0	<2.0	NS	8.0	<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	2.0	11	4.0	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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS

Notes: NA = Not Analyzed  
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Bold numbers indicate an exceedance of State of CT Clean-up Standards  
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DRO=Diesel Range Organics, GRO=Gasoline Range Organics  
L P = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
OBG-1	5/97	480	3,300 D	1,100D	10,000 D	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	7,100 D	2,200	15,000 D	24,000 D	160,000	49,700	NS	NS
	5/98	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/98	340	1,400	790	5,000	1,600	25,000	9,130	NS	NS
	11/98	13,000	51,000	15,000	110,000	1,000	86,000	190,000	NS	NS
	2/99	2,500	16,000	1,600	15,000	4,600	40,000	39,700	NS	NS
	5/99	130	840	270	7,000	720	27,000	8,960	NS	NS

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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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
OBG-2	5/97	77	280	530	9,800 D	290	87,000	10,977	120,000	44,000
	8/97	<b>470</b>	410	1,100	11,000	830	180,000	13,990	99,000	75,000
	11/97	<b>370</b>	380	960	9,200	40,000	23,000	50,910	NS	NS
	2/98	<b>410</b>	340	680	7,900	26,000 D	120,000	35,330	NS	NS
	5/98	<b>570</b>	<1.0	650	6,300	15,000	33,000	22,520	NS	NS
	8/98	<b>330</b>	620	760	5,300	27,000 D	25,000	34,010	NS	NS
	11/98	<250	300	480	5,600	2,000	25,000	8,380	NS	NS
	2/99	<100	500	220	4,100	1,600	39,000	6,420	NS	NS
	5/99	<50	58	290	3,700	2,000	29,000	6,048	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
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	2.0	<1.0	6,000	2.0	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	3.0	<1.0	7.0	8.0	NS	18	NS	NS
	2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	5.0	4,100	5.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	5.0	6,100	5.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	<250	3,100	1,200	11,000	<250	160,000	15,300	NS	NS
	5/99	<100	<100	<100	1,400	<100	NA	1,400	NS	NS

Notes: NA = Not Analyzed  
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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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	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
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	900	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
OBG-8 (destroyed)	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
	5/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/99	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed  
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  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 416.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
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
	5/98	LP	LP	LP	LP	LP	LP	LP	LP	LP
	8/98	56	280	250	2,300	23	NS	2,909	NS	NS
	11/98	31	97	120	1,200	<5.0	5,800	1,448	NS	NS
	2/99	77	190 D	32	340 D	1.0	2,900	640	NS	NS
	5/99	140	4,700	2,500	12,000	<100	1,800	19,340	NS	NS

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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  
LP = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M

**Table 2**  
**Historical Groundwater Sampling Results**  
**NEX - March 1995 - June 1999**  
**Naval Submarine Base, Groton, CT**

(analytical results in µg/l)  
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Compound		BTEX				MTBE	TPH (By EPA Method 418.1) <sup>1</sup>	Total Volatiles (by EPA Method 8010/8020)	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NA	NA	NA	NA
Well	Date									
VEA-4	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<600	<1.0	NS	NS
	11/98	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	5/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	6/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS	NS
VEA-7	8/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	11/98	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	2/99	<1.0	<1.0	<1.0	<1.0	1.0	<400	1.0	NS	NS
	5/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	6/99	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NS	NS
VEA-14	8/98	<10	<10	410	1,000	<10	<500	1,410	NS	NS
	11/98	<1.0	<1.0	16	44	<1.0	1,800	60	NS	NS
	2/99	<1.0	<1.0	21	23	<1.0	5,000	44	NS	NS
	5/99	<1.0	<1.0	48	<1.0	1.0	3,800	49	NS	NS

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Bold numbers indicate an exceedance of State of CT Clean-up Standards  
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DRO=Diesel Range Organics, GRO=Gasoline Range Organics  
L P = Liquid-phase petroleum present; well could not be sampled  
<sup>1</sup> = Beginning 5/98, TPH was analyzed using EPA Method 8100M