N00129.AR.001253
NSB NEW LONDON
5090.3a

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

NEW LONDON NAVAL SUBMARINE BASE
GROTON, CONNECTICUT

Month: April 2000

Prepared by:

IT Corporation
Prepared by:

Jonathan D. Sam /For
Stephen R. Daly
Associate Environmental Scientist

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 operating 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 United States Navy, the SVE system was deactivated. The air sparge system was previously deactivated on January 30, 1999. The site is visited bi-weekly in order to maintain site security and to check conditions of all road boxes.

A site map has been included as **Figure 1**. The site was visited on April 6 and 28, 2000. The monitoring forms for the site visit conducted during the month of April 2000 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 sample was collected for analysis during the April 2000 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 2,153 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 April 2000. 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 or water discharge sampling was conducted during the April 2000 site visits at the Dolphin Mart.

Monitoring Well Gauging – The most recent round of site monitoring, which included monitoring well gauging was conducted on March 20, 2000 during the quarterly groundwater monitoring event. On March 20, 2000 depth to groundwater at the site ranged from 1.28 feet in MW-1 to 8.47 feet in WE-2D. Historical well gauging data has been included in **Attachment 4**.

Monitoring Well Sampling – The most recent round of site monitoring well sampling was conducted on March 20, 2000. The March Quarterly Groundwater Sampling Report was issued under separate cover. The historical groundwater sampling results have been summarized in **Table 1** of **Attachment 5**.

Additional Activities – Drive-by site visits were conducted on April 6 and 28, 2000 to check the site security and the condition of the road boxes. The remediation shed and road boxes were found to be in satisfactory condition during these visits.

NEX AIR SPARGE/SVE SYSTEM

System Status - The remediation system at the site had 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. Approximately 267,061 gallons of water had been extracted, treated, and discharged by the NEX system as of April 28, 2000.

A site map has been included as **Figure 2**. The site was visited on April 6 and 28, 2000. The monitoring forms for operation and maintenance (O&M) conducted during the month of April 2000 are included in **Attachment 1**. A weekly breakdown of the month's field activities has been included as **Attachment 2**.

Mass Removal – The total hydrocarbon mass extracted by the SVE system, as of April 28, 2000, was approximately 3,975.88 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.

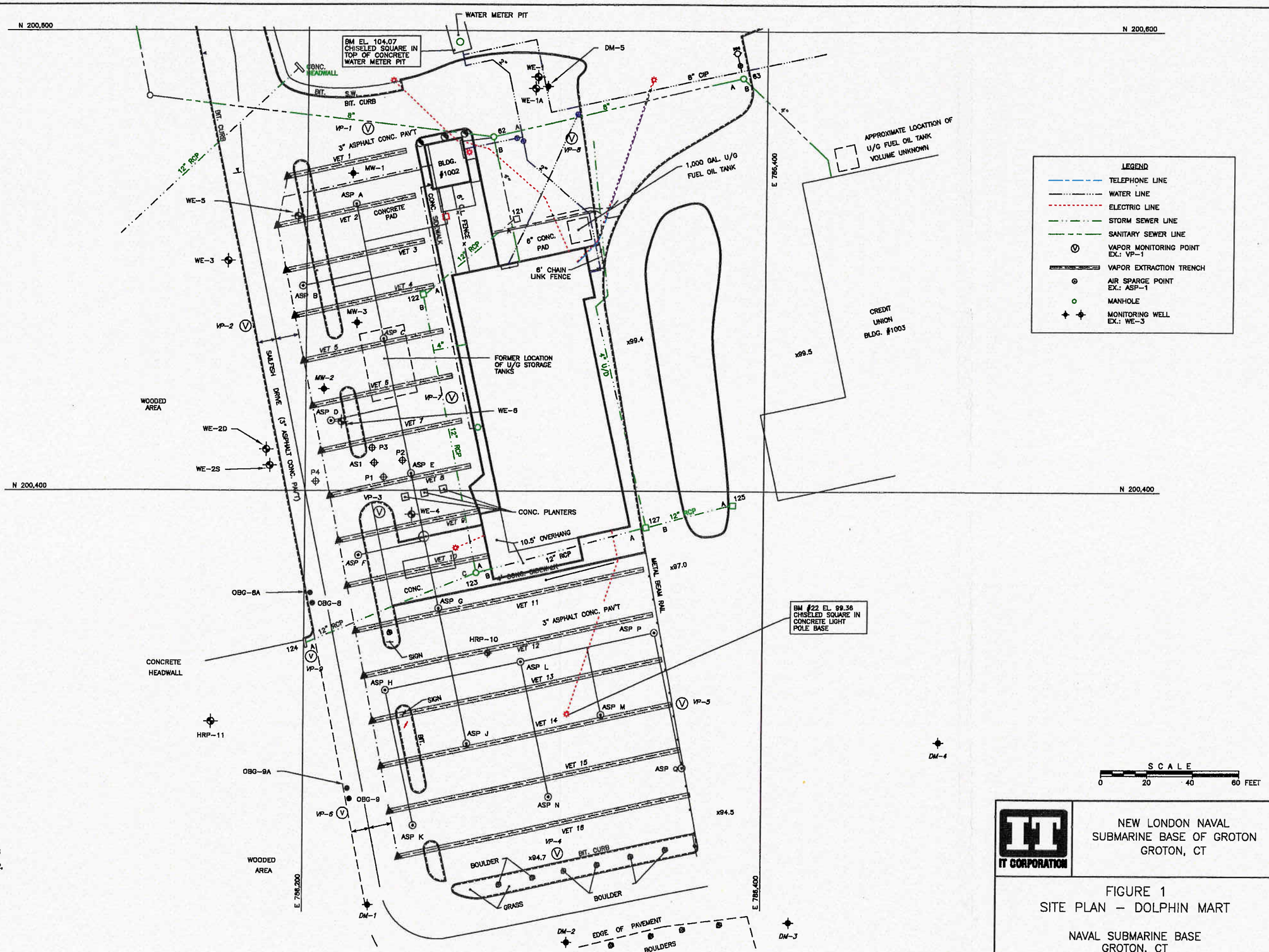
Discharge Monitoring Sampling – The most recent round of water discharge sampling was conducted on April 6, 2000. All parameters of the discharge permit were adhered to. Results were submitted to the CTDEP under separate cover.

Monitoring Well Gauging – The most recent round of site monitoring, including monitoring well gauging was conducted on March 14, 2000. Depth to groundwater at the site ranged from 2.56 feet in VEA-4 to 8.71 feet in FD-3.

Monitoring Well Sampling – The most recent round of site monitoring well sampling was conducted on March 14, 2000. The March Quarterly Groundwater Sampling Report was issued under separate cover. The historical groundwater sampling results have been summarized as **Table 2** in **Attachment 5**.

Additional Activities – During the April 6, 2000 site visit, field personnel reported construction activities being performed at the NEX site. Construction activities included soil excavation with repair of a sanitary sewer line. As a result of these excavation activities, damage was reported to at least one soil vapor extraction point (VEB-3) and potentially other vent and/or sparge lines. Field personnel reported air being drawn into the subsurface in the vicinity of the former VEB-3 vent point area. A full assessment of any additional damage will be conducted with the results reported as part of the May 2000 Monthly Status Report.

FIGURES



THIS MAP WAS PREPARED FROM MAPS LISTED BELOW:

1. NAUTILUS PARK, GROTON, CONN. EXISTING UTILITIES MAPS PREPARED BY CULLINAN ENGINEERING CO., INC. SCALE 1"=40' DATE 3/25/83 NAVFAC DRAWING NO'S. 2,064,332, 2,064,353 AND 2,064,374.
2. MONITOR WELL LOCATION AND GROUND WATER CONTOUR MAP OF JANUARY 21, 1992 DOLPHIN MART SITE US SUBASE, GROTON, CT. PREPARED BY EW-NORTHEAST SCALE 1"=20' APRIL, 1992.
3. UTILITY DATA FROM AS-BUILT DRAWINGS AND UTILITY MAPS; EXACT LOCATIONS MUST BE VERIFIED IN FIELD.
4. ALL TOPOGRAPHIC FEATURES AND INVERTS SHOWN HEREON SHALL BE FIELD VERIFIED.

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	WIN	L. Avery 3/30/99	---	---	1405-17

DATE: 3/30/99
TIME: 2:02 PM
FORMAT REVISION 2/26/99

IT CORPORATION

NEW LONDON NAVAL
SUBMARINE BASE OF GROTON
GROTON, CT

FIGURE 1
SITE PLAN – DOLPHIN MART

NAVAL SUBMARINE BASE
GROTON, CT

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE	IMAGE
1405-16	---	---	L. Avery 3/30/99	WIN	---
				X-REF	---

THIS MAP WAS PREPARED FROM MAPS LISTED BELOW:

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

DATE: 3/30/99
TIME: 2:07 PM
FORMAT REVISION: 2/26/99

IT CORPORATION

NEW LONDON NAVAL SUBMARINE BASE OF GROTON
GROTON, CT

FIGURE 2
SITE PLAN – NEX

NAVAL SUBMARINE BASE
GROTON, CT

Figure 3A- Mass Removal Rate

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

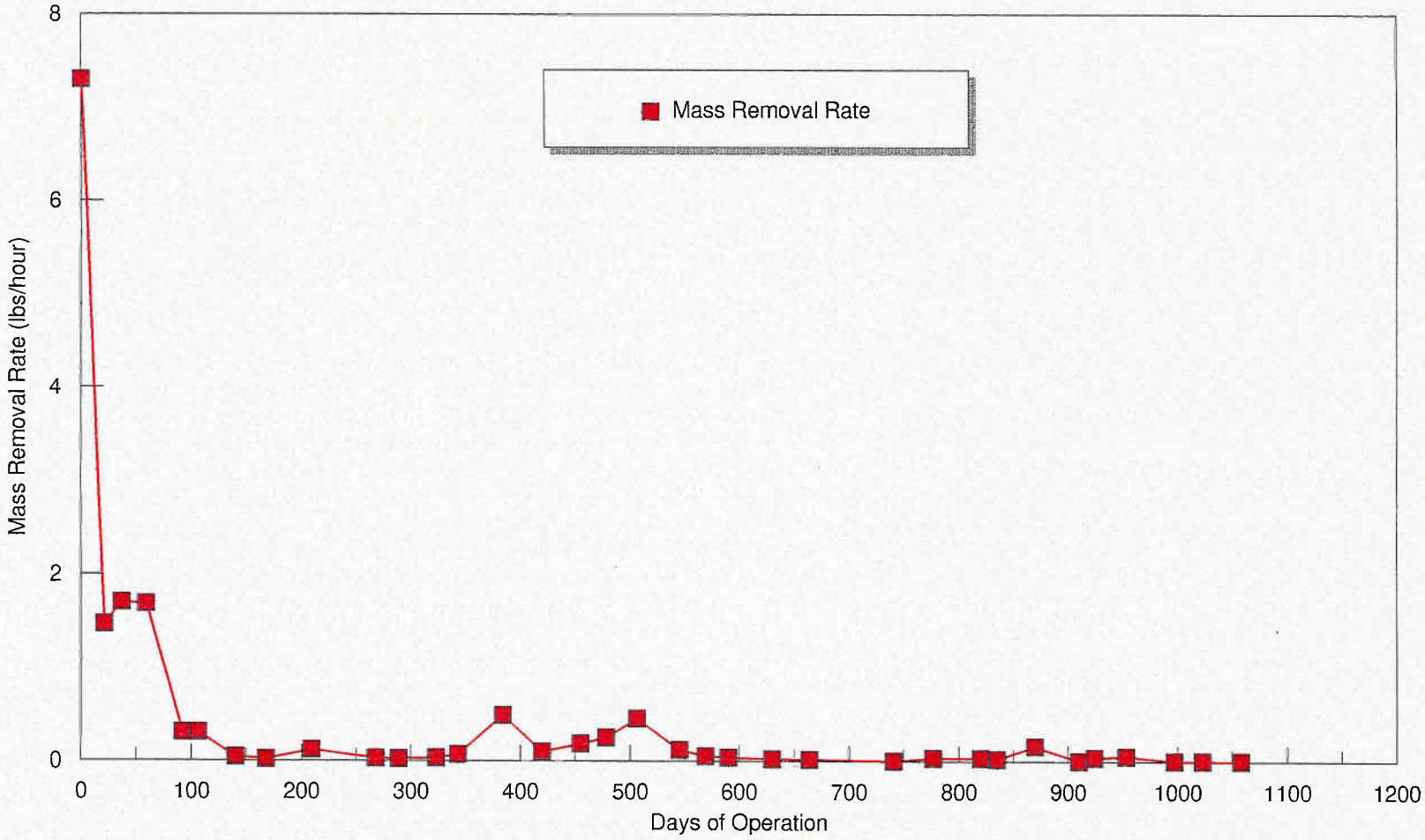


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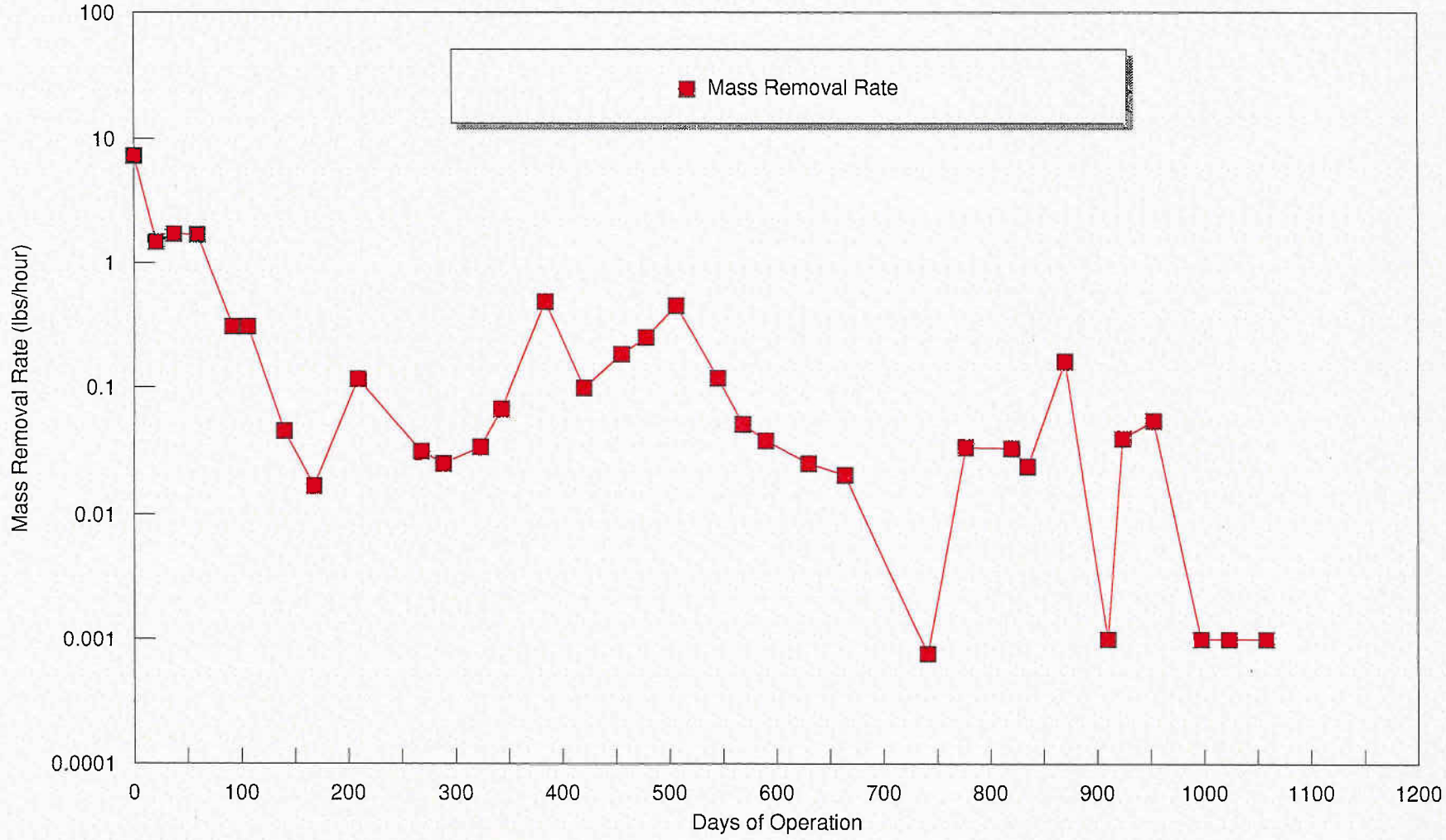
Figure 3B- Mass Removal Rate

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



APR00.WK4

Figure 4 - Cumulative Mass Removed versus Time

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

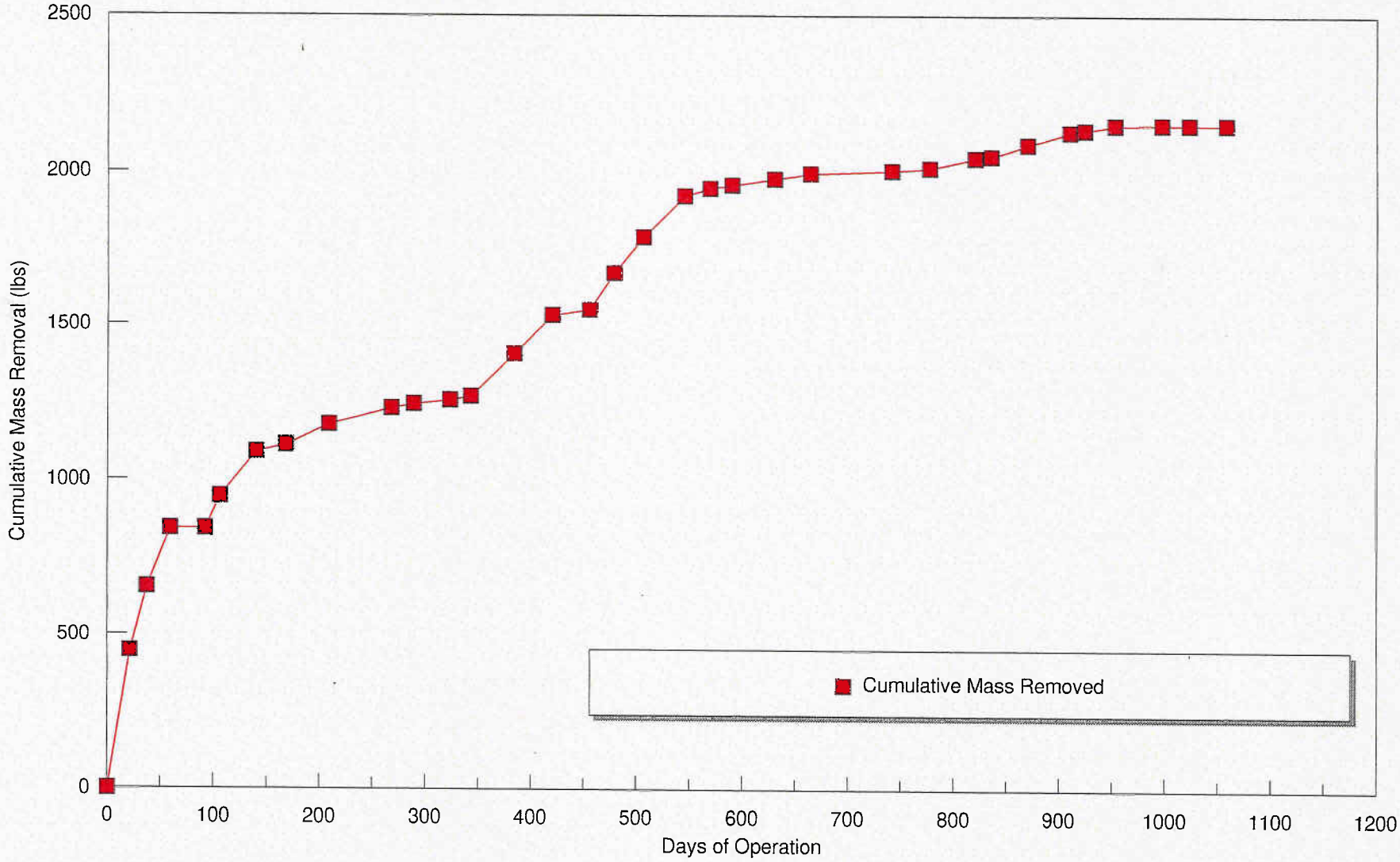


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Figure 5A - Mass Removal Rate

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

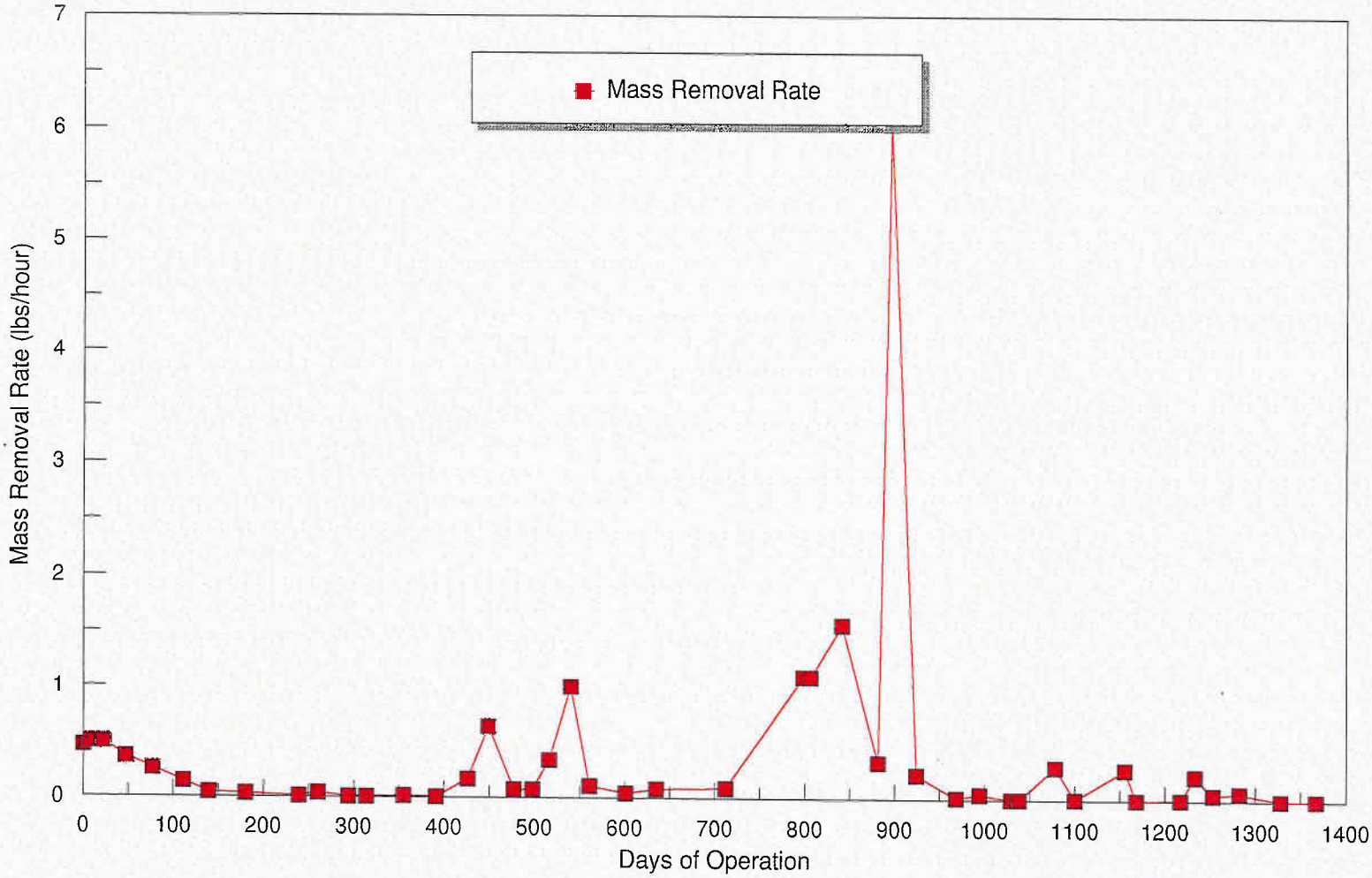

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Figure 5B - Mass Removal Rate

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

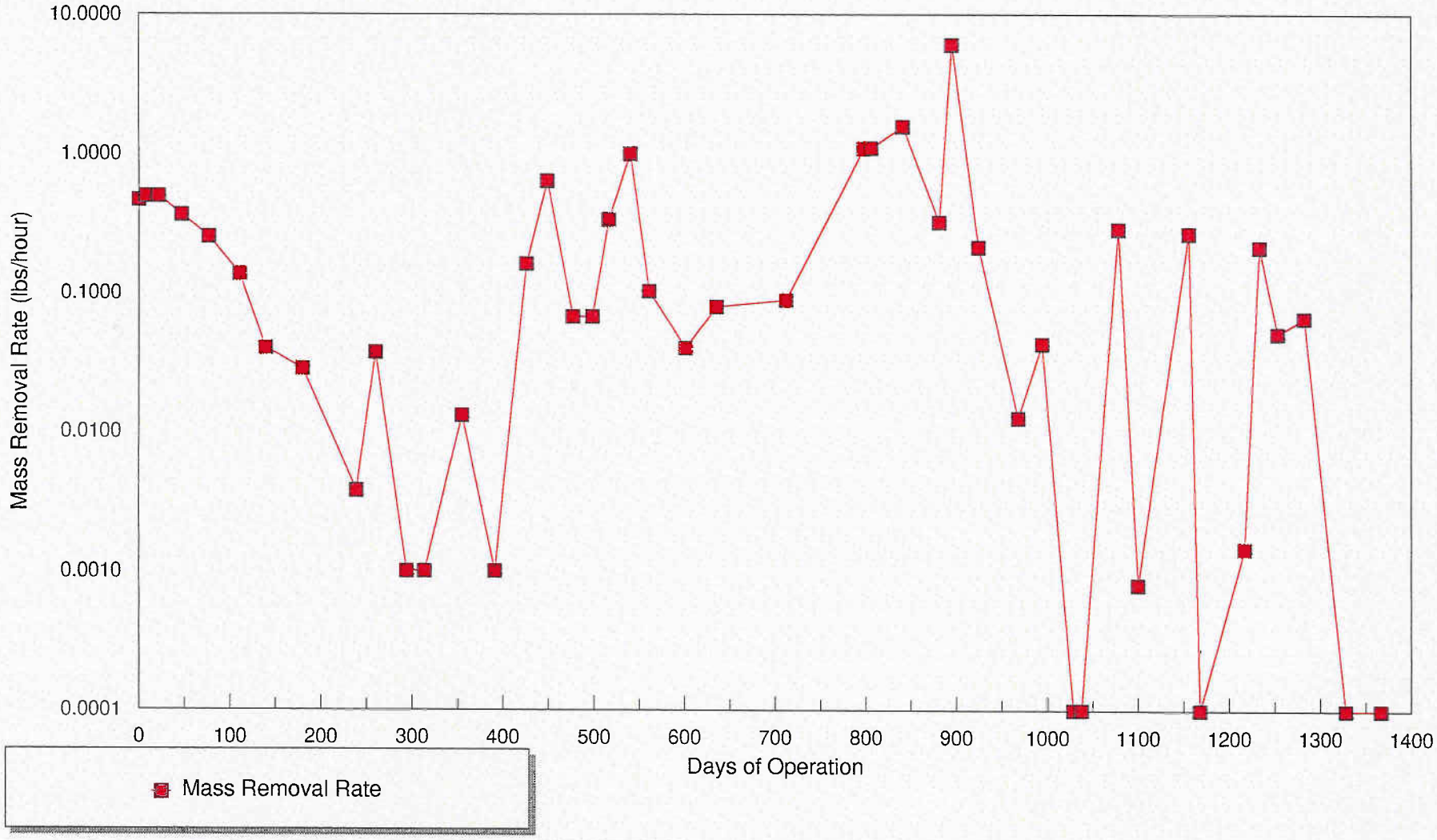

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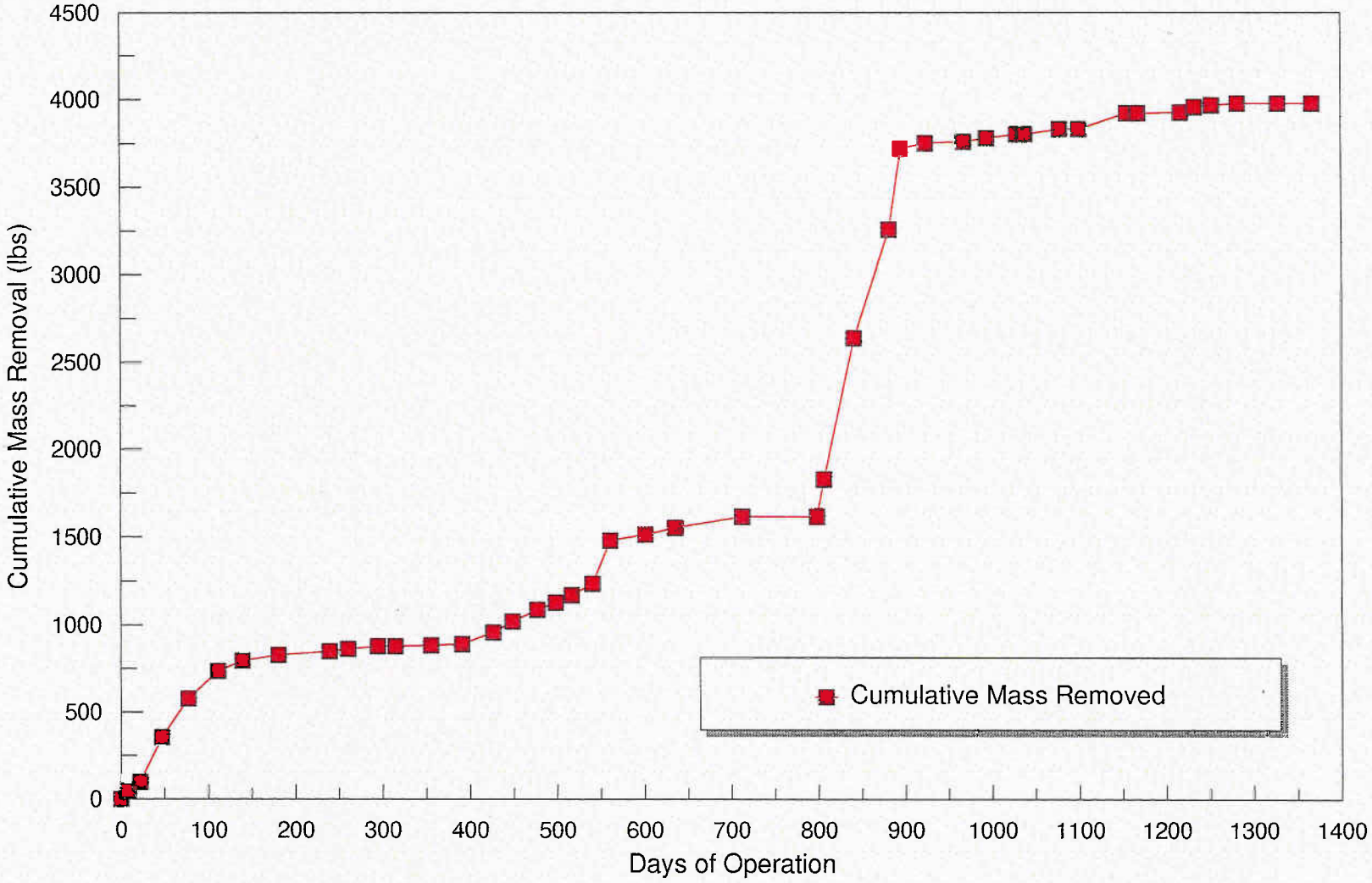
Figure 6 - Cumulative Mass Removed versus Time

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



APR00.WK4

ATTACHMENT 1

SITE VISIT FORMS

NAVAL SUBMARINE BASE
GROTON, CT.
87260014

Date: 4/6/00
Project Number: 87260014
DB/SCA Box Check: Yes / No
Site Arrival Time: 8:30
Total Hours on Site:

Staff: ~~John~~ Bill
Task Number: 0401
Bill Code Override:
Site Departure Time:
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:

R	C	
☑	☐	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
☒	☑	Conduct drive-by and check shed security.
☐	☐	Check condition of all roadboxes

NEX :

R	C	
☒	☐	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
☒	☑	Assess radiator damage on sparge line, determine which line is effected

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		

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Groton SubBase WCD

87260014

4.6.00

4.5.00

- reviewed FWR + double checked with PM.

4.6.00

8:40 - Arr. on site @ NEX.

- Shed secure.
- running on arr were V1 + Rad 1, V3 down due to high water.
- Had to change fuse on V3 sump pump. Cause of the fuse failure seems to be absorber C/D back pressure. Inf is 16psi but the EFF is considerably lower than units A/B, unit A/B Inf psi = 15.

* - Please check last changeout on C/D.

- Under normal operation this pump, (V3), pumps 60% of total water.
- Cleaned probes and confirmed operation.
- tightened bolts on V3 and checked V1.
- Lubed all motors + blowers.
- Surged system to pull water to clear lines and improve flow.
- Completed DMR sampling

12:55 - Proceeded to Dolphin to meet courier.

- Called to confirm 1:00pm meeting time with C.A. (OK)
- Checked over Dolphin site while waiting.
- All roadboxes ok, shed secure + OK.
- CA arr. to pickup samples
- Returned back to NEX to complete system check and vapor points.
- Called JPS to discuss restarting sparge on east side.

* - Sparge system can be isolated from inside shed.

- Will return old Dolphin heat exchanger to Windsor to see about repair or replacement

* - The sewer line construction going on in the Ballfields has resulted in the breaking of a couple of lines. I can not inspect at this time but getting as close as I could I could tell for sure UEB 5 was broken due to the sound of vacuum. The area around SPB B+9 were heavily dug up and due to the lack of backpressure in the sparge system I would say the broke some of those too.

- All systems left on and running. Hopefully when these guys [illegible]

ARR.

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

Date: 4.6.00
Time: 9:00
Technician: WCP

AIR COMPRESSOR SYSTEM

Flow Rate	0.0	SCFM	Total Flow	0.0	SCFM

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

SOIL VAPOR EXTRACTION SYSTEM

Eastern Flow Rate	11	SCFM	Total Flow	~~184401895~~ NA	SCFM
Western Flow Rate	119	SCFM	Total Flow	~~53229019~~ NA	SCFM

Vacuum Pump V-1		Vacuum Pump V-2	
Vacuum	2.5 °Hg	Vacuum	off °Hg
Temperature	101 °F	Temperature	°F
Particulate Filter	ok	Particulate Filter	
Flow Control Valve Setting	100	Flow Control Valve Setting	
Bleed Air Valve Setting	10	Bleed Air Valve Setting	
Liquid Level	0	Liquid Level	

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

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B		Carbon Adsorber C/D	
Pressure	.43 H_2O ~~psi~~	Pressure	0.0 psi
Inf. VOC Level	6.9 ppm	Inf. VOC Level	NA ppm
Mid. VOC Level	3.0 ppm	Mid. VOC Level	NA ppm
Eff. VOC Level	0.4 ppm	Eff. VOC Level	14.7 ppm
Change out Date	NA	Change out Date	NA

WATER TREATMENT

Flowmeter Reading 265850.1 Gallons (arrival reading) Flowmeter Reading NA Gallons (departure reading)

COMMENTS

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

Dep.

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

Date: 4.6.00
Time: 2:40
Technician: LCD

AIR COMPRESSOR SYSTEM

Flow Rate	SCFM	Total Flow	SCFM
Air Compressor C-1		**Air Compressor C-2**	
Pressure	2.5 psi	Pressure	NA psi
Temperature	148 °F	Temperature	°F
Flow Control Valve Setting	100 Eastonly	Flow Control Valve Setting	
Bleed Valve	50	Bleed Valve	
Radiator	ON / OFF	Radiator	ON / OFF

SOIL VAPOR EXTRACTION SYSTEM

Eastern Flow Rate	269 SCFM	Total Flow	18440/1999 SCFM
Western Flow Rate	299 SCFM	Total Flow	53229184 SCFM
Vacuum Pump V-1		**Vacuum Pump V-2**	
Vacuum	3.0 "Hg	Vacuum	off "Hg
Temperature	100 °F	Temperature	°F
Particulate Filter	04	Particulate Filter	
Flow Control Valve Setting	100	Flow Control Valve Setting	
Bleed Air Valve Setting	570	Bleed Air Valve Setting	
Liquid Level	0	Liquid Level	
Vacuum Pump V-3		**Vacuum Pump V-4**	
Vacuum	3.0 "Hg	Vacuum	off "Hg
Temperature	102 °F	Temperature	°F
Particulate Filter	04	Particulate Filter	
Flow Control Valve Setting	100	Flow Control Valve Setting	
Bleed Air Valve Setting	570	Bleed Air Valve Setting	
Liquid Level	0	Liquid Level	

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B		**Carbon Adsorber C/D**	
Pressure	.51 IN H2O psi	Pressure	0.0 H2O psi
Inf. VOC Level	8.3 ppm	Inf. VOC Level	NA ppm
Mid. VOC Level	2.1 ppm	Mid. VOC Level	NA ppm
Eff. VOC Level	0.4 ppm	Eff. VOC Level	16.0 ppm
Change out Date	NA	Change out Date	NA

WATER TREATMENT

Flowmeter Reading _____ Gallons (arrival reading) Flowmeter Reading 265899.3 Gallons (departure reading)

COMMENTS

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

MONITORING PROTOCOL

COMPONENT	FREQUENCY	RECORD DATA FOR:
Air Compressors C-1 and C-2	Monthly + Flybys	Flow Rate Pressure Temperature Flow Control Valve Setting Bypass Valve Setting Radiator Status
Vacuum Pumps V-1, V-2, V-3, and V-4	Monthly + Flybys	Flow Rate Inlet Vacuum Discharge Pressure Discharge Temperature Particulate Filter Condition Moisture Trap Condition Flow Control Valve Setting Bypass Valve Setting
Vapor Phase Carbon Units A/B and C/D	Monthly + Flybys	Pressure Influent VOC Concentration (FID) Midfluent VOC Concentration (FID) Effluent VOC Concentration (FID)
Air Sparge Wells SPA-1 through SPA-37 and SPB-1 through SPB-27	As Directed	Flow Rate Pressure Flow Control Valve Setting
SVE Wells VEA-1 through VEA-20 and VEB-1 through VEB-15	As Directed	Flow Rate Vacuum Flow Control Valve Setting VOC Concentration by FID
Vapor Monitoring Points VP-1 through VP-9	Monthly	Vacuum/Pressure VOC Concentration by FID
Air Discharge	Monthly	Vapor Phase GAC A/B Influent - Tedlar bag samples for: EPA Method T03 for BTEX + MTBE + Total Volatile Petroleum Hydrocarbons Vapor Phase GAC C/D Influent - Tedlar bag samples for: EPA Method T03 for BTEX + MTBE + Total Volatile Petroleum Hydrocarbons

NEW LONDON NAVAL SUBMARINE BASE, NEW LONDON, CT

NEX SITE

Water Discharge	Monthly 11:00 11:20 11:30 11:30 m 11:2 11:40	Liquid Phase GAC A/B Influent - EPA Method 624 + MTBE + Xylenes Liquid Phase GAC A/B Midfluent - EPA Method 624 + MTBE + Xylenes Liquid Phase GAC C/D Influent - EPA Method 624 + MTBE + Xylenes Liquid Phase GAC C/D Midfluent - EPA Method 624 + MTBE + Xylenes Liquid Phase GAC Total Effluent - EPA Method 624 + MTBE + Xylenes EPA Method 418.1 (TPH) EPA Method 239.2 (Total Lead) pH
Water Discharge	April and October	Liquid Phase GAC Total Effluent - Aquatic Toxicity
Groundwater Gauging Monitoring Wells ERM-12, ERM-14, ERM-16, OBG-1, and OBG-9	Monthly	Depth to Groundwater Depth to Petroleum (if present)
Groundwater Gauging Monitoring Wells ERM-5, ERM-6, ERM-7, ERM-11, ERM-12, ERM-13, ERM-14, ERM-15, ERM-16, ERM-17, ERM-19, FD-1, FD-2, FD-3, MW-4, MW-6, NEX-1, OBG-1, OBG-2, OBG-4, OBG-7, OBG-9, VEA-4, VEA-7, VEA-21, and VEB-6	Feb, May, Aug, Nov	Depth to Groundwater Depth to Petroleum (if present)
Groundwater Sampling Monitoring Wells ERM-5, ERM-6, ERM-12, ERM-14, ERM-15, ERM-16, FD-1, FD-2, FD-3, MW-4, MW-6, OBG-1, OBG-2, OBG-9, OBG-4, VEA-4, VEA-7, VEA-21, and VEB-6	Feb, May, Nov	EPA Method 8021 (BTEX + MTBE) EPA Method 8100M (TPH)
Groundwater Sampling Monitoring Wells ERM-5, ERM-6, ERM-7, ERM-11, ERM-12, ERM-13, ERM-14, ERM-, ERM-16, ERM-17, ERM-19, FD-1, FD-2, FD-3, MW-4, MW-6, NEX-1, OBG-1, OBG-, OBG-4, OBG-7, OBG-9, VEA-4, VEA-7, VEA-21, and VEB-6	August	EPA Method 8021 (BTEX + MTBE) EPA Method 8100M (TPH)

PROJECT: Groton Sub Base LOCATION: Groton CT

PROJECT #: 87260014 OPERATOR: WCN

DATE: 4-6-00 EQUIPMENT #:

PROBE CORRECTION: COMMENTS:

WELL MONITORING FORM

WELL ID	WELL DEPTH	DEPTH TO WATER	DEPTH TO PETROLEUM	PETROLEUM THICKNESS	VACUUM OR PRESSURE	VOC CONCENTRATION (PPM)
ERM-12						
ERM-14						
ERM-16						
OBG-1						
OBG-9						
Dolphin Mart						
VP-1						
VP-2						
VP-3						
VP-4						
VP-5						
VP-6						
VP-7						
VP-8						
VP-9						
NEX						
VP-1					0.0	0.0
VP-2 K					[redacted] under const.	under const.
VP-3					0.0	0.0
VP-4					0.0	0.0
VP-5					0.0	0.0
VP-6					0.0	0.0
VP-7					0.0	0.0
VP-8					0.0	0.0
VP-9					0.0	0.0

DATE: 4.6.00	SITE: NEX
NAME: 10:50	JOB/TASK NUMBER: 67J00019
INSTRUMENT MANUFACTURER: Omega	
INSTRUMENT CALIBRATION: PH 4 OK? Yes	PH 7 OK? Yes

SAMPLE ID:	PH:	TEMP:
NEX INF.	7.36	51
NEX EFF.	7.34	53
DOLPHIN MART INF.	X NA	NA X
DOLPHIN MART EFF.	X NA	NA X

* CT. REGS. REQUIRE THE USE OF A PH METER. DO NOT USE PH PAPER.

* CALL IN IF PH READINGS ARE NOT WITHIN 6.0 - 8.5

NAVAL SUBMARINE BASE
GROTON, CT.
87260014

Date: 4/28/00 **Staff:** _____
Project Number: 87260014 **Task Number:** 0401
DB/SCA Box Check: Yes / No **Bill Code Override:** _____
Site Arrival Time: _____ **Site Departure Time:** _____
Total Hours on Site: _____ **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:

R	C	
☐	☐	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
☒	☑	Conduct Drive-by, check shed security, check
☐	☐	condition of all roadboxes

NEX:

R	C	
☒	☑	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
☐	☐	

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		

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

Date: 1-28-00
Time: 17:00
Technician: S.K SR

AIR COMPRESSOR SYSTEM

Flow Rate 0 to 146 SCFM
Total Flow 38252211

Air Compressor C-1
Pressure ____ psi
Temperature 108 °F
Flow Control Valve Setting 100 %
Bleed Valve
Radiator (ON) OFF

Air Compressor C-2
Pressure NA
Temperature
Flow Control Valve Setting
Bleed Valve
Radiator (ON) OFF

SOIL VAPOR EXTRACTION SYSTEM

Eastern Flow Rate 0 to 323 SCFM
Total Flow 185680653
Western Flow Rate 0 to 498 SCFM
Total Flow 54412064

Vacuum Pump V-1
Vacuum 70 "Hg
Temperature 124 °F
Particulate Filter OK
Flow Control Valve Setting 100 %
Bleed Air Valve Setting 0
Liquid Level OK

Vacuum Pump V-2
Vacuum NA
Temperature
Particulate Filter
Flow Control Valve Setting
Bleed Air Valve Setting
Liquid Level

Vacuum Pump V-3
Vacuum 75 "Hg
Temperature 222 °F
Particulate Filter OK
Flow Control Valve Setting 100 %
Bleed Air Valve Setting 100 %
Liquid Level OK

Vacuum Pump V-4
Vacuum NA
Temperature
Particulate Filter
Flow Control Valve Setting
Bleed Air Valve Setting
Liquid Level

ACTIVATED CARBON ADSORPTION SYSTEM

Carbon Adsorber A/B
Pressure 10 psi
Inf. VOC Level 0 ppm
Mid. VOC Level 0 ppm
Eff. VOC Level 0 ppm
Change out Date NA

Carbon Adsorber C/D
Pressure 10
Inf. VOC Level 0
Mid. VOC Level
Eff. VOC Level 0
Change out Date 8-22-9

WATER TREATMENT

Flowmeter Reading 267039 Gallons (arrival reading)
Flowmeter Reading 260761 Gallons (departu

COMMENTS

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

Wrong, JA

4/28

Goulet, Craig

From: Sorrow, Jonathan
Sent: Thursday, April 20, 2000 2:58 PM
To: Goulet, Craig
Subject: Groton Sub Base

Next Visit:

Measure the pressure and air temperature at the discharge point from the air compressor, and at the discharge point of the cooling radiator.

Thank you,
Jonathan D. Sorrow
Lead Geologist
Project Manager
IT Corporation
431F Hayden Station Road
Windsor, CT 06095
(860) 688-1151
(860) 688-8239
jsorrow@theitgroup.com

was unable to obtain the readings.
the system kept shuting down, due to
water being taken into the system.

Groton subbase

872600014/040/0000 4-28-00

Jonathan Sorrow J.K.S.A/W.C.1

Arrived on site, found blower #3 operational and blower #1 non operational. the sparge system was also non operational upon arrival, turned blower #3 off and then reactivated the system and obtained readings. the system would then shut down, because it was drawing in water, restarted the system several times. when the system was runing, I noticed that there was water ~~bubling~~ bubbling up from the spb and VEB points that were removed by foster wheeler. turned the sparge system off and left the SVE system operational.

ATTACHMENT 2

MONTHLY FIELD ACTIVITY SUMMARY

Field Activity Summary
April 2000

New London Naval Submarine Base
Groton, Connecticut

Date of Visit	Site	Period	Field Activities	Comments
4/6/00	Dolphin Mart	Bi-Weekly Monitoring	Conducted drive-by and checked site security and condition of road boxes.	Security and road boxes OK.
	NEX		Conducted O&M on the SVE system. Inspected air sparge system. Collected DMR samples.	The V-3 blower was non-operational at arrival due to high water.
4/28/00	Dolphin Mart	Bi-Weekly Monitoring	Conducted drive-by and checked site security and condition of road boxes.	Security and road boxes OK.
	NEX		Conducted O&M on the SVE system.	Blower V-1 was non-operational due to high water.

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)	Extraction Flowrate (cfm)	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 oncentrati TVPH (mg/m3)	Influent Concentration TVPH (ppmv)	Removal Rate TVPH (lb/hr)	Total Mass Removal Rate (lbs/hr)	Period Mass Removed (lbs)	Cumulative Mass Removed (lbs)	Comments
07/02/96	0	25	450	512.26	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	511.12	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	516.81	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	512.26	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	509.98	2.30	0.019	0.00	0.000	—	0.000	—	0.000	NA	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	512.26	2.30	0.019	0.00	0.000	—	0.000	—	0.000	NA	36.00	0.287	0.306	102.58	947.95	system reactivated 10/2/96
11/19/96	140	30	450	512.26	0.38	0.003	0.00	0.000	—	0.000	—	0.000	22.00	5.29	0.042	0.045	143.33	1091.28	
12/17/96	168	30	450	512.26	0.12	0.001	0.00	0.000	—	0.000	—	0.000	8.20	1.97	0.016	0.017	20.84	1112.12	
01/27/97	209	30	450	512.26	1.35	0.011	0.00	0.000	—	0.000	—	0.000	55.00	13.23	0.106	0.117	65.56	1177.68	
03/27/97	268	30	450	512.26	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	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	512.26	0.00	0.000	0.00	0.000	—	0.000	—	0.000	13.00	3.13	0.025	0.025	14.13	1244.08	
05/21/97	323	15	329	374.52	0.00	0.000	0.00	0.000	—	0.000	—	0.000	24.00	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	374.52	0.25	0.002	0.00	0.000	—	0.000	—	0.000	47.00	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	374.52	1.89	0.011	0.00	0.000	—	0.000	—	0.000	340.00	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	548.69	0.73	0.007	0.00	0.000	—	0.000	—	0.000	45.00	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	548.69	0.34	0.003	0.00	0.000	—	0.000	—	0.000	88.00	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	670.49	0.00	0.000	0.00	0.000	—	0.000	—	0.000	100.00	24.06	0.251	0.251	120.10	1669.78	
11/20/97	506	32	590	671.63	0.00	0.000	5.45	0.050	—	0.000	—	0.000	160.00	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	671.63	0.45	0.005	0.00	0.000	—	0.000	—	0.000	45.00	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	536.16	0.32	0.003	0.00	0.000	—	0.000	—	0.000	24.00	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	335.81	0.23	0.001	0.00	0.000	—	0.000	—	0.000	29.00	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	278.90	0.45	0.002	0.00	0.000	—	0.000	—	0.000	22.00	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	244.75	0.00	0.000	0.00	0.000	—	0.000	—	0.000	22.00	5.29	0.020	0.020	18.47	1995.65	
07/13/98	741	13	294	334.68	0.14	0.001	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	9.67	2005.32	assume 50% up-time, blowers shutting downdue to influent water
08/18/98	777	10	294	334.68	0.14	0.001	0.00	0.000	—	0.000	—	0.000	26.00	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	334.68	0.07	0.0004	0.00	0.000	—	0.000	—	0.000	26.00	6.25	0.033	0.033	34.22	2046.92	
10/15/98	835	0	231	262.96	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	24.00	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	253.69	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	170.00	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	502.91	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	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	290.57	0.07	0.0003	0.00	0.000	—	0.000	—	0.000	36.00	8.66	0.039	0.040	6.81	2136.72	
02/10/99	953	0	346	393.83	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	37.00	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	182.14	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	0.38	2153.47	
04/21/99	1023	0	160	182.14	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	0.38	2153.85	
05/26/99	1058	0	0	0.00	0.00	0.0000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	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 Mitkem Laboratory. Prior to 10/16/96 air analysis performed by NEI/GTEL
7) Mitkem results report total volatile petroleum hydrocarbons, not misc. aromatics and aliphatics.
   Total Volatile Petroleum Hydrocarbons are weighted to molecular weight of 100.
8) Laboratory results from 11/19/96 to present are reported in mg/m3.

SYSTEM MONITORING DATA
SOIL VAPOR EXTRACTION/AIR SPARGE SYSTEM

New London Naval Submarine Base
NEX Site
Groton, CT

Date	Day of Operation	Air Sparge Flowrate (scfm)	Extraction Flowrate (total) (scfm)	Extraction Flowrate (cfm)	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	288.00	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	307.35	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	307.35	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	364.27	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	364.27	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	368.83	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	352.89	0.18	0.001	0.07	0.000	—	0.000	—	0.000	29.00	6.98	0.038	0.040	58.83	794.47	
01/27/97	180	NA*	321	365.41	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	437.13	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	820.75	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	409.81	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	341.51	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	407.53	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	253.28	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	251.58	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	366.55	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	242.47	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	242.47	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	591.37	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	544.70	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	368.26	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	282.88	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	193.52	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	174.74	1.96	0.005	0.00	0.000	39.42	0.084	0.00	0.000	—	—	—	0.089	63.76	1615.16	
10/07/98	798	0	278	315.89	8.40	0.042	0.00	0.000	—	0.000	—	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	316.46	8.40	0.042	0.00	0.000	—	0.000	—	0.000	890.43	214.19	1.056	1.098	210.77	1825.92	
11/19/98	841	41	216	245.31	4.67	0.018	0.46	0.002	—	0.000	—	0.000	1679.20	403.93	1.543	1.563	812.98	2638.91	
12/29/98	881	41	148	168.48	0.90	0.002	0.00	0.000	—	0.000	—	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	349.47	3.22	0.018	0.34	0.002	—	0.000	—	0.000	4607.80	1108.41	6.032	6.052	459.46	3719.87	
02/10/99	924	70	294	334.11	0.81	0.004	0.54	0.002	—	0.000	—	0.000	165.78	39.88	0.207	0.214	31.67	3751.54	
03/26/99	968	79	255	290.28	0.08	0.000	0.14	0.001	—	0.000	—	0.000	10.50	2.53	0.011	0.012	7.96	3759.50	One blower and air compressor down due to tripped breaker
04/21/99	994	38	244	277.19	0.26	0.001	0.00	0.000	—	0.000	—	0.000	40.00	9.62	0.042	0.043	20.30	3779.80	
05/26/99	1029	***	0	0.00	0.11	0.000	0.00	0.000	—	0.000	—	0.000	39.50	9.50	0.000	0.000	19.76	3799.56	
06/04/99	1038	***	0	0.00	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.000	0.00	3799.56	System is non-operational
07/14/99	1078	32	290	330.12	1.82	0.010	4.36	0.020	—	0.000	—	0.000	210.00	50.52	0.260	0.289	32.24	3831.79	System reactivated 7/8/99
08/05/99	1100	37	271	308.49	0.80	0.001	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	0.15	3831.94	
09/29/99	1155	36	352	400.70	0.84	0.005	0.00	0.000	—	0.000	—	0.000	176.00	42.34	0.264	0.269	91.40	3923.34	
10/12/99	1168	59	346	393.87	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.000	0.00	3923.34	Vacuum Pump V-3 is offline.
11/30/99	1217	32	289	328.98	0.28	0.001	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.001	0.43	3923.77	Vacuum Pump V-3 is replaced and reactivated 10/28/99.
12/16/99	1233	34	383	435.99	0.00	0.000	0.00	0.000	40.50	0.215	0.00	0.000	—	—	—	0.215	31.41	3955.17	
01/05/00	1253	35	354	402.98	0.11	0.001	0.00	0.000	—	0.000	—	0.000	33.00	7.94	0.050	0.051	10.02	3965.19	
02/03/00	1282	71	402	457.62	0.00	0.000	0.00	0.000	—	0.000	—	0.000	38.50	9.26	0.066	0.066	10.69	3975.88	
03/20/00	1328	0	314	357.44	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.000	0.00	3975.88	Air sparge compressor non-operational.
04/28/00	1367	73	411	467.29	0.00	0.000	0.00	0.000	—	0.000	—	0.000	0.00	0.00	0.000	0.000	0.00	3975.88	

Notes:

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

APR00.WK4

ATTACHMENT 4

HISTORICAL WELL GAUGING DATA

Well Gauging Data

Dolphin Mart Site

New London Naval Submarine Base, Groton, CT

Date	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	07/02/96	94.23	6.37	87.86	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/03/96	07/03/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/12/96	07/12/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/16/96	07/16/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/17/96	07/17/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/19/96	07/19/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/22/96	07/22/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/23/96	07/23/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/24/96	07/24/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/25/96	07/25/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
07/26/96	07/26/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/01/96	08/01/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/02/96	08/02/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
08/05/96	08/05/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
09/04/96	09/04/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
10/02/96	10/02/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
10/21/96	10/21/96	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
11/19/96	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	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	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	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	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	04/17/97	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
05/21/97	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	08/27/97	94.23	NG	NA	94.30	NG	NA	94.02	NG	NA	94.81	NG	NA
11/21/97	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	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	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	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	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	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	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
08/26/99	08/26/99	94.23	4.51	89.72	94.30	5.32	88.98	94.02	5.16	88.86	94.81	5.86	88.95
11/30/99	11/30/99	94.23	2.06	92.17	94.30	2.40	91.90	94.02	2.28	91.74	94.81	2.92	91.89
03/20/00	03/20/00	94.23	1.82	92.41	94.30	2.32	91.98	94.02	1.87	92.15	94.81	1.37	93.44

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

NG = Not Gauged

* Possible interference due to AS/SVE system

NA = Not Available

NG = Not Gauged

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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	
08/26/99	101.06	10.59	90.47	97.05	7.34	89.71	96.79	6.62	90.17		8.99	
11/30/99	101.06	5.50	95.56	97.05	4.20	92.85	96.79	3.50	93.29		4.13	
03/20/00	101.06	3.28	97.78	97.05	4.10	92.95	96.79	3.32	93.47		1.28	

Notes: WE-2D, WE-2S, and WE-3 are covered by stand pipes.
NG = Not Gauged
* Possible interference due to AS/SVE system

Date	MW-2				MW-3			OBG8A			OBG9A	
	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		3.55			3.12		95.20	NG	NA	94.67	0.82	93.85
07/03/96		2.86			0.00		95.20	NG	NA	94.67	0.89	93.78
07/12/96		3.82			1.95		95.20	NG	NA	94.67	1.85	92.82
07/16/96		2.89			0.74		95.20	NG	NA	94.67	0.69	93.98
07/17/96		1.63			2.79		95.20	NG	NA	94.67	0.00	94.67
07/19/96		0.61			0.00		95.20	NG	NA	94.67	0.00	94.67
07/22/96		1.95			1.17		95.20	NG	NA	94.67	0.00	94.67
07/23/96		3.33			0.00		95.20	NG	NA	94.67	0.20	94.47
07/24/96		1.18			0.00		95.20	NG	NA	94.67	0.00	94.67
07/25/96		NG			NG		95.20	NG	NA	94.67	0.16	94.51
07/26/96		NG			NG		95.20	NG	NA	94.67	0.00	94.67
08/01/96		2.20			1.28		95.20	NG	NA	94.67	NG	NA
08/02/96		1.82			1.31		95.20	NG	NA	94.67	0.00	94.67
08/05/96		NG			1.08		95.20	NG	NA	94.67	0.00	94.67
09/04/96		4.59			DRY		95.20	NG	NA	94.67	NG	NA
10/02/96		NG			3.86		95.20	NG	NA	94.67	NG	NA
10/21/96		NG			NG		95.20	NG	NA	94.67	NG	NA
11/19/96		3.00			DRY		95.20	NG	NA	94.67	NG	NA
12/17/96		2.17			NG		95.20	NG	NA	94.67	NG	NA
01/27/97		2.13			NG		95.20	NG	NA	94.67	NG	NA
02/18/97		2.56			2.28		95.20	NG	NA	94.67	NG	NA
03/27/97		1.86			1.27		95.20	NG	NA	94.67	NG	NA
04/17/97		1.94			1.39		95.20	NG	NA	94.67	NG	NA
05/21/97		2.93			2.44		95.20	NG	NA	94.67	NG	NA
08/27/97		4.28			DRY		95.20	NG	NA	94.67	2.46	92.21
11/21/97		3.84			3.06		95.20	2.26	92.94	94.67	0.95	93.72
02/11/98		1.34			1.88		95.20	1.47	93.73	94.67	1.31	93.36
05/11/98		1.99			4.08		95.20	0.31	94.89	94.67	0.98	93.69
08/17/98		4.95			4.96		95.20	2.35	92.85	94.67	2.58	92.09
11/18/98		5.27			3.27		95.20	2.30	92.90	94.67	1.91	92.76
02/19/99		2.59			1.92		95.20	0.50	94.70	94.67	1.77	92.90
05/21/99		3.23			2.20		95.20	1.71	93.49	94.67	2.42	92.25
08/26/99		7.20			6.93		95.20	4.48	90.72	94.67	4.85	89.82
11/30/99		3.20			2.80		95.20	0.81	94.39	94.67	2.38	92.29
03/20/00		2.30			1.73		95.20	1.53	93.67	94.67	2.17	92.50

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	WE-1 Well Casing Elevation	WE-1 Depth to Groundwater	WE-1 Groundwater Elevation	WE-1A Well Casing Elevation	WE-1A Depth to Groundwater	WE-1A Groundwater Elevation	WE-2D Well Casing Elevation	WE-2D Depth to Groundwater	WE-2D Groundwater Elevation	WE-2S Well Casing Elevation	WE-2S Depth to Groundwater	WE-2S 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
08/26/99		NG			NG		100.84	9.84	91.00	100.86	10.12	90.74
11/30/99		NG			NG		100.84	6.09	94.75	100.86	6.67	94.19
03/20/00		NG			NG		100.84	8.47	92.37	100.86	6.54	94.32

Notes: WE-2D, WE-2S, and WE-3 are covered by stand pipes.
NG = Not Gauged
* Possible interference due to AS/SVE system

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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
08/26/99	103.14	12.04	91.10	97.52	7.53	89.99	99.72	9.10	90.62	97.32	6.94	90.38
11/30/99	103.14	8.60	94.54	97.52	3.93	93.59	99.72	4.35	95.37	97.32	3.02	94.30
03/20/00	103.14	8.31	94.83	97.52	3.27	94.25	99.72	2.83	96.89	97.32	2.26	95.06

Notes: WE-2D, WE-2S, and WE-3 are covered by stand pipes.
NG = Not Gauged
* Possible interference due to AS/SVE system

Date	ERM-5 Well Casing Elevation	ERM-5 Depth to Groundwater/ Product	ERM-5 Groundwater Elevation	ERM-6 Well Casing Elevation	ERM-6 Depth to Groundwater/ Product	ERM-6 Groundwater Elevation	ERM-7 Well Casing Elevation	ERM-7 Depth to Groundwater/ Product	ERM-7 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	NA
05/26/99		3.52		22.09	5.16	16.93	21.98	5.02	16.96
08/30/99		5.35		22.09	6.15	15.94	21.98	6.47	15.51
09/29/99		NG		22.09	NG	NA	21.98	NG	NA
11/29/99		5.36		22.09	6.01	16.08	21.98	NG	NA
03/14/00		4.50		22.09	5.22	16.87	21.98	NG	NA

NG = Not Gauged; NI = Not Installed

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	
08/30/99		NG			NG			NG	
09/29/99		NG			NG			NG	
11/29/99		NG			NG			NG	
03/14/00		NG			NG			NG	

NG = Not Gauged; NI = Not Installed

Date	ERM-11 Well Casing Elevation	ERM-11 Depth to Groundwater/ Product	ERM-11 Groundwater Elevation	ERM-12 Well Casing Elevation	ERM-12 Depth to Groundwater/ Product	ERM-12 Groundwater Elevation	ERM-13 Well Casing Elevation	ERM-13 Depth to Groundwater/ Product	ERM-13 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
08/30/99	23.19	8.30	14.89	23.16	8.54	14.62	26.01	8.10	17.91
09/29/99	23.19	NG	NA	23.16	8.16/sheen	15.00	26.01	NG	NA
11/29/99	23.19	NG	NA	23.16	8.10	15.06	26.01	NG	NA
03/14/00	23.19	NG	NA	23.16	NG	NA	26.01	NG	NA

NG = Not Gauged; NI = Not Installed

Date	ERM-14 Well Casing Elevation	ERM-14 Depth to Groundwater/ Product	ERM-14 Groundwater Elevation	ERM-15 Well Casing Elevation	ERM-15 Depth to Groundwater/ Product	ERM-15 Groundwater Elevation	ERM-16 Well Casing Elevation	ERM-16 Depth to Groundwater/ Product	ERM-16 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	
08/30/99	25.56	7.73	17.83		5.26			9.31/9.28	
09/29/99	25.56	7.69	17.87		NG			8.86/sheen	
11/29/99	25.56	7.82	17.74		5.29			8.89/sheen	
03/14/00	25.56	6.81	18.75		4.18			8.04	

NG = Not Gauged; NI = Not Installed

Date	ERM-17 Well Casing Elevation	ERM-17 Depth to Groundwater/ Product	ERM-17 Groundwater Elevation	ERM-18 Well Casing Elevation	ERM-18 Depth to Groundwater/ Product	ERM-18 Groundwater Elevation	ERM-19 Well Casing Elevation	ERM-19 Depth to Groundwater/ Product	ERM-19 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	NA
05/26/99		5.20			NG		22.42	5.06	17.36
08/30/99		6.21			NG		22.42	6.21	16.21
09/29/99		NG			NG		22.42	NG	NA
11/29/99		NG			NG		22.42	NG	NA
03/14/00		NG			NG		22.42	NG	NA

NG = Not Gauged; NI = Not Installed

Well Gauging Data

NEX Site

New London Naval Submarine Base, Groton, CT

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
08/30/99	14.80	8.52	6.28	14.76	8.74	6.02	14.20	8.58	5.62
09/30/99	14.80	NG	NA	14.76	NG	NA	14.20	NG	NA
11/29/99	14.80	8.38	6.42	14.76	8.63	6.13	14.20	8.82	5.38
03/14/00	14.80	7.73	7.07	14.76	7.88	6.88	14.20	8.71	5.49

NG = Not Gauged; NI = Not Installed

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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	NA
05/26/99		6.02			4.83		24.16	6.42	17.74
08/30/99		7.21			5.80		24.16	6.64	17.52
09/29/99		NG			NG		24.16	NG	NA
11/29/99		7.20			5.48		24.16	NG	NA
03/14/00		6.28			5.22		24.16	NG	NA

NG = Not Gauged; NI = Not Installed

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
08/30/99		8.58		25.36	8.74	16.62	25.22	8.48	16.74
09/29/99		6.48		25.36	NG	NA	25.22	NG	NA
11/29/99		8.61		25.36	8.81	16.55	25.22	8.51	16.71
03/14/00		7.72		25.36	7.94	17.42	25.22	7.63	17.59

NG = Not Gauged; NI = Not Installed

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
08/30/99	24.76	NG	NG	25.47	7.66	17.81	24.87	NG	NG
09/29/99	24.76	NG	NG	25.47	NG	NG	24.87	NG	NG
11/29/99	24.76	NG	NG	25.47	NG	NG	24.87	NG	NG
03/14/00	24.76	NG	NG	25.47	NG	NG	24.87	NG	NG

NG = Not Gauged; NI = Not Installed

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	
08/30/99	24.93	7.28	17.65	3.25	DRY	NA		DRY	
09/29/99	24.93	7.19	17.74	3.25	NG			NG	
11/29/99	24.93	7.40	17.53	3.25	3.20	0.05		NG	
03/14/00	24.93	6.36	18.57	3.25	2.56	0.69		2.81	

NG = Not Gauged; NI = Not Installed

Date	VEA-14			VEB-6		
	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation	Well Casing Elevation	Depth to Groundwater/ Product	Groundwater Elevation
09/16/96		NG			NG	
10/16/96		NG			NG	
11/18/96		NG			NG	
12/16/96		NG			NG	
02/17/97		NG			NG	
03/27/97		NG			NG	
04/15/97		NG			NG	
04/17/97		NG			NG	
04/24/97		NG			NG	
05/21/97		NG			NG	
08/28/97		NG			NG	
11/20/97		NG			NG	
02/12/98		NG			NG	
05/12/98		NG			NG	
08/19/98		NG			NG	
11/19/98		NG			NG	
02/18/99		NG			NG	
05/26/99	7.07	4.46	2.61		DRY	
08/30/99	7.07	5.65	1.42		DRY	
09/29/99	7.07	NG	7.07		NG	
11/29/99	7.07	5.77	1.30		DRY	
03/14/00	7.07	4.45	2.62		NG	

NG = Not Gauged; NI = Not Installed

ATTACHMENT 5

HISTORICAL GROUNDWATER SAMPLING RESULTS

Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	4.0	4.0	<400	8.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**1,500**	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
	8/99	<1.0	<1.0	<1.0	<1.0	6.0	<400	6.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	4.0	<400	4.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	400	<5.0	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	1.0	<400	1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	400	<5.0	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**2.0**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	400	<1.0	NS	NS
	11/99	<1.0	2.0	<1.0	8.0	<1.0	**800**	10.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	9.0	**1,700**	9.0	NS	NS

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DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**700**	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,200**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	2.0	9.0	<1.0	<400	11.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**304**	35.2	257	**1140**	<50	**6,080**	NS	NS	NS
	5/96	**125**	21	54	329	<20	**1,740**	NS	NS	NS
	11/96	**9.0**	<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	**800**	3.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**700**	<1.0	NS	NS
	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	NS	NS

Notes: NA = Not Analyzed
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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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	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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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**3.0**	<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	28	<1.0	**1,000**	18	800	600
	11/97	**2.0**	<1.0	9.0	<1.0	<1.0	<500	11	NS	NS
	2/98	<1.0	1.0	4.0	<1.0	<1.0	**800**	5.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	8/98	**3.0**	<1.0	1.0	<1.0	<1.0	<500	4.0	NS	NS
	11/98	**4.0**	1.0	1.0	1.0	<1.0	**600**	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	**800**	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	300	<5.0	NS	NS

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DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**4.0**	<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	**1,000**	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	**2.0**	<1.0	3.0	1.0	3.0	<500	9.0	NS	NS
	2/98	**2.0**	1.0	6.0	<1.0	<1.0	**700**	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	**2.0**	2.0	<1.0	2.0	4.0	<400	10	NS	NS
	2/99	<1.0	<1.0	2.0	1.0	4.0	**700**	7.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	<1.0	**500**	<1.0	NS	NS
	8/99	<1.0	<1.0	3.0	7.0	<1.0	**500**	10	NS	NS
	11/99	**1.0**	<1.0	<1.0	2.0	4.0	**700**	7.0	NS	NS
	3/00	<1.0	<1.0	1.0	1.0	<5.0	400	2.0	NS	NS

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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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
	8/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/99	**26**	5.0	81	100	1.0	**5,400**	213	NS	NS
	3/00	**2.0**	1.0	6.0	3.0	<5.0	**1,700**	12	NS	NS

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DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**72**	24.6	25.9	62.4	9.29	<473	NS	NS	NS
	5/96	**12.0**	<1.0	9.0	4.0	<2.0	<473	NS	NS	NS
	11/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/97	**3.0**	25	5.0	5.0	<1.0	<500	38	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**9,300**	<1.0	NS	NS
	5/98	<1.0	2.0	<1.0	2.0	<1.0	**3,800**	4.0	NS	NS
	8/98	**2.0**	<1.0	3.0	<1.0	1.0	**2,400**	6.0	NS	NS
	11/98	1.0	<1.0	<1.0	1.0	2.0	**2,300**	4.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	2.0	**4,400**	2.0	NS	NS
	5/99	**6.0**	<1.0	8.0	<1.0	5.0	**800**	19	NS	NS
	8/99	**7.0**	<1.0	9.0	8.0	<1.0	**3,300**	24	NS	NS
	11/99	**1.0**	<1.0	2.0	2.0	6.0	**1,900**	11	NS	NS
	3/00	**3.0**	<1.0	6.0	<1.0	<5.0	**1,300**	9.0	NS	NS

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Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**3,000**	<1.0	<500	<500
	8/97	<1.0	<1.0	<1.0	<1.0	3.0	**11,000**	3.0	2,200	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**3,100**	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	**2,100**	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	3.0	**1,000**	3.0	NS	NS
	11/98	<1.0	<1.0	<1.0	<1.0	3.0	**800**	3.0	NS	NS
	2/99	<1.0	<1.0	<1.0	<1.0	<1.0	**1,300**	<1.0	NS	NS
	5/99	<1.0	<1.0	<1.0	<1.0	1.0	**800**	1.0	NS	NS
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	**700**	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	<1.0	**1,000**	<1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	**4,000**	<5.0	NS	NS

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[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**2.0**	<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	**11,000**	4.0	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,000**	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	3.0	**1500.0**	3.0	NS	NS
	8/98	**2.0**	<1.0	<1.0	<1.0	5.0	<500	7.0	NS	NS
	11/98	**2.0**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	400	<5.0	NS	NS

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Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**50**	22	101	144	<10	**1,570**	NS	NS	NS
	11/96	**7.0**	<1.0	9.0	4.0	14	<1,000	34	<500	<500
	2/97	**5.0**	<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	**4.0**	<1.0	<1.0	15	7.0	<500	26	NS	NS
	5/98	**2.0**	<1.0	10	<1.0	7.0	**1,200**	19	NS	NS
	8/98	**2.0**	<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	**2.0**	<1.0	11	5.0	8.0	<400	26	NS	NS
	5/99	**2.0**	2.0	13	1.0	<1.0	<400	18	NS	NS
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	6.0	<1.0	6.0	<400	12	NS	NS
	3/00	**2.0**	<1.0	15	16	<5.0	**700**	33	NS	NS

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(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**2.0**	<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	**220**	**3,000**	220	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	38	<500	38	NS	NS
	2/98	**2.0**	<1.0	<1.0	<1.0	**160D**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	69	<400	69	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	20	<400	20	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	9.0	<200	9.0	NS	NS

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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**267**	29.8	392	**712**	<40	**5,180**	NS	NS	NS
	5/96	**160**	16	301	**617**	<40	**3,680**	NS	NS	NS
	11/96	**41**	1.0	100	2.0	19	<1,000	166	1,100	500
	2/97	**21**	<1.0	27	1.0	17	<500	66	500	700
	5/97	**13**	<1.0	13	<1.0	19	<500	45	700	540
	8/97	**7.0**	<1.0	19	3B	3B	**700**	44	<500	<500
	11/97	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	NS	NS
	2/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,300**	<1.0	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	**600**	<1.0	NS	NS
	8/98	<1.0	<1.0	<1.0	<1.0	1.0	<500	1.0	NS	NS
	11/98	**5.0**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	8.0	<400	8.0	NS	NS
	11/99	<1.0	<1.0	<1.0	2.0	7.0	<400	9.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	5.0	400	5.0	NS	NS

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Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**240D**	410D	**720D**	**4,300E**	27	**9,000**	5,697	12,000	8,900
	2/97	**42D**	10	89D	490D	6.0	**2,000**	637	2,000	1,200
	5/97	**370**	190	**840**	**3,900D**	<1.0	**4,000**	5,300	11,000	16,000
	8/97	**210D**	<1.0	210D	470DB	63D	**5,000**	953	3,900	2,500
	11/97	**11**	<1.0	2.0	6.0	27	**1,100**	46	NS	NS
	2/98	**11**	<1.0	10	14	3.0	**1,800**	38	NS	NS
	5/98	<1.0	<1.0	<1.0	<1.0	<1.0	**1,400**	<1.0	NS	NS
	8/98	**94**	1.0	30	28	31	**2,400**	184	NS	NS
	11/98	**4.0**	<1.0	<1.0	1.0	37	**1,500**	42	NS	NS
	2/99	**12**	1.0	6.0	78	5.0	**1,000**	102	NS	NS
	5/99	**99**	2.0	8.0	49	<1.0	**1,700**	158	NS	NS
	8/99	<1.0	<1.0	<1.0	<1.0	44	**1,200**	44	NS	NS
	11/99	**98**	1.0	6.0	27	29	**2,600**	161	NS	NS
	3/00	**12**	1.0	20	67	<5.0	**1,700**	100	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 1
Historical Groundwater Sampling Results
Dolphin Mart - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	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	**630 D**	<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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	**1,200**	<1.0	NS	NS
	11/99	**1.0**	<1.0	<1.0	<1.0	4.0	**1,000**	5.0	NS	NS
	3/00	<1.0	<1.0	<1.0	1.0	<5.0	**800**	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	120 D	7.0	<1.0	900 D	<1.0	1,600	1,027	NS	NS
	11/99	24	2.0	5.0	73	<1.0	1,300	104	NS	NS
	3/00	**450**	130	260	385	<25	3,900	1,225	NS	NS

Notes: NA = Not Analyzed
NARS = No Applicable Remediation Standard
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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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	NS	NS
	8/99	<1.0	<1.0	<1.0	2.0	<1.0	<400	2.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	NS	NS

Notes:
NA = Not Analyzed
NARS = No Applicable Remediation Standard
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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: NA = Not Analyzed
NARS = No Applicable Remediation Standard
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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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
NA = Not Analyzed
NARS = No Applicable Remediation Standard
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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
Well	Date									
ERM-9 (destroyed)	5/96	<1.0	<1.0	<1.0	<1.0	2.0	NS	4.0	3,310	<47.3
	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
	8/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	**800**	<1.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
NA = Not Analyzed
NARS = No Applicable Remediation Standard
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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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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**
	8/97	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	4.0	<1.0	900	4.0	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
NA = Not Analyzed
NARS = No Applicable Remediation Standard
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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	3.0	37.0	<400	40.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
NA = Not Analyzed
NARS = No Applicable Remediation Standard
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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
Well	Date									
ERM-14	3/95	**292**	4,880	8,190	6,020	<2.0	NS	19,995	4,840	3,670
	5/96	**305**	5,670	1,250	8,350	<2.0	NS	22,543	7,290	3,890
	11/96	**270**	8,300D	1,700D	11,000D	<25	7,000	21,270	12,000	30,000
	2/97	140	4,500D	980	7,100	<100	60,000	12,840	20,000	20,000
	5/97	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**
	8/97	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**	**LP**
	11/97	40	2,300D	700D	2,500D	<1.0	4,600	5,540	NS	NS
	2/98	<1.0	930	210	2,800	<1.0	28,000	3,940	NS	NS
	5/98	80	2,200	690	5,400	<1.0	11,000	8,370	NS	NS
	8/98	**270**	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
	8/99	5.0	230D	<1.0	9,600D	<1.0	12,000	9,830D	NS	NS
	11/99	<1.0	94	210	2,000	5.0	3,900	2,309	NS	NS
	3/00	<10	140	270	2,700	<50	5,900	3,110	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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
[2] = Beginning 5/98, Total Volatiles (BTEX and MTBE only) were analyzed using EPA Method 8021B

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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	**1,100**	2,700	810	3,200	<50	11,000	7,810	NS	NS
	8/98	**1,000**	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
	8/99	79.0	16.0	150D	<1.0	130D	1,000	375D	NS	NS
	11/99	19.0	<1.0	17	<1.0	<1.0	700	36.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	<200	<5.0	NS	NS

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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
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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		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
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	<1.0	<1.0	<1.0	<1.0	1.0	14,000	1.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	7,400	<5.0	NS	NS

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DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 2
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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	12.0	12.0	<1.0	1,000	24.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

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L P = Liquid-phase petroleum present; well could not be sampled
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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	100D	<1.0	5.0	<1.0	220D	3,400	325D	NS	NS
	11/99	68	<5.0	17	<5.0	180	6,000	265	NS	NS
	3/00	**220**	<5.0	73	<5.0	44	14,000	337	NS	NS

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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	52	<1.0	<1.0	<1.0	46	2,400	52	NS	NS
	11/99	83	<1.0	2.0	<1.0	34	5,200	119	NS	NS
	3/00	74	<1.0	5.0	3.0	13	16,000	95	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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	2.0	<400	2.0	NS	NS
	3/00	<5.0	<5.0	<5.0	790	<25	1,300	790	NS	NS

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DRO=Diesel Range Organics, **GRO**=Gasoline Range Organics
L P = Liquid-phase petroleum present; well could not be sampled
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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	**490**	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	**230**	1,000	410	3,700	<20	NA	5,340	NS	NS
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	160	540	130	1430	<50	21,000	2,260	NS	NS

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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	3.0	<1.0	<400	3.0	NS	NS
	11/99	<1.0	<1.0	<1.0	<1.0	3.0	<400	3.0	NS	NS
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	500	<5.0	NS	NS

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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	<1.0	<1.0	<400	<1.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

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D = Analyte concentration was obtained from a diluted analysis, B = Analyte detected in method blank, E = Analyte concentration exceeded the calibration range.
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L P = Liquid-phase petroleum present; well could not be sampled
[1] = Beginning 5/98, TPH was analyzed using EPA Method 8100M
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Table 2
Historical Groundwater Sampling Results
NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	100	400	<1.0	5,400	3,000	25,000	8,900	NS	NS
	11/99	160	970	320	2,700	930	36,000	5,080	NS	NS
	3/00	92	500	270	1,690	1,200	14,000	3,752	NS	NS

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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
Well	Date									
OBG-2	5/97	77	280	530	9,800 D	290	87,000	10,977	120,000	44,000
	8/97	**470**	410	1,100	11,000	830	180,000	13,990	99,000	75,000
	11/97	**370**	380	960	9,200	40,000	23,000	50,910	NS	NS
	2/98	**410**	340	680	7,900	26,000 D	120,000	35,330	NS	NS
	5/98	**570**	<1.0	650	6,300	15,000	33,000	22,520	NS	NS
	8/98	**330**	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
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	71	260 D	410 D	3,800 D	2,200 D	39,000	6,741	NS	NS
	3/00	45	11	140	1,310	270	37,000	1,776	NS	NS

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Table 2
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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	<150	<500	<500	<500	24,000	2,400	24,000	NS	NS

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L P = Liquid-phase petroleum present; well could not be sampled
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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	<1.0	<1.0	<1.0	2.0	<1.0	<400	2.0	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

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NEX - March 1995 - March 2000
Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/99	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/00	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Naval Submarine Base, Groton, CT

(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	38	660D	2,500D	12,000D	<1.0	16,000	15,198	NS	NS
	11/99	14	290 D	1,100 D	4,700 D	150 D	13,000	6,254	NS	NS
	3/00	<50	1,200	2,200	13,500	<250	13,000	16,900	NS	NS

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(analytical results in µg/l)

Compound		BTEX				MTBE	TPH (By EPA Method 418.1)[1]	Total Volatiles (by EPA Method 8010/8020)[2]	DRO	GRO
		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
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
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	600	<5.0	NS	NS

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		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
Well	Date									
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
	8/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	11/99	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)	NS (dry)
	3/00	<1.0	<1.0	<1.0	<1.0	<5.0	800	<5.0	NS	NS

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		Benzene	Toluene	Ethylbenzene	Xylenes					
Remediation Standard		215	23,500	50,000	21,300	50,000	NARS	NARS	NARS	NARS
Well	Date									
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
	8/99	<1.0	<1.0	<1.0	2.0	<1.0	15,000	2.0	NS	NS
	11/99	<1.0	<1.0	12	12	6.0	NS (dry)	30	NS	NS
	3/00	<1.0	<1.0	16	4.0	<5.0	8,600	20	NS	NS

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