N61165.AR.005694
CNC CHARLESTON
5090.3a

NO FURTHER ACTION (NFA) UNDERGROUND STORAGE TANK (UST) ASSESMENT REPORT DATED 28 JULY 1998 FOR QUARTERS M6 HOUSING CNC CHARLESTON SC
09/02/1998
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

2 September 1998

Department of the Navy
Southern Division NFEC
P.O. Box 190010
North Charleston, SC 29419-9010
Attn: Mr. Gabriel Magwood

Re: Underground Storage Tank Assessment Report dated 28 July 1998
Quarters "M6" Housing (Site Identification # 15405-General File)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides a narrative describing closure activities and analytical results of environmental sampling conducted to determine if releases have occurred as a result of operation of the referenced vessel and/or associated piping system. The analytical results provided indicate reportable concentrations of PAH compounds were detected in soil grab samples obtained from the UST excavation. The reported concentrations are below levels proposed in the SCAP (Soil Corrective Action Plan, amended July 1997). In this regard, the employed closure activities and sampling results appear to indicate that no additional endeavors for remedial actions and/or contaminant characterization are warranted for Quarters "M6" Housing at this time.

With consideration to the above comments, the Department has reviewed the referenced environmental data. Based on the information and analytical data submitted, the Department recognizes that the Department of the Navy and Charleston Naval Complex/Charleston Naval Base has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions please contact me at (803) 734-5328.

Sincerely,

Paul L. Bristol, Hydrogeologist
Groundwater Quality Section
Bureau of Water

Tom Knight, Manager
Groundwater Quality Section
Bureau of Water

cc: Trident District EQC

South Carolina Department of Health and Environmental Control (S.C.D.H.E.C.)
Underground Storage Tank (UST) Assessment Report

Submit Completed Form to:

UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

Date Received

State Use Only

I OWNERSHIP OF UST(S)

Agency/Owner: Southern Division, Naval Facilities Engineering Command, Caretaker Site Office

Mailing Address: P.O. Box 190010

City: N. Charleston State: SC Zip Code: 29419-9010

Area Code: 843 Telephone Number: 743-9985 Contact Person: Henry N. Shepard II, P. E.

II SITE IDENTIFICATION AND LOCATION

NFA

Site I.D. #: Unregulated

Facility Name: Charleston Naval Base Complex, Quarters M6

Street Address: 761 Commissary Street

City: North Charleston, 29405-2413 County: Charleston

III CLOSURE INFORMATION

Closure Started: 18 May 1998 Closure Completed: 18 May 1998

Number of USTs Closed: 1

N/A — Consultant

SPORTENVDETCHASN — UST Removal Contractor

IV. CERTIFICATION (Read and Sign after completing entire submittal)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Henry Shepard II, P. E.
Name (Type or Print)

Henry N. Shepard II PE 7/15/98
Signature

V. UST INFORMATION

		Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
A.	Product.....	Fuel oil				
B.	Capacity.....	1,000 gal				
C.	Age.....	Unk.				
D.	Construction Material.....	Steel				
E.	Month/Year of Last Use.....	3/98				
F.	Depth (ft.) To Base of Tank.....	8"				
G.	Spill Prevention Equipment Y/N.....	N				
H..	Overfill Prevention Equipment Y/N.....	N				
I.	Method of Closure Removed/Filled.....	R				
J.	Visible Corrosion or Pitting Y/N.....	Y				
K.	Visible Holes Y/N.....	N				

L. Method of disposal for any USTs removed from the ground (attach disposal manifests)

UST Quarters M6 was removed, drained, cut open at both ends, and cleaned with a steam cleaner. It was then cut up for recycling as scrap metal. (See Attachment III.)

M. Method of disposal for any liquid petroleum, sludges, or waste waters removed from the USTs (attach disposal manifests)

The sludge, waste water, and residual fuel oil from UST Quarters M6 were recycled.

N. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

UST Quarters M6 had a thin protective coating. Corrosion and pitting were present in patches throughout the tank, but no holes were found.

VI. PIPING INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
A. Construction Material.....	Copper & Steel				
B. Distance from UST to Dispenser.....	27' & 50' See note 1				
C. Number of Dispensers.....	2 see note 1				
D. Type of System P/S.....	S				
E. Was Piping Removed from the Ground? Y/N....	Y				
F. Visible Corrosion or Pitting Y/N.....	Y				
G. Visible Holes Y/N.....	N				
H. Age.....	Unk.				

Note 1: UST Quarters M6 provided heating fuel oil to Double housing Quarters M6 & M7.

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

The steel fill pipe and the steel ventilation pipe were corroded throughout their length, but no holes were found in either pipe. The copper supply and return lines were in very good condition.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Double housing Quarters M6 & M7 was built in the 1940s and served as housing for Naval families until base closure. UST Quarters M6 provided heating fuel oil to the unit.

VIII. SITE CONDITIONS

		Yes	No	Unk
A.	Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map.		X	
B.	Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells? If yes, indicate location on site map and describe the odor (strong, mild, etc.)		X	
C.	Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)? _____		X	
D.	Did contaminated soils remain stockpiled on site after closure? If yes, indicate the stockpile location on the site map. Name of DHEC representative authorizing soil removal: _____		X*	
E.	Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness.		X**	

* All excavated soil was returned to the tank pit.

** No groundwater was encountered.

IX. SAMPLE INFORMATION

S.C.D.H.E.C. Lab Certification Number 10120

Sample #	Location	Sample Type (Soil/Water)	Depth*	Date/Time of Collection	Collected By	OVA#
SPORT 0686-6	West end of tank	Soil	~8'	5/18/98 1320	R. Jenkins	1.0 ppm
SPORT 0686-7	East end of tank	Soil	~8'	5/18/98 1325	R. Jenkins	1.0 ppm
SPORT 0686-8	Pipe run	Soil	18"	5/18/98 1330	R. Jenkins	0 ppm
SPORT 0686-9	Pipe run	Soil	18"	5/18/98 1335	R. Jenkins	0 ppm

* = Depth Below the Surrounding Land Surface

X. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store (preserve) the samples.

After the removal of UST Quarters M6, soil samples were taken. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

Sample jars were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Samples were extracted at the tank ends and from beneath the piping at the mechanical connections.

The samples were marked, logged, and immediately placed in sample coolers packed with ice to maintain an approximate temperature of 4° C. Tools were thoroughly cleaned and decontaminated with organic-free soap and water after each sample.

The samples remained in the custody of SPORTENVDETCHASN until they were transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

XI. RECEPTORS

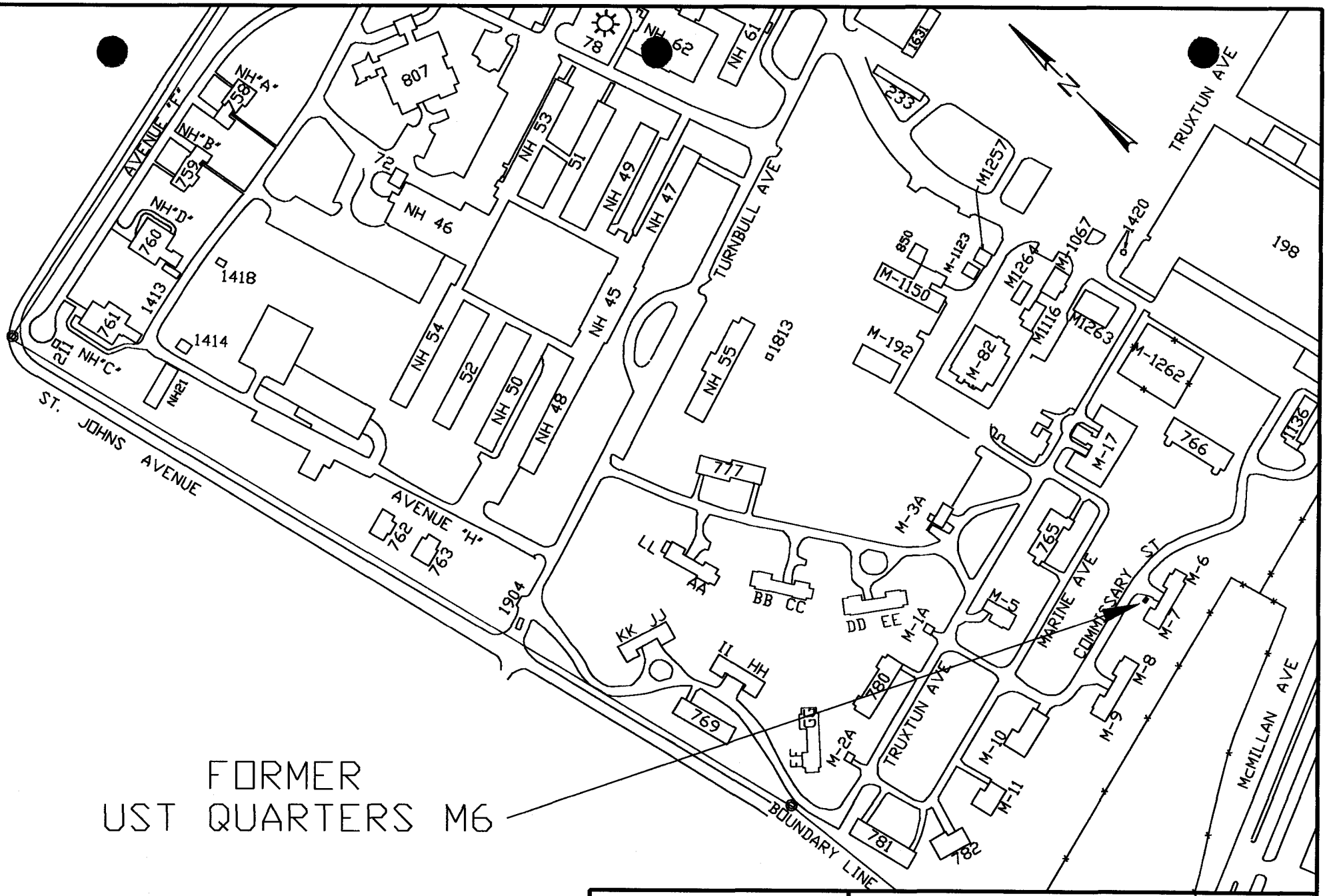
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? If yes, indicate type of receptor, distance, and direction on site map.		X
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map.		X
C.	Are there any underground structures (e.g., basements) located within 100 feet of the UST system? If yes, indicate the type of structure, distance, and direction on site map.		X
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? If yes, indicate the type of utility, distance, and direction on the site map. **[water, storm drains]**	X	
E.	Has contaminated soil been identified at a depth of less than 3 feet below land surface in an area that is not capped by asphalt or concrete? If yes, indicate the area of contaminated soil on the site map.		X

Attachment I

SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and pump island locations, sample locations, extent of excavation, and any other pertinent information.

Site Maps 1 and 2
Photograph 1



300 0 300 600

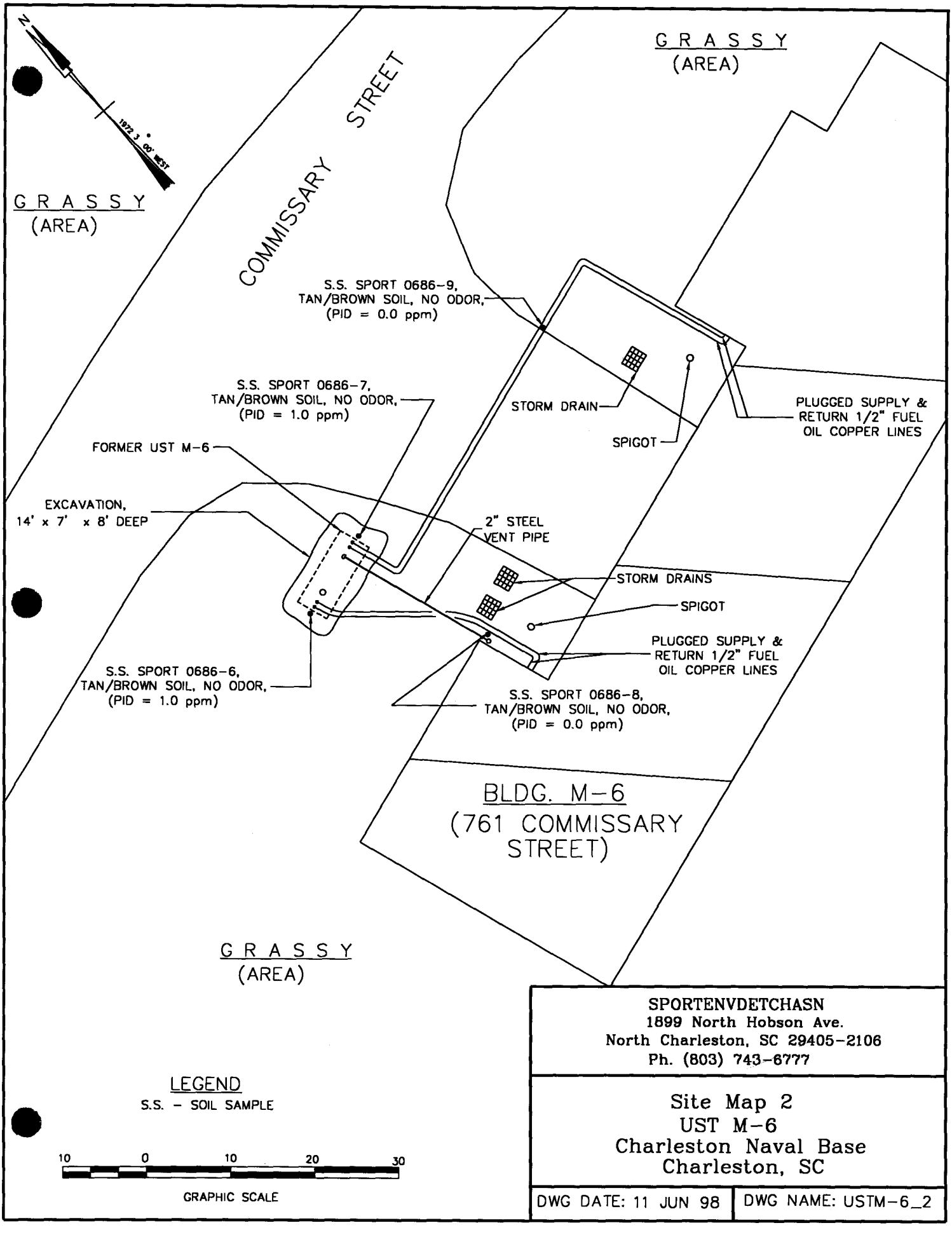
GRAPHIC SCALE

SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC
29405-2106
Ph. (803) 743-6777

Site Map 1
UST Quarters M6
Charleston Naval Base
Charleston, SC

DWG DATE: 15 JUNE 98

DWG NAME: QTRS-M6_1



SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC 29405-2106
Ph. (803) 743-6777

Site Map 2
UST M-6
Charleston Naval Base
Charleston, SC

DWG DATE: 11 JUN 98 | DWG NAME: USTM-6_2

UST Quarters M6

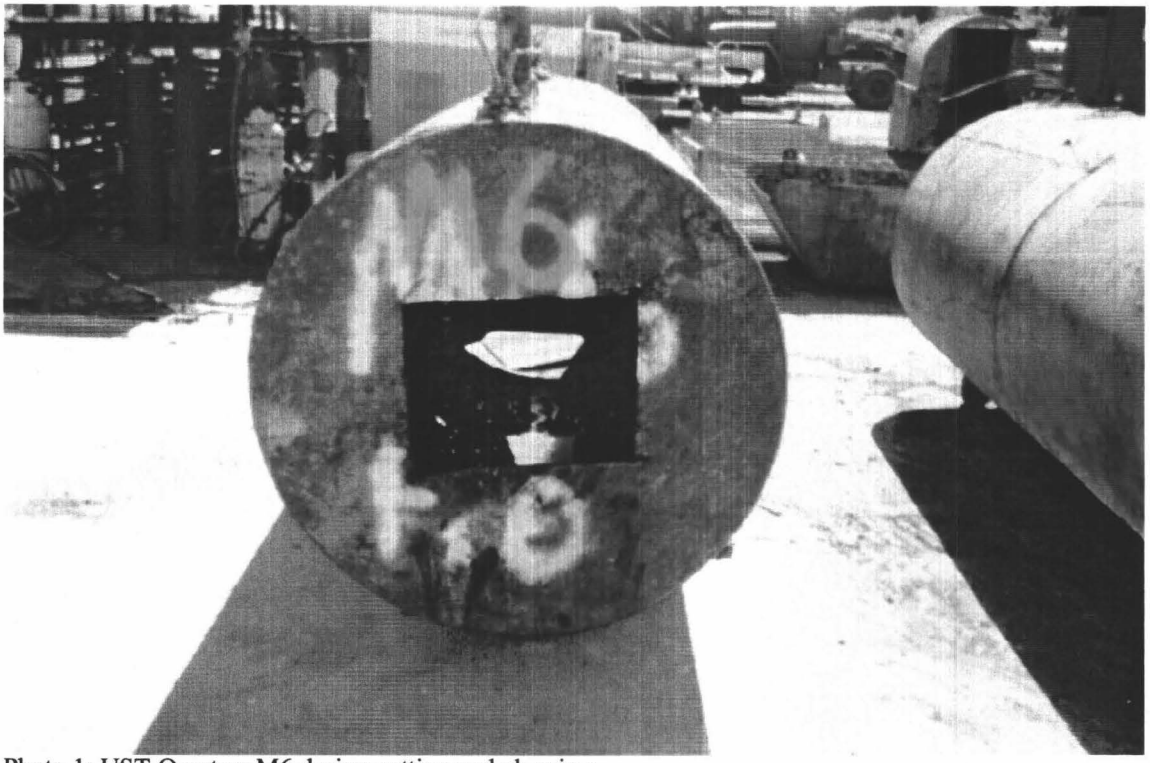


Photo 1: UST Quarters M6 during cutting and cleaning.

Attachment II
ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

Certified Analytical Results
Chain-of-Custody

MB, PPG, MLE

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: June 01, 1998

Sample ID : SPORT0686-1
Lab ID : 9805566-01
Matrix : Soil
Date Collected : 05/15/98
Date Received : 05/19/98
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	0.250	1.00	ug/kg	1.0	TCL	05/26/98	1152	122893	1
Ethylbenzene	U	0.00	0.230	1.00	ug/kg	1.0					
Toluene	U	0.00	0.220	1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	0.620	2.00	ug/kg	1.0					
Naphthalene	U	0.00	0.420	1.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	102.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	79.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	74.9	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	102.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	79.0	(63.4 - 136.)
Toluene-d8	NAP-8260	74.9	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

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9805566-01

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID : SPORT0686-1

M = Method	Method-Description

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Catharine M Tilde
Reviewed By

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID	: SPORT0686-6
Lab ID	: 9805566-06
Matrix	: Soil
Date Collected	: 05/18/98
Date Received	: 05/19/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	0.250	1.00	ug/kg	1.0	TCL	05/26/98	1842	122893	1
Ethylbenzene	U	0.00	0.230	1.00	ug/kg	1.0					
Toluene	U	0.00	0.220	1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	0.620	2.00	ug/kg	1.0					
Naphthalene	U	0.00	0.420	1.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	RLC	05/27/98	0921	122625	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	J	218	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	J	204	164	330	ug/kg	1.0					
Benzo(ghi)perylene		345	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	J	197	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	J	253	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	J	231	164	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

RDH 05/21/98 1000 122625 3

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9805566-06

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID : SPORT0686-6

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	96.0	(30.0 - 115.)
Nitrobenzene-d5	M610	88.9	(23.0 - 120.)
p-Terphenyl-d14	M610	89.7	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	81.6	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	74.9	(63.4 - 136.)
Toluene-d8	BTEX-8260	71.5*	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	81.6	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	74.9	(63.4 - 136.)
Toluene-d8	NAP-8260	71.5*	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Catharine W. Lee

Reviewed By

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID	: SPORT0686-7
Lab ID	: 9805566-07
Matrix	: Soil
Date Collected	: 05/18/98
Date Received	: 05/19/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	0.250	1.00	ug/kg	1.0	TCL	05/26/98	1915	122893	1
Ethylbenzene	U	0.00	0.230	1.00	ug/kg	1.0					
Toluene	U	0.00	0.220	1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	0.620	2.00	ug/kg	1.0					
Naphthalene	U	0.00	0.420	1.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	05/27/98	0950	122625	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds							RDH	05/21/98	1000	122625	3

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9805566-07

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID	: SPORT0686-8
Lab ID	: 9805566-08
Matrix	: Soil
Date Collected	: 05/18/98
Date Received	: 05/19/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	0.250	1.00	ug/kg	1.0	TCL	05/27/98	1025	122893	1
Ethylbenzene	U	0.00	0.230	1.00	ug/kg	1.0					
Toluene	U	0.00	0.220	1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	0.620	2.00	ug/kg	1.0					
Naphthalene	U	0.00	0.420	1.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	RLC	05/27/98	1019	122625	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	0.00	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	U	0.00	164	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

RDH 05/21/98 1000 122625 3

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

Sample ID : SPORT0686-8

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	78.2	(30.0 - 115.)
Nitrobenzene-d5	M610	73.9	(23.0 - 120.)
p-Terphenyl-d14	M610	78.7	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	67.7	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	77.8	(63.4 - 136.)
Toluene-d8	BTEX-8260	86.4	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	67.7	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	77.8	(63.4 - 136.)
Toluene-d8	NAP-8260	86.4	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Reviewed By

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID : SPORT0686-9
Lab ID : 9805566-09
Matrix : Soil
Date Collected : 05/18/98
Date Received : 05/19/98
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	0.250	1.00	ug/kg	1.0	TCL	05/27/98	1057	122893	1
Ethylbenzene	U	0.00	0.230	1.00	ug/kg	1.0					
Toluene	U	0.00	0.220	1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	0.620	2.00	ug/kg	1.0					
Naphthalene	U	0.00	0.420	1.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	RLC	05/27/98	1048	122625	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	0.00	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	U	0.00	164	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds RDH 05/21/98 1000 122625 3

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197 Report Date: June 01, 1998

Sample ID : SPORT0686-9

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	83.6	(30.0 - 115.)
Nitrobenzene-d5	M610	76.2	(23.0 - 120.)
p-Terphenyl-d14	M610	88.2	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	74.9	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	75.4	(63.4 - 136.)
Toluene-d8	BTEX-8260	76.6	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	74.9	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	75.4	(63.4 - 136.)
Toluene-d8	NAP-8260	76.6	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
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Reviewed By

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29414

(803) 556-8171 • Fax (803) 766-1178

9805566-09

NPL C00197

General Engineering Labo[illegible]es, Inc.
2040 Savage Road
Charleston, South Caroli[illegible]7
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

CHAIN OF CUSTODY RECORD

9805566%

Page 1 of 1

Client Name/Facility Name: SPORTENV DETCHASN

Collected by/Company: K. Jenkins SPORTENV DETCHASN

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

CCL 32902

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	BTEX/NAPTH	PAH	Remarks	
01	SPORTO686-1	5-15-98	0800		X		X	1																X		SOIL TRIP BLANK	.1
02	SPORTO686-2	5-15-98	1330		X		X	2																X	X	UST M-8 (NORTH)	.2
03	SPORTO686-3	5-15-98	1335		X		X	2																X	X	UST M-8 (SOUTH)	.2
04	SPORTO686-4	5-15-98	1340		X		X	2																X	X	UST MW (1)	.2
05	SPORTO686-5	5-15-98	1345		X		X	2																X	X	UST MW (2)	.2
06	SPORTO686-6	5-18-98	1320		X		X	2																X	X	UST M-6 (EAST)	.2
07	SPORTO686-7	5-18-98	1325		X		X	2																X	X	UST M-6 (WEST)	.2
08	SPORTO686-8	5-18-98	1330		X		X	2																X	X	UST M-6 MW(1)	.2
09	SPORTO686-9	5-18-98	1335		X		X	2																X	X	UST M-6 MW (2)	.2

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
Randolph Jenkins	5/18/98	1500	Fred Sargent	Fred Sargent	5/19/98	1550	Raymond Reed
Raymond Reed	5/19/98	1615	Karen Blakeney	Karen Blakeney	5/19/98	1615	

Remarks:

White = sample collector Yellow = file Pink = with report

Attachment III

Certificate of Disposal (tank)

UST Certificate of Disposal

CONTRACTOR

Supervisor of Shipbuilding Conversion and Repair
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (843) 743-6482

TANK ID & LOCATION

UST Quarters M6; Quarters M6, 761 Commissary St., North Charleston SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK	SIZE (GAL)
Fuel oil	1,000 gal

CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, and disposed of as recyclable scrap metal.

DISPOSAL CERTIFICATION

I certify that the above tank has been properly cleaned and disposed of as recyclable scrap metal.

Sidney C. Ladson — 10/6/98 (Date)