

N61165.AR.005639
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR QUARTERS FF
CNC CHARLESTON SC
05/14/1998
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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

RECEIVED
JUL 28 1998
Water Monitoring, Assessment &
Protection Division

Submit Completed Form to:

Date Received
State Use Only

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

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

Site I.D. #:	Unregulated		
Facility Name:	Charleston Naval Base Complex, Quarters FF		
Street Address:	1288 Avenue "H"		
City:	North Charleston, 29405-2413	County:	Charleston

III CLOSURE INFORMATION

Closure Started: 14 May 1998	Closure Completed: 14 May 1998
Number of USTs Closed: 1	
N/A	SPORTENVDETCASN
Consultant	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)	
Signature	Henry N. Shepard II PE 7/15/98

V. UST INFORMATION

- A. Product.....
- B. Capacity.....
- C. Age.....
- D. Construction Material.....
- E. Month/Year of Last Use.....
- F. Depth (ft.) To Base of Tank.....
- G. Spill Prevention Equipment Y/N.....
- H. Overfill Prevention Equipment Y/N.....
- I. Method of Closure Removed/Filled.....
- J. Visible Corrosion or Pitting Y/N.....
- K. Visible Holes Y/N.....

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Fuel oil					
1,000 gal					
Unk.					
Fiberglass					
3/98					
6'					
N					
N					
R					
N					
N					

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

UST Quarters FF was a double-wall, fiberglass tank. It was removed, drained, cut open at both ends, and cleaned with a steam cleaner. It was then cut up and disposed of at a local municipal landfill. (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 FF were recycled.

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

UST Quarters FF was a double-wall, fiberglass tank. It was in excellent condition.

VI. PIPING INFORMATION

- A. Construction Material.....
- B. Distance from UST to Dispenser.....
- C. Number of Dispensers.....
- D. Type of System P/S.....
- E. Was Piping Removed from the Ground? Y/N....
- F. Visible Corrosion or Pitting Y/N.....
- G. Visible Holes Y/N.....
- H. Age.....

Note 1: UST Quarters FF provided heating fuel oil to Quarters FF & GG.

Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Copper & Steel				
30' & 60' See note 1				
2 see note 1				
S				
Y				
Y				
N				
Unk.				

- 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 had minor corrosion 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 FF and GG was built in the 1940s, and served as housing for Naval families until base closure. UST Quarters FF provided heating fuel oil to both units.

VIII. SITE CONDITIONS

Yes No Unk

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

* All excavated soil was returned to the tank pit.

** No groundwater was encountered.

X. SAMPLING METHODOLOGY

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

After the removal of UST Quarters FF, 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 SPORTENVDETCNASN until they were transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

XI. RECEPTORS

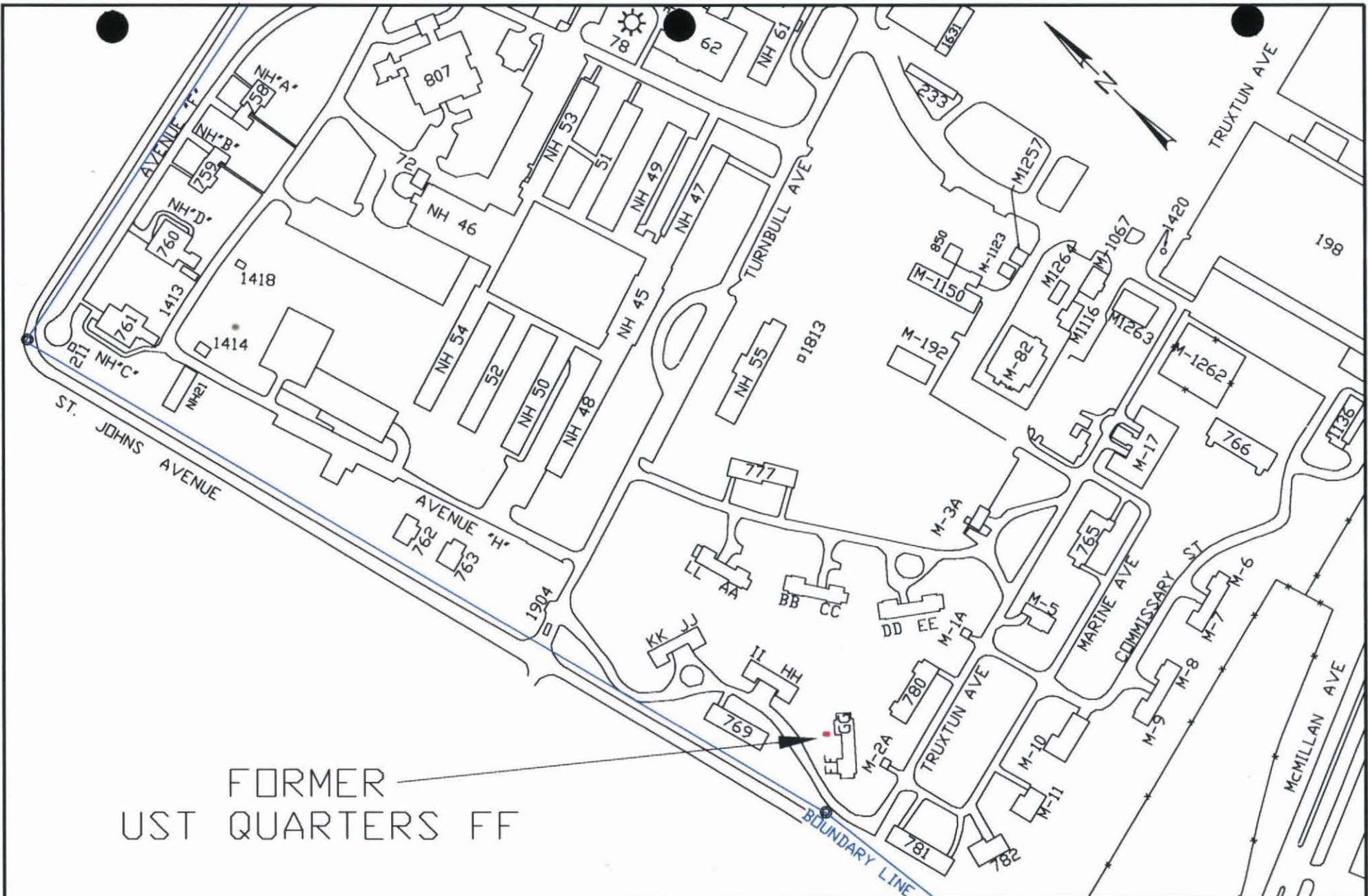
Yes No

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.		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

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
Photographs 1 and 2



FORMER
UST QUARTERS FF

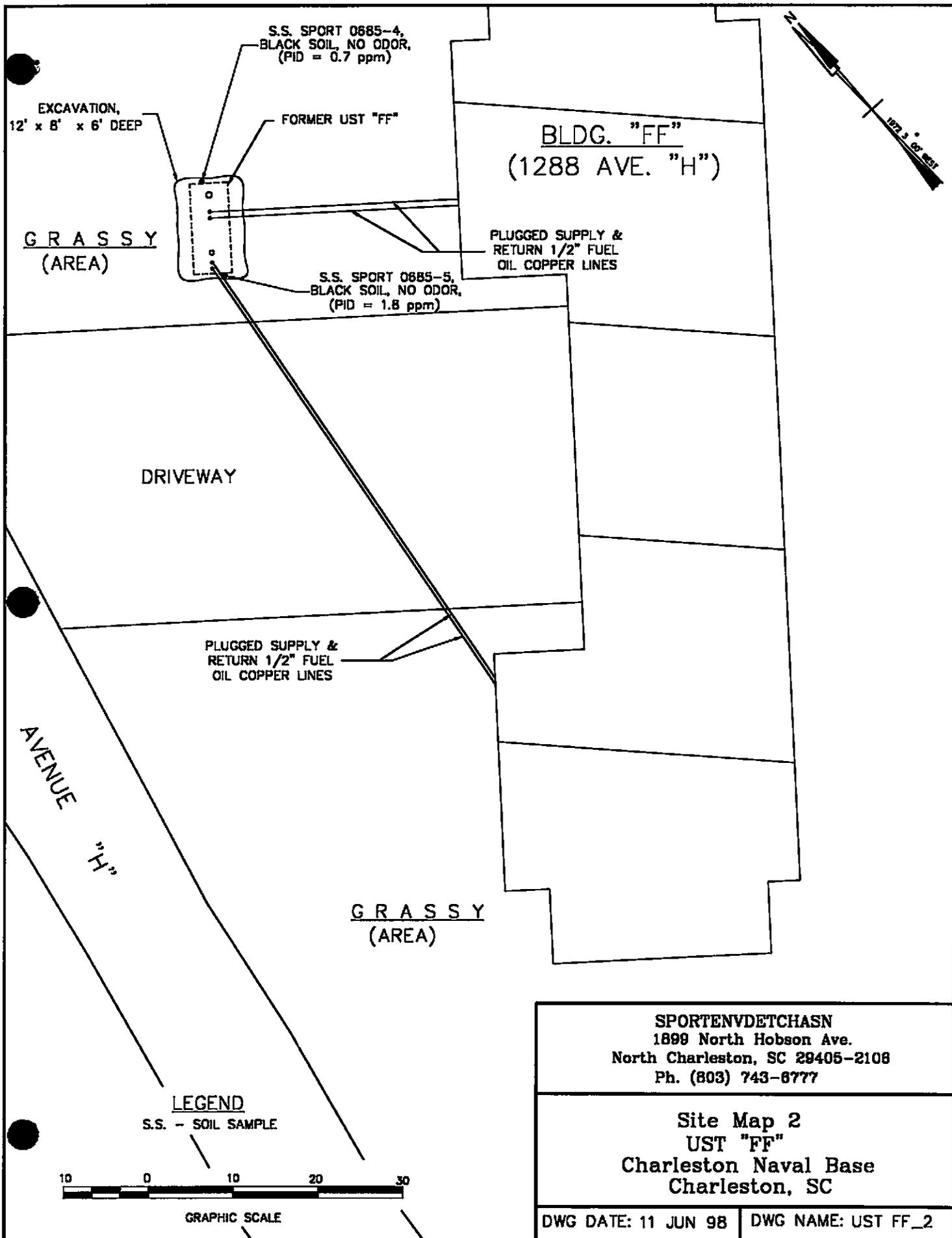


GRAPHIC SCALE

SPORTENVDECHASN
1899 North Hobson Ave.
North Charleston, SC
29405-2108
Ph. (803) 743-6777

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

DWG DATE: 29 MAY 98 | DWG NAME: QTRS-FF_1



UST QUARTERS FF

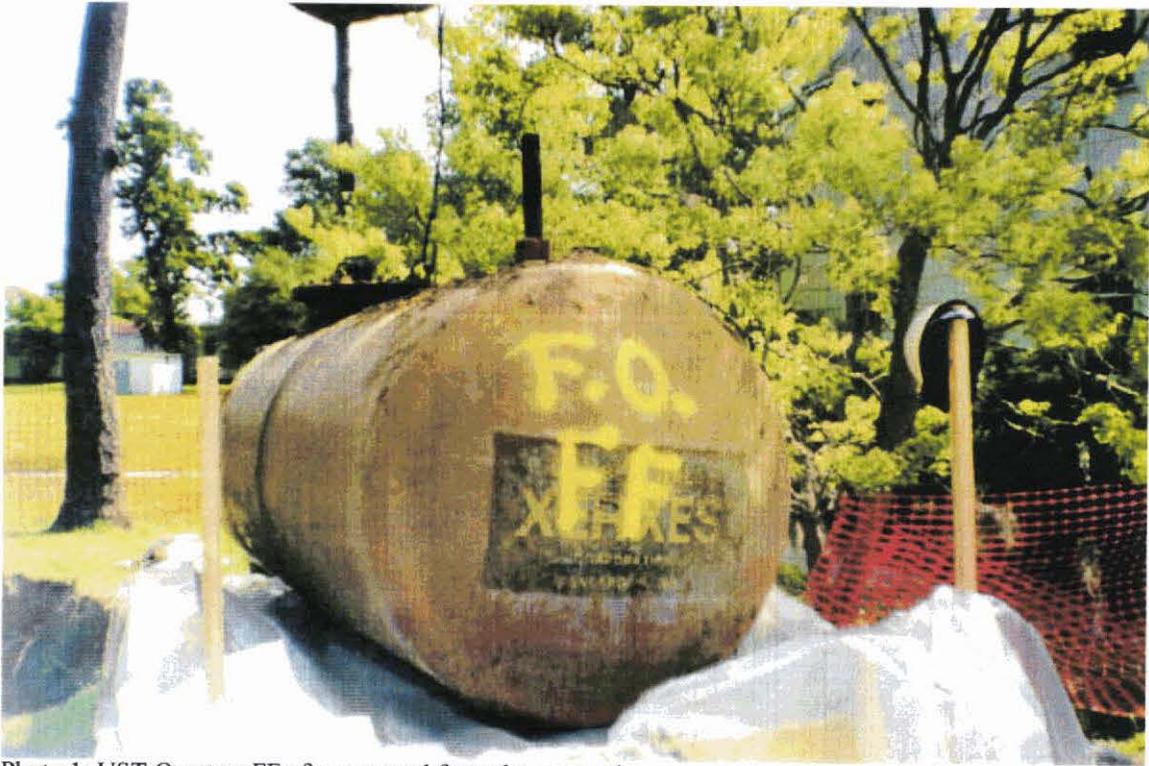


Photo 1: UST Quarters FF after removal from the excavation.

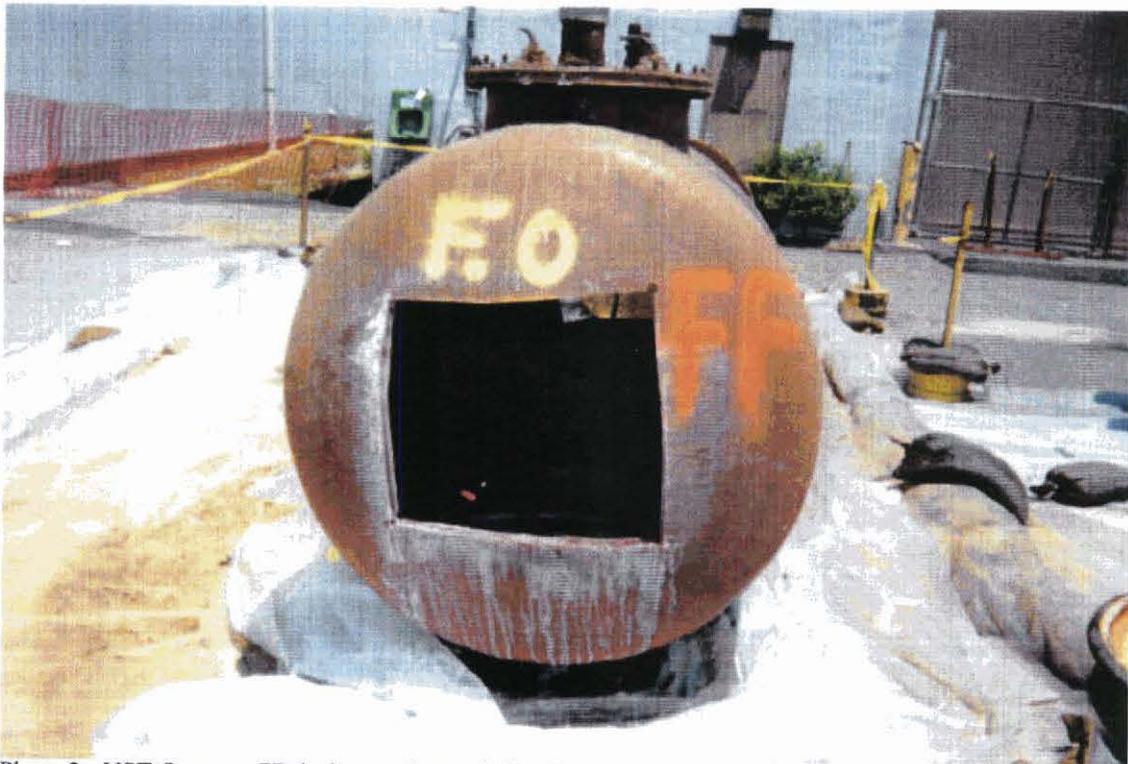
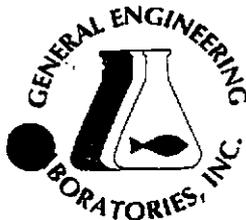


Photo 2: UST Quarters FF during cutting and cleaning.

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



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87438
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

Page 2 of 2

Sample ID : SPORT0685-1

M = Method

Method-Description

Notes:

The qualifiers in this report are defined as follows:

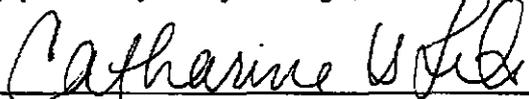
ND indicates that the analyte was not detected at a concentration greater than the detection limit.

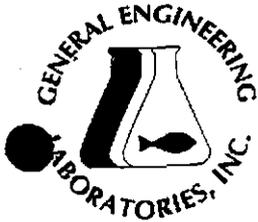
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

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.


Reviewed By



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Laboratory Certifications

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FL	E87156/87294	E87472/87458
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SC	10120	10582
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Page 1 of 2

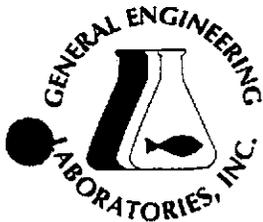
Sample ID : SPORT0685-4
 Lab ID : 9805491-04
 Matrix : Soil
 Date Collected : 05/14/98
 Date Received : 05/15/98
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	05/19/98	1339	122505	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	05/28/98	1135	122378	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 05/18/98 1725 122378 3





GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10982
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

Page 2 of 2

Sample ID : SPORT0685-4

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	77.2	(30.0 - 115.)
Nitrobenzene-d5	M610	69.1	(23.0 - 120.)
p-Terphenyl-d14	M610	80.6	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	96.0	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	92.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	90.8	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	96.0	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	92.0	(63.4 - 136.)
Toluene-d8	NAP-8260	90.8	(72.1 - 137.)

M = Method

Method-Description

M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

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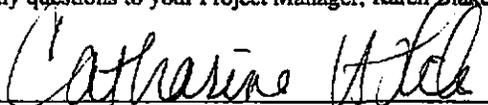
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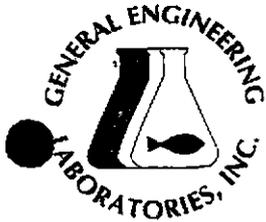
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Reviewed By





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TN	02934	02934

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Page 1 of 2

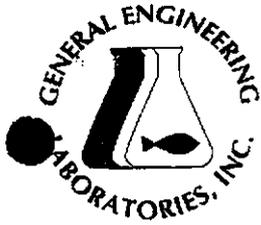
Sample ID : SPORT0685-5
 Lab ID : 9805491-05
 Matrix : Soil
 Date Collected : 05/14/98
 Date Received : 05/15/98
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	05/19/98	1411	122505	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	05/27/98	1247	122378	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 05/18/98 1725 122378 3





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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

Page 2 of 2

Sample ID : SPORT0685-5

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	80.5	(30.0 - 115.)
Nitrobenzene-d5	M610	69.4	(23.0 - 120.)
p-Terphenyl-d14	M610	92.7	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	106.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	92.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	93.6	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	106.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	92.0	(63.4 - 136.)
Toluene-d8	NAP-8260	93.6	(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.

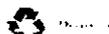
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Reviewed By



NP C 00197

General Engineering Laboratories, Inc.
 2040 Savage Road
 Charleston, South Carolina 29407
 P.O. Box 30712
 Charleston, South Carolina 29417
 (803) 556-8171

CHAIN OF CUSTODY RECORD

9805491-

Page 1 of 1

Client Name/Facility Name			# OF CONTAINERS			SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods														Remarks		
Collected by/Company						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		Caliform - specify type	BTEX/NAP
SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB																
SPORT0685-1	5/13/98	0805				X													X		Water Trip Blank	.1
SPORT0685-2	5/13/98	1030		X	X														X	X	JJ EAST	.2
SPORT0685-3	5/13/98	1040		X	X														X	X	JJ West	.2
SPORT0685-4	5/14/98	1058		X	X														X	X	FF NORTH	.2
SPORT0685-5	5/14/98	1112		X	X														X	X	FF South	.2
SPORT0685-6	5/14/98	1320		X	X														X	X	JJ 1 PPG	.2
SPORT0685-7	5/14/98	1330		X	X														X	X	JJ 2 PPG	.2
SPORT0685-8	5/14/98	1400		X	X														X	X	JJ 3 PPG	.2

CCL 32849

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

Relinquished by: *KW Cop* Date: *5/14/98* Time: *1530* Received by: *Joe & Mike* Relinquished by: *Joe & Mike* Date: *5/15/98* Time: *1410* Received by: *Bob Kachas*

Relinquished by: *Bob Kachas* Date: *5/14/98* Time: *1440* Received by lab by: *Renee Blakney* Date: *5/15/98* Time: *1430* 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, USN
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (803) 743-6482

TANK ID & LOCATION

UST Quarters FF; Quarters FF, 1288 Avenue "H", North Charleston, SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK

Fuel oil

SIZE (GAL)

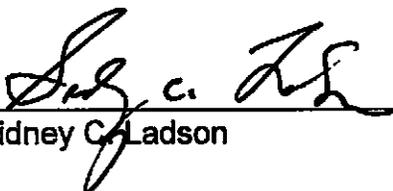
1,000 gal

CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, cut into sections, and disposed of at the local municipal landfill.

DISPOSAL CERTIFICATION

I certify that the above tank has been properly cleaned and disposed of.



Sidney C. Ladson

106/11/98
(Date)