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CNC CHARLESTON  
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR QUARTERS M CNC  
CHARLESTON SC  
04/27/1998  
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

NFA

L6.5.98  
L07.15.98

RECEIVED  
JUN 4 1998  
Water Monitoring & Protection

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

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, Housing Quarters M		
Street Address:	160 Everglades Ave.		
City:	North Charleston, 29405-2413	County:	Charleston

**III CLOSURE INFORMATION**

Closure Started: 22 April 1998	Closure Completed: 27 April 1998
Number of USTs Closed: 1	
N/A	SPORTENVDETHASN
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* 5/26/98

**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					
550 gal					
Unk.					
Steel					
3/98					
6'					
N					
N					
R					
Y					
N					

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

UST Quarters M 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 M were recycled.

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

UST Quarters M was covered with a protective coating of pitch. The tank was in good condition. Patches of corrosion were present, but no holes or pitting were found.

**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 M provided heating fuel oil to housing Quarters M.

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Copper & Steel					
52' See note 1					
1 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 ventilation pipe had corrosion throughout its length, but no holes were found. The copper supply and return lines were in good condition.

**VII. BRIEF SITE DESCRIPTION AND HISTORY**

Quarters M was built in the late 1930s. It served as housing for Naval families until base closure.

## 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 M, 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.

The laboratory soil used for the soil trip blanks that accompanied the samples was taken from the wrong container. This soil exhibited contamination of naphthalene at approximately 6 ug/kg, toluene at ~1 ug/kg, and xylenes at ~ 1 ug/kg. Although this had no effect on the soil samples, the condition renders the use of these trip blanks as unsatisfactory for quality control purposes. Accordingly, the data is not included with the site samples. The problem has been corrected and the unsatisfactory soil has been removed from the lab.

# XI. RECEPTORS

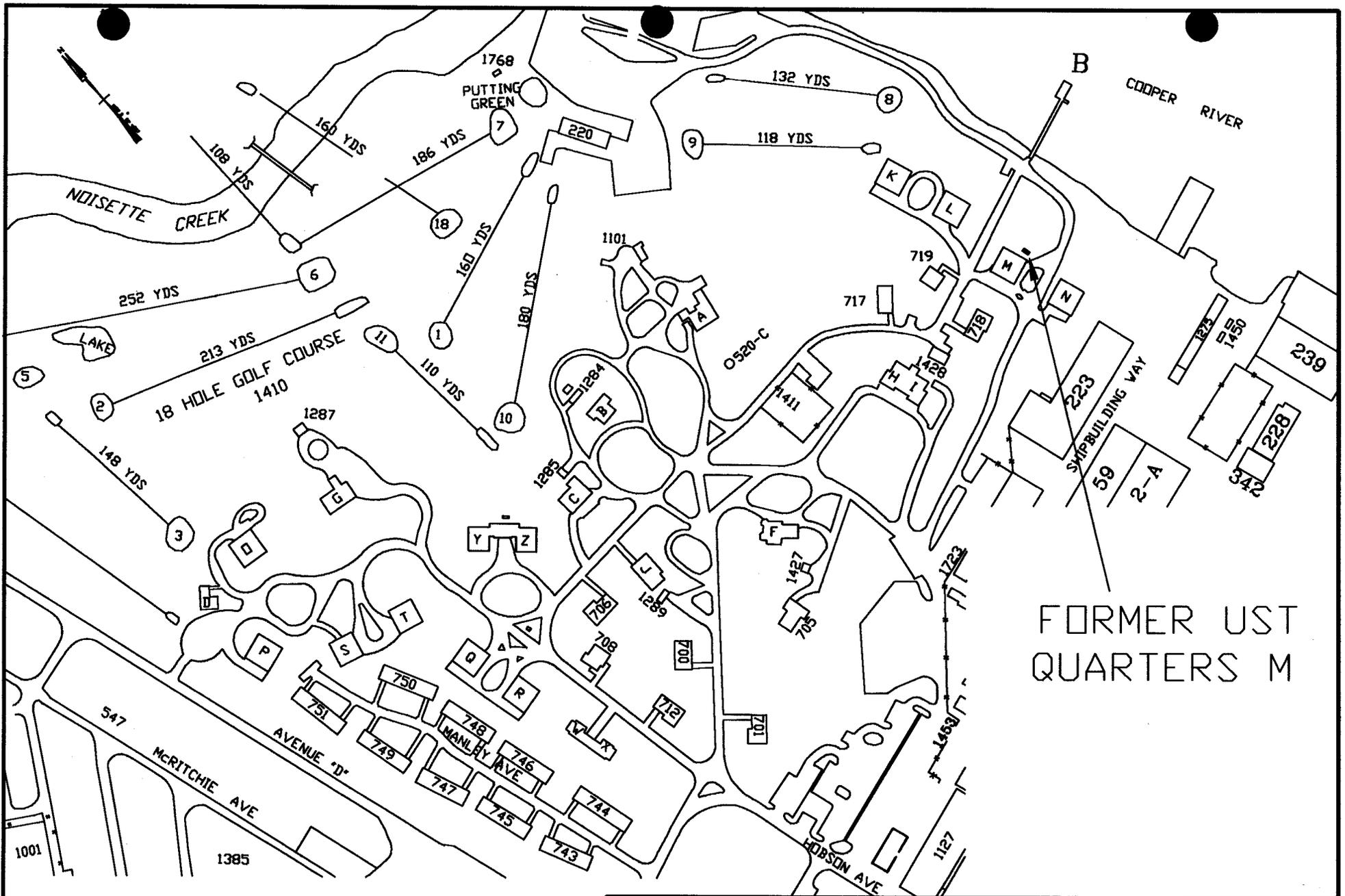
Yes No

<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?                  [Cooper River ~ 196']                  If yes, indicate type of receptor, distance, and direction on site map.</p>	<p>X</p>	
<p>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.</p>		<p>X</p>
<p>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.</p>		<p>X</p>
<p>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?                  [fire hydrant, storm drain ]                  If yes, indicate the type of utility, distance, and direction on the site map.</p>	<p>X</p>	
<p>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.</p>		<p>X</p>

**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



FORMER UST  
QUARTERS M



GRAPHIC SCALE

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

**Site Map 1**  
**UST Quarters M**  
 Charleston Naval Base  
 Charleston, SC

DWG DATE: 6 MAY 98	DWG NAME: QT-M_1
--------------------	------------------

(165' @ COOPER RIVER)

GRASSY  
(AREA)

FORMER UST QUARTERS "M"

S.S. SPORT 0671-4,  
SANDY BLACK BROWN SOIL,  
NO ODOR (PID = 0.0 ppm)

FILL CONN.

EXCAVATION,  
8' x 6' x 6-1/2' DEEP

S.S. SPORT 0671-5,  
SANDY BLACK BROWN SOIL,  
NO ODOR (PID = 0.0 ppm)

S.S. SPORT 0672-5,  
SANDY BLACK BROWN SOIL,  
NO ODOR (PID = 1.0 ppm)

2" STEEL VENT PIPE

PLUGGED SUPPLY &  
RETURN 1/2" FUEL  
OIL COPPER LINES

S.S. SPORT 0672-4,  
SANDY BLACK BROWN SOIL,  
NO ODOR (PID = 0.0 ppm)

QUARTERS "M"  
(160 EVERGLADES)

GRASSY  
(AREA)

MANHOLE

FIRE HYDRANT

EVERGLADES DR.

DRIVEWAY

**SPORTENVDETHASN**

1899 North Hobson Ave.

North Charleston, SC 29405-2108

Ph. (803) 743-6777

**LEGEND**

S.S. - SOIL SAMPLE

Site Map 2  
UST QUARTERS' "M"  
Charleston Naval Base  
Charleston, SC

DWG DATE: 12 MAY 98

DWG NAME: QTRS "M"\_2

12 0 12 24 36

GRAPHIC SCALE

## UST Quarters M

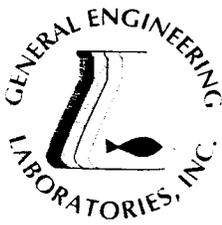


Photo 1: UST Quarters M being readied for transport to the cleaning and cutting pad.

**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	E87472/87458
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: May 08, 1998

Page 1 of 2

Sample ID : SPORT0671-4  
 Lab ID : 9804678-04  
 Matrix : Soil  
 Date Collected : 04/22/98  
 Date Received : 04/24/98  
 Priority : Routine  
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
<b>Volatile Organics</b>											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	04/30/98	1616	121040	1
Ethylbenzene	U	0.760	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)		5.19	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
<b>Extractable Organics</b>											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	05/05/98	1318	120940	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 04/28/98 1510 120940 3

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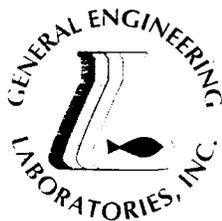
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\*9804678-04\*



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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: May 08, 1998

Page 2 of 2

Sample ID : SPORT0671-4

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	90.5	(30.0 - 115.)
Nitrobenzene-d5	M610	116.	(23.0 - 120.)
p-Terphenyl-d14	M610	85.5	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	93.6	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	88.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	86.6	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	93.6	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	88.0	(63.4 - 136.)
Toluene-d8	NAP-8260	86.6	(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.

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

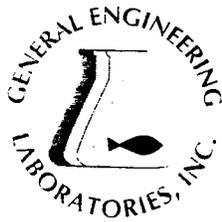
U indicates that the analyte was not detected at a concentration greater than the detection limit.

\* 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 Blakency at (803) 769-7386.

Karen Blakency  
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: May 08, 1998

Page 1 of 2

Sample ID : SPORT0671-5  
 Lab ID : 9804678-05  
 Matrix : Soil  
 Date Collected : 04/22/98  
 Date Received : 04/24/98  
 Priority : Routine  
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
<b>Volatile Organics</b>											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	04/30/98	1648	121040	1
Ethylbenzene	U	0.454	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	J	3.92	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
<b>Extractable Organics</b>											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	167	333	ug/kg	1.0	RLC	05/05/98	1346	120940	2
Acenaphthylene	U	0.00	167	333	ug/kg	1.0					
Anthracene	U	0.00	167	333	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	167	333	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	167	333	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	167	333	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	167	333	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	167	333	ug/kg	1.0					
Chrysene	U	0.00	167	333	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	167	333	ug/kg	1.0					
Fluoranthene	U	0.00	167	333	ug/kg	1.0					
Fluorene	U	0.00	167	333	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	167	333	ug/kg	1.0					
Naphthalene	U	0.00	167	333	ug/kg	1.0					
Phenanthrene	U	0.00	167	333	ug/kg	1.0					
Pyrene	U	0.00	167	333	ug/kg	1.0					

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

RDH 04/28/98 1510 120940 3

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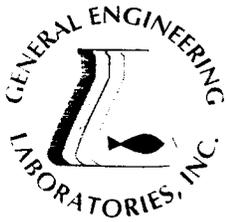
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\*9804678-05\*



# GENERAL ENGINEERING LABORATORIES

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### Laboratory Certifications

STATE	GEL	EPI
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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: May 08, 1998

Page 2 of 2

Sample ID : SPORT0671-5

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	81.3	(30.0 - 115.)
Nitrobenzene-d5	M610	103.	(23.0 - 120.)
p-Terphenyl-d14	M610	80.6	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	87.2	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	88.6	(63.4 - 136.)
Toluene-d8	BTEX-8260	84.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	87.2	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	88.6	(63.4 - 136.)
Toluene-d8	NAP-8260	84.0	(72.1 - 137.)

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

#### Notes:

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

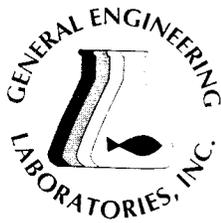
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This data report has been prepared and reviewed  
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*Karen Blakeney*  
 \_\_\_\_\_  
 Reviewed By



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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: May 08, 1998

Page 1 of 2

Sample ID : SPORT0672-4  
 Lab ID : 9804735-04  
 Matrix : Soil  
 Date Collected : 04/27/98  
 Date Received : 04/28/98  
 Priority : Routine  
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
<b>Volatile Organics</b>											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	05/05/98	1646	121492	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					
<b>Extractable Organics</b>											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	666	1330	ug/kg	4.0	GWL	05/01/98	1829	121135	2
Acenaphthylene	U	0.00	666	1330	ug/kg	4.0					
Anthracene	U	0.00	666	1330	ug/kg	4.0					
Benzo(a)anthracene	U	0.00	666	1330	ug/kg	4.0					
Benzo(a)pyrene	U	0.00	666	1330	ug/kg	4.0					
Benzo(b)fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Benzo(ghi)perylene	U	0.00	666	1330	ug/kg	4.0					
Benzo(k)fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Chrysene	U	0.00	666	1330	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	0.00	666	1330	ug/kg	4.0					
Fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Fluorene	U	0.00	666	1330	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	666	1330	ug/kg	4.0					
Naphthalene	U	0.00	666	1330	ug/kg	4.0					
Phenanthrene	U	0.00	666	1330	ug/kg	4.0					
Pyrene	U	0.00	666	1330	ug/kg	4.0					

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

CPU 04/30/98 1705 121135 3

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(803) 556-8171 • Fax (803) 766-1178



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\*9804735-04\*

NPWC 0014 1

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

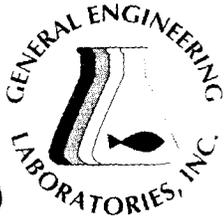
# CHAIN OF CUSTODY RECORD

Page 1 of 1

9804678

Client Name/Facility Name		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									
SPORT ENV DET CHASN		# 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/HAH	PAH	Remarks	
SAMPLE ID	DATE																			TIME	WELL
-01	SPORT0671-1	4/21/98	1410	X	X													X		Soil Trip Blank	.2
-02	SPORT0671-2	4/21/98	1500	X	X													X	X	QTR'S N North	.1
-03	SPORT0671-3	4/21/98	1520	X	X													X	X	QTR'S N South	.1
-04	SPORT0671-4	4/22/98	0955	X	X													X	X	QTR'S m North	.1
-05	SPORT0671-5	4/22/98	1010	X	X													X	X	QTR'S m South	.1
-06	SPORT0671-6	4/22/98	1130	X	X													X	X	QTR'S L North	.1
-07	SPORT0671-7	4/22/98	1140	X	X													X	X	QTR'S L South	.1
-08	SPORT0671-8	4/23/98	1000	X	X													X	X	QTR'S K EAST	.1
-09	SPORT0671-9	4/23/98	1010	X	X													X	X	QTR'S K West	.1
-10	SPORT0671-10	4/23/98	1410	X	X													X	X	QTR'S Y-2 North	.1
-11	SPORT0671-11	4/23/98	1420	X	X													X	X	QTR'S Y-2 South	.1
-12	SPORT0671-12	4/23/98	1440	X	X													X	X	QTR'S Y-2 1 PPG	.1
Relinquished by: <i>[Signature]</i>		Date: 4/23/98	Time: 1615	Received by: <i>[Signature]</i>		Relinquished by: <i>[Signature]</i>		Date: 4/24/98	Time: 1500	Received by: <i>[Signature]</i>											
Relinquished by: <i>[Signature]</i>		Date: 4/24/98	Time: 1610	Received by lab by: Karen Blakeney		Date: 4-24-98	Time: 1610	Remarks:													

White = sample collector    Yellow = file    Pink = with report



# 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: May 08, 1998

Page 2 of 2

Sample ID : SPORT0672-4

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	83.2	(30.0 - 115.)
Nitrobenzene-d5	M610	66.7	(23.0 - 120.)
p-Terphenyl-d14	M610	90.5	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	102.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	87.8	(63.4 - 136.)
Toluene-d8	BTEX-8260	90.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	102.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	87.8	(63.4 - 136.)
Toluene-d8	NAP-8260	90.0	(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:

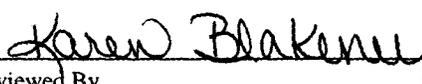
ND indicates that the analyte was not detected at a concentration greater than the detection limit.

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: May 08, 1998

Page 1 of 2

Sample ID : SPORT0672-5  
 Lab ID : 9804735-05  
 Matrix : Soil  
 Date Collected : 04/27/98  
 Date Received : 04/28/98  
 Priority : Routine  
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
<b>Volatile Organics</b>											
<i>BTEX - 4 items</i>											
Benzene	U	0.00									
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0	TCL	05/05/98	1717	121492	1
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	2.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	4.00	ug/kg	1.0					
<b>Extractable Organics</b>											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00									
Acenaphthylene	U	0.00	666	1330	ug/kg	4.0	GWL	05/01/98	1901	121135	2
Anthracene	U	0.00	666	1330	ug/kg	4.0					
Benzo(a)anthracene	U	0.00	666	1330	ug/kg	4.0					
Benzo(a)pyrene	U	0.00	666	1330	ug/kg	4.0					
Benzo(b)fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Benzo(ghi)perylene	U	0.00	666	1330	ug/kg	4.0					
Benzo(k)fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Chrysene	U	0.00	666	1330	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	0.00	666	1330	ug/kg	4.0					
Fluoranthene	U	0.00	666	1330	ug/kg	4.0					
Fluorene	U	0.00	666	1330	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	666	1330	ug/kg	4.0					
Naphthalene	U	0.00	666	1330	ug/kg	4.0					
Phenanthrene	U	0.00	666	1330	ug/kg	4.0					
Pyrene	U	0.00	666	1330	ug/kg	4.0					

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

CPU 04/30/98 1705 121135 3

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

(803) 556-8171 • Fax (803) 766-1178



Printed on recycled paper.



\*9804735-05\*



# 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: May 08, 1998

Page 2 of 2

Sample ID : SPORT0672-5

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	75.9	(30.0 - 115.)
Nitrobenzene-d5	M610	58.8	(23.0 - 120.)
p-Terphenyl-d14	M610	85.9	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	98.8	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	87.6	(63.4 - 136.)
Toluene-d8	BTEX-8260	88.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	98.8	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	87.6	(63.4 - 136.)
Toluene-d8	NAP-8260	88.0	(72.1 - 137.)

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

### Notes:

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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.

Karen Blakeney  
Reviewed By



NPWL 00147

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

Page 1 of 1

9804735

Client Name/Facility Name							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			
SPORT ENV DET CHASN							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/NDP	PAH	Remarks	
Collected by/Company																								# OF CONTAINERS	
SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB																			
01 SPORT 0672-1	4/27/98	0830	X	X																X		Soil Trip Blank	.1		
02 SPORT 0672-2	4/27/98	0931	X	X																X	X	QTR'S N PPG-1	.2		
03 SPORT 0672-3	4/27/98	0948	X	X																X	X	QTR'S N PPG-2	.2		
04 SPORT 0672-4	4/27/98	1005	X	X																X	X	QTR'S M Ppg-1	.2		
05 SPORT 0672-5	4/27/98	1015	X	X																X	X	QTR'S M Ppg-2	.2		
06 SPORT 0672-6	4/27/98	1045	X	X																X	X	QTR'S L Ppg-1	.2		
07 SPORT 0672-7	4/27/98	1120	X	X																X	X	QTR'S K Ppg-1	.2		
08 SPORT 0672-8	4/27/98	1145	X	X																X	X	QTR'S A Ppg-1	.2		
Relinquished by: <i>[Signature]</i>							Date: 4/27/98	Time: 1450	Received by: <i>[Signature]</i>							Date: 4/27/98	Time: 1450	Received by: <i>[Signature]</i>							
Relinquished by: <i>[Signature]</i>							Date: 4/28/98	Time: 1510	Received by lab by: <i>[Signature]</i>							Date: 4/28/98	Time: 1510	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 M; Quarters M, 160 Everglades Ave., Charleston SC

---

## DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning  
& Disposal Area  
Charleston Naval Complex

### TYPE OF TANK

Fuel oil

### SIZE (GAL)

550 gal

---

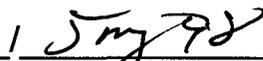
## CLEANING/DISPOSAL METHOD

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

  
\_\_\_\_\_  
(Date)



15 July 1998

2600 Bull Street  
Columbia, SC 29201-1708

COMMISSIONER:  
Douglas E. Bryant

BOARD:  
John H. Burriss  
Chairman

William M. Hull, Jr., MD  
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Rodney L. Grandy

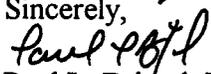
Department of the Navy  
Southern Division NFEC  
P.O. Box 190010  
North Charleston, SC 29419-9010  
Attn: Mr. Gabriel Magwood

Re: Underground Storage Tank Assessment Report dated 1 June 1998  
Quarters "M" 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 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 BTEX 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). Based on review of the employed closure activities and sampling results it appears that no additional endeavors for remedial actions and/or contaminant characterization is warranted for Quarters "M" Housing at this time. Please be aware this statement pertains only to the portion of the facility addressed in the referenced document and does not apply to other areas of the facility and/or any other potential regulatory violations. The Department retains the authority to request additional assessments and/or remedial endeavors, as appropriate, if future conditions or information warrant and are 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



DEPARTMENT OF THE NAVY  
SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
P.O. BOX 190010  
2155 EAGLE DRIVE  
NORTH CHARLESTON, S.C. 29419-9010

NFA  
Li 6.5.98  
Lo 7.15.98

RECEIVED  
0990  
Code 849  
1 June 1998  
JUN 4 1998  
Water Monitoring, Assessment &  
Protection Division

Mr. Paul Bristol  
South Carolina Department of Health  
And Environmental Control  
Division of Underground Storage Tank  
2600 Bull Street  
Columbia, SC 29201

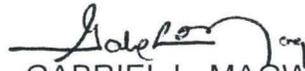
**UST ASSESSMENT REPORTS FOR CHARLESTON NAVAL COMPLEX,  
CHARLESTON, SC**

Dear Mr. Bristol:

Enclosed are the Assessment Reports for the closure of Underground Storage Tanks A, K, L, M, N, Y, 220 and 3909 located at the Charleston Naval Complex, Charleston, SC.

If you have any questions please contact me at (843) 820-7307.

Sincerely,

  
GABRIEL L. MAGWOOD  
Petroleum/UST

As to be changed  
15405

Encl:  
(1) Assessment Reports