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CNC CHARLESTON  
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR QUARTERS Y AND  
REVIEW OF UST ASSESSMENT REPORT DATED 24 APRIL 1998 CNC CHARLESTON SC  
07/15/1998  
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

NFA  
Σ

Li 6.5.98  
Lo 7.15.98

Submit Completed Form to:

Date Received
State Use Only

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

**RECEIVED**  
JUN 4 1998  
Monitoring, Assessment & Protection Division

**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 Y		
Street Address:	1516 Hobson Avenue		
City:	North Charleston, 29405-2413	County:	Charleston

**III CLOSURE INFORMATION**

Closure Started: 23 April 1998	Closure Completed: 24 April 1998
Number of USTs Closed: 2	
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 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.....

Y1	Y2	Tank 3	Tank 4	Tank 5
Fuel oil	Fuel oil			
1,000 gal	550 gal			
Unk.	Unk			
Steel	Steel			
3/98	3/98			
6'	6'			
N	N			
N	N			
R	R			
N	N			
N	N			

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

USTs Quarters Y1 and Y2 were removed, drained, cut open at both ends, and cleaned with a steam cleaner. They were 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 both tanks were recycled.

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

USTs Quarters Y1 and Y2 were in fair to good condition. No corrosion, pitting, or holes 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: USTs Quarters Y1 and Y2 provided heating fuel oil to housing Quarters Y and Z.

Y1	Y2	Tank 3	Tank 4	Tank 5
Copper & Steel	Copper & Steel			
42' See note 1	26' See note 1			
1 See note 1	1 See note 1			
S	S			
Y	Y			
Y	Y			
N	N			
Unk.	Unk.			

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

The steel ventilation pipes for UST Quarters Y1 and Y2 were corroded throughout their length. The copper supply and return pipes were in good condition.

## VII. BRIEF SITE DESCRIPTION AND HISTORY

Quarters Y and Z were built in the 1940s. They 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>			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 USTs Quarters Y1 and Y2, 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

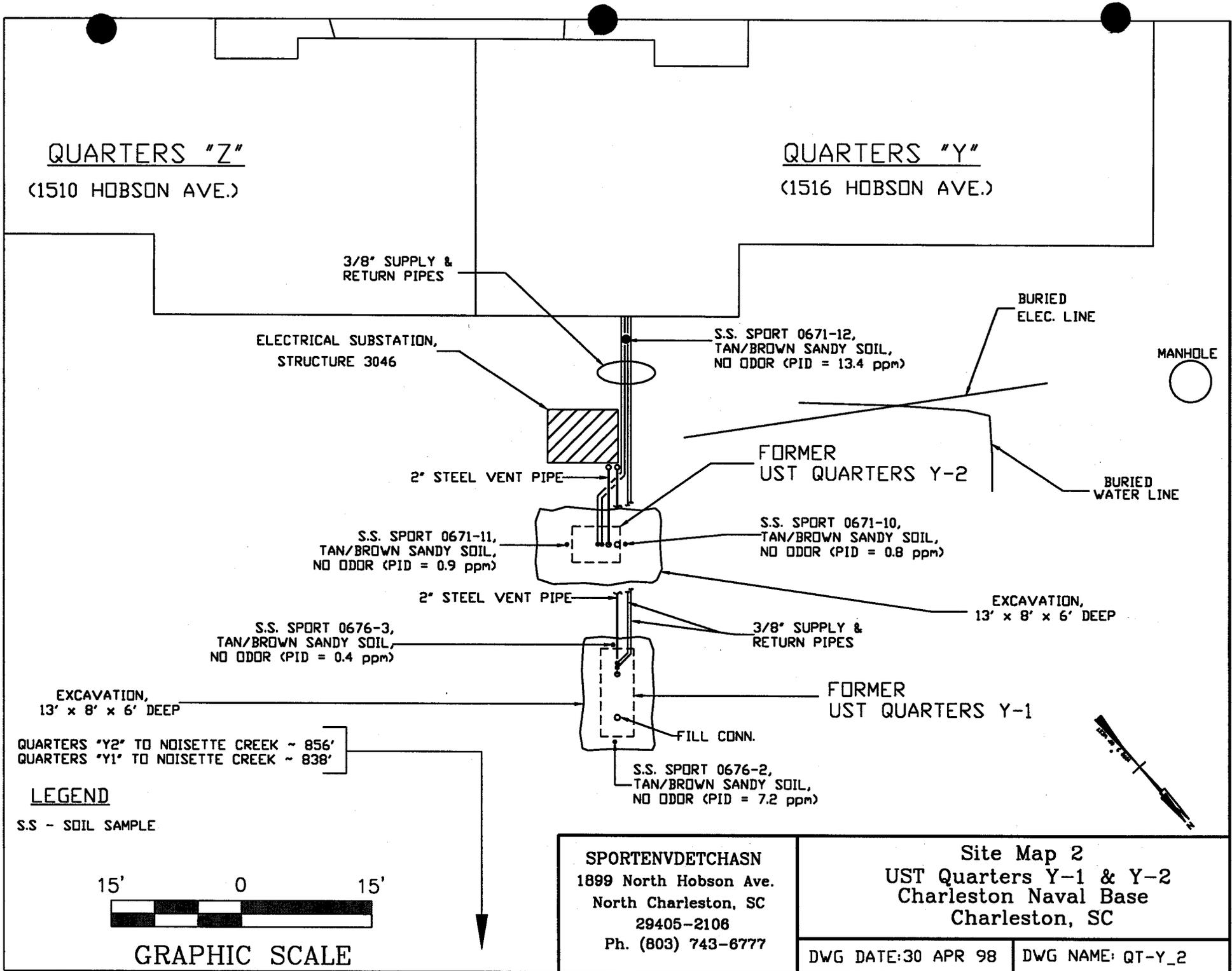
<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?</p> <p>If yes, indicate type of receptor, distance, and direction on site map.</p> <p style="text-align: center;">[Y1 ~ 856' to Noisette Creek Y2 ~ 838' to Noisette Creek]</p>	X	
<p>B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?</p> <p>If yes, indicate type of well, distance, and direction on site map.</p>		X
<p>C. Are there any underground structures (e.g., basements) located within 100 feet of the UST system?</p> <p>If yes, indicate the type of structure, distance, and direction on site map.</p>		X
<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?</p> <p>If yes, indicate the type of utility, distance, and direction on the site map.</p> <p style="text-align: center;">[ electrical, storm drain, water]</p>	X	
<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?</p> <p>If yes, indicate the area of contaminated soil on the site map.</p>		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, 2, and 3





QUARTERS "Z"  
(1510 HOBSON AVE.)

QUARTERS "Y"  
(1516 HOBSON AVE.)

ELECTRICAL SUBSTATION,  
STRUCTURE 3046

3/8" SUPPLY &  
RETURN PIPES

S.S. SPORT 0671-12,  
TAN/BROWN SANDY SOIL,  
NO ODOR (PID = 13.4 ppm)

BURIED  
ELEC. LINE

MANHOLE

FORMER  
UST QUARTERS Y-2

BURIED  
WATER LINE

2" STEEL VENT PIPE

S.S. SPORT 0671-11,  
TAN/BROWN SANDY SOIL,  
NO ODOR (PID = 0.9 ppm)

S.S. SPORT 0671-10,  
TAN/BROWN SANDY SOIL,  
NO ODOR (PID = 0.8 ppm)

2" STEEL VENT PIPE

EXCAVATION,  
13' x 8' x 6' DEEP

S.S. SPORT 0676-3,  
TAN/BROWN SANDY SOIL,  
NO ODOR (PID = 0.4 ppm)

3/8" SUPPLY &  
RETURN PIPES

EXCAVATION,  
13' x 8' x 6' DEEP

FORMER  
UST QUARTERS Y-1

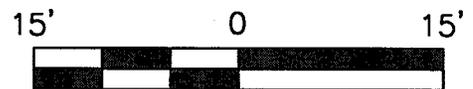
FILL CONN.

QUARTERS "Y2" TO NOISETTE CREEK ~ 856'  
QUARTERS "Y1" TO NOISETTE CREEK ~ 838'

S.S. SPORT 0676-2,  
TAN/BROWN SANDY SOIL,  
NO ODOR (PID = 7.2 ppm)

LEGEND

S.S. - SOIL SAMPLE



GRAPHIC SCALE

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

**Site Map 2**  
**UST Quarters Y-1 & Y-2**  
**Charleston Naval Base**  
**Charleston, SC**

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DWG DATE: 30 APR 98    DWG NAME: QT-Y\_2

## USTs Quarters Y1 & Y2



Photo 1: Site of USTs Quarters Y1 and Y2 excavation.

USTs Quarters Y1 & Y2

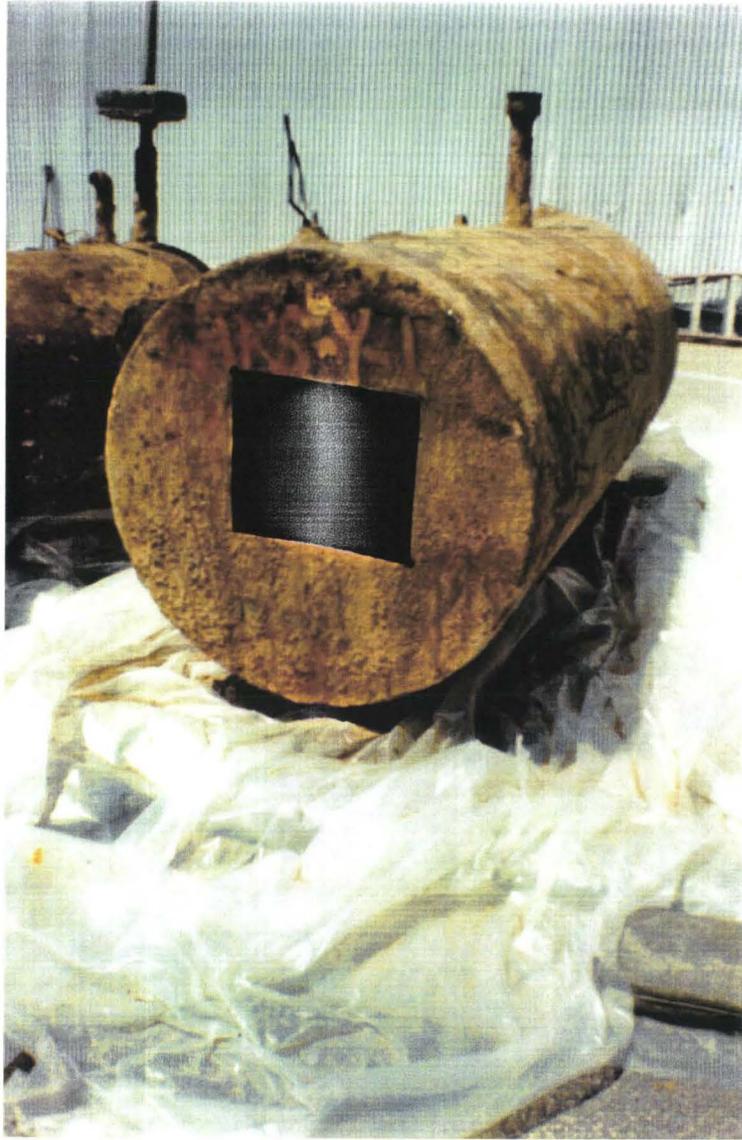


Photo 2: UST Quarters Y1 during cutting and cleaning.

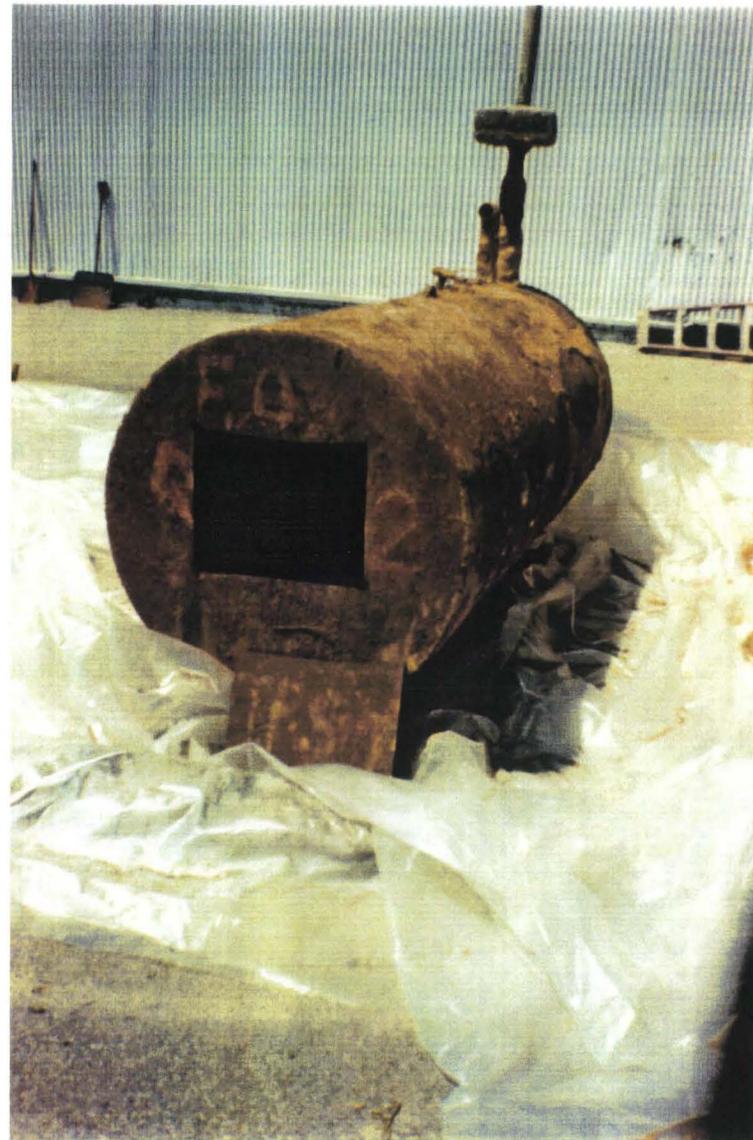
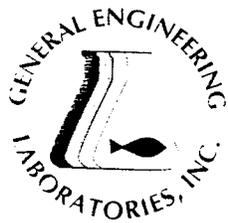


Photo 3: UST Quarters Y2 during cutting and cleaning.

**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

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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 : SPORT0671-10  
 Lab ID : 9804678-10  
 Matrix : Soil  
 Date Collected : 04/23/98  
 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	2303	121259	1
Ethylbenzene	U	0.727	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)		4.32	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	05/06/98	1028	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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\*9804678-10\*



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FL	E87156/87294	E87472/87458
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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 : SPORT0671-10

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	89.7	(30.0 - 115.)
Nitrobenzene-d5	M610	111.	(23.0 - 120.)
p-Terphenyl-d14	M610	89.4	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	89.6	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	88.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	83.2	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	89.6	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	88.0	(63.4 - 136.)
Toluene-d8	NAP-8260	83.2	(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.

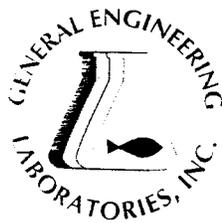
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

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.

Karen Blakeney  
 Reviewed By



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TN	02934	02934

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 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 : SPORT0671-11  
 Lab ID : 9804678-11  
 Matrix : Soil  
 Date Collected : 04/23/98  
 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	05/01/98	0931	121259	1
Ethylbenzene	U	0.490	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	J	1.84	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	166	331	ug/kg	1.0	RLC	05/06/98	1055	120940	2
Acenaphthylene	U	0.00	166	331	ug/kg	1.0					
Anthracene	U	0.00	166	331	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	166	331	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	166	331	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	166	331	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	166	331	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	166	331	ug/kg	1.0					
Chrysene	U	0.00	166	331	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	166	331	ug/kg	1.0					
Fluoranthene	U	0.00	166	331	ug/kg	1.0					
Fluorene	U	0.00	166	331	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	166	331	ug/kg	1.0					
Naphthalene	U	0.00	166	331	ug/kg	1.0					
Phenanthrene	U	0.00	166	331	ug/kg	1.0					
Pyrene	U	0.00	166	331	ug/kg	1.0					

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

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TN	02934	02934

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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 : SPORT0671-11

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	89.9	(30.0 - 115.)
Nitrobenzene-d5	M610	113.	(23.0 - 120.)
p-Terphenyl-d14	M610	84.1	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	88.0	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	91.8	(63.4 - 136.)
Toluene-d8	BTEX-8260	87.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	88.0	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	91.8	(63.4 - 136.)
Toluene-d8	NAP-8260	87.0	(72.1 - 137.)

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

### Notes:

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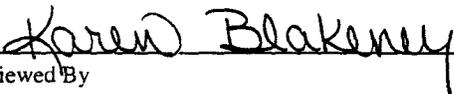
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

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Reviewed By





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 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 : SPORT0671-12  
 Lab ID : 9804678-12  
 Matrix : Soil  
 Date Collected : 04/23/98  
 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	05/01/98	0007	121259	1
Ethylbenzene	U	0.432	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	J	1.75	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.893	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	05/06/98	1123	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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\*9804678-12\*



# 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 : SPORT0671-12

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	79.6	(30.0 - 115.)
Nitrobenzene-d5	M610	89.8	(23.0 - 120.)
p-Terphenyl-d14	M610	90.3	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	86.2	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	91.6	(63.4 - 136.)
Toluene-d8	BTEX-8260	84.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	86.2	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	91.6	(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:

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.

*Karen Blakeney*  
 \_\_\_\_\_  
 Reviewed By

# 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	Colliform - specify type	BTEX/NAP	PAH	Remarks			
SAMPLE ID	DATE	TIME	WELL																			SOIL	COMP	GRAB	Remarks
01	SPORT0671-1	4/21/98	1410	X	X	1															X	Soil Trip Blank	.2		
02	SPORT0671-2	4/21/98	1500	X	X	2																X	X	QTR'S N North	.1
03	SPORT0671-3	4/21/98	1520	X	X	2																X	X	QTR'S N South	.1
04	SPORT0671-4	4/22/98	0955	X	X	2																X	X	QTR'S m North	.1
05	SPORT0671-5	4/22/98	1010	X	X	2																X	X	QTR'S m South	.1
06	SPORT0671-6	4/22/98	1130	X	X	2																X	X	QTR'S L North	.1
07	SPORT0671-7	4/22/98	1140	X	X	2																X	X	QTR'S L South	.1
08	SPORT0671-8	4/23/98	1000	X	X	2																X	X	QTR'S K EAST	.1
09	SPORT0671-9	4/23/98	1010	X	X	2																X	X	QTR'S K west	.1
10	SPORT0671-10	4/23/98	1410	X	X	2																X	X	QTR'S Y-2 North	.1
11	SPORT0671-11	4/23/98	1420	X	X	2																X	X	QTR'S Y-2 South	.1
12	SPORT0671-12	4/23/98	1440	X	X	2																X	X	QTR'S Y-2 1 PPG	.1
																						X	X		
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 Brakeney				Date: 4-24-98	Time: 1610	Remarks:													

White = sample collector    Yellow = file    Pink = with report



# 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 : SPORT0676-2  
 Lab ID : 9804679-02  
 Matrix : Soil  
 Date Collected : 04/24/98  
 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									
Ethylbenzene	J	1.10	1.00	2.00	ug/kg	1.0	TCL	05/01/98	0110	121259	1
Toluene	U	0.953	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)		5.77	1.00	2.00	ug/kg	1.0					
Naphthalene	J	1.81	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	167	333	ug/kg	1.0	RLC	05/06/98	1151	120940	2
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

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

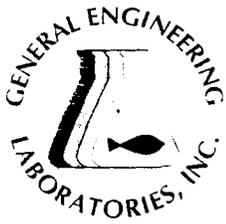
(803) 556-8171 • Fax (803) 766-1178



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\*9804679-02\*



# 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 2 of 2

Sample ID : SPORT0676-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	86.3	(30.0 - 115.)
Nitrobenzene-d5	M610	109.	(23.0 - 120.)
p-Terphenyl-d14	M610	87.4	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	94.8	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	86.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	84.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	94.8	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	86.0	(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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Karen Blakeney  
 Reviewed By



# GENERAL ENGINEERING LABORATORIES

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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 1 of 2

Sample ID : SPORT0676-3  
 Lab ID : 9804679-03  
 Matrix : Soil  
 Date Collected : 04/24/98  
 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	05/01/98	1005	121259	1
Ethylbenzene	U	0.340	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	J	1.55	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	05/06/98	1218	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

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

(803) 556-8171 • Fax (803) 766-1178

\*9804679-03\*



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# 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 2 of 2

Sample ID : SPORT0676-3

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	85.6	(30.0 - 115.)
Nitrobenzene-d5	M610	107.	(23.0 - 120.)
p-Terphenyl-d14	M610	86.4	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	88.8	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	89.6	(63.4 - 136.)
Toluene-d8	BTEX-8260	85.8	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	88.8	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	89.6	(63.4 - 136.)
Toluene-d8	NAP-8260	85.8	(72.1 - 137.)

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

#### Notes:

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Karen Blakeney  
Reviewed By



**Attachment III**

Certificates of Disposal (tanks)

# 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 (803) 743-6482

## TANK ID & LOCATION

UST Quarters Y-1; Quarters Y, 1516 Hobson Ave., Charleston SC

## DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning  
& Disposal Area  
Charleston Naval Complex

### TYPE OF TANK

Fuel oil

### SIZE (GAL)

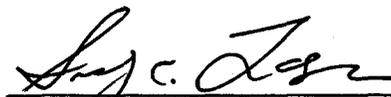
1,000 gal

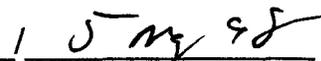
## CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, 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)

# 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 (803) 743-6482

## TANK ID & LOCATION

UST Quarters Y-2; Quarters Y, 1516 Hobson Ave., Charleston SC

---

## DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning  
& Disposal Area  
Charleston Naval Complex

### TYPE OF TANK

Fuel oil

### SIZE (GAL)

550 gal

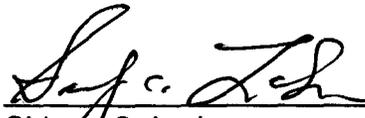
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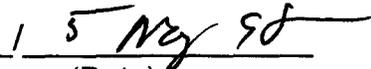
## CLEANING/DISPOSAL METHOD

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

PROMOTE PROTECT PROSPER  
2600 Bull Street  
Columbia, SC 29201-1708

COMMISSIONER:  
Douglas E. Bryant

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

BOARD:  
John H. Burriss  
Chairman

William M. Hull, Jr., MD  
Vice Chairman

Roger Leaks, Jr.  
Secretary

Mark B. Kent

Cyndi C. Mosteller

Brian K. Smith

Rodney L. Grandy

Re: Underground Storage Tank Assessment Report dated 1 June 1998  
Quarters "Y" 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 vessels and/or associated piping system. The analytical results provided indicate reportable concentrations of BTEX and PAH compounds were detected in soil grab samples obtained from the UST excavations and the piping run 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 "Y" 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*  
Paul L. Bristol, Hydrogeologist  
Groundwater Quality Section  
Bureau of Water

*Tom Knight*  
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  
5

Li 6.5.98  
Lo 7.15.98

0090  
Code 1849  
1 June 1998  
**RECEIVED**  
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

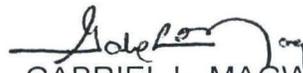
**UST ASSESSMENT REPORTS FOR CHARLESTON NAVAL COMPLEX,  
CHARLESTON, SC**

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