

N61165.AR.005237
CNC CHARLESTON
5090.3a

NO FURTHER ACTION (NFA) UNDERGROUND STORAGE TANK (UST) ASSESSMENT
REPORT DATED 29 JULY 1998 FOR QUARTERS HH HOUSING CNC CHARLESTON SC
09/02/1998
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2 September 1998

2600 Bull Street
Columbia, SC 29201-1708

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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 29 July 1998
Quarters "HH" 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 that concentrations of BTEX and PAH compounds were not detected above established method detection limits in soil grab samples obtained from the UST excavation and/or piping run excavations. 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 "HH" 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.

Charleston Naval Complex/Charleston Naval Base
2 September 1998
page 2

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

#15405

Li 7.31.98
Lo 8.20.98

5090
Code 1849
28 July 1998

Mr. Paul Bristol
South Carolina Department of Health
And Environmental Control
Groundwater Quality Section
Bureau of Water
2600 Bull Street
Columbia, SC 29201

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JUL 28

Water Monitoring, Assessment &
Protection Division

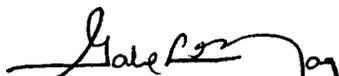
**UST ASSESSMENT REPORTS FOR CHARLESTON NAVAL COMPLEX,
CHARLESTON, SC**

Dear Mr. Bristol:

Enclosed are the Assessment Reports for the closure of Underground Storage Tanks 760, 763, DD, FF, HH, JJ, M5, M6, and M8 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

Encl:
(1) Assessment Reports

NFA

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

RECEIVED
JUL 23 1998

Submit Completed Form to:

Date Received
State Use Only

UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29202
Telephone (803) 734-5331

Water 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, Quarters HH		
Street Address:	1304 Avenue "H"		
City:	North Charleston, 29405-2413	County:	Charleston

Handwritten: N/A

III CLOSURE INFORMATION

Closure Started: 28 May 1998	Closure Completed: 28 May 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 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.					
Steel					
3/98					
6' 6"					
N					
N					
R					
Y					
N					

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

UST Quarters HH 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 HH were recycled.

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

UST Quarters HH was covered with a protective coating. The tank was in fair to good condition. The only corrosion present was where the hold-down bands encircled the tank. No 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: UST Quarters HH provided heating fuel oil to Quarters HH & II.

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Copper & Steel					
25' & 38' 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 only minor corrosion throughout their length. No holes were found in either pipe. The copper supply and return lines were in good condition.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Double housing Quarters HH and II was built in the 1940s, and served as housing for Naval families until base closure. UST Quarters HH 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 HH, 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

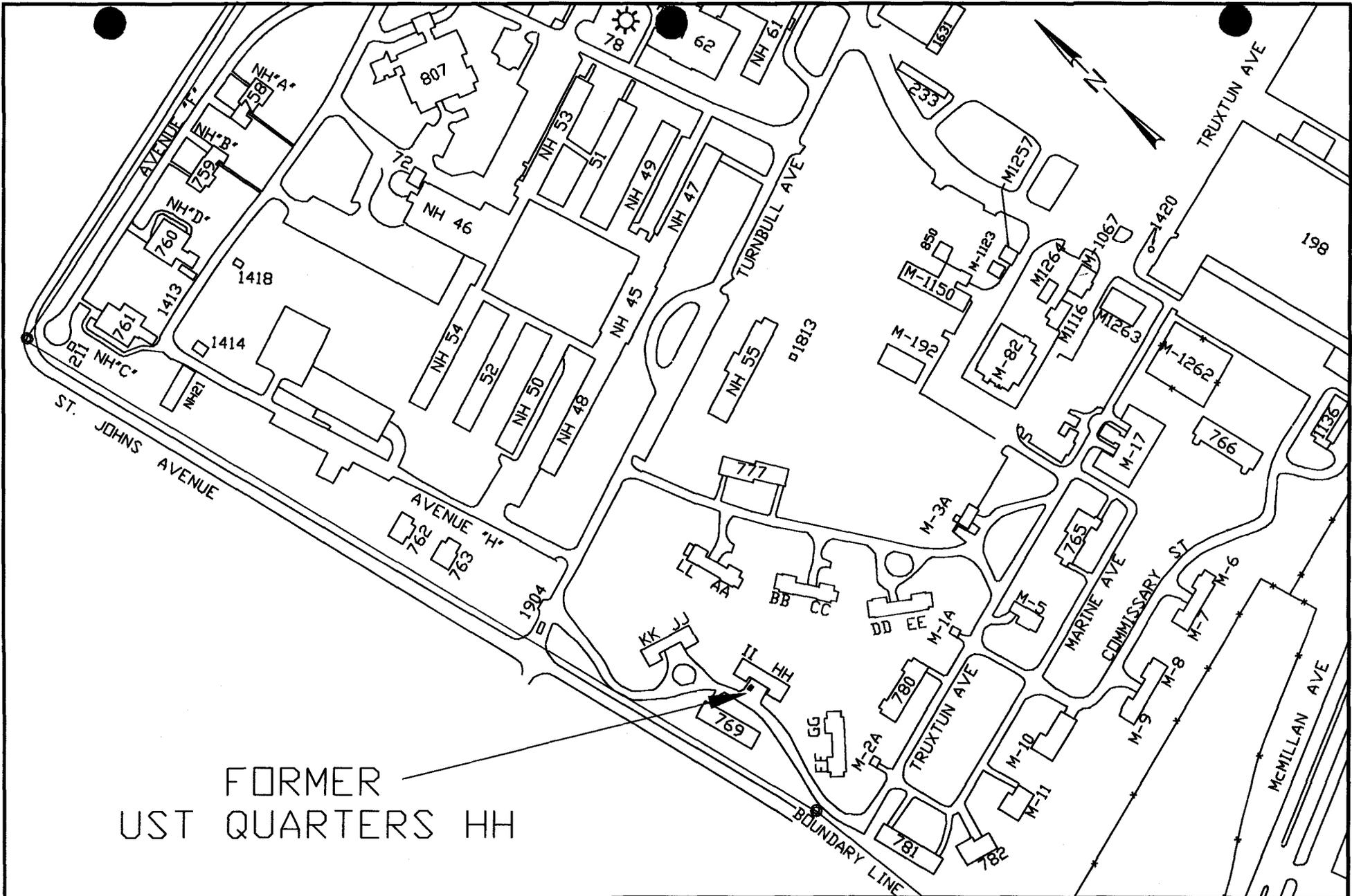
Yes No

<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>		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: right;">[electricity, sewer, 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 and 2



FORMER
UST QUARTERS HH

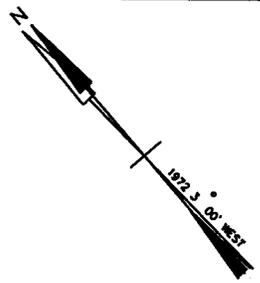


GRAPHIC SCALE

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

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

DWG DATE: 29 MAY 98 DWG NAME: QTRS-HH_1



SEWER MANHOLE



BLDG. "II"
(1310 AVE. "H")

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

SPIGOT

GRASSY
(AREA)

BLDG. "HH"
(1304 AVE. "H")

2" STEEL VENT PIPE

S.S. SPORT 0699-2,
TAN/BROWN SOIL, NO ODOR,
(PID = 0.0 ppm)

FORMER UST "HH"

S.S. SPORT 0699-4,
TAN/BROWN SOIL,
NO ODOR

SPIGOT

EXCAVATION,
12' x 7' x 6' DEEP

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

S.S. SPORT 0699-3,
TAN/BROWN SOIL, NO ODOR,
(PID = 1.2 ppm)

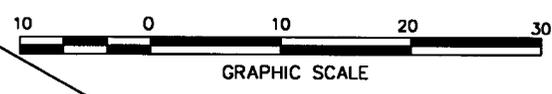


STREET LIGHT-POLE

GRASSY
(AREA)

AVENUE
"H"

GRASSY
(AREA)



BLDG. 769

LEGEND
S.S. - SOIL SAMPLE

SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC 29405-2106
Ph. (803) 743-8777

Site Map 2
UST "HH"
Charleston Naval Base
Charleston, SC

DWG DATE: 15 JUN 98

DWG NAME: UST HH_2

UST Quarters HH

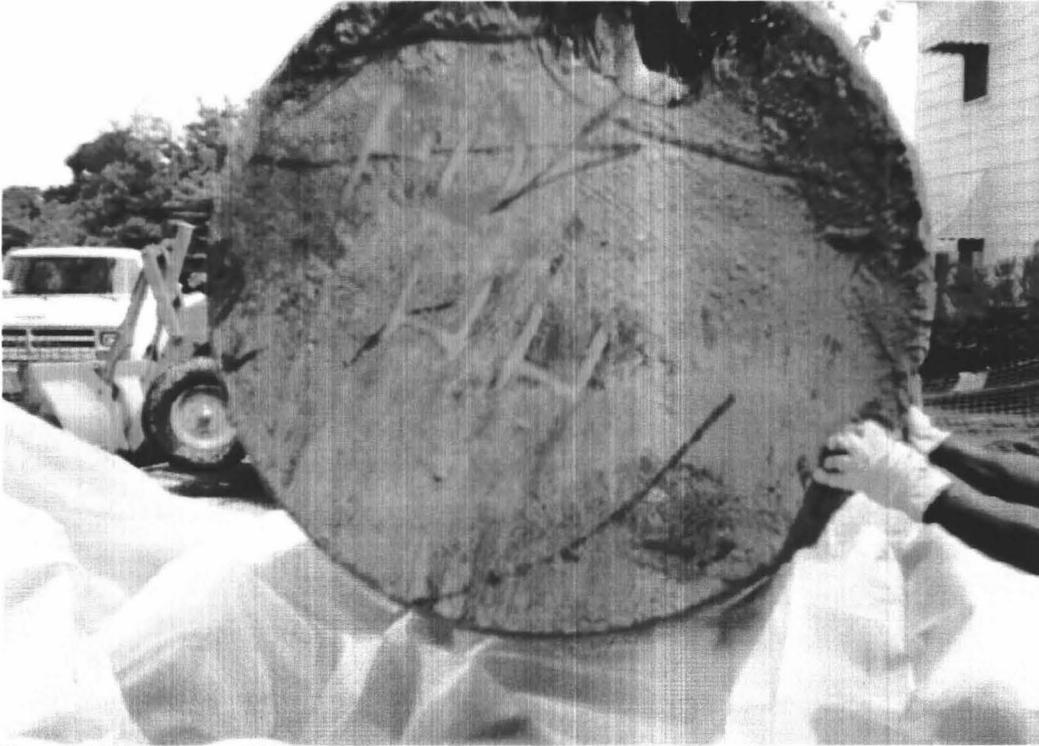


Photo 1: UST Quarters HH being loaded onto the trailer.

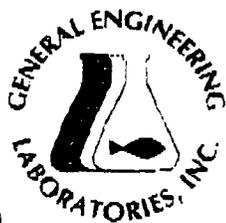


Photo 2: UST Quarters HH during cutting and cleaning.

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	EB7156/87294	EB7472/87458
NC	233	
SC	10130	10582
TN	02934	02934

HH TML JJ PPG

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 09, 1998

Page 1 of 2

Sample ID : Sport0699-1
 Lab ID : 9805819-01
 Matrix : Soil
 Date Collected : 05/28/98
 Date Received : 05/29/98
 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	0.250	1.00	ug/kg	1.0	TCL	06/02/98	0506	123272	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	92.4	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	71.9	(63.4 - 136.)
Toluene-d8	BTEX-8260	69.8*	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	92.4	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	71.9	(63.4 - 136.)
Toluene-d8	NAP-8260	69.8*	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

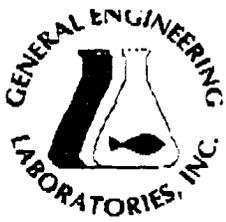
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9805819-01



GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	007156/87294	ER7472/87458
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 09, 1998

Page 2 of 2

Sample ID : Sport0699-1

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.

Karen Blakeney
 Reviewed By

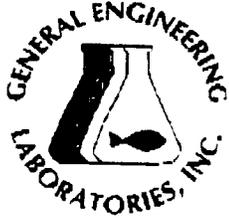
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Laboratory Certifications

STATE	GEL	EPI
FL	887156/87294	EB7472/87458
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 09, 1998

Page 1 of 2

Sample ID : Sport0699-2
 Lab ID : 9805819-02
 Matrix : Soil
 Date Collected : 05/28/98
 Date Received : 05/29/98
 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	0.250	1.00	ug/kg	1.0	TCL	06/02/98	1057	123272	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											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	86.6	333	ug/kg	1.0	RLC	06/03/98	1209	123205	2
Acenaphthylene	U	0.00	93.2	333	ug/kg	1.0					
Anthracene	U	0.00	63.3	333	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	59.9	333	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	56.6	333	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	103	333	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	59.9	333	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	86.6	333	ug/kg	1.0					
Chrysene	U	0.00	46.6	333	ug/kg	1.0					
Dibenzo(a,b)anthracene	U	0.00	56.6	333	ug/kg	1.0					
Fluoranthene	U	0.00	79.9	333	ug/kg	1.0					
Fluorene	U	0.00	79.9	333	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	140	333	ug/kg	1.0					
Naphthalene	U	0.00	76.6	333	ug/kg	1.0					
Phenanthrene	U	0.00	76.6	333	ug/kg	1.0					
Pyrene	U	0.00	63.3	333	ug/kg	1.0					

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

CPU 06/01/98 2050 123205 3

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9805819-02

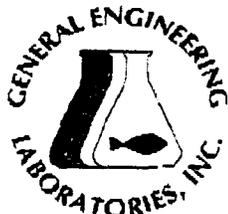


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P. 004

TEL: 803-852-5812

JUN -09 98 (TUE) 16:24 GEN. ENGINEERING



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 09, 1998

Page 2 of 2

Sample ID : Sp010699-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	68.5	(30.0 - 115.)
Nitrobenzene-d5	M610	68.5	(23.0 - 120.)
p-Terphenyl-d14	M610	83.2	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	83.5	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	71.1	(63.4 - 136.)
Toluene-d8	BTEX-8260	73.8	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	83.5	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	71.1	(63.4 - 136.)
Toluene-d8	NAP-8260	73.8	(72.1 - 137.)

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

Notes:

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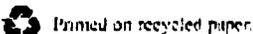
This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

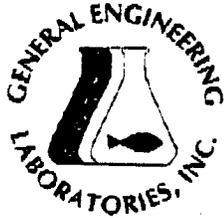
Karen Blakeney
 Reviewed By

PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29414

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9805819-02





GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TX	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 09, 1998

Page 1 of 2

Sample ID : Sport0699-3
 Lab ID : 9805819-03
 Matrix : Soil
 Date Collected : 05/28/98
 Date Received : 05/29/98
 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	0.250	1.00	ug/kg	1.0	TCL	06/02/98	1127	123272	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											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	86.6	333	ug/kg	1.0	RLC	06/04/98	1224	123205	2
Acenaphthylene	U	0.00	93.2	333	ug/kg	1.0					
Anthracene	U	0.00	63.3	333	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	59.9	333	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	56.6	333	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	103	333	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	59.9	333	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	86.6	333	ug/kg	1.0					
Chrysene	U	0.00	46.6	333	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	56.6	333	ug/kg	1.0					
Fluoranthene	U	0.00	79.9	333	ug/kg	1.0					
Fluorene	U	0.00	79.9	333	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	140	333	ug/kg	1.0					
Naphthalene	U	0.00	76.6	333	ug/kg	1.0					
Phenanthrene	U	0.00	76.6	333	ug/kg	1.0					
Pyrene	U	0.00	63.3	333	ug/kg	1.0					

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

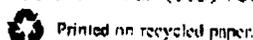
CPU 06/01/98 2050 123205 3

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JUN -09 98 (TUE) 16:24 GEN. ENGINEERING



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Laboratory Certifications

STATE	GEL	EPI
FL	E57156/87294	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 09, 1998

Page 2 of 2

Sample ID : Sport0699-3

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	53.0	(30.0 - 115.)
Nitrobenzene-d5	M610	46.2	(23.0 - 120.)
p-Terphenyl-d14	M610	73.1	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	86.9	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	70.2	(63.4 - 136.)
Toluene-d8	BTEX-8260	73.6	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	86.9	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	70.2	(63.4 - 136.)
Toluene-d8	NAP-8260	73.6	(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 Blakeney at (803) 769-7386.

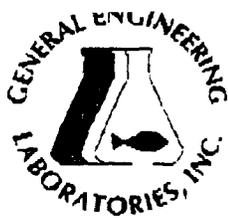
Karen Blakeney
 Reviewed By

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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 09, 1998

Page 1 of 3

Sample ID : Sport0699-4
 Lab ID : 9805819-04
 Matrix : Soil
 Date Collected : 05/28/98
 Date Received : 05/29/98
 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	0.250	1.00	ug/kg	1.0	TCL	06/05/98	1503	123272	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	J	0.877	0.420	1.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	173	666	ug/kg	2.0	RLC	06/04/98	1253	123205	2
Acenaphthylene	U	0.00	186	666	ug/kg	2.0					
Anthracene	U	0.00	127	666	ug/kg	2.0					
Benzo(a)anthracene	U	0.00	120	666	ug/kg	2.0					
Benzo(a)pyrene	U	0.00	113	666	ug/kg	2.0					
Benzo(b)fluoranthene	U	0.00	206	666	ug/kg	2.0					
Benzo(ghi)perylene	U	0.00	120	666	ug/kg	2.0					
Benzo(k)fluoranthene	U	0.00	173	666	ug/kg	2.0					
Chrysene	U	0.00	93.2	666	ug/kg	2.0					
Dibenzo(a,h)anthracene	U	0.00	113	666	ug/kg	2.0					
Fluoranthene	U	0.00	160	666	ug/kg	2.0					
Fluorene	U	0.00	160	666	ug/kg	2.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	280	666	ug/kg	2.0					
Naphthalene	U	0.00	153	666	ug/kg	2.0					
Phenanthrene	U	0.00	153	666	ug/kg	2.0					
Pyrene	U	0.00	127	666	ug/kg	2.0					

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

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STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10382
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 09, 1998

Page 2 of 3

Sample ID : Sport0699-4

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	---

Comments:

A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	55.5	(30.0 - 115.)
Nitrobenzene-d5	M610	47.0	(23.0 - 120.)
p-Terphenyl-d14	M610	81.0	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	106.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	84.6	(63.4 - 136.)
Toluene-d8	BTEX-8260	95.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	106.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	84.6	(63.4 - 136.)
Toluene-d8	NAP-8260	95.0	(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.

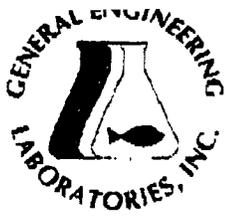
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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Laboratory Certifications

STATE	GEL	EPI
FL	EB7156/87294	EB7472/8745A
NC	223	
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 09, 1998

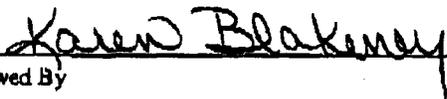
Page 3 of 3

Sample ID : Sport0699-4

M = Method

Method-Description

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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KRB NPWC00197

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

CHAIN OF CUSTODY RECORD

Page 1 of 1

9805819

NPWC00197

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						
Collected by/Company				# 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	BTEN/Infl	PAH	Remarks	
SAMPLE ID	DATE	TIME	WELL															SOIL						COMP
SPORT0699-1	5/28/98	1100	X	X																		X	Soil Trip Blank	
SPORT0699-2	5/28/98	1142	X	X																		X	X	HH EAST
SPORT0699-3	5/28/98	1158	X	X																		X	X	HH West
SPORT0699-4	5/28/98	1209	X	X																		X	X	HH PPG
SPORT0699-5	5/28/98	1347	X	X																		X	X	JJ PPG-4
Relinquished by: <i>RW Pcf</i>				Date: <i>5/28/98</i>	Time: <i>1600</i>	Received by: <i>Fred Z...</i>				Relinquished by: <i>Fred B...</i>	Date: <i>5/29/98</i>	Time: <i>1020</i>	Received by: <i>F...</i>											
Relinquished by: <i>F...</i>				Date: <i>5/28/98</i>	Time: <i>1100</i>	Received by lab by: <i>D...</i>				Date: <i>5-25-98</i>	Time: <i>14:00</i>	Remarks:												

01
02
03
04
05

1
2
3
4
5

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 HH; Quarters HH, 1304 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, 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

106/11/98
(Date)