

N61165.AR.005239
CNC CHARLESTON
5090.3a

NO FURTHER ACTION (NFA) UNDERGROUND STORAGE TANK (UST) ASSESSMENT
REPORT DATED 27 AUGUST 1998 FOR BUILDING 761 (QUARTERS NH-C HOUSING) CNC
CHARLESTON SC
09/29/1998
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



29 September 1998

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:
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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 27 August 1998
Building 761 (Quarters "NH C" Housing) (Site Identification # 15405-General File)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Dear Mr. Magwood:

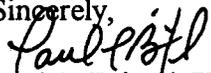
The author has completed technical review of the referenced document. As submitted, the report provides a narrative describing closure activities and analytical results of environmental sampling conducted to determine if releases have occurred as a result of operation of the referenced vessel and/or associated piping system. The analytical results provided indicate that minor concentrations of BTEX compounds were detected in grab samples obtained from the piping run excavation. Concentrations of 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 Building 761 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
29 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

Li 9.1.98
Lo 9.29.98

NFA

5090
Code 1849
27 Aug 98

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

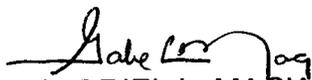
**UST ASSESSMENT REPORTS FOR CHARLESTON NAVAL COMPLEX,
CHARLESTON, SC**

Dear Mr. Bristol:

Enclosed are the Assessment Reports for the closure of Underground Storage Tanks 758, 759, 761 and 762 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

RECEIVED

AUG 31 1998

Water Monitoring, Assessment &
Protection Division

L. 9.1.98
L. 9.29.98

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, Building 761 | | |
| Street Address: | 895 Avenue "F" | | |
| City: | North Charleston, 29405-2413 | County: | Charleston |

N/A

III CLOSURE INFORMATION

| | |
|-----------------------------|-------------------------------|
| Closure Started: 6 May 1998 | Closure Completed: 6 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 | <i>H. N. Shepard II for</i> |

RECEIVED
AUG 31 1998

Water Monitoring, Assessment & Protection Division

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' 6" | | | | | |
| N | | | | | |
| N | | | | | |
| R | | | | | |
| Y | | | | | |
| N | | | | | |

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

UST 761 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 761 were recycled.

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

UST 761 was covered with a protective coating. The tank was in good condition. Minor corrosion was present, but no 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: UST 761 provided heating fuel oil to building 761.

| | Tank 1 | Tank 2 | Tank 3 | Tank 4 | Tank 5 |
|-------------------|--------|--------|--------|--------|--------|
| Copper & Steel | | | | | |
| 10' 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 fill pipe and the steel ventilation pipe were corroded throughout their length, but no holes were found in either pipe. The copper supply and return lines were in good condition.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building 761 is also known as Naval Hospital building NH-"C." It was built in 1917, and 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.

IX. SAMPLE INFORMATION

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

| Sample # | Location | Sample Type (Soil/Water) | Depth* | Date/Time of Collection | Collected By | OVA# |
|------------------|--------------------------|-----------------------------|--------|----------------------------|-----------------|----------|
| SPORT 0679-8 | North end of tank | Soil | ~6' 6" | 5/6/98 1505 | R. Cope | 16.8 ppm |
| SPORT 0679-9 | South end of tank | Soil | ~6' 6" | 5/6/98 1510 | R. Cope | 33.0 ppm |
| SPORT 0679-13 | supply & return pipe run | Soil | 18" | 5/7/98 1320 | R. Cope | 16.9 ppm |
| SPORT 0748-5 | supply & return pipe run | Soil | 10' | 7/9/98 1110 | W. Nesbit | 2.5 ppm |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* = Depth Below the Surrounding Land Surface

Note: Sample SPORT 0679-13 reported zero results with detection levels above the RBSL's due to a dilution factor of 10. The site was resampled by hand augering down to 10 feet below ground surface level. Samples were taken at two foot intervals and OVA (FID) readings were taken from each interval. The samples with the highest OVA reading (or the 10 foot sample if all readings were the same) was sent off for laboratory testing. Sample SPORT 0748-5 was taken at the same location as SPORT 0679-13.

X. SAMPLING METHODOLOGY

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

After the removal of UST 761, soil samples were taken. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

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

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

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

XI. RECEPTORS

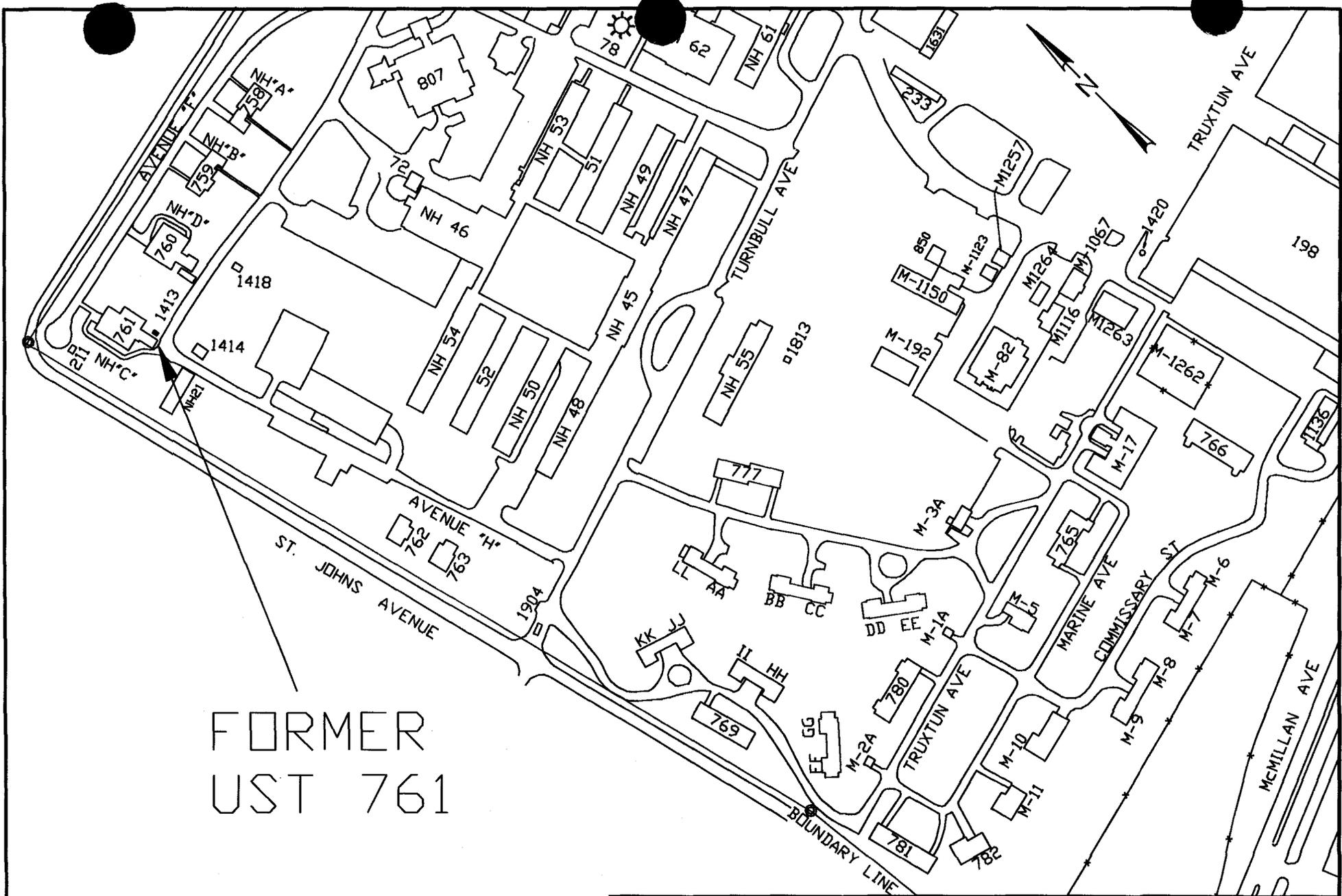
Yes No

| | | | |
|----|---|---|---|
| A. | Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? | | X |
| | If yes, indicate type of receptor, distance, and direction on site map. | | |
| B. | Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? | | X |
| | If yes, indicate type of well, distance, and direction on site map. | | |
| C. | Are there any underground structures (e.g., basements) located within 100 feet of the UST system? | X | |
| | [basement 10'] | | |
| | If yes, indicate the type of structure, distance, and direction on site map. | | |
| 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? | X | |
| | [electric, storm drain, water] | | |
| | If yes, indicate the type of utility, distance, and direction on the site map. | | |
| 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? | | X |
| | If yes, indicate the area of contaminated soil on the site map. | | |

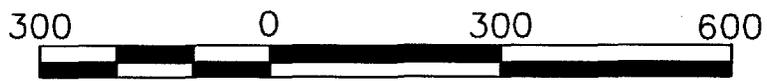
SITE MAP

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

Site Maps 1 and 2
Photograph 1



FORMER
UST 761



GRAPHIC SCALE

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

Site Map 1
UST 761
Charleston Naval Base
Charleston, SC

DWG DATE: 18 MAY 98 | DWG NAME: U761_1

ELECTRIC SUBSTATION

GRASS

AVENUE "H"

REAR OF BUILDING 761
A.K.A. NH "C"
895 AVENUE "F"

SUPPLY & RETURN
CUT & CAPPED
(3/8" COPPER)

@ 18' BELOW GSL: SS SPORT 0679-13
(SANDY BROWN SOIL,
NO ODDOR, OVA - 16.9 ppm)
@ 10' BELOW GSL: SS SPORT 0748-5
(SANDY BROWN SOIL,
NO ODDOR, OVA - 2.5 ppm)

FORMER UST 761

SS SPORT 0679-8
(SANDY BROWN SOIL
NO ODDOR, OVA - 16.8 ppm)

FILL

UST EXCAVATION

MANHOLE

BASEMENT,
LOCATION OF
WATER HEATER
& BOILER

VENT

SS SPORT 0679-9
(SANDY BROWN SOIL
NO ODDOR, OVA - 33.0 ppm)

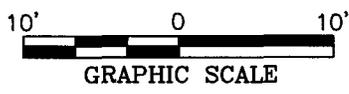
BURIED WATER LINE

FIRE HYDRANT

KEY
SS - SOIL SAMPLE

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

Site Map 2
UST 761
Charleston Naval Base
Charleston, SC



DWG DATE: 30 JULY 98 | DWG NAME: U761_2

UST 761



Photo 1: UST 761 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



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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|--------------|
| FL | E87156/87294 | E87472/87458 |
| NC | 232 | |
| SC | 10120 | 10582 |
| TN | 02934 | 02934 |

758, 759, 761, 762

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 15, 1998

Page 1 of 2

Sample ID : SPORT0679-1
 Lab ID : 9805214-01
 Matrix : GroundH2O
 Date Collected : 05/05/98
 Date Received : 05/07/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|--------------------------|-----------|--------|------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX - 4 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 1.00 | 2.00 | ug/l | 1.0 | JEB | 05/13/98 | 0951 | 122074 | 1 |
| Ethylbenzene | U | 0.00 | 1.00 | 2.00 | ug/l | 1.0 | | | | | |
| Toluene | U | 0.00 | 1.00 | 2.00 | ug/l | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 1.00 | 4.00 | ug/l | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 1.00 | 2.00 | ug/l | 1.0 | | | | | |

| Surrogate Recovery | Test | Percent% | Acceptable Limits |
|----------------------|-----------|----------|-------------------|
| Bromofluorobenzene | BTEX-8260 | 95.3 | (60.2 - 139.) |
| Dibromofluoromethane | BTEX-8260 | 90.5 | (70.6 - 152.) |
| Toluene-d8 | BTEX-8260 | 94.5 | (68.4 - 135.) |
| Bromofluorobenzene | NAP-8260 | 95.3 | (60.2 - 139.) |
| Dibromofluoromethane | NAP-8260 | 90.5 | (70.6 - 152.) |
| Toluene-d8 | NAP-8260 | 94.5 | (68.4 - 135.) |

| M = Method | Method-Description |
|------------|--------------------|
| M 1 | EPA 8260 |

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

(803) 556-8171 • Fax (803) 766-1178



9805214-01

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Laboratory Certifications

| | | |
|-------|--------------|--------------|
| STATE | GEL | EPI |
| FL | EB7156/87294 | EB7472/87458 |
| NC | 232 | |
| 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 15, 1998

Page 2 of 2

Sample ID : SPORT0679-1

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

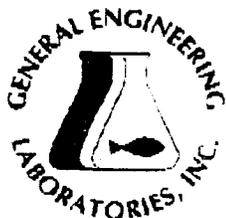
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|-------|--------------|--------------|
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| NC | 233 | |
| SC | 10120 | 10582 |
| TN | 02934 | 02934 |

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 15, 1998

Page 1 of 2

Sample ID : SPORT0679-8
 Lab ID : 9805214-08
 Matrix : Soil
 Date Collected : 05/06/98
 Date Received : 05/07/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|---|-----------|--------|------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX - 4 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | TCL | 05/12/98 | 1936 | 122015 | 1 |
| Ethylbenzene | U | 0.371 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Toluene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 1.00 | 4.00 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Extractable Organics | | | | | | | | | | | |
| <i>Polynuclear Aromatic Hydrocarbons - 16 items</i> | | | | | | | | | | | |
| Acenaphthene | U | 0.00 | 166 | 331 | ug/kg | 1.0 | WAM | 05/11/98 | 2126 | 121874 | 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 | L | 0.00 | 166 | 331 | ug/kg | 1.0 | | | | | |

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

RDH 05/11/98 1525 121874 3

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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|--------------|
| FL | EB7156/87294 | ES7472/87458 |
| NC | 233 | |
| SC | 10120 | 10582 |
| TN | 02934 | 02934 |

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 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 15, 1998

Page 2 of 2

Sample ID : SPORT0679-8

| Surrogate Recovery | Test | Percent% | Acceptable Limits |
|----------------------|-----------|----------|-------------------|
| 2-Fluorobiphenyl | M610 | 64.6 | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 55.5 | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 67.7 | (37.3 - 128.) |
| Bromofluorobenzene | BTEX-8260 | 88.2 | (53.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 90.0 | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 88.0 | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 88.2 | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 90.0 | (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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Karen Blakeney
 Reviewed By

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9805214-08





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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-Fortsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Fortsmouth Detachment

cc: NPWC00197

Report Date: May 15, 1998

Page 1 of 2

Sample ID : SPORT0679-9
 Lab ID : 9805214-09
 Matrix : Soil
 Date Collected : 05/06/98
 Date Received : 05/07/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|---|-----------|--------|------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX - 4 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | TCL | 05/12/98 | 2006 | 122015 | 1 |
| Ethylbenzene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Toluene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 1.00 | 4.00 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Extractable Organics | | | | | | | | | | | |
| <i>Polynuclear Aromatic Hydrocarbons - 16 items</i> | | | | | | | | | | | |
| Accnaphthene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | WAM | 05/11/98 | 2157 | 121874 | 2 |
| Acenaphthylene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Anthracene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Benzo(a)anthracene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Benzo(a)pyrene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Benzo(b)fluoranthene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Benzo(ghi)perylene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Benzo(k)fluoranthene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Chrysene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Dibenzo(a,h)anthracene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Fluoranthene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Fluorene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Indeno(1,2,3-c,d)pyrene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Phenanthrene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |
| Pyrene | U | 0.00 | 166 | 332 | ug/kg | 1.0 | | | | | |

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

RDH 05/11/98 1525 121874 3

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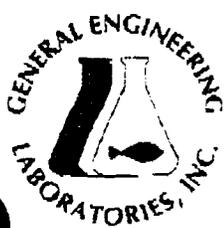
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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|--------------|
| FL | EN7156/87294 | EN7472/87458 |
| NC | 237 | |
| 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 15, 1998

Page 2 of 2

Sample ID : SPORT0679-9

| Surrogate Recovery | Test | Percent% | Acceptable Limits |
|----------------------|-----------|----------|-------------------|
| 2-Fluorobiphenyl | M610 | 59.7 | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 51.6 | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 64.4 | (37.3 - 128.) |
| Bromofluorobenzene | BTEX-8260 | 91.8 | (55.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 89.6 | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 89.8 | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 91.8 | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 89.6 | (63.4 - 136.) |
| Toluene-d8 | NAP-8260 | 89.8 | (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.

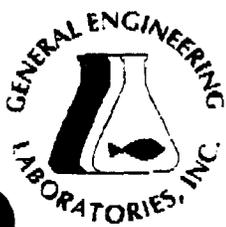
Karen Blakeney
 Reviewed By

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| STATE | GEL | EPI |
|-------|--------------|--------------|
| FL | EB7156/87294 | 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 Hiere
 Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: May 15, 1998

Page 1 of 3

Sample ID : SPORT0679-13
 Lab ID : 9805214-13
 Matrix : Soil
 Date Collected : 05/07/98
 Date Received : 05/07/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|---|-----------|--------|------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX - 4 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | TCL | 05/12/98 | 2210 | 122015 | 1 |
| Ethylbenzene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Toluene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 1.00 | 4.00 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Extractable Organics | | | | | | | | | | | |
| <i>Polynuclear Aromatic Hydrocarbons - 16 items</i> | | | | | | | | | | | |
| Acenaphthene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | WAM | 05/12/98 | 0002 | 121874 | 2 |
| Acenaphthylene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Anthracene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Benzo(a)anthracene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Benzo(a)pyrene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Benzo(b)fluoranthene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Benzo(ghi)perylene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Benzo(k)fluoranthene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Chrysene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Dibenzo(a,h)anthracene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Fluoranthene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Fluorene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Indeno(1,2,3-c,d)pyrene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Naphthalene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Phenanthrene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |
| Pyrene | U | 0.00 | 1670 | 3330 | ug/kg | 10. | | | | | |

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

RDH 05/11/98 1525 121874 3

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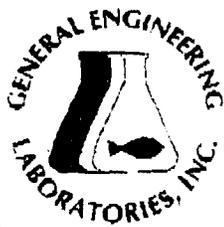
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9805214-13



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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 15, 1998

Page 2 of 3

Sample ID : SPORT0679-13

| 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 | 102. | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 0.00* | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 100. | (37.3 - 128.) |
| Bromofluorobenzene | BTEX-8260 | 107. | (53.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 92.6 | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 101. | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 107. | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 92.6 | (63.4 - 136.) |
| Toluene-d8 | NAP-8260 | 101. | (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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(803) 556-8171 • Fax (803) 766-1178

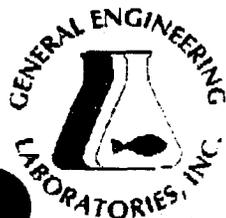
9805214-13

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P. 030

TEL: 803-852-5812

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GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

| STATE | GEI | EPI |
|-------|--------------|--------------|
| FL | 537156/87294 | ER7472/87438 |
| NC | 233 | |
| SC | 10120 | 10582 |
| TN | 02534 | 02934 |

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env
 1399 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers
 Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: May 15, 1998

Page 3 of 3

Sample ID : SPORT0679-13

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.

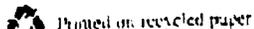
Karen Blakeney

 Reviewed By

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

(803) 556-8171 • Fax (803) 766-1178

9805214-13



NO 00197
 Page 1 of 1

CHAIN OF CUSTODY RECORD

9805214-

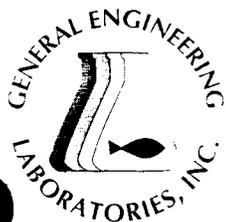
General Engineering Laboratories, Inc.
 2040 Savage Road
 Charleston, South Carolina 29407
 P.O. Box 30712
 Charleston, South Carolina 29417
 (803) 556-8171

| 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 | | | | | |
|---------------------------|---------------|--------|------|--|------|------|-----------------|------------------|---------|-----|-----------------------------|-----------------|-------------------------------|------------------|-----------|-----------|--------------|-------------------|------------------|-------|--|-------------------------|----------|-----|------------------|----|
| SPORTENV DET CHASN | | | | | | | | | | | | | | | | | | | | | CCL 32680 | | | | | |
| Collected by/Company | | | | | | | | | | | | | | | | | | | | | Remarks | | | | | |
| SPORTENV DET CHASN | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE ID | DATE | TIME | WELL | SOIL | COMP | GRAB | # OF CONTAINERS | pH, conductivity | TOC/DOC | TOX | Chloride, Fluoride, Sulfate | Nitrite/Nitrate | VOC - Specify Method required | METALS - specify | Pesticide | Herbicide | Total Phenol | Acid Extractables | B/N Extractables | PCB's | Cyanide | Coliform - specify type | BTEX/NAF | PAH | Remarks | |
| -01 | SPORT 0679-1 | 5/5/98 | 0840 | | | | 1 | | | | | | | | | | | | | | | | X | | Water Trip Blank | .1 |
| -02 | SPBIT 0679-2 | 5/5/98 | 1440 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 758 EAST | .2 |
| -03 | SPORT 0679-3 | 5/5/98 | 1450 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 758 West | .2 |
| -04 | SPORT 0679-4 | 5/6/98 | 0900 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 758 PPg | .2 |
| -05 | SPORT 0679-5 | 5/6/98 | 0930 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 759 North | .2 |
| -06 | SPORT 0679-6 | 5/6/98 | 0935 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 759 South | .2 |
| -07 | SPORT 0679-7 | 5/6/98 | 1015 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 759 PPg | .2 |
| -08 | SPORT 0679-8 | 5/6/98 | 1505 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 761 NORTH | .2 |
| -09 | SPORT 0679-9 | 5/6/98 | 1510 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 761 SOUTH | .2 |
| -10 | SPORT 0679-10 | 5/7/98 | 1010 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 762 West | .2 |
| -11 | SPORT 0679-11 | 5/7/98 | 1015 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 762 EAST | .2 |
| -12 | SPORT 0679-12 | 5/7/98 | 1135 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 762 PPg | .2 |
| -13 | SPORT 0679-13 | 5/7/98 | 1320 | X | X | | 2 | | | | | | | | | | | | | | | | X | X | 761 PPg | .2 |

Relinquished by: *[Signature]* Date: 5/7/98 Time: 1340 Received by: *[Signature]* Relinquished by: *[Signature]* Date: 5/7/98 Time: 1451 Received by: *[Signature]*

Relinquished by: *[Signature]* Date: 5/7/98 Time: 1510 Received by lab by: *[Signature]* Date: 5/7/98 Time: 1510 Remarks:

White = sample collector Yellow = file Pink = with report



GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

| | | |
|-------|--------------|----------|
| STATE | GEL | EPI |
| FL | E87156/87294 | E87472/8 |
| 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: July 20, 1998

Page 1 of 2

Sample ID : SPORT0748-1
 Lab ID : 9807256-01
 Matrix : Soil
 Date Collected : 07/08/98
 Date Received : 07/09/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|--------------------------------|-----------|--------|-------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX + NAPTH. - 5 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 0.241 | 1.00 | ug/kg | 1.0 | TCL | 07/14/98 | 1249 | 126012 | |
| Ethylbenzene | U | 0.00 | 0.221 | 1.00 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 0.404 | 1.00 | ug/kg | 1.0 | | | | | |
| Toluene | U | 0.00 | 0.212 | 1.00 | ug/kg | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 0.596 | 2.00 | ug/kg | 1.0 | | | | | |

The following prep procedures were performed:

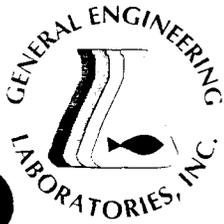
GC/MS Volatiles (8260 High Level)

TCL 07/13/98 1000 126012 2

| Surrogate Recovery | Test | Percent% | Acceptable Limits |
|----------------------|----------------|----------|-------------------|
| Bromofluorobenzene | BTEX+NAP-8260B | 82.2 | (53.5 - 154.) |
| Dibromofluoromethane | BTEX+NAP-8260B | 83.8 | (63.4 - 136.) |
| Toluene-d8 | BTEX+NAP-8260B | 79.5 | (72.1 - 137.) |

| M = Method | Method-Description |
|------------|--------------------|
| M 1 | SW846 8260B |
| M 2 | EPA 5035 |





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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|-----------|
| FL | E87156/87294 | E87472/87 |
| 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: July 20, 1998

Page 2 of 2

Sample ID : SPORT0748-1

| M = Method | Method-Description |
|------------|--------------------|
|------------|--------------------|

Notes:

The qualifiers in this report are defined as follows:

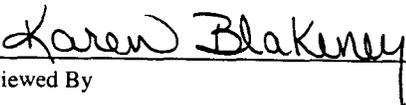
ND indicates that the analyte was not detected at a concentration greater than the detection limit.

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

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

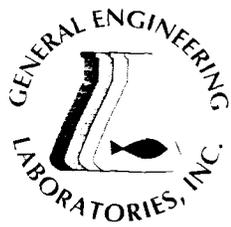
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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



Reviewed By





GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|----------|
| FL | E87156/87294 | E87472/8 |
| 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: July 20, 1998

Page 1 of 2

Sample ID : SPORT0748-5
 Lab ID : 9807256-05
 Matrix : Soil
 Date Collected : 07/09/98
 Date Received : 07/09/98
 Priority : Routine
 Collector : Client

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|---|-----------|--------|-------|------|-------|-----|---------|----------|------|--------|---|
| Volatile Organics | | | | | | | | | | | |
| <i>BTEX + NAPTH. - 5 items</i> | | | | | | | | | | | |
| Benzene | U | 0.00 | 0.295 | 1.18 | ug/kg | 1.0 | TCL | 07/15/98 | 1741 | 126012 | |
| Ethylbenzene | U | 0.00 | 0.271 | 1.18 | ug/kg | 1.0 | | | | | |
| Naphthalene | U | 0.00 | 0.496 | 1.18 | ug/kg | 1.0 | | | | | |
| Toluene | J | 0.708 | 0.260 | 1.18 | ug/kg | 1.0 | | | | | |
| Xylenes (TOTAL) | U | 0.00 | 0.732 | 2.36 | 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 | 07/13/98 | 1325 | 125761 | 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 Volatiles (8260 High Level)

TCL 07/13/98 1000 126012 3

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

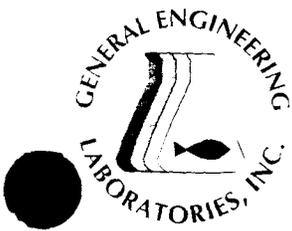
(803) 556-8171 • Fax (803) 766-1178



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9807256-05



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|------------|
| FL | E87156/87294 | E87472/87- |
| 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: July 20, 1998

Page 2 of 2

Sample ID : SPORT0748-5

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | M |
|------------------------------|-----------|--------|----|----|-------|----|---------|----------|------|--------|---|
| GC/MS Base/Neutral Compounds | | | | | | | CPU | 07/10/98 | 1535 | 125761 | 4 |

| Surrogate Recovery | Test | Percent % | Acceptable Limits |
|----------------------|----------------|-----------|-------------------|
| 2-Fluorobiphenyl | M610 | 62.7 | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 68.9 | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 66.8 | (37.3 - 128.) |
| Bromofluorobenzene | BTEX+NAP-8260B | 104. | (53.5 - 154.) |
| Dibromofluoromethane | BTEX+NAP-8260B | 103. | (63.4 - 136.) |
| Toluene-d8 | BTEX+NAP-8260B | 99.3 | (72.1 - 137.) |

| M = Method | Method-Description |
|------------|--------------------|
| M 1 | SW846 8260B |
| M 2 | EPA 8270 |
| M 3 | EPA 5035 |
| M 4 | 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 Karen Blakeney

NPUR 00197

980256-

General Engineering L... s, 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

NOTE: SEE ATTACHED SHEET FOR LIMITS.

| Client Name/Facility Name | | Collected by/Company | | WELL | SOIL | COMP | GRAB | # OF CONTAINERS | SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods | | | | | | | | | | | | | | BTEX | PAH | Remarks |
|---------------------------|-------------|----------------------|------------------|---------------------|------|--------|-------|--------------------|--|-------|-----------------------------|-----------------|-------------------------------|------------------|-----------|-----------|--------------|-------------------|------------------|-------|---------|-------------------------|------|------------------------|---------|
| SAMPLE ID | DATE | TIME | 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 | | | |
| -01 | SPORT 748-1 | 7/8/98 | 0843 | | | | | 1 | | | | | | | | | | | | | | ✓ | ✓ | UST Soil Temp PL... | .1 |
| -02 | SPORT 748-2 | 7/8/98 | 1148 | | | | | 3 | | | | | | | | | | | | | | ✓ | ✓ | UST 758 PPG | .2 |
| -03 | SPORT 748-3 | 7/8/98 | 1459 | | | | | 3 | | | | | | | | | | | | | | ✓ | ✓ | UST 759 PPG | .2 |
| -04 | SPORT 748-4 | 7/9/98 | 0957 | | | | | 3 | | | | | | | | | | | | | | ✓ | ✓ | UST 762 PPG | .2 |
| -05 | SPORT 748-5 | 7/9/98 | 1110 | | | | | 3 | | | | | | | | | | | | | | ✓ | ✓ | UST 761 PPG | .2 |
| Relinquished by: | | Date: | Time: | Received by: | | Date: | Time: | Received by: | | Date: | Time: | Received by: | | | | | | | | | | | | | |
| William J. Blakeney | | 7/9/98 | 1203 | W.K. Hiers, Jr. | | 7/9/98 | 1419 | Stephanie Berkeley | | | | | | | | | | | | | | | | | |
| Relinquished by: | | Date: | Time: | Received by lab by: | | Date: | Time: | Remarks: | | | | | | | | | | | | | | | | | |
| Stephanie Berkeley | | 7/9/98 | 2:40 | Karen Blakeney | | 7/9/98 | 1440 | | | | | | | | | | | | | | | | | | |

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 761; Building 761, 895 Avenue "F", North 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

106/11/98

(Date)