

N61165.AR.005358
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT DATED 2 APRIL 1998
FOR BUILDING 647 WITH SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL REVIEW LETTER CNC CHARLESTON SC
05/29/1998
NAVFAC SOUTHERN



May 29, 1998

2600 Bull Street
Columbia, SC 29201-1708

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Brian K. Smith

Rodney L. Grandy

Mr. Gabriel L. Magwood
Southern Division NFEC
P.O. Box 190010
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

Re: Underground Storage Tank Assessment Report dated April 2, 1998
Building 647 (Site Identification # 15405-General File)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

01165

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides a narrative describing closure activities, site conditions and analytical results of environmental sampling conducted to determine if releases have occurred from operation of the referenced vessel and/or associated piping system. The site description and analytical results appear to indicate that no contamination was detected at the subject site. However, analytical results for PAH compounds from sample SPORT0580-2 were reported as BDL (below detection limits) with detection limits elevated due to matrix interference. Please be reminded that previous correspondence (Bristol to Amey, September 2, 1997) provided that when detection limits are elevated and CoC's (contaminants of concern) are reported as zero (0) or BDL it will be assumed that the chemical constituent is equal to the elevated detection limit. It is recognized that the subject vessel was coated with "pitch" as a protective measure. Please provide additional information concerning this protective coating and its potential impact on the noted sample results. Subsequent to submittal and review of the requested information, additional comments and/or recommendations concerning the necessity for additional activities will be presented, as appropriate.

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

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 4.B.98
Lo 5.24.98

RECEIVED

APR 6 1998

Water Monitoring, Assessment &
Protection Division ✓

5090
Code 1849
2 Apr 1998

Mr. Paul Bristol
South Carolina Department of Health
And Environmental Control
Ground-Water Protection Division
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 storage tanks USTs
661, 643 and 647 and AST NS6 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

LI 4.8.98
LO 5.26.98
RECEIVED
APR 6 1998

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

Water Monitoring, Assessment & Protection Division

Submit Completed Form to:

| |
|----------------|
| Date Received |
| State Use Only |

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

#01165

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: 803 | Telephone Number: 743-9985 | Contact Person: LCDR Paul Rose | |

II SITE IDENTIFICATION AND LOCATION

| | | |
|-----------------|---|--------------------|
| Site I.D. #: | Unregulated | |
| Facility Name: | Charleston Naval Base Complex, Bldg 647 | |
| Street Address: | Bainbridge Avenue | |
| City: | North Charleston, 29405-2413 | County: Charleston |

III CLOSURE INFORMATION

| | |
|------------------------------|-------------------------------|
| Closure Started: 26 Nov 1997 | Closure Completed: 4 Mar 1998 |
| Number of USTs Closed: 1 | |
| N/A | SPORTENVDETCNASN |
| 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. | |
| LCDR Paul Rose | |
| Name (Type or Print) | |
| <i>W. M. [Signature]</i> For LCDR ROSE | |
| Signature | |

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 | | | | | |
| 4,000 gal | | | | | |
| 1964 | | | | | |
| Steel | | | | | |
| Unk | | | | | |
| N/A | | | | | |
| N | | | | | |
| N | | | | | |
| R | | | | | |
| N | | | | | |
| N | | | | | |

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

UST 647 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 were recycled.

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

UST 647 was in good condition. The tank was coated with a thick layer of pitch. It had no holes, corrosion, or pitting.

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.....

| | Tank 1 | Tank 2 | Tank 3 | Tank 4 | Tank 5 |
|-------------------|--------|--------|--------|--------|--------|
| Copper | | | | | |
| 18' See note 1 | | | | | |
| 1 See note 1 | | | | | |
| S | | | | | |
| N | | | | | |
| N | | | | | |
| N | | | | | |
| 1964 | | | | | |

Note 1: UST 647 provided heating fuel oil to building 647.

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

No corrosion, pitting, or holes were found in the piping.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building 647 on Naval Base Charleston housed offices and classrooms for the Fleet Mine Warfare Training Center. It was constructed in 1964 on previously undeveloped land.

UST 647 provided heating fuel oil for the building's boiler. The tank was encapsulated inside an above ground, dirt filled cinder block vault located on the north side of the building. Piping from the vault to the building was not removed because the vault acted as a supporting foundation for the concrete slab. The piping passed an air drop test, was flushed, and then cut and capped.

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 | |

X. SAMPLING METHODOLOGY

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

After the removal of UST 647, 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. The samples were extracted at the tank ends.

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

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

XI. RECEPTORS

Yes No

| | | Yes | No |
|----|--|-----|----|
| A. | Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? If yes, indicate type of receptor, distance, and direction on site map. | | X |
| B. | Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map. | | X |
| C. | Are there any underground structures (e.g., basements) located within 100 feet of the UST system? If yes, indicate the type of structure, distance, and direction on site map. | | X |
| D. | Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? If yes, indicate the type of utility, distance, and direction on the site map. [storm drain, water, fire main, A/C piping] | X | |
| E. | Has contaminated soil been identified at a depth of less than 3 feet below land surface in an area that is not capped by asphalt or concrete? | | X |

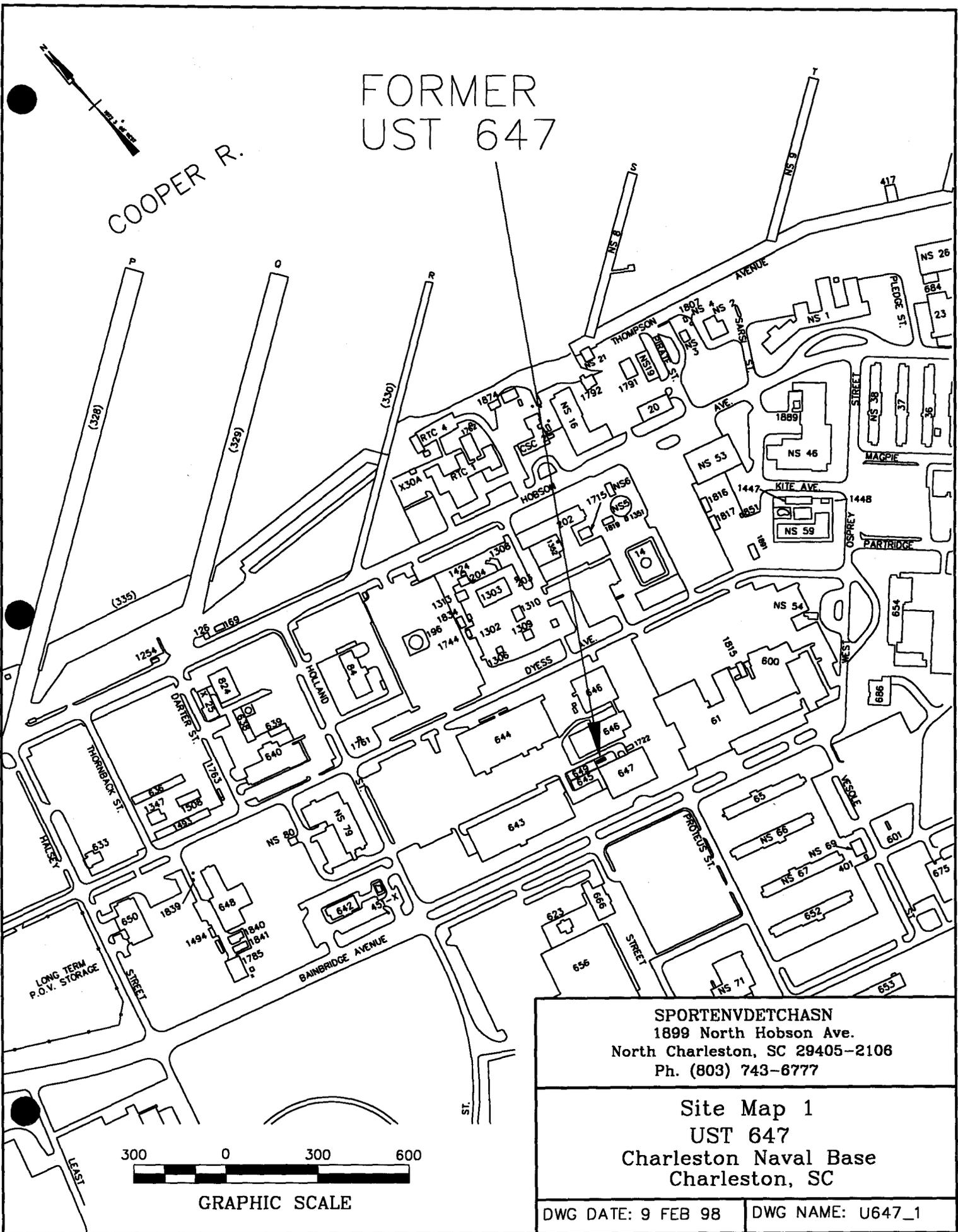
SITE MAP

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, 2, and 3
Photographs 1 and 2

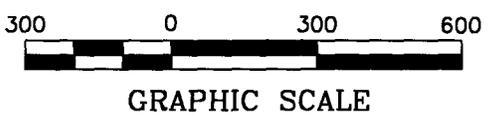
FORMER UST 647

COOPER R.



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

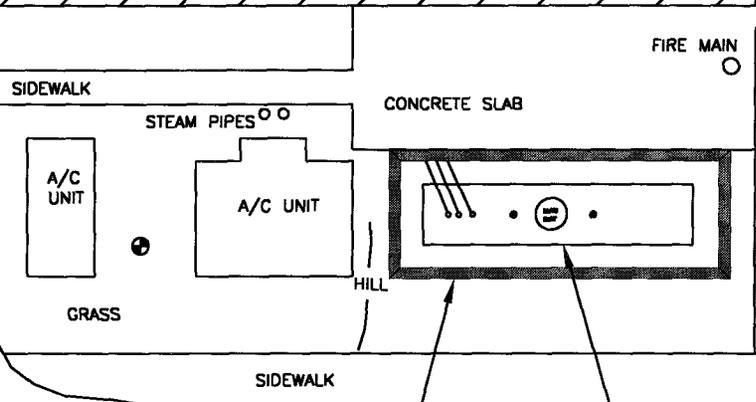
Site Map 1
UST 647
Charleston Naval Base
Charleston, SC



DWG DATE: 9 FEB 98

DWG NAME: U647_1

BLDG 647

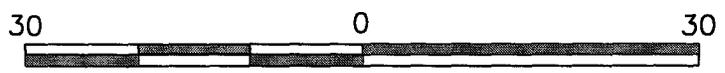


BLDG 649

BLDG 646

NOTES

- MONITORING WELL
- ⊗ WATER CUT OFF VALVE



GRAPHIC SCALE

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

Site Map 2
 UST 647
 Charleston Naval Base
 Charleston, SC

DWG DATE: 10 MAR 98 DWG NAME: U647_2.DWG

BLDG 647

CONCRETE SLAB

FIRE MAIN

CUT AND CAPPED
RETURN
SUPPLY
TANK LEVEL INDICATOR

CINDERBLOCK VAULT,
EARTH FILLED

VENT

BLDG 649

FORMER UST 647

MAN
WAY

A/C UNIT

GRASS COVERED HILL

FILL

SOIL SAMPLE SPORT 0580-2
(DARK BROWN, SANDY, NO ODOR)

SOIL SAMPLE SPORT 0580-3
(DARK BROWN, SANDY, NO ODOR)



GRAPHIC SCALE

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

Site Map 3
UST 647
Charleston Naval Base
Charleston, SC

DWG DATE: 10 MAR 98

DWG NAME: U647_3

UST 647



Photo 1: UST 647 in the cutting pad berm. The ends have been cut open for cleaning.



Photo 2: Site of UST 647 removal.

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

Certified Analytical Results
Chain-of-Custody



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|-----------|
| FL | E87156/87294 | E87472/87 |
| 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: December 19, 1997

Page 1 of 2

Sample ID : SPORT0580-1
 Lab ID : 9712133-01
 Matrix : Soil
 Date Collected : 12/04/97
 Date Received : 12/04/97
 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 | 12/11/97 | 2019 | 112652 | |
| 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 | | | | | |

| Surrogate Recovery | Test | Percent % | Acceptable Limits |
|----------------------|-----------|-----------|-------------------|
| Bromofluorobenzene | BTEX-8260 | 103. | (53.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 98.3 | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 92.4 | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 103. | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 98.3 | (63.4 - 136.) |
| Toluene-d8 | NAP-8260 | 92.4 | (72.1 - 137.) |

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





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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: December 19, 1997

Page 2 of 2

Sample ID : SPORT0580-1

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).

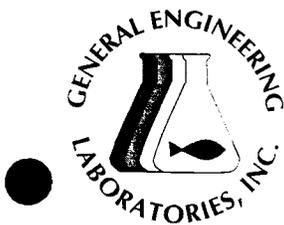
U indicates that the analyte was not detected at a concentration greater than the detection limit.

* 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 | E87472/874 |
| 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: December 19, 1997

Page 1 of 3

Sample ID : SPORT0580-2
 Lab ID : 9712133-02
 Matrix : Soil
 Date Collected : 12/04/97
 Date Received : 12/04/97
 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 | 12/10/97 | 2218 | 112652 | 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 | | 3.09 | 1.00 | 2.00 | ug/kg | 1.0 | | | | | |
| Extractable Organics | | | | | | | | | | | |
| <i>Polynuclear Aromatic Hydrocarbons - 16 items</i> | | | | | | | | | | | |
| Acenaphthene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | JCB | 12/11/97 | 1740 | 112705 | 2 |
| Acenaphthylene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Anthracene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Benzo(a)anthracene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Benzo(a)pyrene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Benzo(b)fluoranthene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Benzo(ghi)perylene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Benzo(k)fluoranthene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Chrysene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Dibenzo(a,h)anthracene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Fluoranthene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Fluorene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Indeno(1,2,3-c,d)pyrene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Naphthalene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Phenanthrene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |
| Pyrene | U | 0.00 | 1660 | 3310 | ug/kg | 10. | | | | | |

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

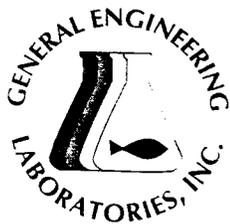
GWL 12/10/97 2345 112705 3

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

(803) 556-8171 • Fax (803) 766-1178



9712133-02



GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|---------|
| FL | E87156/87294 | E87472A |
| 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: December 19, 1997

Page 2 of 3

Sample ID : SPORT0580-2

| 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 | 0.00* | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 0.00* | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 0.00* | (37.3 - 128.) |
| Bromofluorobenzene | BTEX-8260 | 127. | (53.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 110. | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 112. | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 127. | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 110. | (63.4 - 136.) |
| Toluene-d8 | NAP-8260 | 112. | (72.1 - 137.) |

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

Notes:

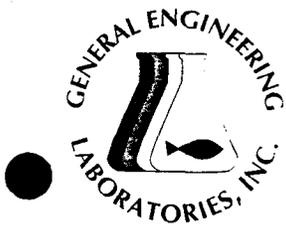
The qualifiers in this report are defined as follows:

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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|-------|--------------|------------|
| 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: December 19, 1997

Page 3 of 3

Sample ID : SPORT0580-2

| 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

Karen Blakeney





GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

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: December 19, 1997

Page 1 of 2

Sample ID : SPORT0580-3
 Lab ID : 9712133-03
 Matrix : Soil
 Date Collected : 12/04/97
 Date Received : 12/04/97
 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 | 12/12/97 | 1218 | 112652 | |
| 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 | 660 | 1320 | ug/kg | 4.0 | JCB | 12/11/97 | 1813 | 112705 | 2 |
| Acenaphthylene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Anthracene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Benzo(a)anthracene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Benzo(a)pyrene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Benzo(b)fluoranthene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Benzo(ghi)perylene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Benzo(k)fluoranthene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Chrysene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Dibenzo(a,h)anthracene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Fluoranthene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Fluorene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Indeno(1,2,3-c,d)pyrene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Naphthalene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Phenanthrene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |
| Pyrene | U | 0.00 | 660 | 1320 | ug/kg | 4.0 | | | | | |

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

GWL 12/10/97 2345 112705 3

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

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9712133-03



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

| STATE | GEL | EPI |
|-------|--------------|-------------|
| FL | E87156/87294 | E87472/874. |
| 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: December 19, 1997

Page 2 of 2

Sample ID : SPORT0580-3

| Surrogate Recovery | Test | Percent% | Acceptable Limits |
|----------------------|-----------|----------|-------------------|
| 2-Fluorobiphenyl | M610 | 77.0 | (30.0 - 115.) |
| Nitrobenzene-d5 | M610 | 47.4 | (23.0 - 120.) |
| p-Terphenyl-d14 | M610 | 96.7 | (37.3 - 128.) |
| Bromofluorobenzene | BTEX-8260 | 144. | (53.5 - 154.) |
| Dibromofluoromethane | BTEX-8260 | 118. | (63.4 - 136.) |
| Toluene-d8 | BTEX-8260 | 123. | (72.1 - 137.) |
| Bromofluorobenzene | NAP-8260 | 144. | (53.5 - 154.) |
| Dibromofluoromethane | NAP-8260 | 118. | (63.4 - 136.) |
| Toluene-d8 | NAP-8260 | 123. | (72.1 - 137.) |

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

Notes:

The qualifiers in this report are defined as follows:

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

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

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

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

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

Reviewed By

Karen Blakeney



Attachment III

Certificate of Disposal (tank)

UST Certificate of Disposal

CONTRACTOR

Supervisor of Shipbuilding, Conversion and Repair, USN
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (803) 743-6482

TANK ID & LOCATION

UST 647; Charleston Naval Base, Bldg 647, Bainbridge Ave., N. Charleston, SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK

Fuel oil

SIZE (GAL)

4,000 gal.

CLEANING/DISPOSAL METHOD

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

1 36-98

(Date)