

N61165.AR.005693
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR BUILDING
NS701 CNC CHARLESTON SC

10/09/1996

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Ser: 153
30 SEP 1996

MEMORANDUM

From: Director, Supervisor of Shipbuilding, Conversion and Repair, USN, Portsmouth Environmental Detachment Charleston, SC (SPORTENVDETCNASN)

To: Southern Division Naval Facilities Engineering Command
(Code 18B - Hayes Patterson)

Subj: UST ASSESSMENT REPORT FOR UST NS 701

Ref: (a) DHEC Underground Storage Tank Assessment Guidelines for Permanent Closure, Change-In-Owner and Change-In-Service, dated June, 1995

(b) SC Underground Storage Tank Control Regulations, R.61-92, Part 280

(c) South Carolina Department of Health and Environmental Control (SCDHEC) Comments on the Tank Management Plan, dated June 18, 1996

Encl: (1) UST Assessment Report for UST NS 701

1. Enclosure (1) is the UST Assessment Report for UST NS 701. The UST was an unregulated 280 gallon tank which supplied heating oil to building NS 701, a Naval Base Charleston residence. Removal was completed June 10, 1996. This report documents the tank's removal and serves as SPORTENVDETCNASN's work completion report for all work associated with the removal of the subject tank.

2. The UST Assessment Report (AR) contains the information required by Appendix 4 of reference (a). Although reference (b) does not require an AR for unregulated UST's, reference (c) comments request that all reports be forwarded to the South Carolina Department of Health and Environmental Control's DOD petroleum contact.



E. R. Dearhart



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

L1 12-3-94
L2 12-10-94
PLM

5090
Code 1849
9 Oct 1996

Mr. Paul Bristol
South Carolina Department of Health
and Environmental Control
Ground-Water Protection Division
2600 Bull Street
Columbia, SC 29201

Bldg NS 701
#17663

UST ASSESSMENT REPORT FOR: NS 765, NS 705, NS 708, NS 701, NS 719, NS 717 AND NS 718 CHARLESTON NAVAL COMPLEX, CHARLESTON, SC

Dear Mr. Bristol:

Enclosed are the Assessment Reports for the closure of underground storage tanks NS 765, NS 705, NS 708, NS 701, NS 719, NS 717 AND NS 718 located at the Charleston Naval Complex, Charleston, SC.

If you have any questions please contact me at 803-820-7307.

Sincerely,


GABRIEL L. MAGWOOD
Petroleum/UST

RECEIVED
OCT 11 1996
Groundwater Protection
Division

4-12.3.96
20

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

Date Received

State Use Only

Submit Completed Form to:
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: 803 Telephone Number: 743-9985 Contact Person: LCDR Paul Rose

II SITE IDENTIFICATION AND LOCATION

Site I.D. #: N/A Unregulated
Facility Name: Charleston Naval Base Complex, NS 701
Street Address: 399 Turnbull Avenue
City: North Charleston, 29405-2413 County: Charleston

III CLOSURE INFORMATION

Closure Started: 6 June 1996 Closure Completed: 10 June 1996
Number of USTs Closed: 1
N/A Consultant SPORTENVDETCNASN 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.
Paul M. Rose
Name (Type or Print)
Signature

RECEIVED
OCT 11 1996
Groundwater 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	Tank 6
Fuel oil						
280						
> 20 yrs						
Steel						
4/96						
6'6"						
N						
N						
R						
N						
N						

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

UST NS 701 was removed, drained and cleaned. 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).

Residual waste oil was pumped into a 55 gallon drum and recycled.

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

No corrosion, holes, or pitting was 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.....

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Steel						
N/A (See Note 1)						
N/A (See Note 1)						
S						
Y						
N						
N						
> 20 Yrs						

Note 1: UST 701 provided heating oil for a residence.

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

No corrosion, pitting or holes were observed.

VII. BRIEF SITE DESCRIPTION AND HISTORY

NS 701 served as housing for naval personnel and their families. UST 701 provided heating oil for the residence.

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 701 soil samples were taken. The soil samples were collected from the bottom of the excavation from native soils at a depth of 6' 6" below land surface as shown in Site Map Number 2. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

The samples are identified as follows:

	Detachment Charleston		General Engineering Labs
Soil Sample	UST701-1	=	SPORT -0072-1
Soil Sample	UST701-2	=	SPORT - 0072-2
Soil Sample	UST0701-1	=	SPORT - 0072-3
Soil Sample	UST0701-2	=	SPORT - 0072-4

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 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

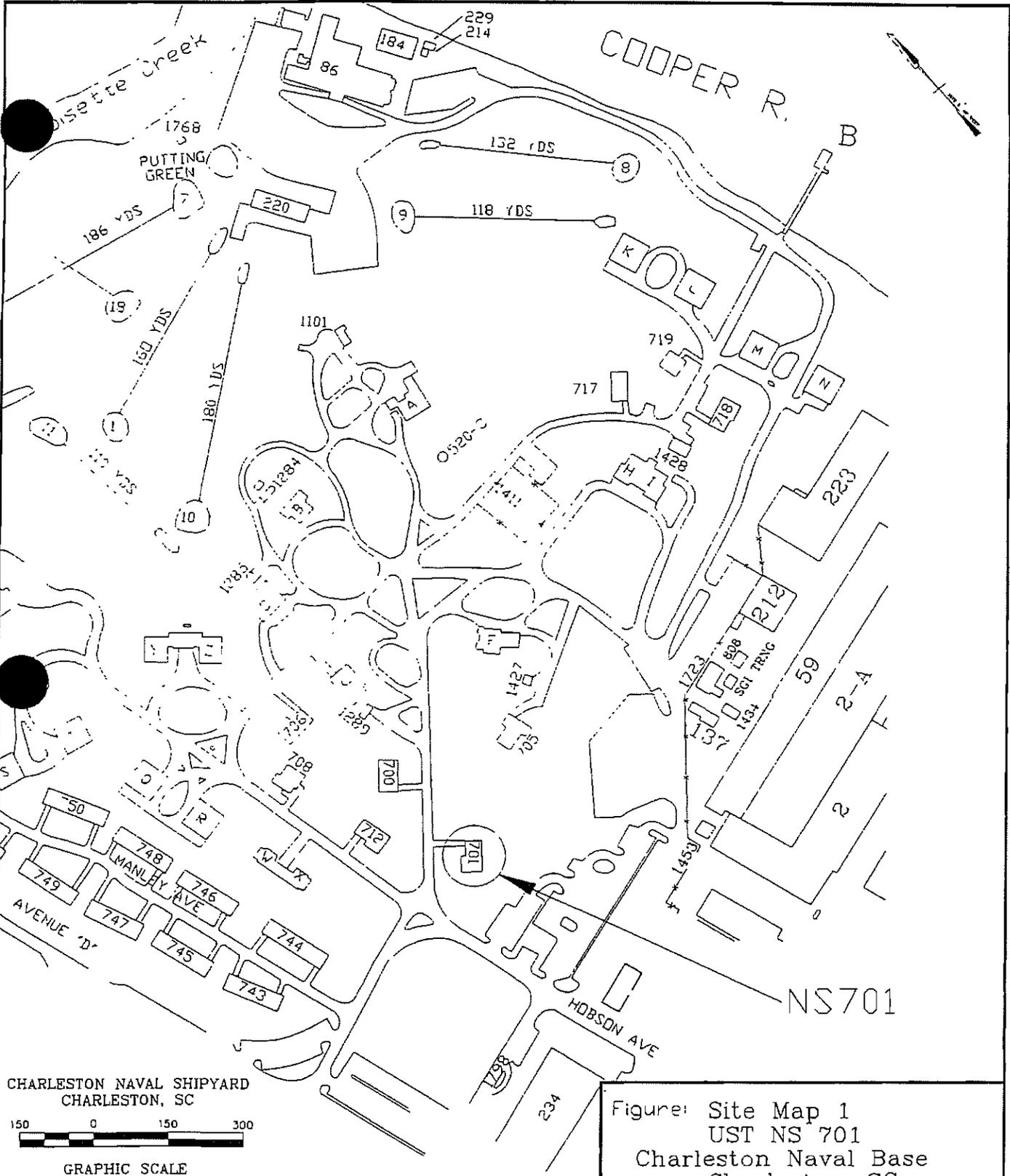
Yes No

A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? 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? <div style="text-align: right; margin-right: 50px;">[*electricity]</div> If yes, indicate the type of utility, distance, and direction on the site map.	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? If yes, indicate the area of contaminated soil on the site map.		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
No photographs available



CHARLESTON NAVAL SHIPYARD
CHARLESTON, SC

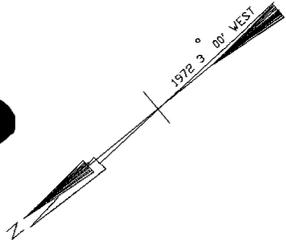


GRAPHIC SCALE

SPORTENVDETHASN
1899 North Hobson Avenue
North Charleston, SC 29405-2106

Figure: Site Map 1
UST NS 701
Charleston Naval Base
Charleston, SC

DWG DATE: 7 Aug 96
DWG NAME: NS 701_1



78' to under-ground electricity

S.S. SPORT 0072-1
S.S. SPORT 0072-3

Return

Shrub

Excavation

Former UST 701

Supply

Fill

Tree

Vent

S.S. SPORT 0072-2
S.S. SPORT 0072-4

NS 701
399 Turnbull Ave.

Driveway

LEGEND

S.S. Soil Sample
— Piping

GRAPHIC SCALE

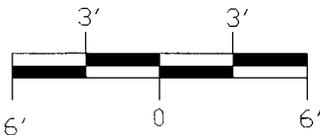


Figure: Site Map 2
UST NS 701
Charleston Naval Base
Charleston, SC

SPORTENVDETHASN
1899 North Hobson Avenue
North Charleston, SC 29405-2106

DWG DATE: 15 Aug 1996

DWG NAME: NS701_2

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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CERTIFICATE OF ANALYSIS

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: NPWC00196

Report Date: June 20, 1996

Page 1 of 3

Sample ID : SPORT-0072-1
 Lab ID : 9606195-01
 Matrix : Soil
 Date Collected : 06/10/96
 Date Received : 06/11/96
 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	THL	06/12/96	1715	85880	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	0.730	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	164	330	ug/kg	1.0	WAM	06/17/96	2026	86033	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	0.00	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	U	0.00	164	330	ug/kg	1.0					

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

GWL 06/17/96 1700 86033 3



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 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 2 of 3

Sample ID : SPORT-0072-1

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	101.	(30.0 - 115.)
Nitrobenzene-d5	M610	84.6	(23.0 - 120.)
p-Terphenyl-d14	M610	118.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	85.7	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	110.	(74.0 - 128.)
Toluene-d8	BTEX-8260	90.8	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	85.7	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	110.	(74.0 - 128.)
Toluene-d8	NAP-8260	90.8	(53.4 - 163.)

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:

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

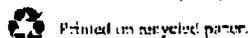
U indicates that the analyte was not detected at a concentration greater than the detection limit.

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

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175

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

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 3 of 3

Sample ID : SPORT-0072-1

GEL Laboratory Certifications

DE - SC012
ME - SC012
NC - 233
RI - 135
TN - 02934
VA - 00151
WI - 999887790

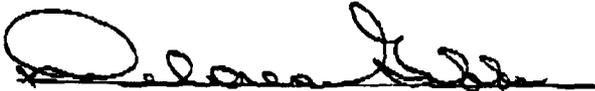
FL - E87156/87294
MS - 10120
NY - 11501
SC - 10120
UT - E-251
WA - C223

EPI Laboratory Certifications

FL - E87472/87458
NY - 11502
SC - 10582
UT - E-227
WA - C225
PA - 68-485

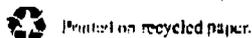
MS - 29417
RI - 138
TN - 02934
VA - 00111
NJ - 79002
WV - 235

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.


Analytical Report Specialist

9606195-01

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P. 004

TEL: 803-852-5812

GENERAL ENGINEERING

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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: NPWC00196

Report Date: June 20, 1996

Page 1 of 3

Sample ID : SPORT-0072-2
 Lab ID : 9606195-02
 Matrix : Soil
 Date Collected : 06/10/96
 Date Received : 06/11/96
 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	THL	06/12/96	1745	85880	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	167	333	ug/kg	1.0	WAM	06/17/96	2059	86033	2
Acenaphthylene	U	0.00	167	333	ug/kg	1.0					
Anthracene	U	0.00	167	333	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	167	333	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	167	333	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	167	333	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	167	333	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	167	333	ug/kg	1.0					
Chrysene	U	0.00	167	333	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	167	333	ug/kg	1.0					
Fluoranthene	U	0.00	167	333	ug/kg	1.0					
Fluorene	U	0.00	167	333	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	167	333	ug/kg	1.0					
Naphthalene	U	0.00	167	333	ug/kg	1.0					
Phenanthrene	U	0.00	167	333	ug/kg	1.0					
Pyrene	U	0.00	167	333	ug/kg	1.0					

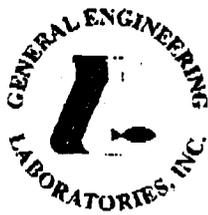
The following prep procedures were performed:
 GC/MS Base/Neutral Compounds

GWL 06/17/96 1700 86033 3



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

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 2 of 3

Sample ID : SPORT-0072-2

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	71.9	(30.0 - 115.)
Nitrobenzene-d5	M610	45.9	(23.0 - 120.)
p-Terphenyl-d14	M610	97.6	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	91.7	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	115.	(74.0 - 128.)
Toluene-d8	BTEX-8260	92.4	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	91.7	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	115.	(74.0 - 128.)
Toluene-d8	NAP-8260	92.4	(53.4 - 163.)

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:

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

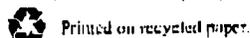
U indicates that the analyte was not detected at a concentration greater than the detection limit.

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

GEL Laboratory Certifications		EPI Laboratory Certifications	
AL - 41040	AZ - AZ0514	AL - 41050	AZ - AZ0514
CA - 2089	CT - PH-0169	CA - I-1023/2056	CT - PH-0175

9606195-02

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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: NPWC00196

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Page 3 of 3

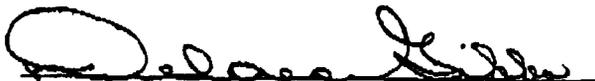
Sample ID : SPORT-0072-2

GEL Laboratory Certifications

EPI Laboratory Certifications

DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790			

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 Blakemey at (803) 769-7386.


 Analytical Report Specialist



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

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 1 of 3

Sample ID : SPORT-0072-3
 Lab ID : 9606195-03
 Matrix : Soil
 Date Collected : 06/10/96
 Date Received : 06/11/96
 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	THL	06/12/96	1815	85880	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		2.42	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	06/17/96	2131	86033	2
Acenaphthylene	U	0.00	166	331	ug/kg	1.0					
Anthracene		506	166	331	ug/kg	1.0					
Benzo(a)anthracene		708 ↑	166	331	ug/kg	1.0					
Benzo(a)pyrene		397	166	331	ug/kg	1.0					
Benzo(b)fluoranthene		768 †	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		814 ↑	166	331	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	166	331	ug/kg	1.0					
Fluoranthene		1790	166	331	ug/kg	1.0					
Fluorene	J	209	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		1670	166	331	ug/kg	1.0					
Pyrene		1940	166	331	ug/kg	1.0					

*Total
2802 ug/kg*

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

GWL 06/17/96 1700 86033 3



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CERTIFICATE OF ANALYSIS

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: NPWC00196

Report Date: June 20, 1996

Page 2 of 3

Sample ID : SPORT-0072-3

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	86.0	(30.0 - 115.)
Nitrobenzene-d5	M610	56.7	(23.0 - 120.)
p-Terphenyl-d14	M610	112.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	83.8	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	113.	(74.0 - 128.)
Toluene-d8	BTEX-8260	93.5	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	83.8	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	113.	(74.0 - 128.)
Toluene-d8	NAP-8260	93.5	(53.4 - 163.)

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:

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.

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

GEL Laboratory Certifications

EPI Laboratory Certifications

AL - 41040
 CA - 2089

AZ - AZ0514
 CT - PH-0169

AL - 41050
 CA - I-1023/2056

AZ - AZ0514
 CT - PH-0175

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North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 3 of 3

Sample ID : SPORT-0072-3

GEL Laboratory Certifications

DE - SC012
ME - SC012
NC - 233
RI - 135
TN - 02934
VA - 00151
WI - 999887790

FL - E87156/87294
MS - 10120
NY - 11501
SC - 10120
UT - E-251
WA - C223

EPI Laboratory Certifications

FL - E87472/87458
NY - 11502
SC - 10582
UT - E-227
WA - C225
PA - 68-485

MS - 29417
RI - 138
TN - 02934
VA - 00111
NJ - 79002
WV - 235

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.

Analytical Report Specialist





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

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 1 of 3

Sample ID : SPORT-0072-4
 Lab ID : 9606195-04
 Matrix : Soil
 Date Collected : 06/10/96
 Date Received : 06/11/96
 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	THL	06/12/96	1845	85880	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.530	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	164	330	ug/kg	1.0	WAM	06/17/96	2203	86033	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	164	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	164	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	164	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	164	330	ug/kg	1.0					
Chrysene	U	0.00	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	164	330	ug/kg	1.0					
Fluoranthene	U	0.00	164	330	ug/kg	1.0					
Fluorene	U	0.00	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene	U	0.00	164	330	ug/kg	1.0					
Pyrene	U	0.00	164	330	ug/kg	1.0					

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

GWL 06/17/96 1700 86033 3



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Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: June 20, 1996

Page 2 of 3

Sample ID : SPORT-0072-4

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	97.0	(30.0 - 115.)
Nitrobenzene-d5	M610	75.4	(23.0 - 120.)
p-Terphenyl-d14	M610	126.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	83.0	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	118.	(74.0 - 128.)
Toluene-d8	BTEX-8260	100.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	83.0	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	118.	(74.0 - 128.)
Toluene-d8	NAP-8260	100.	(53.4 - 163.)

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:

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

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

GEL Laboratory Certifications

AL - 41040
 CA - 2089

AZ - AZ0514
 CT - PH-0169

EPI Laboratory Certifications

AL - 41050
 CA - I-1023/2056

AZ - AZ0514
 CT - PH-0175



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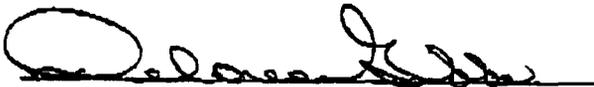
Sample ID : SPORT-0072-4

GEL Laboratory Certifications

EPI Laboratory Certifications

DE - SC012	FL - E87156/87294	FL - E87472/87458	MS - 29417
ME - SC012	MS - 10120	NY - 11502	RI - 138
NC - 233	NY - 11501	SC - 10582	TN - 02934
RI - 135	SC - 10120	UT - E-227	VA - 00111
TN - 02934	UT - E-251	WA - C225	NJ - 79002
VA - 00151	WA - C223	PA - 68-485	WV - 235
WI - 999887790			

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 Blakoney at (803) 769-7386.


 Analytical Report Specialist

N: 00196

KBB

General Engineering Laboratories, Inc.
 2040 Savage Road
 Charleston, South Carolina 29414
 P.O. Box 30712
 Charleston, South Carolina 29417
 (803) 556-8171

CHAIN OF CUSTODY RECORD

Page 1 of 1

96006195

Client Name/Facility Name		SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods														Use F or P in the boxes to indicate whether sample was filtered and/or preserved					
SPORT ENV DET CHASH		pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	BTEX PLUS N/A THA 1010 R	PAH	Remarks		
Collected by/Company																			# OF CONTAINERS		Remarks
SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB															
-01	SPORT0072-1	6/10/96	1130	X	X		2												X	X	UST-701-1 soil
-02	SPORT0072-2	6/10/96	1130	X	X		2												X	X	UST-701-2 soil
-03	SPORT0072-3	6/10/96	1130	X	X		2												X	X	UST-0701-1 soil
-04	SPORT0072-4	6/10/96	1130	X	X		2												X	X	UST-0701-2 soil
-05	SPORT0072-5	6/10/96	1130			X	3												X		UST-701 TRIP BLANK

Relinquished by: W. K. Thiery, Jr. Date: 6/11/96 Time: 1300 Received by: W. K. Thiery, Jr. Date: 6/11/96 Time: 1505 Received by: Michael R.

Relinquished by: Michael Patton Date: 6/11/96 Time: 1539 Received by: R. Desnave Date: 6/11/96 Time: 1540 Remarks:

White = sample collector Yellow = file Pink = with report

Attachment III

Certificate of Disposal (tank)

