N61165.AR.005361
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT DATED 2 APRIL 1998 AND NO FURTHER ACTION (NFA) FOR BUILDING NS-6 AND ABOVE GROUND STORAGE TANK NS-6 (AST NS-6) WITH SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL REVIEW LETTER CNC CHARLESTON
05/29/1998
NAVFAC SOUTHERN

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
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Brian K. Smith

Rodney L. Grandy

May 29, 1998

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 NS-6 (AST NS6) (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, 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 employed closure activities, site description and analytical results appear to indicate that no additional endeavors for remedial actions and/or contaminant characterization is warranted at the referenced site at this time. If in the future contamination is identified which is attributable to this site, additional assessments and/or remedial endeavors may be required, as appropriate.

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

L: 4.8.98
Lo 5.26.98

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

L 4.8.98
W 5.26.98

RECEIVED
APR 6 1998
Water Monitoring, Assessment & Protection Division

Aboveground Storage Tank (AST) Assessment Report

Date Received
State Use Only

Submit Completed Form to:
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

I. OWNERSHIP OF AST(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 NS6

Street Address: South Hobson Avenue

City: North Charleston, 29405-2413 County: Charleston

III. CLOSURE INFORMATION

Closure Started: 22 Jan 1998 Closure Completed: 11 Feb 1998

Number of ASTs Closed: 1

N/A
Consultant

SPORTENVDETCHASN
AST 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)

W. W. Grandy for LCDR ROSE
Signature

V. AST INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A. Product.....	Gasoline					
B. Capacity.....	100 gal.					
C. Age.....	~1958					
D. Construction Material.....	Steel					
E. Month/Year of Last Use.....	Unk					
F. Spill Prevention Equipment Y/N.....	N					
G. Overfill Prevention Equipment Y/N....	N					
H. Method of Closure Removed/Filled..	R					
I. Visible Corrosion or Pitting Y/N.....	Y					
J. Visible Holes Y/N.....	N					

L. Method of disposal for any ASTs removed.

AST NS6-1 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 ASTs.

AST NS6-1 was found empty. The waste water and sludge were recycled.

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

AST NS6-1 was pitted and corroded throughout its exterior surface. No holes were found.

VI. PIPING INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A. Construction Material.....	Copper & Steel					
B. Distance from AST to Dispenser.....	2'					
C. Number of Dispensers.....	1 See note 1					
D. Type of System P/S.....	S					
E. Was Piping Removed Y/N.....	Y					
F. Visible Corrosion or Pitting Y/N.....	Y					
G. Visible Holes Y/N.....	N					
H. Age.....	~1958					

Note 1: AST NS6-1 was a gasoline tank for pump house NS6.

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

The lines were corroded and pitted throughout. But no holes were found.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building NS6 served as a fresh water pump house for the Charleston Naval Base. It was constructed around 1958. AST NS6-1 was located in a sealed brick vault attached to the pump house. Sand filled the void between the tank and the vault.

VIII. SITE CONDITIONS

		Yes	No	Unk
A.	Were any petroleum-stained or contaminated soils found near the AST?		X	
B.	Were any petroleum odors detected?			
	If yes, indicate location on site map and describe the odor (strong, mild, etc.)		X	

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 0599-5	Soil berm	Soil	--	11 Feb 98 1045	William Nesbit	Not Taken
SPORT 0599-6	Soil berm	Soil	--	11 Feb 98 1100	William Nesbit	Not Taken

* = Depth Below the Surrounding Land Surface

X. SAMPLING METHODOLOGY

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

After the removal of AST NS6-1, 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 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

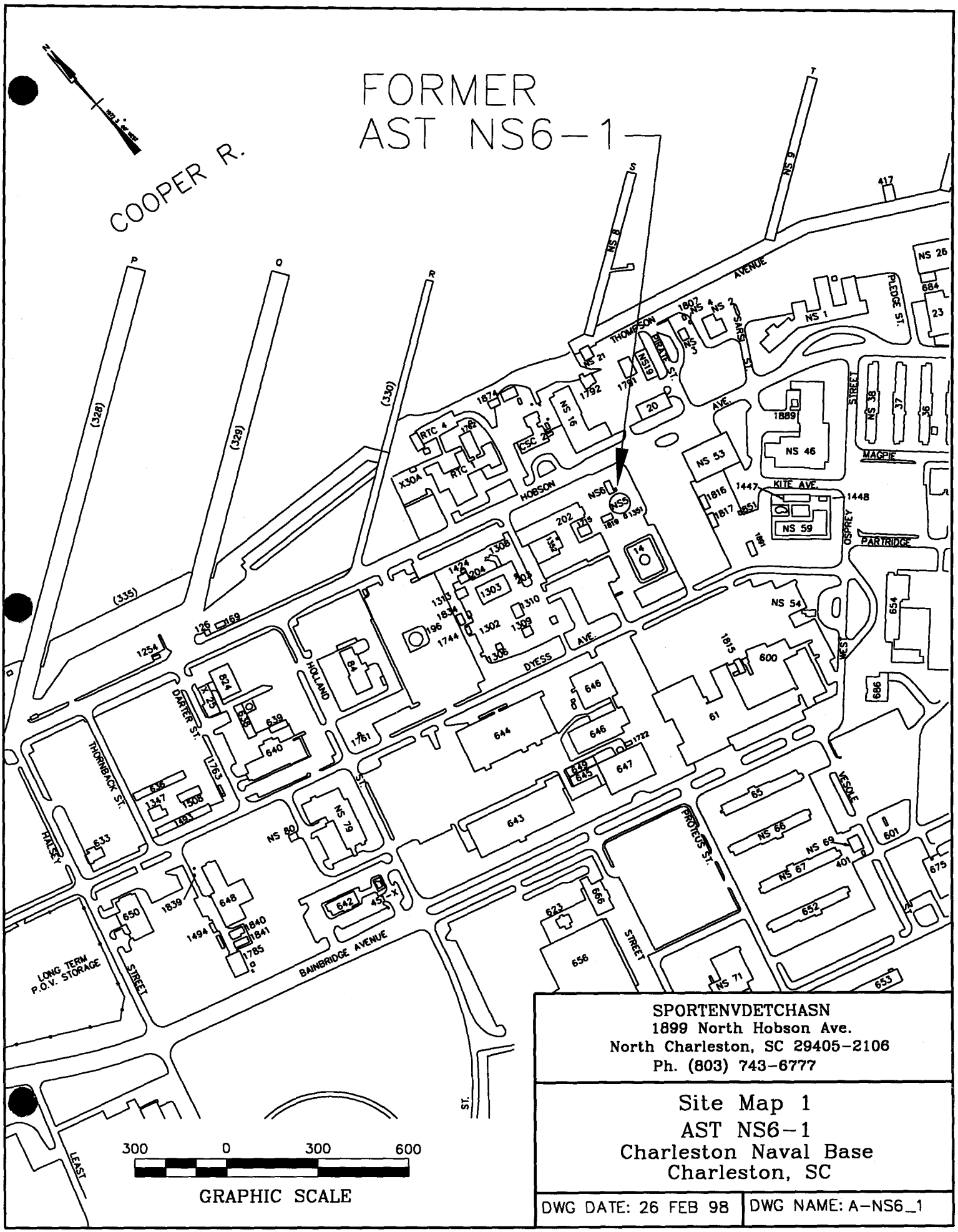
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the AST system? **[Cooper R. ~479']** If yes, indicate type of receptor, distance, and direction on site map.	X	
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the AST system? 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 AST 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 AST system that could potentially come in contact with the contamination? If yes, indicate the type of utility, distance, and direction on the site map. **[water, storm drain, electricity]**	X	

Attachment I

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.

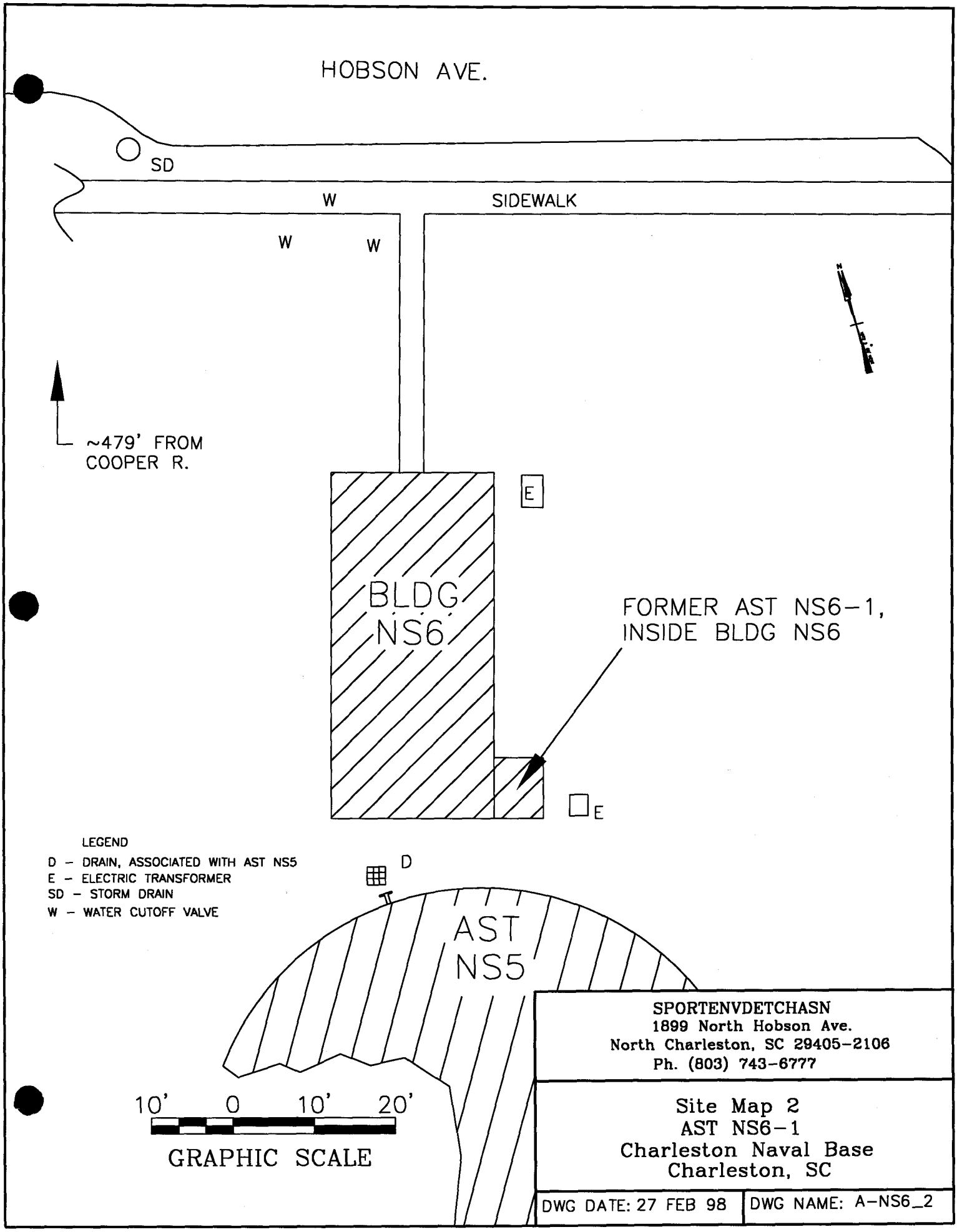
Site Maps 1, 2, and 3
Photographs 1 and 2

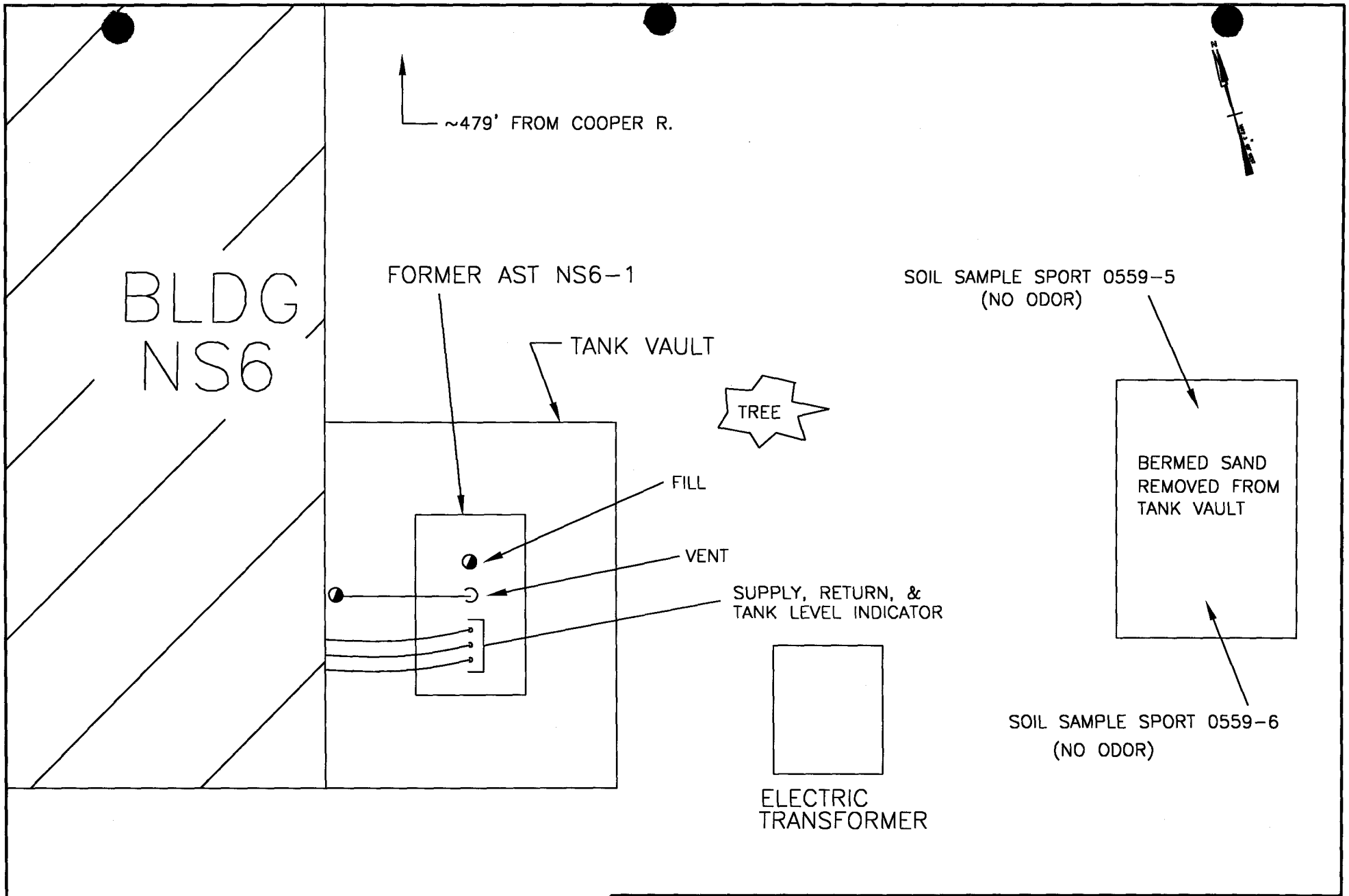


SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC 29405-2106
Ph. (803) 743-6777

Site Map 1
AST NS6-1
Charleston Naval Base
Charleston, SC

DWG DATE: 26 FEB 98 | DWG NAME: A-NS6_1


HOBSON AVE.
SD
W
SIDEWALK
W
W
~479' FROM
COOPER R.
E
BLDG
NS6
FORMER AST NS6-1,
INSIDE BLDG NS6
E
LEGEND
D - DRAIN, ASSOCIATED WITH AST NS5
E - ELECTRIC TRANSFORMER
SD - STORM DRAIN
W - WATER CUTOFF VALVE
D
AST
NS5
10' 0 10' 20'
GRAPHIC SCALE
SPORTENVDETCHASN
1899 North Hobson Ave.
North Charleston, SC 29405-2106
Ph. (803) 743-6777
Site Map 2
AST NS6-1
Charleston Naval Base
Charleston, SC
DWG DATE: 27 FEB 98
DWG NAME: A-NS6_2



3 0 3

GRAPHIC SCALE

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

Site Map 3
AST NS6-1
Charleston Naval Base
Charleston, SC

DWG DATE: 3 MAR 98

DWG NAME: A-NS6_3

AST NS6-1

Photo 1: AST NS6-1 in vault prior to removal.

Photo 2: AST NS6-1 immediately after removal.

Attachment II

ANALYTICAL RESULTS

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

Certified Analytical Results
Chain-of-Custody

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	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: March 02, 1998

Sample ID	: SPORT0599-5
Lab ID	: 9802336-05
Matrix	: Soil
Date Collected	: 02/11/98
Date Received	: 02/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	RMB	02/19/98	1806	116917	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											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	RLC	02/21/98	0957	116420	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					

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

MAL 02/12/98 2130 116420 3

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29414
(803) 556-8171 • Fax (803) 766-1178

9802336-05

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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: March 02, 1998

Sample ID : SPORT0599-5

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	66.8	(30.0 - 115.)
Nitrobenzene-d5	M610	61.1	(23.0 - 120.)
p-Terphenyl-d14	M610	82.2	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	120.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	84.1	(63.4 - 136.)
Toluene-d8	BTEX-8260	112.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	120.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	84.1	(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.

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

Karen Blakeney
Reviewed By

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87451
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: March 02, 1998

Sample ID	: SPORT0599-6
Lab ID	: 9802336-06
Matrix	: Soil
Date Collected	: 02/11/98
Date Received	: 02/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	5.00	10.0	ug/kg	5.0	RMB	02/19/98	1834	116917	1
Ethylbenzene	U	0.00	5.00	10.0	ug/kg	5.0					
Toluene	U	0.00	5.00	10.0	ug/kg	5.0					
Xylenes (TOTAL)	U	0.00	5.00	10.0	ug/kg	5.0					
Naphthalene	U	0.00	5.00	10.0	ug/kg	5.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	167	333	ug/kg	1.0	RLC	02/21/98	1028	116420	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

MAL 02/12/98 2130 116420 3

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: March 02, 1998

Sample ID : SPORT0599-6

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	55.0	(30.0 - 115.)
Nitrobenzene-d5	M610	48.8	(23.0 - 120.)
p-Terphenyl-d14	M610	90.0	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	121.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	85.9	(63.4 - 136.)
Toluene-d8	BTEX-8260	106.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	121.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	85.9	(63.4 - 136.)
Toluene-d8	NAP-8260	106.	(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).
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This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7385.

Karen Blakeney
Reviewed By

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(803) 556-8171 • Fax (803) 766-1178

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NPWC00141

CHAIN OF CUSTODY RECORD

9802336

2040 Savage Road
Charleston, South Carolina 29407
P.O. Box 30712
Charleston, South Carol 17
(803) 556-8171

Page 1 of 1

Client Name/Facility Name: SPORTENVDETCHASN

Collected by/Company: SPORTENVDETCHASN

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

CCL 31313

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX/EOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	SCRA METALS - specify	BTEX/NAP	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	~~PCB's~~ PAH	Cyanide	Coliform - specify type	Sb/Be/Ni	TPH	Remarks	
-01	SPORTO599-1	2-11-98	0900		✓		✓	1								X										Soil Trip Blank	.1
-02	SPORTO599-2	2-11-98	0940		✓		✓	3			X				X									X	X	Soil AST 3909-4	.2
-03	SPORTO599-3	2-11-98	1005		✓		✓	1													X					Soil AST 3909-5	.3
-04	SPORTO599-4	2-11-98	1025		✓		✓	1													X					Soil AST 3909-6	.3
-05	SPORTO599-5	2-11-98	1045		✓	✓		2								X					X					Soil AST NS6-1	.4
-06	SPORTO599-6	2-11-98	1100		✓	✓		2								X					X					Soil AST NS6-2	.4

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	2-11-98	1320	[signature]	[signature]	2/11/98	1420	[signature]

Relinquished by:	Date:	Time:	Received by lab by:	Date:	Time:	Remarks:
[signature]	2/11/98	1600	Karen Blakeney	2/11/98	1600	

White = sample collector Yellow = file Pink = with report

Attachment III

Certificate of Disposal (tank)

AST 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

AST NS6-1; Charleston Naval Base, Bldg NS6, Hobson Ave., N. Charleston, SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK	SIZE (GAL)
Gasoline	100 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 / 3-17-98

Sidney C. Ladson (Date)