

N61165.AR.005068
CNC CHARLESTON
5090.3a

ABOVE GROUND STORAGE TANK (AST) ASSESSMENT REPORT BUILDING 590A CNC
CHARLESTON SC
09/29/1997
ENVIRONMENTAL DETACHMENT CHARLESTON

L33.9.98
L033.9.98

RECEIVED

FEB 10 1998

Aboveground Storage Tank (AST) Assessment Report

Water Monitoring, Assessment & Protection Division

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	# 01026
Facility Name:	Charleston Naval Base Complex, Building 590-A	
Street Address:	River Road	
City:	North Charleston, 29405-2413	County: Charleston

III. CLOSURE INFORMATION

Closure Started: 29 Sept 1997	Closure Completed: 14 Nov 97
N/A	SPORTENVDETCNASN
Consultant	AST Removal Contractor
Number of ASTs Closed: 1	

V. 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)	
Signature	

V. AST INFORMATION

- A. Product.....
- B. Capacity.....
- C. Age.....
- D. Construction Material.....
- E. Month/Year of Last Use.....
- F. Spill Prevention Equipment Y/N.....
- G. Overfill Prevention Equipment Y/N....
- H. Method of Closure Removed/Filled..
- I. Visible Corrosion or Pitting Y/N.....
- J. Visible Holes Y/N.....

590A	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Fuel oil					
300 gal					
2 - 3 yrs					
Steel					
Unk					
N					
N					
R					
Y					
N					

- L. Method of disposal for any ASTs removed.

AST 590A 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.

The residual fuel oil, waste water, and sludge were recycled.

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

AST 590A was covered with patches of flaking paint and surface rust, but no holes were found.

VI. PIPING INFORMATION

- A. Construction Material.....
- B. Distance from AST to Dispenser.....
- C. Number of Dispensers.....
- D. Type of System P/S.....
- E. Was Piping Removed Y/N.....
- F. Visible Corrosion or Pitting Y/N.....
- G. Visible Holes Y/N.....
- H. Age.....

590A	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
Copper					
~5'					
1 Sec note 1					
S					
Y					
N					
N					
2-3 yrs					

Note 1: AST 590A provided heating fuel oil to Building 590-A.

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

AST 590A had an exposed copper tubing run of approximately five feet. No corrosion, pitting, or holes were found in the piping.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building 590A was constructed in 1935. It served as a barracks and then a mess hall until 1975. From 1975 until base closure, the building housed the Charleston Naval Shipyard Radiological Control administrative offices.

AST 590A was the source of heating fuel oil for Building 590A at the time of the tank's removal. It is unknown when the switch was made from USTs 590A, 590A-1. Although the tank appeared old and was coated with surface rust, it was installed sometime during shipyard closure, between 1994 and 1996.

X. SAMPLING METHODOLOGY

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

After the removal of AST 590A, a soil sample was taken. Sampling was performed in accordance with SCDHEC R.61-92 Part 280 and SCDHEC 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 soil sample was extracted at the tank end closest to the fill pipe and beneath the supply and return piping.

The sample jars 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 sample remained in the custody of SPORTENVDETCNASN until it was transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

XI. RECEPTORS

Yes No

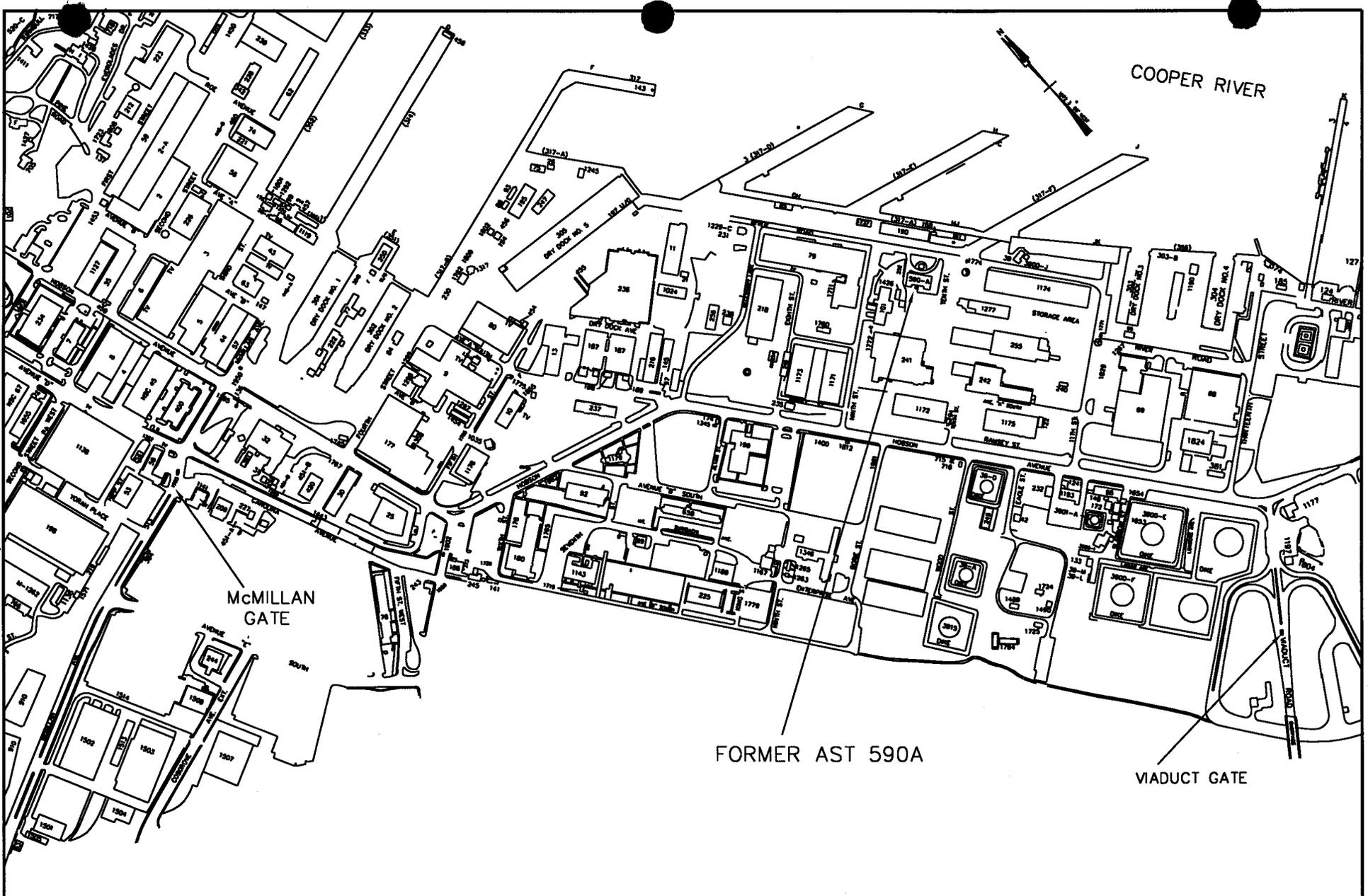
A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the AST system?		X
If yes, indicate type of receptor, distance, and direction on site map.		
B. Are there any public, private, or irrigation water supply wells within 1000 feet of the AST system?		X
If yes, indicate type of well, distance, and direction on site map.		
C. Are there any underground structures (e.g., basements) located within 100 feet of the AST system?		X
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 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.	X	
[storm drain & electrical]		

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



SPORTENVDECHASN
 1899 North Hobson Ave.
 North Charleston, SC
 29405-2108
 Ph. (803) 743-6777

Site Map 1 AST 590A Charleston Naval Base Charleston, SC	
DWG DATE: 20 NOV 97	DWG NAME: A590A_1

590-A

SD

C

A

E

SIDEWALK

COOPER R. ~ 320'
FROM AST 590A

GRASS

ASPHALT

FORMER AST 590A

KEY

- A - AC UNIT
- C - CATCH BASIN, RAIN WATER
- E - ELEC SUBSTA 590A
- P - PIPES ENTER GND
- SD - STORM DRAIN

SD



GRAPHIC SCALE

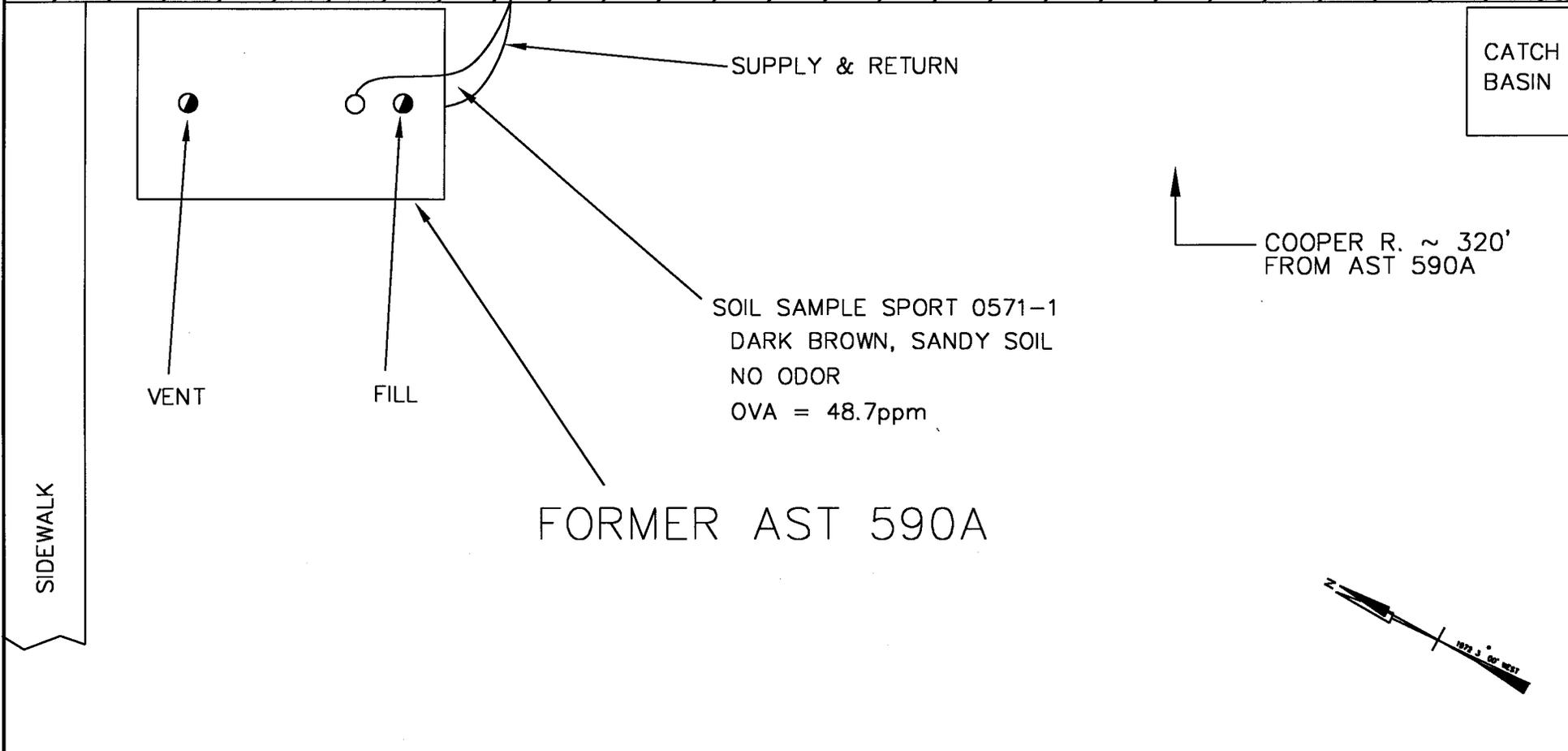
SPORTENVDETHASN
 1899 North Hobson Ave.
 North Charleston, SC 29405-2106
 Ph. (803) 743-6777

Site Map 2
 AST 590A
 Charleston Naval Base
 Charleston, SC

DWG DATE: 9 DEC 98

DWG NAME: A590A_2

BUILDING 590-A



SUPPLY & RETURN

CATCH BASIN

COOPER R. ~ 320'
FROM AST 590A

SOIL SAMPLE SPORT 0571-1
DARK BROWN, SANDY SOIL
NO ODOR
OVA = 48.7ppm

VENT

FILL

FORMER AST 590A

SIDEWALK



GRAPHIC SCALE

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

Site Map 3
AST 590A
Charleston Naval Base
Charleston, SC

DWG DATE: 5 DEC 97

DWG NAME: A590A_3

AST 590A



Photo 1: AST 590A prior to removal.

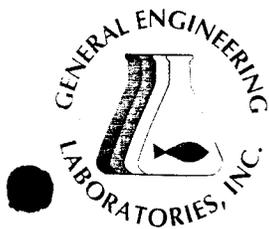


Photo 2: AST 590A being cleaned and cut up as scrap metal.

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: November 26, 1997

Page 1 of 3

Sample ID : SPORT0571-1
 Lab ID : 9711511-01
 Matrix : Soil
 Date Collected : 11/18/97
 Date Received : 11/18/97
 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	JAS	11/25/97	1146	111983	
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	656	1310	ug/kg	4.0	WAM	11/24/97	1809	111600	2
Acenaphthylene	U	0.00	656	1310	ug/kg	4.0					
Anthracene	U	0.00	656	1310	ug/kg	4.0					
Benzo(a)anthracene	U	0.00	656	1310	ug/kg	4.0					
Benzo(a)pyrene	U	0.00	656	1310	ug/kg	4.0					
Benzo(b)fluoranthene	U	0.00	656	1310	ug/kg	4.0					
Benzo(ghi)perylene	U	0.00	656	1310	ug/kg	4.0					
Benzo(k)fluoranthene	U	0.00	656	1310	ug/kg	4.0					
Chrysene	U	0.00	656	1310	ug/kg	4.0					
Dibenzo(a,h)anthracene	U	0.00	656	1310	ug/kg	4.0					
Fluoranthene	U	0.00	656	1310	ug/kg	4.0					
Fluorene	U	0.00	656	1310	ug/kg	4.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	656	1310	ug/kg	4.0					
Naphthalene	U	0.00	656	1310	ug/kg	4.0					
Phenanthrene	U	0.00	656	1310	ug/kg	4.0					
Pyrene	U	0.00	656	1310	ug/kg	4.0					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

GWL 11/19/97 2345 111600 3

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

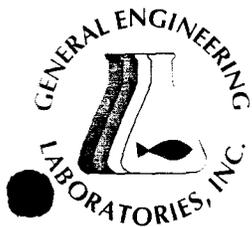
(803) 556-8171 • Fax (803) 766-1178

9711511-01



Printed on recycled paper.





GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/8745
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: November 26, 1997

Page 2 of 3

Sample ID : SPORT0571-1

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

Volatile Organics contained matrix interferences.

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	70.8	(30.0 - 115.)
Nitrobenzene-d5	M610	64.1	(23.0 - 120.)
p-Terphenyl-d14	M610	79.9	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	124.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	105.	(63.4 - 136.)
Toluene-d8	BTEX-8260	131.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	124.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	105.	(63.4 - 136.)
Toluene-d8	NAP-8260	131.	(72.1 - 137.)

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

Notes:

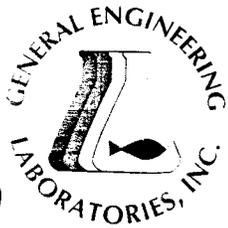
The qualifiers in this report are defined as follows:

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.



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: November 26, 1997

Page 3 of 3

Sample ID : SPORT0571-1

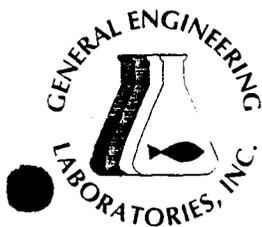
M = Method

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	E87472/87
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: November 26, 1997

Page 1 of 2

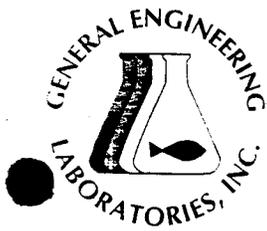
Sample ID : SPORT0571-4
 Lab ID : 9711511-04
 Matrix : Soil
 Date Collected : 11/18/97
 Date Received : 11/18/97
 Priority : Routine
 Collector : Client

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	JAS	11/25/97	1307	111983	.
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	110.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	118.	(63.4 - 136.)
Toluene-d8	BTEX-8260	113.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	110.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	118.	(63.4 - 136.)
Toluene-d8	NAP-8260	113.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260





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: November 26, 1997

Page 2 of 2

Sample ID : SPORT0571-4

M = Method Method-Description

Notes:

The qualifiers in this report are defined as follows:

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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

CHAIN OF CUSTODY RECORD

971151

Client Name/Facility Name			# OF CONTAINERS			SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods														Use F or P in the boxes to indicate whether sample was filtered and/or preserved	
Collected by/Company						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/NAP
SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB															
-01 SPORT0571-1	11/18/97	1000	X	X		2												X	X	AST 590 A	.1
-02 SPORT0571-2	11/18/97	1115	X	X		2												X	X	AST 1136	.1
-03 SPORT0571-3	11/18/97	1035	X	X		2												X	X	AST 1177	.1
-04 SPORT0571-4	11/18/97	0910	X	X		1												X		Soil TRIP BLANK	.2

Relinquished by: <i>[Signature]</i>	Date: 11/18/97	Time: 1455	Received by: Vivian Washington	Relinquished by: Vivian Washington	Date: 11/18/97	Time: 1437	Received by: <i>[Signature]</i>
Relinquished by: <i>[Signature]</i>	Date: 11/18/97	Time: 1455	Received by lab by: Karen Blaken	Date: 11/18/97	Time: 1455	Remarks:	

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 590A; Charleston Naval Base, Bldg 590A, River Road, N. Chas, SC 29405

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK

Fuel oil

SIZE (GAL)

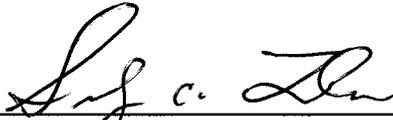
300 gal.

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 12-03-97
(Date)