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CNC CHARLESTON
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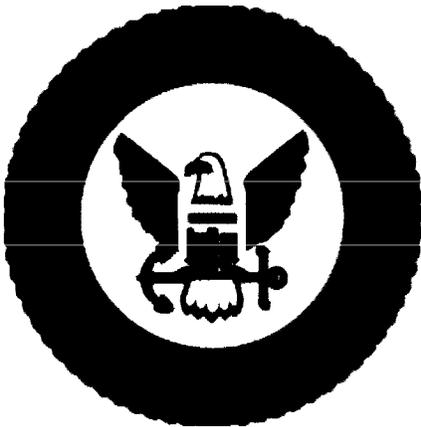
COMPLETION REPORT INTERIM MEASURE FOR SOLID WASTE MANAGEMENT UNIT 42
(SWMU42) FORMER ASPHALT PLANT TANKS WITH TRANSMITTAL CNC CHARLESTON

SC
7/24/1997
U S NAVY



COMPLETION REPORT

**INTERIM MEASURE FOR
SWMU 42 FORMER ASPHALT PLANT TANKS
NAVAL BASE CHARLESTON
CHARLESTON, SC**



Prepared for:

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON SC**



Prepared by:

**Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106**

July 17, 1997



DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR, USN
PORTSMOUTH, VIRGINIA, DETACHMENT ENVIRONMENTAL CHARLESTON
1899 NORTH HOBSON AVENUE, BUILDING 30
NORTH CHARLESTON, SOUTH CAROLINA 29405-2106

IN REPLY REFER TO:

Ser: 784

JUL 24 1997

Mr. G. Randall Thompson, Director
Division of Hazardous and Infectious Waste Management
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia SC 29201

Dear Mr. Thompson:

The enclosed interim measure completion report for Solid Waste Management Unit (SWMU) 42 is submitted to fulfill the requirement of Permit Condition IV.D.6 for Permit Number SCO 170 022 560. If the Department of Health and Environmental Control should have any questions, please contact Reece Batten of Southern Division Naval Facilities Engineering Command (NAVFAC) at (803) 820-5578.

Sincerely,

E. R. Dearhart
E. R. Dearhart
Director

Encl:

(1) SWMU 42 Completion Report

Copy to:

SCDHEC (Mr. Tapia, Mr. Bergstrand)

USEPA (Mr. Bassett)

CSO Naval Base Charleston (LCDR Rose)

NAVFAC (Mr. Batten)

EA&H (Ms. Maddux)



COMPLETION REPORT

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ACRONYMS, ABBREVIATIONS and SYMBOLS

AOC	Area of Concern
BTEX	Benzene, Toluene, Ethylbenene, Xylenes
CMS	Corrective Measures Study
COPC	Constituents of Potential Concern
DERP	Defense Environmental Restoration Program
DET	Environmental Detachment Charleston
DON	Department of the Navy
IM	Interim Measure
IR	Installation Restoration
mg/kg (ppm)	milligrams per kilogram (equal to parts per million)
RBC	Risk Based Concentration
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SARA	Superfund Amendments and Reauthorization Act
SCDHEC	South Carolina Department of Health and Environmental Control
SOUTHDIV	Southern Division Naval Facilities Engineering Command
SUPSHIP	Supervisor of Shipbuilding, Conversion and Repair, USN
SWMU	Solid Waste Management Unit
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
USN	United States Navy
μg/kg (ppb)	micrograms per kilogram (equal to parts per billion)

1. INTRODUCTION

1.1 INSTALLATION RESTORATION PROGRAM. The purpose of the Department of the Navy (DON) Installation Restoration (IR) Program is to identify, assess, characterize and cleanup or control contamination from past hazardous waste disposal operations and hazardous material spills at Navy and Marine Corps activities. The Defense Environmental Restoration Program (DERP) is codified in the Superfund Amendment and Reauthorization Act (SARA) Section 211 (10 USC 2701). The IR program is a component of DERP.

1.1.1 Naval Base Charleston Installation Restoration Program. At Naval Base Charleston, a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) was prepared which divided the Naval Base into zones and identified Solid Waste Management Units (SWMUs) and Area of Concerns (AOCs) within each zone. The RFA evaluated each SWMU and AOC and determined which sites required further investigation. Based on the RFA, a RCRA Facility Investigation (RFI) work plan has been or is being prepared for each zone containing SWMUs and AOCs requiring further investigation. On completion of the RFI for each zone, a RFI report will be prepared for that zone. The RFI report will identify SWMUs and AOCs containing wastes requiring remediation. Eventually, Corrective Measures Studies (CMSs) will be prepared to determine the best means of remediating each site.

1.2 INTERIM MEASURES. Interim Measures (IM) performed as part of the IR program are intended to eliminate sources of environmental contamination or limit the spread of environmental contaminants prior to the completion of the RFI CMSs.

1.3 SOLID WASTE MANAGEMENT UNIT 42. SWMU 42 is located in Zone "A", north of Noisette Creek. Figure A-1 of Appendix A illustrates the site. This SWMU consists of a former asphalt plant, associated tanks and storage area. The unit operated from 1947 until 1962 and has since been demolished. Since the unit was taken out of service in the late 1960s into the early 1970s, little information was obtain about dimensions, design features, operating practices, or waste disposal methods. The site currently contains Building 1803, a Golf Course

Maintenance Building. The unpaved surrounding area contains rock, asphalt debris and racks used to support asphalt-related above ground storage tanks. The RFI identified Lead as the Constituent of Potential Concern (COPC) at this site.

1.4 SOLID WASTE MANAGEMENT UNIT 42 INTERIM MEASURE. During the interval between the RFI and the completion of the CMS, it was decided by Southern Division Naval Facilities Engineering Command (SOUTHDIR) that an IM would be performed by Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP), United States Navy (USN), Portsmouth Va. Environmental Detachment Charleston (DET). The objective of this IM was to remove and dispose of the contaminated lead soil having levels greater than 400 parts per million (ppm) as the controlling guidance for cleanup.

2. INTERIM MEASURE EXECUTION

2.1 ACTIONS REQUIRED BY INTERIM MEASURE WORK PLAN. Removal was performed on an estimated 5.4 cubic yards of lead contaminated soil. This contaminated soil had lead levels greater than 400 ppm. Required action included excavation from the following areas. Excavation locations are shown on Figure A-1.

- Soil boring 505-S-B005 was excavated to an area approximately 6' x 6' and 2 foot in depth.
- Soil boring 042-S-B009 was excavated to an area approximately 6' x 6' and 2 foot in depth.

2.2 OBSERVATIONS NOTED. None.

2.3 PLAN MODIFICATIONS AND JUSTIFICATION. None.

3. INTERIM MEASURE OUTCOME

3.1 SITE CONDITIONS FOLLOWING COMPLETION OF WORK. Following completion of all site work on 21 May 1997, the excavated areas were backfilled with clean soil. All excavated waste was characterized as non-hazardous and transported to a Sub Title "D" land fill. Photos D-1 and D-2 of Appendix D reflect conditions at the site during removal of contaminated soil. Photos D-3 and D-4 reflect conditions at the site after completion of IM.

4. SAMPLING

4.1 SAMPLING EVOLUTIONS AND RESULTS.

4.1.1 Field Sampling. None.

4.1.2 Confirmatory Sampling. Following excavation, confirmatory samples (grab) were taken. These samples were collected at the bottom and sidewalls of each excavated area. These samples were analyzed for Lead. A copy of the analytical results of all confirmatory samples is included in Appendix B. Table B-1 of Appendix B summarizes the results and sample coordinates. Figure B-1 of Appendix B illustrates the sampling locations. There were no detections of Lead above 400 ppm.

4.1.3 Waste Characterization Sampling. One composite sample was collected from each stockpile of excavated soil and submitted for laboratory analysis for waste characterization. A Toxicity Characteristic Leaching Procedure (TCLP) was done on the waste soil and determined to be non-hazardous. A copy of the analytical results of all waste characterization samples is included in Appendix B. Table B-2 of Appendix B summarizes these samples. Figure B-2 of Appendix B illustrates the arrangement of all stockpiled soil excavated from the site with its corresponding sample identification number.

5. WASTE GENERATION

5.1 HAZARDOUS/POTENTIALLY HAZARDOUS WASTE. No hazardous waste was generated at this site.

5.1.1 Hazardous Excavated Soil. No hazardous soil was generated at this site.

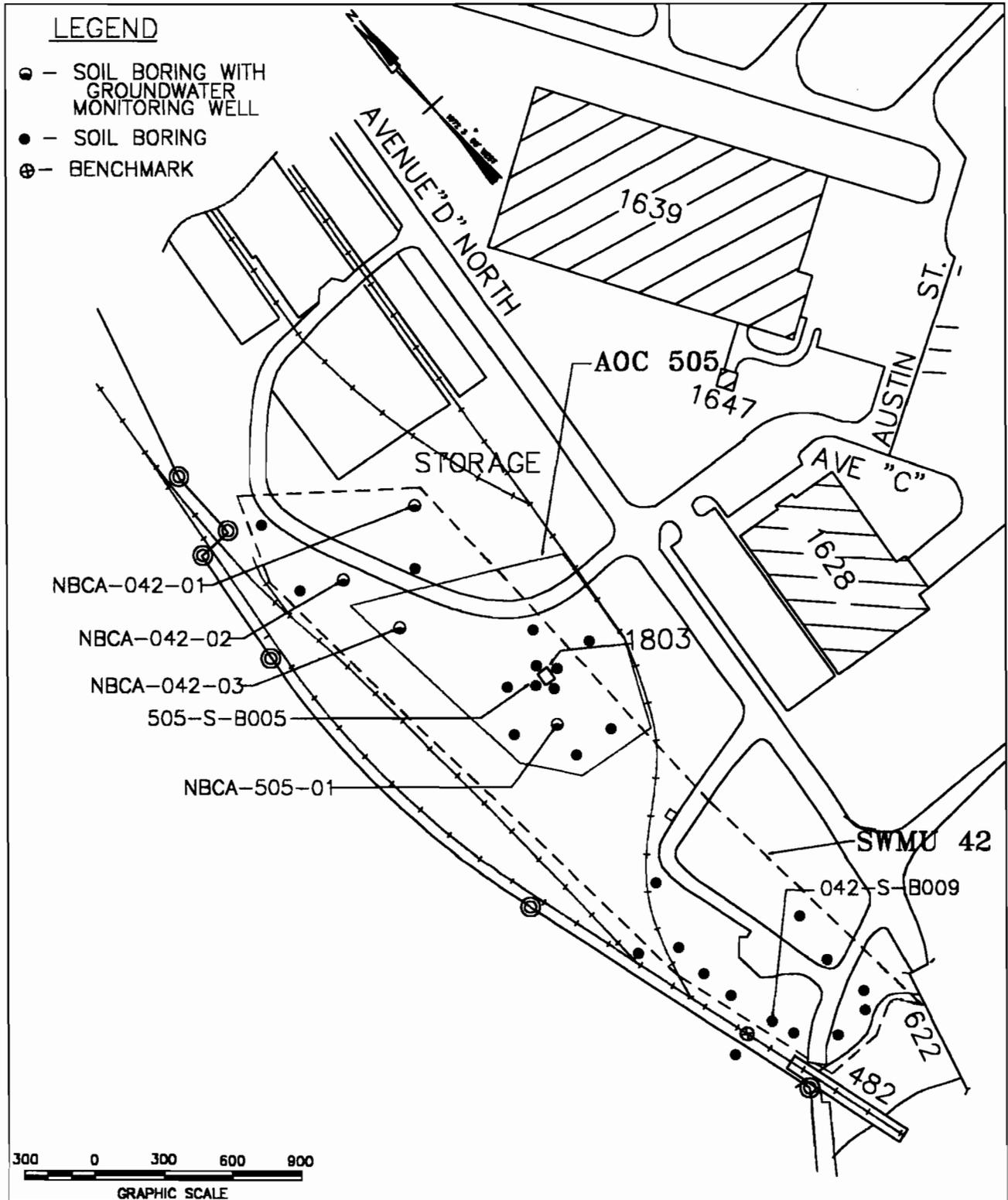
5.2 NON-HAZARDOUS WASTE. Approximately 5.4 cubic yards of non-hazardous waste was generated at this site.

5.2.1 Non-Hazardous Excavated Soil. The excavated non-hazardous soil was transported from SWMU 42 to Chambers Oakridge landfill.

APPENDIX A

SITE MAPS

FIGURE A-1
SWMU 42 SITE MAP



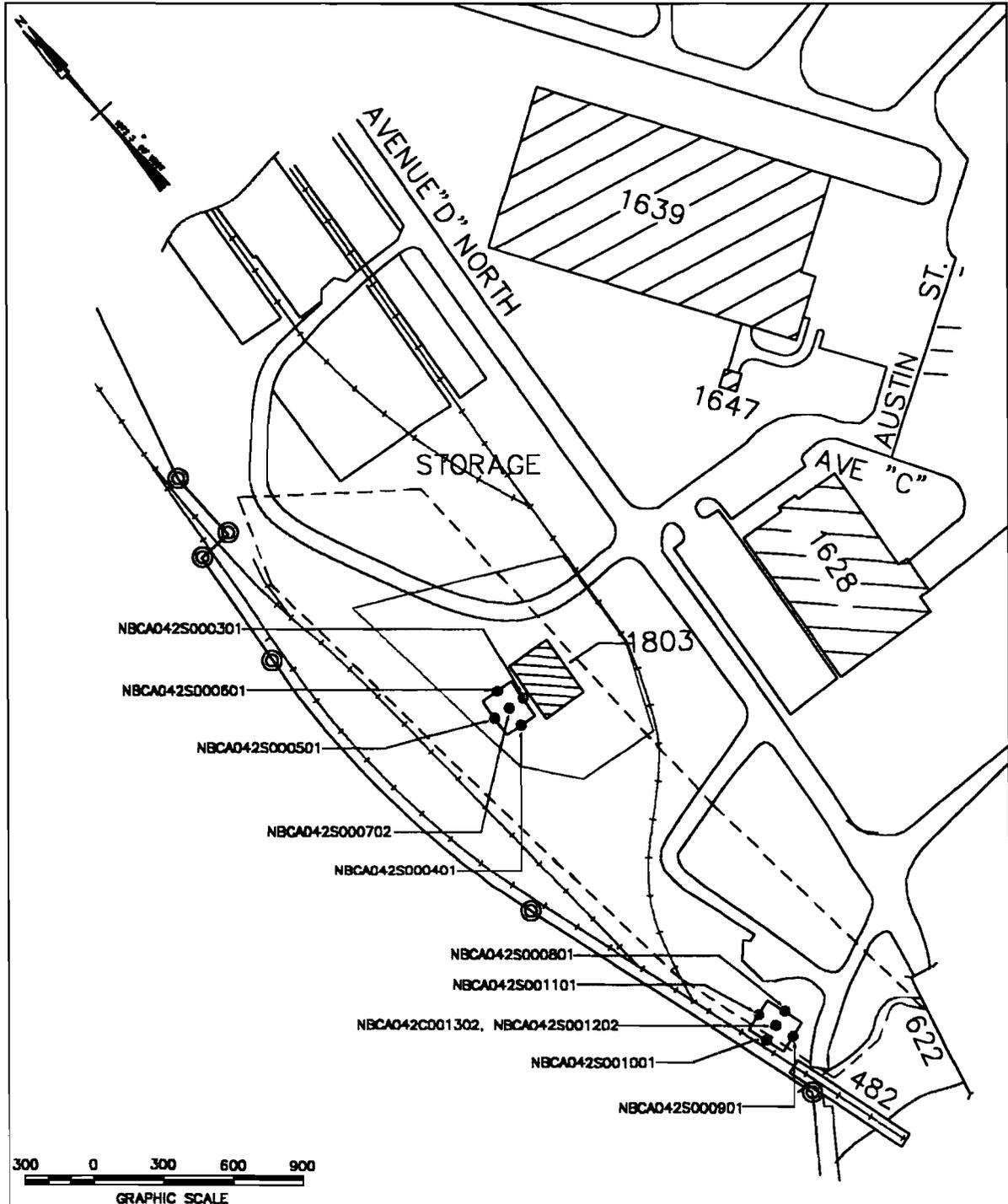
APPENDIX B

SAMPLING

DOCUMENTATION

FIGURE B-1

SWMU 42 CONFIRMATORY SAMPLING GRID MAP



SWMU 42 CONFIRMATORY SAMPLING RESULTS SUMMARY			
SAMPLE NUMBER	SAMPLE DATE (1997)	SAMPLE ID NUMBER	S.C. STATE PLANE COORDINATES
		TEST (S) REQUESTED	RESULTS THAT EXCEEDED USEPA RESIDENTIAL RBCs
1	MARCH 27	SPORT0401-1 NBCA042S000301	380348.460 N 2315158.780 E NONE
2	MARCH 27	SPORT0401-2 NBCA042S000401	380344.840 N 2315153.140 E NONE
3	MARCH 27	SPORT0401-3 NBCA042S000501	380389.150 N 2315147.510 E NONE
4	MARCH 27	SPORT0401-4 NBCA042S000601	380352.810 N 2315152.280 E NONE
5	MARCH 27	SPORT0401-5 NBCA042S000702	380349.450 N 2315153.180 E NONE

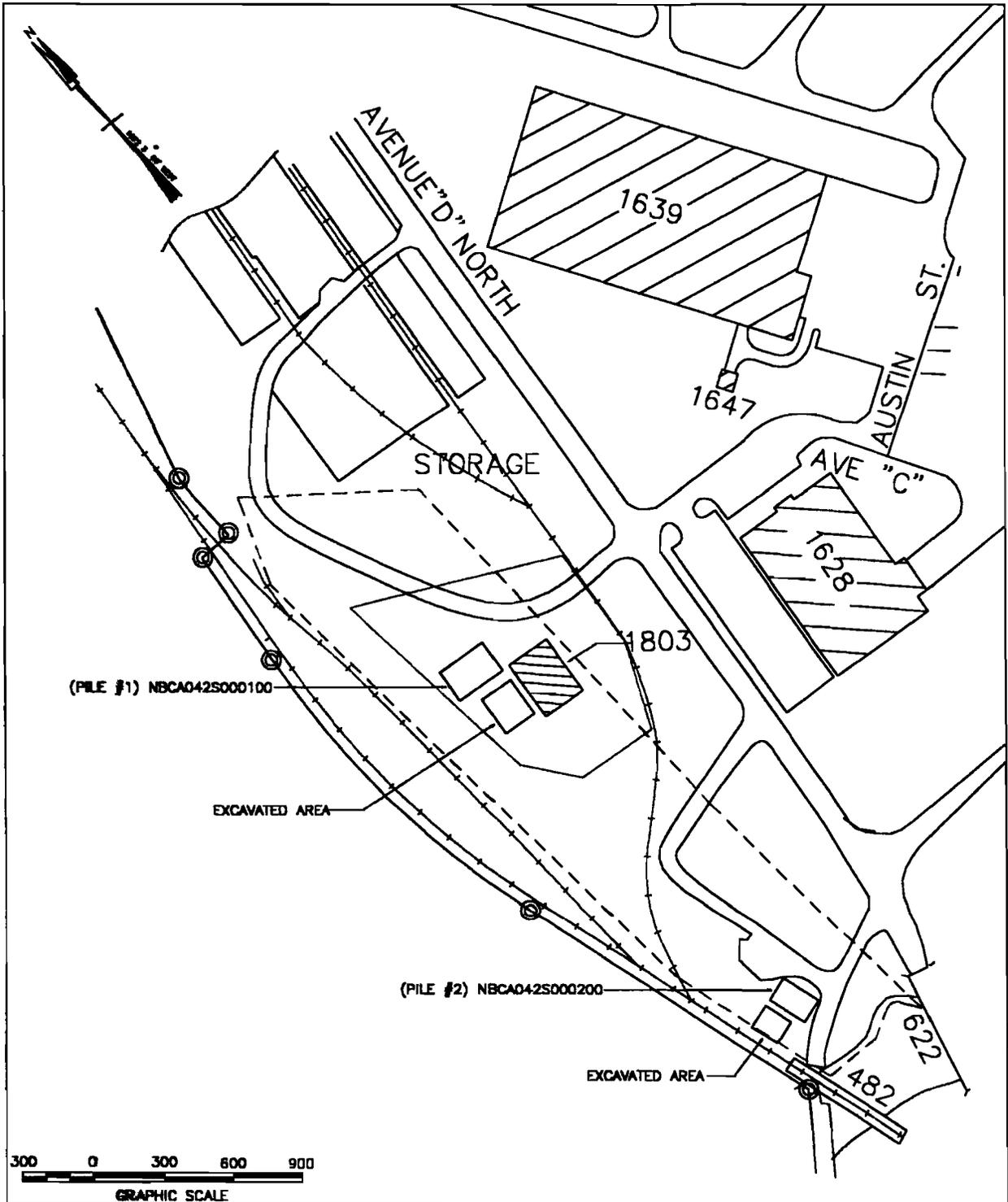
Table B-1 (2 Sheets)
B-2

SWMU 42 CONFIRMATORY SAMPLING RESULTS SUMMARY			
SAMPLE NUMBER	SAMPLE DATE (1997)	SAMPLE ID NUMBER	S.C. STATE PLANE COORDINATES
		TEST (S) REQUESTED	RESULTS THAT EXCEEDED USEPA RESIDENTIAL RBCs
6	MARCH 27	SPORT0401-6 NBCA042S000801	379894.860 N 2315107.010 E NONE
7	MARCH 27	SPORT0401-7 NBCA042S000901	379890.150 N 2315103.820 E NONE
8	MARCH 27	SPORT0401-8 NBCA042S001001	379893.800 N 2315099.920 E NONE
9	MARCH 27	SPORT0401-9 NBCA042S001101	379900.210 N 2315102.580 E NONE
10	MARCH 27	SPORT0401-10 NBCA042S001202	379895.890 N 2315103.130 E NONE

Table B-1 (2 Sheets)
B-3

FIGURE B-2

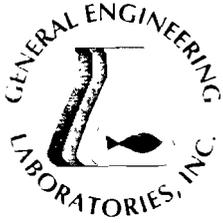
SWMU 42 EXCAVATED SOIL STOCKPILE MAP



SWMU 42 WASTE CHARACTERIZATION SAMPLING RESULTS SUMMARY					
SAMPLE NUMBER	SAMPLE DATE (1997)	STOCKPILE NUMBER SAMPLED	SAMPLE ID NUMBER <hr/> TEST (S) REQUESTED	DATE SOIL REMOVED FROM SITE (1997)	REMARKS AND RESULTS THAT EXCEEDED USEPA RBCs
1	MARCH 26	1	SPORT0397-1 NBCA042S000100 <hr/> TCLP (8 RCRA)	MAY 21	NONE
2	MARCH 26	2	SPORT0397-2 NBCAO42S000200 <hr/> TCLP (8 RCRA)	MAY 21	NONE

Table B-2 (1 Sheets)
B-5

ANALYTICAL DATA



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FL	E87156/87294	E87472/87458
NC	233	
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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: April 03, 1997

Page 1 of 1

Sample ID : SPORT0401-1
 Lab ID : 9703587-01
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		89300	130	476	ug/kg	2.0	MBL	04/02/97	0113	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

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).

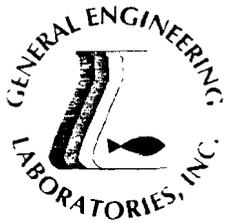
U indicates that the analyte was not detected at a concentration greater than the detection limit.

* 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.


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 North Charleston, South Carolina 29405-2106

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

cc: NPWC00197

Report Date: April 03, 1997

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Sample ID : SPORT0401-2
 Lab ID : 9703587-02
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		22000	135	495	ug/kg	2.0	MBL	04/02/97	0118	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

Notes:

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Karen Blakeney

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NC	233	
SC	10120	10582
TN	02934	02934

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

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

cc: NPWC00197

Report Date: April 03, 1997

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Sample ID : SPORT0401-3
 Lab ID : 9703587-03
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		63100	126	463	ug/kg	2.0	MBL	04/02/97	0123	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method

Method-Description

M 1	EPA 6010A
M 2	EPA 3050

Notes:

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PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407

(803) 556-8171 • Fax (803) 766-1178



9703587-03



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TN	02934	02934

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 North Charleston, South Carolina 29405-2106

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

cc: NPWC00197

Report Date: April 03, 1997

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Sample ID : SPORT0401-4
 Lab ID : 9703587-04
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		76000	136	500	ug/kg	2.0	MBL	04/02/97	0128	99874	1

The following prep procedures were performed:
 TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

Notes:

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SC	10120	10582
TN	02934	02934

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 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: April 03, 1997

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Sample ID : SPORT0401-5
 Lab ID : 9703587-05
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		125000	135	495	ug/kg	2.0	MBL	04/02/97	0133	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

Notes:

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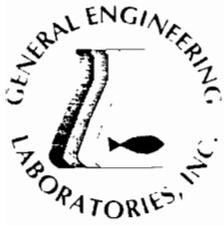
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Contact: Mr. Bill Hiers

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Sample ID : SPORT0401-6
 Lab ID : 9703587-06
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		160000	129	472	ug/kg	2.0	MBL	04/02/97	0138	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method

Method-Description

M 1	EPA 6010A
M 2	EPA 3050

Notes:

The qualifiers in this report are defined as follows:

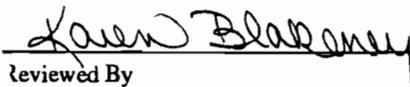
ND indicates that the analyte was not detected at a concentration greater than the detection limit.

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

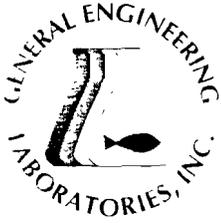
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Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00197

Report Date: April 03, 1997

Page 1 of 1

Sample ID : SPORT0401-7
 Lab ID : 9703587-07
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		121000	129	472	ug/kg	2.0	MBL	04/02/97	0202	99874	1

The following prep procedures were performed:
 TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

Notes:

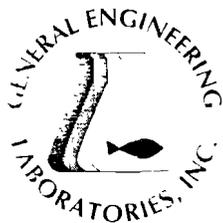
The qualifiers in this report are defined as follows:

- 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





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: April 03, 1997

Page 1 of 1

Sample ID : SPORT0401-8
 Lab ID : 9703587-08
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		66700	130	476	ug/kg	2.0	MBL	04/02/97	0207	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method

Method-Description

M 1	EPA 6010A
M 2	EPA 3050

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).

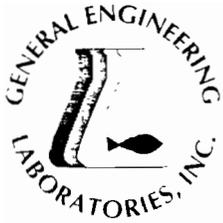
U indicates that the analyte was not detected at a concentration greater than the detection limit.

* 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.


 eviewed By





GENERAL ENGINEERING LABORATORIES

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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: April 03, 1997

Page 1 of 1

Sample ID : SPORT0401-9
 Lab ID : 9703587-09
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		98100	131	481	ug/kg	2.0	MBL	04/02/97	0212	99874	1

The following prep procedures were performed:
 TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

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).

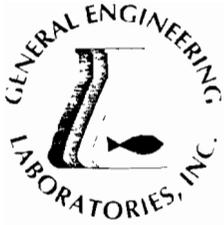
U indicates that the analyte was not detected at a concentration greater than the detection limit.

* 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





GENERAL ENGINEERING LABORATORIES

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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: April 03, 1997

Page 1 of 1

Sample ID : SPORT0401-10
 Lab ID : 9703587-10
 Matrix : Soil
 Date Collected : 03/27/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Lead		145000	136	500	ug/kg	2.0	MBL	04/02/97	0217	99874	1

The following prep procedures were performed:

TRACE

DVW 03/28/97 2000 99874 2

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 3050

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	E87472/87458
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: April 07, 1997

Page 1 of 2

Sample ID : SPORT0397-1
 Lab ID : 9703565-01
 Matrix : TCLP
 Date Collected : 03/26/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Silver	U	-0.0175	0.00780	0.500	mg/l	1.0	JSS	04/02/97	1617	99986	1
Arsenic	U	-0.121	0.0421	0.500	mg/l	1.0					
Barium	J	0.401	0.00220	10.0	mg/l	1.0					
Cadmium	J	0.00534	0.00330	0.100	mg/l	1.0					
Chromium	U	0.00331	0.00420	0.500	mg/l	1.0					
Lead		0.974	0.0364	0.500	mg/l	1.0					
Selenium	U	0.00293	0.0841	0.300	mg/l	1.0					
Mercury	U	0.000920	0.00100	0.0200	mg/l	1.0	CRB	04/01/97	1246	99892	2

The following prep procedures were performed:

ICP CRB 04/02/97 1100 99986 3
 Mercury CRB 03/28/97 1630 99892 4
 TCLP Prep for Metals JL 03/27/97 1430 99839 5

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 7471
M 3	EPA 3005
M 4	EPA 7470
M 5	EPA 1311





GENERAL ENGINEERING LABORATORIES

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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: April 07, 1997

Page 1 of 2

Sample ID : SPORT0397-2
 Lab ID : 9703565-02
 Matrix : TCLP
 Date Collected : 03/26/97
 Date Received : 03/27/97
 Priority : Routine
 Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Metals Analysis											
Silver	U	-0.00803	0.00780	0.500	mg/l	1.0	JSS	04/02/97	1625	99986	1
Arsenic	U	-0.162	0.0421	0.500	mg/l	1.0					
Barium	J	0.488	0.00220	10.0	mg/l	1.0					
Cadmium	U	0.00278	0.00330	0.100	mg/l	1.0					
Chromium	J	0.0151	0.00420	0.500	mg/l	1.0					
Lead	J	0.126	0.0364	0.500	mg/l	1.0					
Selenium	U	-0.0347	0.0841	0.300	mg/l	1.0					
Mercury	U	0.000150	0.00100	0.0200	mg/l	1.0	CRB	04/01/97	1249	99892	2

The following prep procedures were performed:

ICP CRB 04/02/97 1100 99986 3
 Mercury CRB 03/28/97 1630 99892 4
 TCLP Prep for Metals JL 03/27/97 1430 99839 5

M = Method	Method-Description
M 1	EPA 6010A
M 2	EPA 7471
M 3	EPA 3005
M 4	EPA 7470
M 5	EPA 1311



APPENDIX C

WASTE

DOCUMENTATION

CHAMBERS OAKRIDGE LANDFILL
SPECIAL WASTE MANIFEST

MANIFEST OR-9704026
EXPIRES 6/18/97

GENERATOR OF WASTE: CHARLESTON NAVAL COMPLEX
ACCOUNT NUMBER: 490-149
LOCATION OF WASTE: CHARLESTON SC
ADDRESS: 1809 N HOBSON AV
PHONE: 803-743-6797 CONTACT: LEROY WASHINGTON

GENERATOR'S SIGNATURE: William W. Smith DATE: 5/21/97
(DIRT)

***** TO BE COMPLETED BY TRANSPORTER *****

TRANSPORTER OF WASTE: FENNELL
DATE: 5-21-97 TRUCK NUMBER: 122
DRIVER'S SIGNATURE: [Signature]

***** TO BE COMPLETED BY CHAMBERS OAKRIDGE LANDFILL *****

DISPOSAL SITE: CHAMBERS OAKRIDGE LANDFILL DWP 130
DESCRIPTION OF WASTE: SOL / CONTAMINATED SOIL
TICKET NUMBER: 36970 TONNAGE: 15.81
RECEIVED BY: [Signature]

Post-It™ brand fax transmittal memo 7671		# of pages	1
To	Leroy Washington		
From	Gus Holladay		
Co.	Remed. det.		
Co.	WPNSTA 098		
Dept.	Phone # 743-7568		
Fax #	743-2222		

sumu-42



CHAMBERS DEVELOPMENT COMPANY, INC. SPECIAL WASTE DISPOSAL APPLICATION



SALES PERSON: _____

APPLICATION ID #: _____

DISPOSAL FACILITY:

APPLICATION DATE:

A. GENERAL INFORMATION

C. HAZARDOUS CONSTITUENTS

Customer Name: CHARLESTON NAVAL COMPLEX
 Address: 1899 NORTH HOBSON AVE
NORTH CHARLESTON SC 29405-2106
 Phone: 743-6777 EXT III
 Contact: LEROY WASHINGTON
 USEPA ID#: SC010022560
 Waste Type: SOIL (SWMU-42) (Station 42)
 Quantity: 8.4 TN Per: _____
 Delivery Method: TRUCK
 Contractor: FENNEL CONTAINER CO INC
 Contractor's Phone: _____
 State of Origin: SC State of Disposal: SC

	Total (ppm)	TCLP (ppm)
PCB's		
TPH		
BTEX		
TOX		
TCLP METALS		
Arsenic	<u>< 5.00</u>	
Barium	<u>< 100.00</u>	
Cadmium	<u>< 1.00</u>	
Chromium	<u>< 5.00</u>	
Lead	<u>< 5.00</u>	
Mercury	<u>< 0.2</u>	
Selenium	<u>< 1.0</u>	
Silver	<u>< 5.0</u>	
TCLP VOLATILES/SEMI-VOLATILES		

B. WASTE DESCRIPTION

Physical State: Solid (X) Liquid () Gas () Semi-Solid ()
 Single Phased: Yes (X) No ()
 % Solids: 100 pH: _____
 % Free Liquids: _____ Color: _____
 % Radioactive Waste: _____ Odor: _____
 % Asbestos: _____ Flast: Point: _____
 Reactive Sulfides (ppm): _____
 Reactive Cyanides (ppm): _____

Benzene		
Carbon Tetrachloride		
Chlorobenzene		
Chloroform		
m-Cresol		
o-Cresol		
p-Cresol		
1,4-Dichlorobenzene		
1,2-Dichloroethane		
1,1-Dichloroethane		
2,4-Dinitrotoluene		
Hexachlorobenzene		
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Methyl Ethyl Ketone		
Nitrobenzene		
Pentachlorophenol		
Pyridine		
Tetrachloroethane		
Trichloroethene		
2,4,5-Trichlorophenol		
2,4,6-Trichlorophenol		
Vinyl Chloride		

PROCESS OF WASTE GENERATION:

CONTENTS OF WASTE BY VOLUME IN %:

D. CERTIFICATIONS

I certify that the laboratory results identified below are attached as support to the data certified on this application form.

lab name(s): GENERAL ENGINEERING LAB

report date(s): APRIL 7, 1997

sample ID#(s): SPORT0397

TCLP HERBICIDES/PESTICIDES		
Chlordane		
Endrin		
Heptachlor		
Lindane (Gamma-BHC)		
Methoxychlor		
Silvex (2,4,5-TP)		
Toxaphene		
2,4-D		

By signing this form I certify that:

- I am the legal generator of the waste described on this form.
- The waste described on this form is not a regulated Hazardous Waste as defined by the USEPA, the State of Origin or the State of Disposal listed above.
- This form and its attachments contain true and accurate descriptions of the waste.
- Any laboratory data used to support the information presented on this form has been obtained from the analysis of a volumetrically representative sample, obtained and analyzed according to 40 CFR 261, EPA Document SW-846, or other applicable regulations or guidelines, of EXACTLY THE SAME WASTE that I will deliver to Chambers for either hauling or disposal.

Certified Signature

William W. Smalls

Date

4/14/97

Printed/Typed Name, Title & Employer: WILLIAM W. SMALLS EPS ENVIRONMENTAL DET CHAS

APPENDIX D

PHOTOGRAPHS



Photo D-1 Excavation viewed from south end of site 1.



Photo D-2 Excavation viewed from north end of site 2.



Photo D-3 Work plan complete, waste soil and security fence removed , excavation filled in and viewed from south end of site 1.



Photo D-4 Work plan complete, waste soil and security fence removed, excavation filled in and viewed from north end of site 2.