N61165.AR.002856
CNC CHARLESTON
5090.3a

FINAL RESOURCE CONSERVATION AND RECOVERY ACT FACILITY ASSESSMENT
VOLUME 4 OF 5 CNC CHARLESTON SC
6/6/1995
ENSAFE/ ALLEN AND HOSHALL

FINAL
RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
VOLUME IV

SOUTHDIV Contract Number:
N62467-89-D-0318
CTO-029

Prepared for:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
Charleston, South Carolina

Prepared by:

EnSafe/Allen & Hoshall
935 Houston Northcutt Boulevard, Suite 113
Mt. Pleasant, South Carolina 29464
(803) 884-0029

June 6, 1995

ACRONYM LIST

AA	Accumulation Area
AOC	Area of Concern
CIA	Controlled Industrial Area
CNSY	Charleston Naval Shipyard
CSI	Confirmatory Sampling Investigation
CWA	Clean Water Act
DRMO	Defense Reutilization and Marketing Office
HSWA	Hazardous and Solid Waste Amendments
kph	Kilometers per Hour
mg/l	Milligrams per Liter
MOMAG 11	Mobile Mine Assembly Group 11 (MOMAG 11)
msl	Mean Sea Level
NCSD	North Charleston Sewer District
NFE	New Fuel Enclosure
NFI	No Further Investigation
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated Biphenyl
POTW	Publicly Owned Treatment Works
ppm	Parts Per Million
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
ROC	Run-of-Crusher
SAA	Satellite Accumulation Area
SCDHEC	South Carolina Department of Health and Environmental Control
SCHWMR	South Carolina Hazardous Waste Management Regulations
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SWDA	Solid Waste Disposal Act
SWMU	Solid Waste Management Unit
TCLP	Toxicity Characteristic Leachate Procedure

ACRONYM LIST

USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VSI	Visual Site Inspection

Table of Contents

List of Figures

List of Tables

1.0 INTRODUCTION

In November 1984, Congress enacted the Hazardous and Solid Waste Amendments (HSWA) to the Solid Waste Disposal Act (SWDA). SWDA is more commonly known as the Resource Conservation and Recovery Act (RCRA) and will be referred to as RCRA herein. The HSWA established a RCRA corrective action program with a primary objective of cleaning up releases of hazardous waste or hazardous substances that may pose a threat to human health and the environment. The initial phase of the corrective action process is the RCRA Facility Assessment (RFA). The purpose of the RFA is to:

- Identify solid waste management units (SWMUs) and gather information on releases at RCRA facilities.

- Evaluate SWMUs and other areas of concern (AOCs) for releases to all media and regulated units for releases to media other than groundwater.

- Make preliminary determinations regarding releases of concern and the need for further actions and interim measures at the facility.

- Screen from further investigations those SWMUs and AOCs which do not pose a threat to human health and the environment.

Naval Base Charleston, South Carolina is located on the banks of the Cooper River in Charleston County, South Carolina. The installation consists of two major areas: an undeveloped spoil area on the east bank of the Cooper River on Clouter Island in Berkeley County, and a developed area on the west bank of the Cooper River. The developed portion of Naval Base Charleston lies on a peninsula, bounded on the west by the Ashley River and on the east by the Cooper River. Naval Base Charleston facilities adjacent to the main developed area include Naval Hospital Charleston and the Chicora Tank Farm, both located within 0.5 mile of the

western boundary of the installation. In addition to the areas listed above, there are four non-contiguous properties that are integral parts of the Naval Base Charleston. These are the Short Stay recreational facility in Monck's Corner, a degaussing facility in downtown Charleston, the Navy Annex facility adjacent to the Charleston Air Force Base, and the Naval Electronics facility on Sullivan's Island.

Naval Base Charleston is made up of several different command organizations. Of these, Charleston Naval Shipyard (CNSY) was designated as the *lead activity* for compliance with the Navy Hazardous Waste Management Program for all commands and activities at Naval Base Charleston. As the lead activity, CNSY is the holder of RCRA Part B Permit SCO 170 022 560. Section II.B.2 of the HSWA portion of the Part B Permit outlines the RFA requirements for CNSY.

In August 1987, Ebasco Services, Inc., under contract to the United States Environmental Protection Agency (USEPA) Region IV, prepared an Interim RFA of Naval Base Charleston which identified 24 SWMUs. On August 20-22, 1990, the USEPA and South Carolina Department of Health and Environmental Control (SCDHEC) performed an inspection of the installation which identified additional SWMUs. Subsequent to this inspection, Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) prepared two addendums to the 1987 RFA addressing the new SWMUs. Upon completion of the second addendum, a total of 36 SWMUs had been identified.

On August 10, 1993, CNSY notified the USEPA Region IV and SCDHEC of three additional SWMUs and 118 sites that would be evaluated for consideration as SWMUs or AOCs.

Since August 1993 and in conjunction with the Base Closure program, over 300 RFAs have been conducted at Naval Base Charleston (in addition to the original 36). These RFAs have been presented in several volumes. Additional volumes will be prepared as new sites are identified.

SWMU/AOC Site Location Maps for these volumes can be found in map pockets following the text of each volume. SWMUs are shown in Figures 4-A, 4-B, 4-C, 4-D, and 4-E; AOCs are shown in Figures 5A, 5B, 5C, 5D, and 5E. Tables 1-1, 1-1A, 1-2, and 1-2A summarize all SWMUs and AOCs contained within the RFA. Tables 1-1 and 1-2 are listed according to SWMU/AOC number; Tables 1-1A and 1-2A are listed according to building/facility number.

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
1	—	DRMO Storage Area	Hazardous Wastes, Lead	RFI	DRMO	A
2	—	Lead Contaminated Area	Lead	RFI	DRMO	A
3	—	Pesticide Mixing Area	Pesticides	RFI	Building 249	G
4	—	Pesticide Storage Building	Pesticides	RFI	Building 381	F
5	—	Battery Electrolyte Treatment Area	Acids	RFI	Building 1797 Area	E
6	—	Public Works Storage Yard (Old Corral)	Hazardous Wastes, Lead	RFI	Old Corral SW of Building 380	G
7	—	PCB Transformer Storage Yard	PCBs	RFI	Old Corral SW of Building 380	G
8	—	Oil Sludge Pit	Oil Sludges	RFI	Parking Area SW of Building 161	G
9	—	Closed Landfill	Industrial Wastes	RFI	Open Area Between Bainbridge and West Road	H
10	—	Hazardous Waste Storage Facility, Building 246	Industrial Wastes	RU	Building 246	G
11	—	Caustic Pond	Calcium Hydroxide	RFI	SE of Building 190	G
12	—	Old Fire Fighter Training Area	Petroleum	RFI	Southern Tip of Base	I
13	—	Current Fire Fighter Training Area	Petroleum	RFI	Building 1303 Area	H
14	—	Chemical Disposal Area	Decontaminating Agent	RFI	South of Building 1897	H
15	—	Incinerator	Products of Incomplete Combustion, Paper	RFI	South of Building 1843	H
16	—	Paint Storage Bunker	Paint, Thinner	RFI	West of Building X-55	I
17	—	Oil Spill Area	Oil	RFI	North Side of Building 61	H
18	—	PCB Spill Area	PCBs	RFI	Building 1278	E
19	—	Solid Waste Transfer Station	Solid Wastes	RFI	West of Least Tern Lane	H

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
20	—	Waste Disposal Area	Solid Wastes	RFI	NE of Building 903	H
21	—	Old Paint Storage Center (Waste Paint Storage Pad)	Paint, Thinner	RFI	Building 1275 Area	E
22	—	Old Plating Shop Was' .water Treatment System	Cadmium, Chromium	RFI	Alley Between Buildings 5 and 44	E
23	—	New Plating Shop Wastewater Treatment System	Heavy Metals, Solvents	RFI	Building 226	E
24	—	Waste Oil Reclamation Facility	Waste Oil	RFI	Fuel Farm Area	G
25	—	Building 44, Old Plating Operation	Cyanide, Metals	RFI	Building 44	E
26	—	Waste Storage Area, Building 64-40, Pier C	Paint, Thinner	NFI	Pier C Building 64-40	E
27	—	Waste Storage Area East End, Pier C	Paint, Thinner	NFI	East End Pier C	E
28	—	Waste Storage Area West End, Pier C	Paint, Thinner	NFI	West End Pier C	E
29	—	Building X-10	Hazardous Wastes	NFI	Building X-10	G
30	—	Building 13 SAA #39	Hazardous Wastes	NFI	Building 13	E
31	—	Waste Paint Storage Area Drydock #5	Paint, Thinner	NFI	Drydock #5	E
32	—	Waste Paint Storage Area Building 195	Paint, Thinner	NFI	Building 195	E
33	—	Waste Paint Storage Area West End, Drydock #2	Paint, Thinner	NFI	Drydock #2	E
34	—	MWR, Southeast of Building X-10	Refrigerant, Waste Oil	NFI	SE of Building X-10	G
35	—	Building X-12	Hazardous Wastes	NFI	Building X-12	G
36	—	Building 68 Battery Shop	Sulfuric Acid	RFI	Building 68	F
37	I - 4.1	Sanitary Sewer System	Industrial Wastes	RFI	Basewide	L
38	II - 4.1	Miscellaneous Storage, North of Building 1605	Waste Oil	CSI	North of Building 1605	A

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
39	I - 4.2	Former POL Drum Storage, Building 1604	Petroleum Products	RFI	North of Building 1604	A
40	I - 4.3	DRMO, Building 1640	Hazardous Wastes	RU	Building 1640	A
41	II - 4.2	Battery Charging Station, Building 1624	Lead, Sulfuric Acid	NFI	Building 1624	A
42	II - 4.3	Former Asphalt Plant and Tanks	Asphalt Products, Solvents, Degreasers	CSI	NW of Building 1803	A
43	II - 4.4	Publications and Printing Plant, Building 1628	Chromium, Lead	CSI	Building 1628	A
44	I - 4.4	Coal Storage Yard	Coal and Coal By-Products	RFI	South Side of Noisette Creek	C
45	I - 4.5	SAA, Building NH-51	Photograph Fixer/ Developer	NFI	Building NH-51	C
46	I - 4.6	Temporary SAA, Building NH-21	Lead Paint Removal Debris	NFI	Building NH-21	C
47	II - 4.5	Burning Dump, Building NSC 66 Area	Products of Incomplete Combustion	RFI	Building NSC 64, 66, 67	C
48	I - 4.7	SAA, Building 234	Photo Chemicals, Ammonia, EDTA Containers	NFI	Building 234	C
49	II - 4.6	Forklift Battery Charging Station, Building 219	Lead, Sulfuric Acid	NFI	Building 219	C
50	I - 4.8	SAA, Building NH-1	Xylene, Toluene, Coating Resin	NFI	Building NH-1	D
51	I - 4.9	SAA, Building NH-1	Xylene, Hazardous Wastes	NFI	Building NH-1	D
52	I - 4.10	SAA, Building NH-1	Hazardous Wastes	NFI	Building NH-1	D
53	I - 4.11	SAA, Building 212	Paint, Thinner	RFI Investigate w/ AOC 526	Building 212	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
54	I - 4.12	Former Abrasive Blasting Area	Blast Residue	RFI Investigate w/ SWMU 21	Building 1275 Area	E
55	I - 4.13	SAA, Building 59A	Paint, Thinner, Glue	NFI	Building 59A	E
56	I - 4.14	SAA, Building 2A	Adhesives	NFI	Building 2A	E
57	I - 4.15	SAA, Building 35	Petroleum Products	NFI	Building 35	E
58	I - 4.16	SAA, Building 35	Acids/Metals, Alcohol	NFI	Building 35	E
59	I - 4.17	SAA, Building 35	Hazardous Wastes	NFI	Building 35	E
60	I - 4.18	Less-Than-90-Day Accumulation Area, Building 2	Petroleum Products, Solvents, Paint	NFI	Building 2	E
61	I - 4.19	Less-Than-90-Day Accumulation Area, Building 228	Adhesives	NFI	Building 228	E
62	I - 4.20	SAA, Building 226	Plating Solution, Metal Hydroxide, Misc. Plating Supplies/Debris	NFI	Building 226	E
63	II - 4.7	Battery Charging Station, Former Building 73	Lead, Acids	CSI	Building 226 Area	E
64	I - 4.21	SAA, Building 56	Paint	NFI	Building 56	E
65	I - 4.22	Lead Storage Area, Building 221	Lead	RFI	Building 221	E
66	I - 4.23	SAA, Pier C	Paint	NFI	Pier C	E
67	II - 4.8	Mercury Gauge Room, Building 3	Mercury	CSI	Building 3	E
68	I - 4.24	SAA, Building 5	Adhesives, Paints	NFI	Building 5	E
69	I - 4.25	SAA, Building 5	Paint, Adhesives	NFI	Building 5	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
70	II - 4.9	Dip Tank Area, Building 5	Copper, Chromium Arsenate	RFI	Building 5	E
71	I - 4.26	SAA, Building 44	Petroleum Products, Metal Shavings	NFI	Building 44	E
72	II - 4.10	Less-Than-90-Day Accumulation Area, Building 44	Metal Debris	NFI	Building 44	E
73	I - 4.27	SAA, Building 43	Petroleum Products, Used Coolants, Solvents	NFI	Building 43	E
74	I - 4.28	SAA, Building 57	Tetrachloroethylene	NFI	Building 57	E
75	I - 4.29	SAA, Drydock #1	Hazardous Wastes	NFI	Drydock #1	E
76	I - 4.30	SAA, Building 32	Paint, Hazardous Wastes	NFI	Building 32	E
77	I - 4.31	SAA, Drydock #2	Paint, Hazardous Wastes	NFI	Drydock #2	E
78	I - 4.32	SAA, Drydock #2	Hazardous Wastes	NFI	Drydock #2	E
79	I - 4.33	SAA, Building 250	Hazardous Wastes	NFI	Building 250	E
80	II - 4.11	Paint Shop Storage, Building 194	Lead, Paint, Solvents, Sand-Blasting Grit	CSI	Building 194	E
81	I - 4.34	Less-Than-90-Day Accumulation Area, Building 1245	Paint, Trichloroethane	CSI	Building 1245	E
82	I - 4.35	SAA, Building 177	Solvents, Xylene, Petroleum Products, Adhesives, Preservatives, Acetone, MEK, Toluene	NFI	Building 177	E
83	I - 4.36	Building 9 Foundry	Lead, Solvents, PCBs	RFI	Building 9	E
84	I - 4.37	Lead Storage, Building 9	Lead	RFI	Building 9	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
85	I - 4.38	SAA, Building 9	Paint Debris, Petroleum Products	NFI	Building 9	E
86	I - 4.39	Less-Than-90-Day Accumulation Area, Building 9	Paint, Petroleum Products	NFI	Building 9	E
87	I - 4.40	Less-Than-90-Day Accumulation Area, Building 80	Paint, Petroleum Products, Mercury, Chelating Agents	CSI	Building 80	E
88	I - 4.41	SAA, Building 25	Hazardous Waste Storage	NFI	Building 25	E
89	I - 4.42	SAA, Building 13	Acids/Metals, Lab Samples, Freon 133	NFI	Building 13	E
90	I - 4.43	SAA, Building 13	Petroleum Products	NFI	Building 13	E
91	I - 4.44	SAA, Building 13	Petroleum Products	NFI	Building 13	E
92	I - 4.45	SAA, Building 13	Acids/Metals (ICP Waste)	NFI	Building 13	E
93	I - 4.46	SAA, Building 13	Kodak Fixer, Miscellaneous	NFI	Building 13	E
94	I - 4.47	SAA, Building 13	Acids, Acids/Metals, Alcohol	NFI	Building 13	E
95	I - 4.48	SAA, Building 13	Used Analytical Reagents	NFI	Building 13	E
96	I - 4.49	Less-Than-90-Day Accumulation Area, Building 236	Petroleum Products, Paint	NFI	Building 236	E
97	I - 4.50	Less-Than-90-Day Accumulation Area, Building 236	Petroleum Products, Solvents	CSI	Building 236	E
98	I - 4.51	SAA, Pier G	Hazardous Waste Storage	NFI	Pier G	E
99	I - 4.52	SAA, Pier G	Marine Anti-Foulant Paint, Thinner	NFI	Pier G	E
100	I - 4.53	SAA, Building 218	Petroleum Products, Paint, Sandblast Grit	RFI	Building 218	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
101	I - 4.54	Less-Than-90-Day Accumulation Area, Building 1173	Hazardous Waste Accumulation	NFI	Building 1173	E
102	II - 4.12	Mercury Spill, Building 79	Mercury	CSI	Building 79	E
103	I - 4.55	SAA, Drydock #5	Hazardous Waste Storage	NFI	Drydock #5	E
104	Not Included in this Document	Reserved	—	—	—	E
105	I - 4.56	SAA, Building 1518 (Diver's Locker)	Petroleum Products, Marine Anti-Foulant Paint, Thinner	NFI	Building 1518	E
106	I - 4.57	Blast Area in Drydock #3	Blast Residue	RFI	Drydock #3	E
107	I - 4.58	Temporary SAA, CBU-412 Chapel	Lead Paint Removal, Construction Debris	NFI	Chapel CBU-412	F
108	I - 4.59	SAA, Building 187	Hazardous Waste Storage	NFI	Building 187	F
109	I - 4.60	Abrasive Blast Media Storage Area	Blast Media	CSI	Structures 1364, 1365, 1393	F
110	I - 4.61	SAA, Building 1346	Paint, Grease	NFI	Building 1346	F
111	I - 4.62	SAA, Building 241	Marine Anti-Foulant Paint, Thinner	NFI	Building 241	F
112	I - 4.63	SAA, Building 241	Marine Anti-Foulant Paint, Thinner	NFI	Building 241	F
113	I - 4.64	SAA, Building 241	Marine Anti-Foulant Paint, Thinner, Petroleum Products	NFI	Building 241	F
114	I - 4.65	SAA, Building 241	Petroleum Products	NFI	Building 241	F

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
115	I - 4.66	SAA, Building 242	Petroleum Products	NFI	Building 242	F
116	I - 4.67	SAA, Building 1175	Petroleum Products	NFI	Building 1175	F
117	I - 4.68	SAA, Building 249	Marine Anti-Foulant Paint, Thinner	NFI	Building 249	G
118	II - 4.14	Temporary SAA, Pier Z	Marine Anti-Foulant Paint, Thinner	NFI	Pier Z	G
119	II - 4.15	Garbage Handling, Facility 1271	Solid Wastes	NFI	End of Building 336	G
120	I - 4.69	Pier M Laydown	Marine Anti-Foulant Paint, Thinner, Lead	RFI	Pier M	G
121	I - 4.70	SAA, Building 801	VOCs, Metals, Petroleum Products	RFI Investigate w/ SWMU 9	Building 801	H
122	I - 4.71	SAA, Building 636	Marine Anti-Foulant Paint, Thinner, Grease	NFI	Building 636	H
123	I - 4.72	SAA, Building 636	Marine Anti-Foulant Paint, Thinner, Grease	NFI	Building 636	H
124	I - 4.73	SAA, Building 1508	Marine Anti-Foulant Paint, Thinner, Petroleum Products	NFI	Building 1508	H
125	I - 4.74	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
126	I - 4.75	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
127	I - 4.76	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
128	I - 4.77	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
129	I - 4.78	SAA, Building 202	Spent OBA Canisters	NFI	Building 202	H

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
130	I - 4.79	SAA, Building 202	Petroleum Products	NFI	Building 202	H
131	I - 4.80	SAA, Building NS-67	Dry Paint Waste	NFI	Building NS-67	H
132	I - 4.81	SAA, Building FBM 61	Mercuric Nitrate	NFI	Building 61	H
133	I - 4.82	SAA, Building FBM 61	Borate Cupric Sulfate, Petroleum Products	NFI	Building 61	H
134	I - 4.83	SAA, Building FBM 61	Hazardous Waste Storage	NFI	Building 61	H
135	I - 4.84	SAA, Building FBM 61	Hazardous Waste Storage	NFI	Building 61	H
136	I - 4.85	SAA, Building NS-53	VOCs, Metals, Petroleum Products	CSI	Building NS-53	H
137	I - 4.86	SAA, Building 675	Photograph Fixer	NFI	Building 657	H
138	I - 4.87	SAA, Building 1776	VOCs, Waste Oil, Petroleum Products, Antifreeze	CSI	Building 1776	H
139	II - 4.16	Former Temporary SAA, Pier P	Marine Anti-Foulant Paint, Thinner	NFI	Pier P	I
140	II - 4.17	Temporary SAA, Pier P	Marine Anti-Foulant Paint, Thinner	NFI	Pier P	I
141	I - 4.88	Temporary SAA, Pier Q	Marine Anti-Foulant Paint, Thinner	NFI	Pier Q	I
142	I - 4.89	Less-Than-90-Day Accumulation Area, Building 681	Paint, Aerosol	NFI	Building 681	I
143	III - 4.1	Building 222	Mercuric Nitrate, Silver Nitrate, Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 222	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
144	III - 4.2	SAA, Building 222, CNSY Permit #88	Flammable Wastes, Lead, Cadmium, Brass, Bronze	NFI	Building 222	E
145	III - 4.3	Mercury Spill Area, Building 13A	Mercury	CSI	Under Building 13A	E
146	III - 4.4	SAA, Building 13A, CNSY Permit #85	Lead	NFI	Building 13A	E
147	III - 4.5	SAA, Pier C, CNSY Permit #79	Waste Oil, Aerosol Cans	NFI	Pier C	E
148	III - 4.6	SAA, Building 194, CNSY Permit #81	Marine Anti-Foulant Paint Waste, Thinner	NFI	Building 194	E
149	III - 4.7	Metal Trades SAA, Drydock #5, CNSY Permit #T06	Marine Anti-Foulant Paint Waste, Thinner	NFI	Drydock #5 Area	E
150	III - 4.8	Braswell Shipyard SAA, Pier Z, CNSY Permit #93	Paint Wastes, Thinner	NFI	Pier Z	G
151	III - 4.9	Building 79A	Mercuric Nitrate, Silver Nitrate, Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 79A	E
152	III - 4.10	SAA, Building 79A, CNSY Permit #92	Flammable Wastes, Lead, Brass, Bronze	NFI	Building 79A	E
153	III - 4.11	SAA, Pier H, CNSY Permit #91	Marine Anti-Foulant Paint Waste, Thinner	NFI	Pier H	E
154	III - 4.12	SAA, Pier H, CNSY Permit #80	Waste Oil, Aerosol Cans	NFI	Pier H	E
155	III - 4.13	Building 101	Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 101	E
156	III - 4.14	SAA, Drydock #4 Pierside, CNSY Permit #86	Lead, PPE	NFI	Drydock #4 Area	E
157	III - 4.15	Less-Than-90-Day Accumulation Area, Building 1278, CNSY Permit #83	Investigation Derived Waste (IDW)	NFI	Building 1278	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
158	III - 4.16	SAA, Pier M Quaywall, CNSY Permit #82	Paint Wastes	NFI	Pier M Quaywall	G
159	III - 4.17	SAA, Building 665, CNSY Permit #90	Aerosol Cans	RFI	Building 665	H
160	III - 4.18	SAA, Port Services, CNSY Permit #95	Waste Oil	NFI	Pier S Quaywall	I
161	IV - 4.1	Vehicle Maintenance Shop, Marine Reserve Center	Petroleum Products	CSI	Building 2505, Naval Annex	K
162	IV - 4.2	Sludge Drying Field, MOMAG 11	Heavy Metals	CSI	South of Building 2509, Naval Annex	K
163	IV - 4.3	Concrete Pit Area 10' x 10' x 2' at MOMAG 11	Paint, Spent Solvents, Heavy Metals, Methane	CSI	North of Building 2513 Naval Annex	K
164	IV - 4.4	Blasting Operation, MOMAG 11	Lead, Cadmium	CSI	Building 2556, Naval Annex	K
165	IV - 4.5	Painting Operation, MOMAG 11	Paint, Lead	NFI	Building 2556, Naval Annex	K
166	IV - 4.6	Sewer System, Naval Annex	Heavy Metals, Petroleum Products, Waste Paint, Solvents	CSI	Basewide, Naval Annex	K
167	IV - 4.7	Less-Than-180-Day Accumulation Area, MOMAG 11, CNSY Permit #94	Waste Paints, Petroleum Products, Spent Solvents, Batteries, Heavy Metals, Aerosol Cans	NFI	South of Building 2522, Naval Annex	K
168	IV - 4.8	Building 2A, Temporary Metal Storage Area	Zinc, Metals	NFI	Building 2A, Between Buildings 2 and 59	E
169	IV - 4.9	Building 57, Touch-up Painting Operations	Waste Paint, Paint Thinner, Heavy Metals	NFI	Building 57	E
170	IV - 4.10	Drydock #1 Area, PCB Removal Operations	PCBs	CSI	Drydock #1 Area	E
171	IV - 4.11	Drydock #2 Area, PCB Removal Operations	PCBs	CSI	Drydock #2 Area	E
172	IV - 4.12	Building 80, Steam Cleaning Operations	Petroleum Products	CSI	Building 80	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
173	IV - 4.13	Building 1297, Storage Area	Lead Zinc Misc. Chemicals Unlabelled Drums	CSI	Building 1297	E
174	IV - 4.14	Air Compressor Oil Blowdown, Building 97	Petroleum Lubricating Oils	NFI	Building 97	F
175	IV - 4.15	Crane Painting Area, Near Building 1277	Paint Constituents Heavy Metals Lead Acetone Xylenes Toluene	RFI	South of Building 1277	F
176	IV - 4.16	Transformer Oil Leak, Near Building 657	PCBs	NFI	Building 657	H
177	IV - 4.17	RTC-4 Oil Spill	Petroleum Products	CSI	Building RTC-4	I
178	IV - 4.18	Site of Apparent Transformer Fire Outside of Building NS-53	PCBs Wood Preservatives	CSI	Building NS-53	H
179	IV - 4.19	SAA, Building 222, Shipping and Receiving, CNSY Permit #90	Flammable Wastes Lead Cadmium Brass Bronze	NFI	Building 222	E
180	IV - 4.20	SAA, Building 222, New Fuel Enclosure, CNSY Permit #102	Flammable Wastes Lead Cadmium Brass Bronze	NFI	Building 222	E
181	V - 4.1	SAA, Metal Trades, CNSY Permit #99	Lead Petroleum Products	CSI	Pier C	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
182	V - 4.2	SAA, Ships Forces, CNSY Permit #102	Lead Petroleum Products Solvents	NFI	Pier C	E
183	V - 4.3	Less-Than-90-Day Accumulation Area, Building 79A, CNSY Permit #89	Lead Brass Bronze Chromium Cadmium Alcohol	NFI	Building 79A High Bay	E
184	V - 4.4	SAA, Building 79A, CNSY Permit #106	Brass Bronze	NFI	Building 79A High Bay	E
185	Not Included in this Document	Reserved	—	—	—	E
186	V - 4.5	SAA, Building 58, CNSY Permit #105	Lead Chromium	NFI	Building 58, Outside	C
187	V - 4.6	SAA, Paint Waste, CNSY Permit #101	Lead Petroleum Products Solvents	NFI	Head of Drydock #5, North Side	E
188	V - 4.7	SAA, Paint Waste, CNSY Permit #103	Lead Petroleum Products Solvents	RFI	South Side of Drydock #5, Midway	E
189	V - 4.8	SAA, Building 222 Fenced in Area, CNSY Permit #108	Brass Bronze Cadmium	NFI	Building 222, Outside West End	E
190	V - 4.9	SAA, Pier J, CNSY Permit #110	Brass Cadmium Lead	NFI	Pier J	E

Table 1-1
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
191	V - 4.10	SAA, Pier G, CNSY Permit #98	Paint and Oil Waste	NFI	Pier G	E
192	V - 4.11	SAA, Building 222, CNSY Permit #111	Brass Cadmium Lead Bronze Chromium	NFI	Building 222	E
193	V - 4.12	SAA, Building 79A, CNSY Permit #107	Brass Bronze	NFI	Building 79A, Fenced in Area	E
194	V - 4.13	Building 197, Paint Storage, Naval Short Stay	Paint Waste	NFI	Building 197, Short Stay	K
195	V - 4.14	Building 207, Flammable Storage, Naval Short Stay	Petroleum Products Solvents	NFI	Building 207, Short Stay	K

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
50	I - 4.8	SAA, Building NH-1	Xylene, Toluene, Coating Resin	NFI	Building NH-1	D
51	I - 4.9	SAA, Building NH-1	Xylene, Hazardous Wastes	NFI	Building NH-1	D
52	I - 4.10	SAA, Building NH-1	Hazardous Wastes	NFI	Building NH-1	D
75	I - 4.29	SAA, Drydock #1	Hazardous Wastes	NFI	Drydock #1	E
170	IV - 4.10	Drydock #1 Area, PCB Removal Operations	PCBs	CSI	Drydock #1 Area	E
33	—	Waste Paint Storage Area West End, Drydock #2	Paint, Thinner	NFI	Drydock #2	E
56	I - 4.14	SAA, Building 2A	Adhesives	NFI	Building 2A	E
60	I - 4.18	Less-Than-90-Day Accumulation Area, Building 2	Petroleum Products, Solvents, Paint	NFI	Building 2	E
77	I - 4.31	SAA, Drydock #2	Paint, Hazardous Wastes	NFI	Drydock #2	E
78	I - 4.32	SAA, Drydock #2	Hazardous Wastes	NFI	Drydock #2	E
168	IV - 4.8	Building 2A, Temporary Metal Storage Area	Zinc, Metals	NFI	Building 2A, Between Buildings 2 and 59	E
171	IV - 4.11	Drydock #2 Area, PCB Removal Operations	PCBs	CSI	Drydock #2 Area	E
67	II - 4.8	Mercury Gauge Room, Building 3	Mercury	CSI	Building 3	E
106	I - 4.57	Blast Area in Drydock #3	Blast Residue	RFI	Drydock #3	E
156	III - 4.14	SAA, Drydock #4 Pierside, CNSY Permit #86	Lead, PPE	NFI	Drydock #4 Area	E
177	IV - 4.17	RTC-4 Oil Spill	Petroleum Products	CSI	Building RTC-4	I
22	—	Old Plating Shop Wastewater Treatment System	Cadmium, Chromium	RFI	Alley Between Buildings 5 and 44	E
31	—	Waste Paint Storage Area Drydock #5	Paint, Thinner	NFI	Drydock #5	E

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
68	I - 4.24	SAA, Building 5	Adhesives, Paints	NFI	Building 5	E
69	I - 4.25	SAA, Building 5	Paint, Adhesives	NFI	Building 5	E
70	II - 4.9	Dip Tank Area, Building 5	Copper, Chromium Arsenate	RFI	Building 5	E
103	I - 4.55	SAA, Drydock #5	Hazardous Waste Storage	NFI	Drydock #5	E
149	III - 4.7	Metal Trades SAA, Drydock #5, CNSY Permit #T06	Marine Anti-Foulant Paint Waste, Thinner	NFI	Drydock #5 Area	E
187	V - 4.6	SAA, Paint Waste, CNSY Permit #101	Lead Petroleum Products Solvents	NFI	Head of Drydock #5, North Side	E
188	V - 4.7	SAA, Paint Waste, CNSY Permit #103	Lead Petroleum Products Solvents	RFI	South Side of Drydock #5, Midway	E
83	I - 4.36	Building 9 Foundry	Lead, Solvents, PCBs	RFI	Building 9	E
84	I - 4.37	Lead Storage, Building 9	Lead	RFI	Building 9	E
85	I - 4.38	SAA, Building 9	Paint Debris, Petroleum Products	NFI	Building 9	E
86	I - 4.39	Less-Than-90-Day Accumulation Area, Building 9	Paint, Petroleum Products	NFI	Building 9	E
29	—	Building X-10	Hazardous Wastes	NFI	Building X-10	G
34	—	MWR, Southeast of Building X-10	Refrigerant, Waste Oil	NFI	SE of Building X-10	G
35	—	Building X-12	Hazardous Wastes	NFI	Building X-12	G
30	—	Building 13 SAA #39	Hazardous Wastes	NFI	Building 13	E
89	I - 4.42	SAA, Building 13	Acids/Metals, Lab Samples, Freon 133	NFI	Building 13	E

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
90	I - 4.43	SAA, Building 13	Petroleum Products	NFI	Building 13	E
91	I - 4.44	SAA, Building 13	Petroleum Products	NFI	Building 13	E
92	I - 4.45	SAA, Building 13	Acids/Metals (ICP Waste)	NFI	Building 13	E
93	I - 4.46	SAA, Building 13	Kodak Fixer, Miscellaneous	NFI	Building 13	E
94	I - 4.47	SAA, Building 13	Acids, Acids/Metals, Alcohol	NFI	Building 13	E
95	I - 4.48	SAA, Building 13	Used Analytical Reagents	NFI	Building 13	E
145	III - 4.3	Mercury Spill Area, Building 13A	Mercury	CSI	Under Building 13A	E
146	III - 4.4	SAA, Building 13A, CNSY Permit #85	Lead	NFI	Building 13A	E
46	I - 4.6	Temporary SAA, Building NH-21	Lead Paint Removal Debris	NFI	Building NH-21	C
88	I - 4.41	SAA, Building 25	Hazardous Waste Storage	NFI	Building 25	E
76	I - 4.30	SAA, Building 32	Paint, Hazardous Wastes	NFI	Building 32	E
57	I - 4.15	SAA, Building 35	Petroleum Products	NFI	Building 35	E
58	I - 4.16	SAA, Building 35	Acids/Metals, Alcohol	NFI	Building 35	E
59	I - 4.17	SAA, Building 35	Hazardous Wastes	NFI	Building 35	E
73	I - 4.27	SAA, Building 43	Petroleum Products, Used Coolants, Solvents	NFI	Building 43	E
25	—	Building 44, Old Plating Operation	Cyanide, Metals	RFI	Building 44	E
71	I - 4.26	SAA, Building 44	Petroleum Products, Metal Shavings	NFI	Building 44	E
72	II - 4.10	Less-Than-90-Day Accumulation Area, Building 44	Metal Debris	NFI	Building 44	E
45	I - 4.5	SAA, Building NH-51	Photograph Fixer/ Developer	NFI	Building NH-51	C

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
136	I - 4.85	SAA, Building NS-53	VOCs, Metals, Petroleum Products	CSI	Building NS-53	H
178	IV - 4.18	Site of Apparent Transformer Fire Outside of Building NS-53	PCBs Wood Preservatives	CSI	Building NS-53	H
16	—	Paint Storage Bunker	Paint, Thinner	RFI	West of Building X-55	I
64	I - 4.21	SAA, Building 56	Paint	NFI	Building 56	E
74	I - 4.28	SAA, Building 57	Tetrachloroethylene	NFI	Building 57	E
169	IV - 4.9	Building 57, Touch-up Painting Operations	Waste Paint, Paint Thinner, Heavy Metals	NFI	Building 57	E
186	V - 4.5	SAA, Building 58, CNSY Permit #105	Lead Chromium	NFI	Building 58, Outside	C
55	I - 4.13	SAA, Building 59A	Paint, Thinner, Glue	NFI	Building 59A	E
17	—	Oil Spill Area	Oil	RFI	North Side of Building 61	H
132	I - 4.81	SAA, Building FBM 61	Mercuric Nitrate	NFI	Building 61	H
133	I - 4.82	SAA, Building FBM 61	Borate Cupric Sulfate, Petroleum Products	NFI	Building 61	H
134	I - 4.83	SAA, Building FBM 61	Hazardous Waste Storage	NFI	Building 61	H
135	I - 4.84	SAA, Building FBM 61	Hazardous Waste Storage	NFI	Building 61	H
47	II - 4.5	Burning Dump, Building NSC 66 Area	Products of Incomplete Combustion	RFI	Building NSC 64, 66, 67	C
26	—	Waste Storage Area, Building 64-40, Pier C	Paint, Thinner	NFI	Pier C Building 64-40	E
131	I - 4.80	SAA, Building NS-67	Dry Paint Waste	NFI	Building NS-67	H

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
36	—	Building 68 Battery Shop	Sulfuric Acid	RFI	Building 68	F
102	II - 4.12	Mercury Spill, Building 79	Mercury	CSI	Building 79	E
151	III - 4.9	Building 79A	Mercuric Nitrate, Silver Nitrate, Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 79A	E
152	III - 4.10	SAA, Building 79A, CNSY Permit #92	Flammable Wastes, Lead, Brass, Bronze	NFI	Building 79A	E
183	V - 4.3	Less-Than-90-Day Accumulation Area, Building 79A, CNSY Permit #89	Lead Brass Bronze Chromium Cadmium Alcohol	NFI	Building 79A High Bay	E
184	V - 4.4	SAA, Building 79A, CNSY Permit #106	Brass Bronze	NFI	Building 79A High Bay	E
193	V - 4.12	SAA, Building 79A, CNSY Permit #107	Brass Bronze	NFI	Building 79A, Fenced in Area	E
87	I - 4.40	Less-Than-90-Day Accumulation Area, Building 80	Paint, Petroleum Products, Mercury, Chelating Agents	CSI	Building 80	E
172	IV - 4.12	Building 80, Steam Clean ıg Operations	Petroleum Products	CSI	Building 80	E
174	IV - 4.14	Air Compressor Oil Blowdown, Building 97	Petroleum Lubricating Oils	NFI	Building 97	F
155	III - 4.13	Building 101	Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 101	E
8	—	Oil Sludge Pit	Oil Sludges	RFI	Parking Area SW of Building 161	G

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
82	I - 4.35	SAA, Building 177	Solvents, Xylene, Petroleum Products, Adhesives, Preservatives, Acetone, MEK, Toluene	NFI	Building 177	E
108	I - 4.59	SAA, Building 187	Hazardous Waste Storage	NFI	Building 187	F
11	—	Caustic Pond	Calcium Hydroxide	RFI	SE of Building 190	G
80	II - 4.11	Paint Shop Storage, Building 194	Lead, Paint, Solvents, Sand-Blasting Grit	CSI	Building 194	E
148	III - 4.6	SAA, Building 194, CNSY Permit #81	Marine Anti-Foulant Paint Waste, Thinner	NFI	Building 194	E
32	—	Waste Paint Storage Area Building 195	Paint, Thinner	NFI	Building 195	E
194	V - 4.13	Building 197, Paint Storage, Naval Short Stay	Paint Waste	NFI	Building 197, Short Stay	K
125	I - 4.74	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
126	I - 4.75	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
127	I - 4.76	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
128	I - 4.77	SAA, Building 202	Mercuric Nitrate Waste	NFI	Building 202	H
129	I - 4.78	SAA, Building 202	Spent OBA Canisters	NFI	Building 202	H
130	I - 4.79	SAA, Building 202	Petroleum Products	NFI	Building 202	H
195	V - 4.14	Building 207, Flammable Storage, Naval Short Stay	Petroleum Products Solvents	NFI	Building 207, Short Stay	K
53	I - 4.11	SAA, Building 212	Paint, Thinner	RFI Investigate w/ AOC 526	Building 212	E

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
100	I - 4.53	SAA, Building 218	Petroleum Products, Paint, Sandblast Grit	RFI	Building 218	E
49	II - 4.6	Forklift Battery Charging Station, Building 219	Lead, Sulfuric Acid	NFI	Building 219	C
65	I - 4.22	Lead Storage Area, Building 221	Lead	RFI	Building 221	E
143	III - 4.1	Building 222	Mercuric Nitrate, Silver Nitrate, Chromium, Lead, Flammable Wastes, Chromium/Lead Paint	NFI	Building 222	E
144	III - 4.2	SAA, Building 222, CNSY Permit #88	Flammable Wastes, Lead, Cadmium, Brass, Bronze	NFI	Building 222	E
179	IV - 4.19	SAA, Building 222, Shipping and Receiving, CNSY Permit #90	Flammable Wastes Lead Cadmium Brass Bronze	NFI	Building 222	E
180	IV - 4.20	SAA, Building 222, New Fuel Enclosure, CNSY Permit #102	Flammable Wastes Lead Cadmium Brass Bronze	NFI	Building 222	E
189	V - 4.8	SAA, Building 222 Fenced in Area, CNSY Permit #108	Brass Bronze Cadmium	NFI	Building 222, Outside West End	E
192	V - 4.11	SAA, Building 222, CNSY Permit #111	Brass Cadmium Lead Bronze Chromium	NFI	Building 222	E

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
23	—	New Plating Shop Wastewater Treatment System	Heavy Metals, Solvents	RFI	Building 226	E
62	I - 4.20	SAA, Building 226	Plating Solution, Metal Hydroxide, Misc. Plating Supplies/Debris	NFI	Building 226	E
63	II - 4.7	Battery Charging Station, Former Building 73	Lead, Acids	CSI	Building 226 Area	E
61	I - 4.19	Less-Than-90-Day Accumulation Area, Building 228	Adhesives	NFI	Building 228	E
48	I - 4.7	SAA, Building 234	Photo Chemicals, Ammonia, EDTA Containers	NFI	Building 234	C
96	I - 4.49	Less-Than-90-Day Accumulation Area, Building 236	Petroleum Products, Paint	NFI	Building 236	E
97	I - 4.50	Less-Than-90-Day Accumulation Area, Building 236	Petroleum Products, Solvents	CSI	Building 236	E
111	I - 4.62	SAA, Building 241	Marine Anti-Foulant Paint, Thinner	NFI	Building 241	F
112	I - 4.63	SAA, Building 241	Marine Anti-Foulant Paint, Thinner	NFI	Building 241	F
113	I - 4.64	SAA, Building 241	Marine Anti-Foulant Paint, Thinner, Petroleum Products	NFI	Building 241	F
114	I - 4.65	SAA, Building 241	Petroleum Products	NFI	Building 241	F
115	I - 4.66	SAA, Building 242	Petroleum Products	NFI	Building 242	F
10	—	Hazardous Waste Storage Facility, Building 246	Industrial Wastes	RU	Building 246	G
3	—	Pesticide Mixing Area	Pesticides	RFI	Building 249	G

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
117	I - 4.68	SAA, Building 249	Marine Anti-Foulant Paint, Thinner	NFI	Building 249	G
79	I - 4.33	SAA, Building 250	Hazardous Wastes	NFI	Building 250	E
119	II - 4.15	Garbage Handling, Facility 1271	Solid Wastes	NFI	End of Building 336	G
6	—	Public Works Storage Yard (Old Corral)	Hazardous Wastes, Lead	RFI	Old Corral SW of Building 380	G
7	—	PCB Transformer Storage Yard	PCBs	RFI	Old Corral SW of Building 380	G
4	—	Pesticide Storage Building	Pesticides	RFI	Building 381	F
107	I - 4.58	Temporary SAA, CBU-412 Chapel	Lead Paint Removal, Construction Debris	NFI	Chapel CBU-412	F
122	I - 4.71	SAA, Building 636	Marine Anti-Foulant Paint, Thinner, Grease	NFI	Building 636	H
123	I - 4.72	SAA, Building 636	Marine Anti-Foulant Paint, Thinner, Grease	NFI	Building 636	H
137	I - 4.86	SAA, Building 675	Photograph Fixer	NFI	Building 657	H
176	IV - 4.16	Transformer Oil Leak, Near Building 657	PCBs	NFI	Building 657	H
159	III - 4.17	SAA, Building 665, CNSY Permit #90	Aerosol Cans	RFI	Building 665	H
142	I - 4.89	Less-Than-90-Day Accumulation Area, Building 681	Paint, Aerosol	NFI	Building 681	I
121	I - 4.70	SAA, Building 801	VOCs, Metals, Petroleum Products	RFI Investigate w/ SWMU 9	Building 801	H
20	—	Waste Disposal Area	Solid Wastes	RFI	NE of Building 903	H
101	I - 4.54	Less-Than-90-Day Accumulation Area, Building 1173	Hazardous Waste Accumulation	NFI	Building 1173	E

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
116	I - 4.67	SAA, Building 1175	Petroleum Products	NFI	Building 1175	F
81	I - 4.34	Less-Than-90-Day Accumulation Area, Building 1245	Paint, Trichloroethane	CSI	Building 1245	E
21	—	Old Paint Storage Center (Waste Paint Storage Pad)	Paint, Thinner	RFI	Building 1275 Area	E
54	I - 4.12	Former Abrasive Blasting Area	Blast Residue	RFI Investigate w/ SWMU 21	Building 1275 Area	E
175	IV - 4.15	Crane Painting Area, Near Building 1277	Paint Constituents Heavy Metals Lead Acetone Xylenes Toluene	RFI	South of Building 1277	F
18	—	PCB Spill Area	PCBs	RFI	Building 1278	E
157	III - 4.15	Less-Than-90-Day Accumulation Area, Building 1278, CNSY Permit #83	Investigation Derived Waste (IDW)	NFI	Building 1278	E
173	IV - 4.13	Building 1297, Storage Area	Lead Zinc Misc. Chemicals Unlabelled Drums	CSI	Building 1297	E
13	—	Current Fire Fighter Training Area	Petroleum	RFI	Building 1303 Area	H
110	I - 4.61	SAA, Building 1346	Paint, Grease	NFI	Building 1346	F
109	I - 4.60	Abrasive Blast Media Storage Area	Blast Media	CSI	Structures 1364, 1365, 1393	F
124	I - 4.73	SAA, Building 1508	Marine Anti-Foulant Paint, Thinner, Petroleum Products	NFI	Building 1508	H

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
105	I - 4.56	SAA, Building 1518 (Diver's Locker)	Petroleum Products, Marine Anti-Foulant Paint, Thinner	NFI	Building 1518	E
39	I - 4.2	Former POL Drum Storage, Building 1604	Petroleum Products	RFI	North of Building 1604	A
38	II - 4.1	Miscellaneous Storage, North of Building 1605	Waste Oil	CSI	North of Building 1605	A
41	II - 4.2	Battery Charging Station, Building 1624	Lead, Sulfuric Acid	NFI	Building 1624	A
43	II - 4.4	Publications and Printing Plant, Building 1628	Chromium, Lead	CSI	Building 1628	A
40	I - 4.3	DRMO, Building 1640	Hazardous Wastes	RU	Building 1640	A
138	I - 4.87	SAA, Building 1776	VOCs, Waste Oil, Petroleum Products, Antifreeze	CSI	Building 1776	H
5	—	Battery Electrolyte Treatment Area	Acids	RFI	Building 1797 Area	E
42	II - 4.3	Former Asphalt Plant and Tanks	Asphalt Products, Solvents, Degreasers	CSI	NW of Building 1803	A
15	—	Incinerator	Products of Incomplete Combustion, Paper	RFI	South of Building 1843	H
14	—	Chemical Disposal Area	Decontaminating Agent	RFI	South of Building 1897	H
161	IV - 4.1	Vehicle Maintenance Shop, Marine Reserve Center	Petroleum Products	CSI	Building 2505, Naval Annex	K
162	IV - 4.2	Sludge Drying Field, MOMAG 11	Heavy Metals	CSI	South of Building 2509, Naval Annex	K
163	IV - 4.3	Concrete Pit Area 10' x 10' x 2' at MOMAG 11	Paint, Spent Solvents, Heavy Metals, Methane	CSI	North of Building 2513 Naval Annex	K
167	IV - 4.7	Less-Than-180-Day Accumulation Area, MOMAG 11, CNSY Permit #94	Waste Paints, Petroleum Products, Spent Solvents, Batteries, Heavy Metals, Aerosol Cans	NFI	South of Building 2522, Naval Annex	K

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
164	IV - 4.4	Blasting Operation, MOMAG 11	Lead, Cadmium	CSI	Building 2556, Naval Annex	K
165	IV - 4.5	Painting Operation, MOMAG 11	Paint, Lead	NFI	Building 2556, Naval Annex	K
27	—	Waste Storage Area East End, Pier C	Paint, Thinner	NFI	East End Pier C	E
28	—	Waste Storage Area West End, Pier C	Paint, Thinner	NFI	West End Pier C	E
66	I - 4.23	SAA, Pier C	Paint	NFI	Pier C	E
147	III - 4.5	SAA, Pier C, CNSY Permit #79	Waste Oil, Aerosol Cans	NFI	Pier C	E
181	V - 4.1	SAA, Metal Trades, CNSY Permit #99	Lead Petroleum Products	CSI	Pier C	E
182	V - 4.2	SAA, Ships Forces, CNSY Permit #102	Lead Petroleum Products Solvents	NFI	Pier C	E
98	I - 4.51	SAA, Pier G	Hazardous Waste Storage	NFI	Pier G	E
99	I - 4.52	SAA, Pier G	Marine Anti-Foulant Paint, Thinner	NFI	Pier G	E
191	V - 4.10	SAA, Pier G, CNSY Permit #98	Paint and Oil Waste	NFI	Pier G	E
153	III - 4.11	SAA, Pier H, CNSY Permit #91	Marine Anti-Foulant Paint Waste, Thinner	NFI	Pier H	E
154	III - 4.12	SAA, Pier H, CNSY Permit #80	Waste Oil, Aerosol Cans	NFI	Pier H	E
190	V - 4.9	SAA, Pier J, CNSY Permit #110	Brass Cadmium Lead	NFI	Pier J	E
120	I - 4.69	Pier M Laydown	Marine Anti-Foulant Paint, Thinner, Lead	RFI	Pier M	G
158	III - 4.16	SAA, Pier M Quaywall, CNSY Permit #82	Paint Wastes	NFI	Pier M Quaywall	G

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
139	II - 4.16	Former Temporary SAA, Pier P	Marine Anti-Foulant Paint, Thinner	NFI	Pier P	I
140	II - 4.17	Temporary SAA, Pier P	Marine Anti-Foulant Paint, Thinner	NFI	Pier P	I
141	I - 4.88	Temporary SAA, Pier Q	Marine Anti-Foulant Paint, Thinner	NFI	Pier Q	I
160	III - 4.18	SAA, Port Services, CNSY Permit #95	Waste Oil	NFI	Pier S Quaywall	I
118	II - 4.14	Temporary SAA, Pier Z	Marine Anti-Foulant Paint, Thinner	NFI	Pier Z	G
150	III - 4.8	Braswell Shipyard SAA, Pier Z, CNSY Permit #93	Paint Wastes, Thinner	NFI	Pier Z	G
1	—	DRMO Storage Area	Hazardous Wastes, Lead	RFI	DRMO	A
2	—	Lead Contaminated Area	Lead	RFI	DRMO	A
9	—	Closed Landfill	Industrial Wastes	RFI	Open Area Between Bainbridge and West Road	H
12	—	Old Fire Fighter Training Area	Petroleum	RFI	Southern Tip of Base	I
19	—	Solid Waste Transfer Station	Solid Wastes	RFI	West of Least Tern Lane	H
24	—	Waste Oil Reclamation Facility	Waste Oil	RFI	Fuel Farm Area	G
37	I - 4.1	Sanitary Sewer System	Industrial Wastes	RFI	Basewide	L
44	I - 4.4	Coal Storage Yard	Coal and Coal By-Products	RFI	South Side of Noisette Creek	C
166	IV - 4.6	Sewer System, Naval Annex	Heavy Metals, Petroleum Products, Waste Paint, Solvents	CSI	Basewide, Naval Annex	K

Table 1-1A
Solid Waste Management Unit Summary
Naval Base Charleston

SWMU Number	RFA Vol-Sec Number	SWMU Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
104	Not Included in this Document	Reserved	—	—	—	E
185	Not Included in this Document	Reserved	—	—	—	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
500	I - 5.1	UXO Site Between Piers S and T	2 Mark 47 TORPEX Loaded Depth Bombs	CSI Investigate w/EOD Team	Between Piers S and T	J
501	I - 5.2	UXO Site in Cooper River East of Buildings X-54 and X-55	2 Mark 47 TORPEX Loaded Depth Bombs	CSI Investigate w/EOD Team	Cooper River	J
502	I - 5.3	UXO Site Between Piers G and H	Three 5-inch Unexploded Shells at About 40 Feet Below MWL	CSI Investigate w/EOD Team	Between Piers G and H	J
503	I - 5.4	UXO Site South of Building 665	2 Mark 17 Depth Bombs	CSI Investigate w/EOD Team	South of Building 665	H
504	II - 5.1	Railroad System	Petroleum Products Batteries Lead Acids Coal	RFI	Basewide	L
505	II - 5.2	Creosote Cross-Tie/Ballast Storage Area and Golf Course Maintenance Building	Creosote and Degradation Products	RFI	Area of Building 1803	A
506	II - 5.3	Flammable Storage Shelter, Building 1629	Ignitable Materials	CSI	Building 1629	A
507	II - 5.4	Oil Storehouse, Former Building 1010	Petroleum Products	CSI	Golf Course Area (1410)	B
508	II - 5.5	Former Incinerator 19	Petroleum Products Metals Polynuclear Aromatic Hydrocarbons	CSI	Between St. Johns and Avenue H	C
509	II - 5.6	Hazardous/Flammable Storage, Building 1079	Ignitable Materials	NFI	Building 1079	C
510	II - 5.7	Laboratory, Building NH-21	Methyl Ethyl Ketone Acetone Methylene Chloride Solvents	CSI	Building NH-21	C
511	II - 5.8	Oil House, Former Building 16	Petroleum Products	CSI	North of Building 762	C

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
512	II - 5.9	Former Incinerator 67	Petroleum Products Metals Combustion Products	CSI	Building 1079	C
513	II - 5.10	Former Morgue	Formaldehyde Miscellaneous	CSI	SE of Building 45	C
514	II - 5.11	Flammable Storage, Building 1813	Paint Adhesive Petroleum Products	NFI	Building 1813	C
515	II - 5.12	Incinerator and Paint Shop 51, Building 233 Area	Paints Solvents	CSI	Building 233	C
516	I - 5.5	Wash Area, Building 233	Acid Petroleum Products	RFI	Building 233	C
517	II - 5.13	Indoor Firing Range, Building M-192	Lead	CSI	Building M-192	C
518	II - 5.14	Coal Storage Bins, Area of Building M-1257	Coal and Coal By-Products	CSI	Adjacent to Building M-1257	C
519	II - 5.15	Former Boiler House 1081	Petroleum Products	CSI	East of Building NH-55	C
520	II - 5.16	Garbage House, Former Building M-1051	Solid Wastes	CSI	Adjacent to Building M-17	C
521	II - 5.17	Oil Storehouse 1052, Facility M-1262	Petroleum Products	NFI	Building M-1262	C
522	II - 5.18	Grease and Wash Building, Former Building 1252	Petroleum Products	CSI	SW of Building 198	C
523	II - 5.19	Gas Station Storage, Former Building M-1234	Petroleum Products	CSI	Building 198	C
524	II - 5.20	Substation, Building 415A	PCBs	NFI	Building 415A	D
525	I - 5.6	Paint Shop, Building 223	Paint	RFI—Booth 35 NFI—Booths 36, 37, 38, 63	Building 223	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
526	I - 5.7	Paint Area, Building 212	Paint	RFI	Building 212	E
527	II - 5.21	Transformer House, Building 24	PCBs Petroleum Products	NFI	Near Building 3	E
528	II - 5.22	Steam Cleaning Shop	Grease Waste Oil Miscellaneous	CSI Investigate w/Sewer System	Building 59	E
529	I - 5.8	Coating and Spray Systems, Building 2A	Aluminum Cleaning Solvents	NFI	Building 2A	E
530	II - 5.23	Paint and Oil Storage, Building 35	Paints Solvents Petroleum Products	CSI	Building 35	E
531	II - 5.24	Substation and Storage, Building 459	PCBs Petroleum Products	CSI	Building 459	E
532	II - 5.25	Sump Collection Vats, Building 2	Preservatives	NFI	Building 2	E
533	II - 5.26	Substation, Building 460	PCBs Petroleum Products Lead	NFI	Building 460	E
534	II - 5.27	Latrine, Building 27	Organic Wastes Heavy Metals	NFI	Near Building 59	E
535	II - 5.28	Latrine, Building 28	Organic Wastes Heavy Metals	NFI	East of Building 2	E
536	II - 5.29	Substation, Building 460	PCBs Petroleum Products Lead	NFI	Building 460	E
537	II - 5.30	Substation, Building 342	PCBs Petroleum Products	CSI	Building 342	E
538	I - 5.9	Forge Shop, Building 6	Lead	RFI	Building 6	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
539	II - 5.31	Propeller Shop, Building 6	Zyglo	RFI Investigate w/AOC 538	Building 6	E
540	II - 5.32	Building 226 Plating Plant (Formerly Building 73 Battery Charging)	Heavy Metals	CSI	Building 226	E
541	II - 5.33	Oil Storage Shop, Former Building 38	Petroleum Products	CSI	Between Buildings 6 and 226	E
542	II - 5.34	Old Oxy-Acetylene Plant and Paint Shop, Building 226	Acetylene gas Paints Possible Solvents	CSI	Building 226 Area	E
543	II - 5.35	Former Building 1026; Building 226 Plating Plant	Zinc Inorganic Acids	CSI	Building 226	E
544	I - 5.10	Former Pickling Plant, Building 221	Lead	RFI	Building 221	E
545	I - 5.11	Surface Coating Operations, Building 3	Epoxy, Activator	NFI	Building 3	E
546	II - 5.36	Galvanizing/Pickling Shop, Building 1025	Zinc Inorganic Acids	CSI	Between South end of Buildings 56 and 74	E
547	II - 5.37	Fiberglass Shop, Building 5	Fiberglass Process Resins Miscellaneous	NFI	Building 5	E
548	II - 5.38	Hydraulic Elevator, Building 5	Hydraulic Oil	CSI	Building 5	E
549	II - 5.39	Scrap Yard 1054, Building 5	Heavy Metals	RFI	Building 5 Area	E
550	II - 5.40	Boiler House, Former Building 1111	Petroleum Products	CSI	SW of Building 62	E
551	II - 5.41	Boilerhouse, Building 1119	Coal By-Products	CSI	Pier 314	E
552	II - 5.42	Former Galvanizing Shop, Building 1030	Zinc Inorganic Acids	CSI	NE corner of Drydock #1	E
553	Not Included in this Document	Reserved	—	—	—	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
554	II - 5.44	Paint Shop, Former Building 1003	Lead Heavy Metals Acetone Xylenes Toluene	CSI	Between Buildings 5 and 44	E
555	II - 5.45	Latrine and Substation, Former Building 29	Organic Wastes Heavy Metals PCBs	CSI	SE side of Building 1119	E
556	I - 5.12	Drydock Discharges	Paint Wastes Blast Residue Waste Oils	RFI	Drydocks	E
557	II - 5.46	Latrine, Former Building 1020	Organic Wastes Heavy Metals	CSI	South of Drydock #1	E
558	II - 5.47	Electrical Substation, Building 177	PCBs Petroleum Products	CSI	Building 77	E
559	II - 5.48	Central Power Station, Building 32	Petroleum Products Combustion Products PCBs	RFI	Building 32	E
560	II - 5.49	Disinfector, Building 34	Infectious Wastes	CSI	South of Building 32	E
561	II - 5.50	Substation, Building 451B	PCBs Petroleum Products	RFI	Along Carolina Avenue	E
562	II - 5.51	Substation, Building 84	PCBs Petroleum Products	CSI	Building 84	E
563	II - 5.52	Locomotive House, Former Building 37	Solvents Degreasers	CSI	Building 177	E
564	II - 5.53	Oil/Water Separator, Building 80	Petroleum Products	CSI	North of Building 80	E
565	II - 5.54	Coal Bin, Former Building 1006	Coal and Coal By-Products	NFI	North of Drydock #5	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
566	II - 5.55	Paint Shop Storage, Building 194	Marine Anti-Foulant Paint Wastes Thinner	CSI	Building 194	E
567	II - 5.56	Substation, Building 75	PCBs Petroleum Products Lead	CSI	East of Building 195	E
568	II - 5.57	Former Latrine, Building 26	Organic Wastes Heavy Metals	NFI	Building 26	E
569	II - 5.58	Gasoline Station and Oil Storage, Former Building 1279	Petroleum Products	RFI	Attached to SW Corner of Building 30	E
570	II - 5.59	Former Coal Storage Area	Coal By-Products	RFI Investigate w/AOC 578	Building 1199 Area	E
571	I - 5.13	Paint Shop, Building 177	Marine Anti-Foulant Paint Thinner	RFI-Booth 33 NFI—Booths 31, 32, 34	Building 177	E
572	I - 5.14	Motor Area, Building 177	Petroleum Products	RFI	Building 177	E
573	II - 5.60	Anodizing Process, Building 177	Heavy Metals Acids Degreasers	CSI	Building 177	E
574	I - 5.15	Fuel Tank, Building 9	Petroleum	RFI	Building 9	E
575	II - 5.61	Substation, Building 54	PCBs Petroleum Products Lead	CSI	Building 454	E
576	II - 5.62	Oil and Paint Storehouse/Print Office, Former Building 1012	Heavy Metals Paints Solvents	CSI	Building 80	E
577	I - 5.16	Paint Booth, Building 25	Paint	NFI	Building 25	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
578	II - 5.63	Transportation Shop and Garage, Building 25	Petroleum Products Lead Solvents	RFI	Building 25	E
579	II - 5.64	Former Paint Shop, Building 1035	Paints Heavy Metals	CSI	Building 1035	E
580	II - 5.65	Former Pattern and Electric Shop, Building 10	Lead Zinc Solvents Degreasers	CSI	Building 10	E
581	II - 5.66	Substation and Radio Lab, Building 20	PCBs	NFI	NE of Building 236	E
582	II - 5.67	Substation, Building 455	PCBs Petroleum Products	NFI	Building 455	E
583	II - 5.68	Northeast Corner of Building 236	Freon Petroleum Products	RFI	Northeast Corner of Building 236	E
584	II - 5.69	Substation, Building 451H	PCBs Petroleum Products	NFI	Building 451H	E
585	II - 5.70	Latrine and Officers Club Storage, Former Building 36	Organic Wastes Heavy Metals	NFI	East of Drydock #5	E
586	II - 5.71	Temporary Powerhouse, Building 1014	Coal	CSI	Adjacent to Building 11	E
587	II - 5.72	Former Aviation Gas Storage, Building 21	Petroleum Products Lead	NFI	Building 21	E
588	I - 5.17	Paint Booth, Building 218	Paint	NFI	Building 218	E
589	II - 5.73	Substation, Building 85	PCBs Petroleum Products	NFI	Building 85	E
590	II - 5.74	Alley, Buildings 1760 and 79	Acetone Petroleum Products Metals	CSI	Between Buildings 79 and 1760	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
591	Not Included in this Document	Reserved	—	—	—	E
592	II - 5.76	Asbestos Shredding Shelter, Former Building 1225	Asbestos Waste	CSI	South of Building 1760	E
593	Not Included in this Document	Reserved	—	—	—	E
594	II - 5.78	Radcon Training & Offices, Building 190	Paint Petroleum Products	NFI	Building 190	E
595	II - 5.79	Oil & Paint Storehouse, Former Building 1018	Petroleum Products Paints Heavy Metals Solvents	NFI	SW of Building 101	E
596	II - 5.80	Former Torpedo Storage, Building 101	Explosives Propellants Solvents/Degreasers	CSI	Building 101	E
597	II - 5.81	Substation, Building 91	PCBs Petroleum Products Lead	CSI	Building 91	E
598	II - 5.82	Sonar Dome Area, End of Pier J	Blast Residue Marine Anti-Foulant Paint	RFI	End of Pier J	E
599	I - 5.18	Pump House, Pier J	Diesel Fuel	CSI	Pier J	E
600	II - 5.83	Coal and Oil Pier, Former Pier 318-L	Petroleum Products Coal By-Products	NFI	North of Drydock #3	E
601	II - 5.84	Oil Pier, Former Pier 319	Petroleum Products	NFI	South of Pier 317-F	E
602	II - 5.85	Substation and Storage, Building 95	PCBs Petroleum Products	CSI	Building 95	E

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
603	II - 5.86	Burning Dump, Drydock #3 Area	Solid Wastes, Products of Incomplete Combustion	CSI	Drydock #3	E
604	II - 5.87	Substation and Storage, Building 96	PCBs Petroleum Products	CSI	Building 96	E
605	II - 5.88	Waste Paint Storage Area, Pad 1278	Paint Petroleum Products Lead	RFI investigate w/SWMU 5	Drydock #4	E
606	I - 5.19	Paint Booth, Building 187	Paint	NFI	Building 187	F
607	I - 5.20	Dry Cleaning, Building 1189	Perchloroethylene	RFI	Building 1189	F
608	II - 5.89	Naval Exchange Storage Shed, Building 1263	Petroleum Products	NFI	Building 1263	F
609	I - 5.21	Service Station, Building 1346	Ethylene Glycol Petroleum Products	RFI	Building 1346	F
610	I - 5.22	Paint Booth, Building 241	Marine Anti-Foulant Paint Thinner	NFI	Building 241	F
611	II - 5.90	Grease Rack and Hobby Shop, Building 1264	Petroleum Products Solvents Degreasers Lead	CSI	Ninth Street and Enterprise Avenue	F
612	II - 5.91	Substation, Building 94	PCBs Petroleum Products	NFI	Building 94	F
613	II - 5.92	Old Locomotive Repair Shop, Former Building 1169	Petroleum Products Solvents	RFI	Building 242	F
614	I - 5.23	Paint Booth, Building 242	Paint	NFI	Building 242	F
615	II - 5.93	Old Chain Locker, Building 1391	Epoxies Resins	CSI	Building 255	F

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
616	II - 5.94	Paint Shop, Former Building 1201	Paints Heavy Metals	CSI	Building 69 Parking Lot	F
617	II - 5.95	Galvanizing Plant, Former Building 1176	Zinc Inorganic Acids	CSI	Building 69A	F
618	II - 5.96	Switching Substation, Building 466	PCBs Petroleum Products	NFI	Building 466	F
619	II - 5.97	Former Oil Storage Yard	Petroleum Products	CSI	Area of Buildings 1824, 1836, 316, 381	F
620	II - 5.98	Battery Shop, Building 68	Paint Solvents Petroleum Products	RFI Investigate w/SWMU 36	Building 68	F
621	II - 5.99	Battery Cracking Area, Building 68	Lead Acids	RFI investigate w/SWMU 5	Building 68	F
622	II - 5.100	Ballast Water Treatment Facility, Facility 3926	Petroleum Oils Metals	CSI Investigate w/AOC 626	NSC Fuel Farm	G
623	II - 5.101	Concrete Tank, Building 98	Petroleum Products	CSI Investigate w/AOC 626	Building 96	G
624	II - 5.102	Fuel Oil Booster Pumphouse, Building 98	Petroleum Products	RFI	Building 98	G
625	II - 5.103	Sludge Pumphouse, Building 3901B	Petroleum Products	CSI	Building 3901B	G
626	I - 5.24	Charleston Naval Supply Center Fuel Farm	Petroleum Products Waste Oil	RFI	Fuel Farm Area	G
627	II - 5.104	Oil Spill Area at Hobson Avenue and Viaduct Road	Petroleum Products	RFI	Hobson and Viaduct Roads	G
628	II - 5.105	Sandblasting Area, Southeast Area of Building 68	Paint Blast Residue	CSI	SE of Building 68	G

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
629	II - 5.106	Tank Truck/Car Loading/Unloading Facility	Petroleum Products Waste Oil	CSI Investigate w/AOC 626	Building 3913	G
630	II - 5.107	POL Sampling/Test Building, Building 3914	Petroleum Products	NFI	Building 3913	G
631	II - 5.108	Fueling Pier Kilo (K)	Petroleum Products	RFI	Pier Kilo	G
632	II - 5.109	Substation, Building 124	PCBs Petroleum Products	NFI	Building 124	G
633	II - 5.110	Substation, Building 451C	PCBs Petroleum Products	CSI	Building 451C	G
634	II - 5.111	Flammable Material Storage, Building 1814	Paint Flammable Material	CSI	SW of Building 224	G
635	II - 5.112	Paint and Oil Storehouse, Building 3902	PCBs Paints Petroleum Products Solvents Metals	RFI Investigate w/SWMU 6 and 7	Building 3902	G
636	II - 5.113	Torpedo Magazine, Building 161 Area	Explosives Propellants	CSI	Building 161	G
637	II - 5.114	Dump Area, Building 161 Area	Solid and Hazardous Wastes	CSI	Building 161 Area	G
638	II - 5.115	Torpedo Workshop, Building 132	Explosives Propellants	CSI	Building 132	G
639	II - 5.116	Alcohol Storage	Alcohol	NFI	South of Building 132	G
640	II - 5.117	Fuel Oil Pier, Former Pier 322	Petroleum Products	NFI	Pier 336	G
641	II - 5.118	Stripper Pumphouse, Former Building 39-K	Acetone Methylene Chloride	CSI	Base of Building 336	G

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
642	II - 5.119	Former Pistol Range, Present Parking Lot	Lead Explosives	CSI Investigate w/SWMU 29 and 34	Parking Lot Building X-10	G
643	II - 5.120	Substation, Building 125	PCBs Petroleum Products	CSI	Building 125	G
644	II - 5.121	Substation, Building 1793	PCBs Petroleum Products Lead	NFI	Building 1793	G
645	II - 5.122	Transformer Vault, Building 3906S	PCBs	NFI	Chicora Tank Farm	G
646	II - 5.123	Operational Storage, Building 3906Q	Petroleum Products	CSI	Chicora Tank Farm	G
647	II - 5.124	Transformer Vault, Building 3906R	PCBs	NFI	Chicora Tank Farm	G
648	II - 5.125	Transformer Vault, West of Building 672	PCB Oils	CSI	West of Building 672	H
649	II - 5.126	Braswell Shipyards, Inc. Storage Area	Blast Media Welding Supplies	CSI	East of Building 672	H
650	II - 5.127	Metal Trades, Inc. Storage Area	Information not Available to Identify	CSI	East of Building 672	H
651	II - 5.128	Sandblasters, Inc. Storage Area	Information not Available to Identify	CSI	East of Building 672	H
652	I - 5.25	Paint Booth, Building 636	Marine Anti-Foulant Paint Thinner	NFI	Building 636	H
653	I - 5.26	Hobby Shop, Building 1508	Petroleum Products Automotive Paint Thinner	RFI	Building 1508	H
654	II - 5.129	Septic Tank and Drain Field 1718, Building 661	Solvents Petroleum Products	CSI Investigate W/SWMU 9	Building 661 Area	H
655	II - 5.130	Oil Spill Area, Building 656	Petroleum Products	RFI	Building 656	H

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
656	II - 5.131	Petroleum Spill Between Buildings 602 and NS-71	Petroleum Products	RFI	Between Buildings 602 and NS-71	H
657	II - 5.132	Engine Overhaul Facility, Building 645	Solvents Degreasers Petroleum Products Chlorofluorocarbons	NFI	Building 645	H
658	II - 5.133	Gas Storage, Building 203	Petroleum Products Flammable gases	NFI	East of Building 1303	H
659	II - 5.134	Diesel Storage, Building 14	Petroleum Products	CSI	Building 14	H
660	II - 5.135	Mosquito Control, Former Building 31	Pesticides	CSI	NW of Building NS-6 Area	H
661	II - 5.136	Former Explosives Storage	Explosives	CSI	South of Building 601	H
662	I - 5.27	Former Gasoline Station, Building NS-54	Petroleum Products	CSI	Building NS-54	H
663	II - 5.137	Gas/Diesel Pumping Station, Building 851	Petroleum Products	CSI	Building 851	H
664	II - 5.138	Transformer Vault (X-33A)	PCBs Petroleum Products	NFI	Building X33A	H
665	II - 5.139	Pyrotechnic Storage, Building 159	Pyrotechnic Explosives	CSI	Building 1889 and NS-46	H
666	II - 5.140	Fuel Storage, Building NS-45	Petroleum Products	CSI	By Osprey Street	H
667	I - 5.28	CBU-412 Vehicle Maintenance Area, Building 1776	Petroleum Products	RFI	CBU-412	H
668	II - 5.141	Hazardous Material Storage, Building 1899	Oxygen Acetylene Welding Supplies	NFI	Building 1899	H
669	II - 5.142	Indoor Pistol Range, Building 1888	Lead	NFI	Building 1888	H
670	II - 5.143	Former Skeet Range, South of Building 1897	Lead Brass Shell Casings	RFI Investigate w/SWMU 14	Field South of Building 1897	H

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
671	II - 5.144	Metering House, Former Building 3905G	Petroleum Products	CSI	North of Hobson	I
672	II - 5.145	Substation, Building 126	PCBs Petroleum Products	RFI	Building 126	I
673	II - 5.146	Paint and Oil Storehouse, Building 169	Paints Petroleum Products Solvents Metals	CSI	Building 169	I
674	II - 5.147	Paint Storage, Building RTC 4	Paint Petroleum Products Heavy Metals Solvents	NFI	Building RTC 4	I
675	II - 5.148	Fuel Oil Storage, Building NS-4	Petroleum Products	CSI	Along Thompson Ave.	I
676	II - 5.149	Former Incinerator, Building NS-2	Products of Incomplete Combustion	CSI Investigate w/AOC 677	Area of Building NS-2	I
677	I - 5.29	Grounds, Building NS-2	Petroleum Products	RFI	Building NS-2	I
678	II - 5.150	Fire Fighting School, Former Building 2-V	Petroleum Products	CSI	Building NS-1 Area	I
679	II - 5.151	Former Wash Rack	Paint Petroleum Products	CSI	Building NS-1 Area	I
680	II - 5.152	Brake Repair and Welding Area, NE Side of Building NS-26	Asbestos Waste	CSI	Building NS-26	I
681	I - 5.30	Abrasive Blast Booth, Building 681	Blast Residue	RFI	Building 681	I
682	I - 5.31	Spray Booth, Building 681	Paint Wastes Thinner	NFI	Building 681	I
683	II - 5.153	Transformer Vault	PCBs	NFI	Building 678 Area	I
684	II - 5.154	Former Outdoor Pistol Range, Building 1888	Lead	RFI Investigate w/SWMU 14	Building 1888	I

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
685	II - 5.155	Former Smoke Drum	Products of Incomplete Combustion	CSI	West of Juneau Ave.	I
686	II - 5.156	High Explosive Storage, Building X-54	Explosives Lead Petroleum Products	NFI	Building X-54	I
687	II - 5.157	Ammunition Storage, Building X-55	Explosives	CSI	Building X-55	I
688	II - 5.158	Ammunition Storage, Building X-56	Explosives	CSI	Building X-56	I
689	II - 5.159	Southern Tip of Base (Marina Parking Area)	Dioxins	RFI	Southern Tip of Base	I
690	II - 5.160	Dredged Materials Area Road	Solid Wastes	CSI	South End of Base	I
691	II - 5.161	Waterfront	Petroleum Products	RFI	Waterfront	J
692	II - 5.162	Free Product Along Cooper River	Petroleum Products	RFI	Waterfront	J
693	II - 5.163	Fuse and Primer House, Former Building 117	Petroleum Products Reactives	CSI	Clouter Creek Dredge Area	K
694	II - 5.164	Former Naval Ammunition Depot	Explosives Heavy Metals	CSI Investigate w/EOD Team	Clouter Creek Dredge Area	K
695	II - 5.165	Electric Locomotive Shed, Former Building 119	Solvents Degreasers	CSI	SW of Building 117	K
696	IV - 5.1	Transformer Area Near Building 2509, MOMAG 11	PCBs	CSI	Building 2509, MOMAG 11	K
697	IV - 5.2	Transformer Area Near Building 2554, MOMAG 11	PCBs	NFI	Building 2554, MOMAG 11	K
698	IV - 5.3	Boiler House, Building 2508, Marine Reserve Training Center, Naval Annex	Lead	RFI	Building 2508, Naval Annex	K
699	V - 5.1	Storm Sewer System	Industrial Wastes	RFI	Basewide	L

Table 1-2
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
700	V - 5.2	Golf Maintenance Building	Pesticides Petroleum Products	RFI	Building 1646	C
701	V - 5.3	Former McMillan Avenue Gas Station	Petroleum Products	CSI	Building 1141	E
702	V - 5.4	Paint Accumulation, Pier D	Paint Waste	CSI	Pier D	E
703	V - 5.5	Paint Accumulation, Pier F	Paint Waste	CSI	Pier F	E
704	V - 5.6	Paint Accumulation, Building 301B	Paint Waste	CSI	West of Building 301B	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
552	II - 5.42	Former Galvanizing Shop, Building 1030	Zinc Inorganic Acids	CSI	NE corner of Drydock #1	E
557	II - 5.46	Latrine, Former Building 1020	Organic Wastes Heavy Metals	CSI	South of Drydock #1	E
678	II - 5.150	Fire Fighting School, Former Building 2-V	Petroleum Products	CSI	Building NS-1 Area	I
679	II - 5.151	Former Wash Rack	Paint Petroleum Products	CSI	Building NS-1 Area	I
532	II - 5.25	Sump Collection Vats, Building 2	Preservatives	NFI	Building 2	E
535	II - 5.28	Latrine, Building 28	Organic Wastes Heavy Metals	NFI	East of Building 2	E
676	II - 5.149	Former Incinerator, Building NS-2	Products of Incomplete Combustion	CSI Investigate w/AOC 677	Area of Building NS-2	I
677	I - 5.29	Grounds, Building NS-2	Petroleum Products	RFI	Building NS-2	I
529	I - 5.8	Coating and Spray Systems, Building 2A	Aluminum Cleaning Solvents	NFI	Building 2A	E
527	II - 5.21	Transformer House, Building 24	PCBs Petroleum Products	NFI	Near Building 3	E
545	I - 5.11	Surface Coating Operations, Building 3	Epoxy, Activator	NFI	Building 3	E
600	II - 5.83	Coal and Oil Pier, Former Pier 318-L	Petroleum Products Coal By-Products	NFI	North of Drydock #3	E
603	II - 5.86	Burning Dump, Drydock #3 Area	Solid Wastes, Products of Incomplete Combustion	CSI	Drydock #3	E
605	II - 5.88	Waste Paint Storage Area, Pad 1278	Paint Petroleum Products Lead	RFI investigate w/SWMU 5	Drydock #4	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
674	II - 5.147	Paint Storage, Building RTC 4	Paint Petroleum Products Heavy Metals Solvents	NFI	Building RTC 4	I
547	II - 5.37	Fiberglass Shop, Building 5	Fiberglass Process Resins Miscellaneous	NFI	Building 5	E
548	II - 5.38	Hydraulic Elevator, Building 5	Hydraulic Oil	CSI	Building 5	E
549	II - 5.39	Scrap Yard 1054, Building 5	Heavy Metals	RFI	Building 5 Area	E
554	II - 5.44	Paint Shop, Former Building 1003	Lead Heavy Metals Acetone Xylenes Toluene	CSI	Between Buildings 5 and 44	E
565	II - 5.54	Coal Bin, Former Building 1006	Coal and Coal By-Products	NFI	North of Drydock #5	E
585	II - 5.70	Latrine and Officers Club Storage, Former Building 36	Organic Wastes Heavy Metals	NFI	East of Drydock #5	E
538	I - 5.9	Forge Shop, Building 6	Lead	RFI	Building 6	E
539	II - 5.31	Propeller Shop, Building 6	Zyglo	RFI Investigate w/AOC 538	Building 6	E
541	II - 5.33	Oil Storage Shop, Former Building 38	Petroleum Products	CSI	Between Buildings 6 and 226	E
660	II - 5.135	Mosquito Control, Former Building 31	Pesticides	CSI	NW of Building NS-6 Area	H
574	I - 5.15	Fuel Tank, Building 9	Petroleum	RFI	Building 9	E
580	II - 5.65	Former Pattern and Electric Shop, Building 10	Lead Zinc Solvents Degreasers	CSI	Building 10	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
642	II - 5.119	Former Pistol Range, Present Parking Lot	Lead Explosives	CSI Investigate w/SWMU 29 and 34	Parking Lot Building X-10	G
586	II - 5.71	Temporary Powerhouse, Building 1014	Coal	CSI	Adjacent to Building 11	E
659	II - 5.134	Diesel Storage, Building 14	Petroleum Products	CSI	Building 14	H
520	II - 5.16	Garbage House, Former Building M-1051	Solid Wastes	CSI	Adjacent to Building M-17	C
510	II - 5.7	Laboratory, Building NH-21	Methyl Ethyl Ketone Acetone Methylene Chloride Solvents	CSI	Building NH-21	C
587	II - 5.72	Former Aviation Gas Storage, Building 21	Petroleum Products Lead	NFI	Building 21	E
577	I - 5.16	Paint Booth, Building 25	Paint	NFI	Building 25	E
578	II - 5.63	Transportation Shop and Garage, Building 25	Petroleum Products Lead Solvents	RFI	Building 25	E
568	II - 5.57	Former Latrine, Building 26	Organic Wastes Heavy Metals	NFI	Building 26	E
680	II - 5.152	Brake Repair and Welding Area, NE Side of Building NS-26	Asbestos Waste	CSI	Building NS-26	I
569	II - 5.58	Gasoline Station and Oil Storage, Former Building 1279	Petroleum Products	RFI	Attached to SW Corner of Building 30	E
559	II - 5.48	Central Power Station, Building 32	Petroleum Products Combustion Products PCBs	RFI	Building 32	E
560	II - 5.49	Disinfector, Building 34	Infectious Wastes	CSI	South of Building 32	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
664	II - 5.138	Transformer Vault (X-33A)	PCBs Petroleum Products	NFI	Building X33A	H
530	II - 5.23	Paint and Oil Storage, Building 35	Paints Solvents Petroleum Products	CSI	Building 35	E
513	II - 5.10	Former Morgue	Formaldehyde Miscellaneous	CSI	SE of Building 45	C
662	I - 5.27	Former Gasoline Station, Building NS-54	Petroleum Products	CSI	Building NS-54	H
686	II - 5.156	High Explosive Storage, Building X-54	Explosives Lead Petroleum Products	NFI	Building X-54	I
519	II - 5.15	Former Boiler House 1081	Petroleum Products	CSI	East of Building NH-55	C
687	II - 5.157	Ammunition Storage, Building X-55	Explosives	CSI	Building X-55	I
546	II - 5.36	Galvanizing/Pickling Shop, Building 1025	Zinc Inorganic Acids	CSI	Between South End of Buildings 56 and 74	E
688	II - 5.158	Ammunition Storage, Building X-56	Explosives	CSI	Building X-56	I
528	II - 5.22	Steam Cleaning Shop	Grease Waste Oil Miscellaneous	CSI Investigate w/Sewer System	Building 59	E
534	II - 5.27	Latrine, Building 27	Organic Wastes Heavy Metals	NFI	Near Building 59	E
550	II - 5.40	Boiler House, Former Building 1111	Petroleum Products	CSI	SW of Building 62	E
620	II - 5.98	Battery Shop, Building 68	Paint Solvents Petroleum Products	RFI Investigate w/SWMU 36	Building 68	F

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
621	II - 5.99	Battery Cracking Area, Building 68	Lead Acids	RFI investigate w/SWMU 5	Building 68	F
628	II - 5.105	Sandblasting Area, Southeast Area of Building 68	Paint Blast Residue	CSI	SE of Building 68	G
616	II - 5.94	Paint Shop, Former Building 1201	Paints Heavy Metals	CSI	Building 69 Parking Lot	F
617	II - 5.95	Galvanizing Plant, Former Building 1176	Zinc Inorganic Acids	CSI	Building 69A	F
558	II - 5.47	Electrical Substation, Building 177	PCBs Petroleum Products	CSI	Building 77	E
590	II - 5.74	Alley, Buildings 1760 and 79	Acetone Petroleum Products Metals	CSI	Between Buildings 79 and 1760	E
564	II - 5.53	Oil/Water Separator, Building 80	Petroleum Products	CSI	North of Building 80	E
576	II - 5.62	Oil and Paint Storehouse/Print Office, Former Building 1012	Heavy Metals Paints Solvents	CSI	Building 80	E
562	II - 5.51	Substation, Building 84	PCBs Petroleum Products	CSI	Building 84	E
589	II - 5.73	Substation, Building 85	PCBs Petroleum Products	NFI	Building 85	E
597	II - 5.81	Substation, Building 91	PCBs Petroleum Products Lead	CSI	Building 91	E
612	II - 5.91	Substation, Building 94	PCBs Petroleum Products	NFI	Building 94	F

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
602	II - 5.85	Substation and Storage, Building 95	PCBs Petroleum Products	CSI	Building 95	E
604	II - 5.87	Substation and Storage, Building 96	PCBs Petroleum Products	CSI	Building 96	E
623	II - 5.101	Concrete Tank, Building 98	Petroleum Products	CSI Investigate w/AOC 626	Building 96	G
624	II - 5.102	Fuel Oil Booster Pumphouse, Building 98	Petroleum Products	RFI	Building 98	G
595	II - 5.79	Oil & Paint Storehouse, Former Building 1018	Petroleum Products Paints Heavy Metals Solvents	NFI	SW of Building 101	E
596	II - 5.80	Former Torpedo Storage, Building 101	Explosives Propellants Solvents/Degreasers	CSI	Building 101	E
695	II - 5.165	Electric Locomotive Shed, Former Building 119	Solvents Degreasers	CSI	SW of Building 117	K
632	II - 5.109	Substation, Building 124	PCBs Petroleum Products	NFI	Building 124	G
643	II - 5.120	Substation, Building 125	PCBs Petroleum Products	CSI	Building 125	G
672	II - 5.145	Substation, Building 126	PCBs Petroleum Products	RFI	Building 126	I
638	II - 5.115	Torpedo Workshop, Building 132	Explosives Propellants	CSI	Building 132	G
639	II - 5.116	Alcohol Storage	Alcohol	NFI	South of Building 132	G

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
636	II - 5.113	Torpedo Magazine, Building 161 Area	Explosives Propellants	CSI	Building 161	G
637	II - 5.114	Dump Area, Building 161 Area	Solid and Hazardous Wastes	CSI	Building 161 Area	G
673	II - 5.146	Paint and Oil Storehouse, Building 169	Paints Petroleum Products Solvents Metals	CSI	Building 169	I
563	II - 5.52	Locomotive House, Former Building 37	Solvents Degreasers	CSI	Building 177	E
571	I - 5.13	Paint Shop, Building 177	Marine Anti-Foulant Paint Thinner	RFI-Booth 33 NFI—Booths 31, 32, 34	Building 177	E
572	I - 5.14	Motor Area, Building 177	Petroleum Products	RFI	Building 177	E
573	II - 5.60	Anodizing Process, Building 177	Heavy Metals Acids Degreasers	CSI	Building 177	E
606	I - 5.19	Paint Booth, Building 187	Paint	NFI	Building 187	F
594	II - 5.78	Radcon Training & Offices, Building 190	Paint Petroleum Products	NFI	Building 190	E
517	II - 5.13	Indoor Firing Range, Building M-192	Lead	CSI	Building M-192	C
566	II - 5.55	Paint Shop Storage, Building 194	Marine Anti-Foulant Paint Wastes Thinner	CSI	Building 194	E
567	II - 5.56	Substation, Building 75	PCBs Petroleum Products Lead	CSI	East of Building 195	E
522	II - 5.18	Grease and Wash Building, Former Building 1252	Petroleum Products	CSI	SW of Building 198	C

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
523	II - 5.19	Gas Station Storage, Former Building M-1234	Petroleum Products	CSI	Building 198	C
526	I - 5.7	Paint Area, Building 212	Paint	RFI	Building 212	E
588	I - 5.17	Paint Booth, Building 218	Paint	NFI	Building 218	E
544	I - 5.10	Former Pickling Plant, Building 221	Lead	RFI	Building 221	E
525	I - 5.6	Paint Shop, Building 223	Paint	RFI—Booth 35 NFI—Booths 36, 37, 38, 63	Building 223	E
634	II - 5.111	Flammable Material Storage, Building 1814	Paint Flammable Material	CSI	SW of Building 224	G
540	II - 5.32	Building 226 Plating Plant (Formerly Building 73 Battery Charging)	Heavy Metals	CSI	Building 226	E
542	II - 5.34	Old Oxy-Acetylene Plant and Paint Shop, Building 226	Acetylene gas Paints Possible Solvents	CSI	Building 226 Area	E
543	II - 5.35	Former Building 1026; Building 226 Plating Plant	Zinc Inorganic Acids	CSI	Building 226	E
515	II - 5.12	Incinerator and Paint Shop 51, Building 233 Area	Paints Solvents	CSI	Building 233	C
516	I - 5.5	Wash Area, Building 233	Acid Petroleum Products	RFI	Building 233	C
581	II - 5.66	Substation and Radio Lab, Building 20	PCBs	NFI	NE of Building 236	E
583	II - 5.68	Northeast Corner of Building 236	Freon Petroleum Products	RFI	Northeast Corner of Building 236	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
610	I - 5.22	Paint Booth, Building 241	Marine Anti-Foulant Paint Thinner	NFI	Building 241	F
613	II - 5.92	Old Locomotive Repair Shop, Former Building 1169	Petroleum Products Solvents	RFI	Building 242	F
614	I - 5.23	Paint Booth, Building 242	Paint	NFI	Building 242	F
615	II - 5.93	Old Chain Locker, Building 1391	Epoxies Resins	CSI	Building 255	F
704	V - 5.6	Paint Accumulation, Building 301B	Paint Waste	CSI	West of Building 301B	E
551	II - 5.41	Boilerhouse, Building 1119	Coal By-Products	CSI	Pier 314	E
601	II - 5.84	Oil Pier, Former Pier 3[illegible]	Petroleum Products	NFI	South of Pier 317-F	E
640	II - 5.117	Fuel Oil Pier, Former Pier 322	Petroleum Products	NFI	Pier 336	G
641	II - 5.118	Stripper Pumphouse, Former Building 39-K	Acetone Methylene Chloride	CSI	Base of Building 336	G
537	II - 5.30	Substation, Building 342	PCBs Petroleum Products	CSI	Building 342	E
667	I - 5.28	CBU-412 Vehicle Maintenance Area, Building 1776	Petroleum Products	RFI	CBU-412	H
524	II - 5.20	Substation, Building 415A	PCBs	NFI	Building 415A	D
584	II - 5.69	Substation, Building 451H	PCBs Petroleum Products	NFI	Building 451H	E
633	II - 5.110	Substation, Building 451C	PCBs Petroleum Products	CSI	Building 451C	G
575	II - 5.61	Substation, Building 454	PCBs Petroleum Products Lead	CSI	Building 454	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
582	II - 5.67	Substation, Building 455	PCBs Petroleum Products	NFI	Building 455	E
531	II - 5.24	Substation and Storage, Building 459	PCBs Petroleum Products	CSI	Building 459	E
533	II - 5.26	Substation, Building 460	PCBs Petroleum Products Lead	NFI	Building 460	E
536	II - 5.29	Substation, Building 460	PCBs Petroleum Products Lead	NFI	Building 460	E
618	II - 5.96	Switching Substation, Building 466	PCBs Petroleum Products	NFI	Building 466	F
661	II - 5.136	Former Explosives Storage	Explosives	CSI	South of Building 601	H
656	II - 5.131	Petroleum Spill Between Buildings 602 and NS-71	Petroleum Products	RFI	Between Buildings 602 and NS-71	H
652	I - 5.25	Paint Booth, Building 636	Marine Anti-Foulant Paint Thinner	NFI	Building 636	H
657	II - 5.132	Engine Overhaul Facility, Building 645	Solvents Degreasers Petroleum Products Chlorofluorocarbons	NFI	Building 645	H
655	II - 5.130	Oil Spill Area, Building 656	Petroleum Products	RFI	Building 656	H
654	II - 5.129	Septic Tank and Drain Field 1718, Building 661	Solvents Petroleum Products	CSI Investigate W/SWMU 9	Building 661 Area	H

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
503	I - 5.4	UXO Site South of Building 665	2 Mark 17 Depth Bombs	CSI Investigate w/EOD Team	South of Building 665	H
648	II - 5.125	Transformer Vault, West of Building 672	PCB Oils	CSI	West of Building 672	H
649	II - 5.126	Braswell Shipyards, Inc. Storage Area	Blast Media Welding Supplies	CSI	East of Building 672	H
650	II - 5.127	Metal Trades, Inc. Storage Area	Information not Available to Identify	CSI	East of Building 672	H
651	II - 5.128	Sandblasters, Inc. Storage Area	Information not Available to Identify	CSI	East of Building 672	H
683	II - 5.153	Transformer Vault	PCBs	NFI	Building 678 Area	I
681	I - 5.30	Abrasive Blast Booth, Building 681	Blast Residue	RFI	Building 681	I
682	I - 5.31	Spray Booth, Building 681	Paint Wastes Thinner	NFI	Building 681	I
511	II - 5.8	Oil House, Former Building 16	Petroleum Products	CSI	North of Building 762	C
663	II - 5.137	Gas/Diesel Pumping Station, Building 851	Petroleum Products	CSI	Building 851	H
579	II - 5.64	Former Paint Shop, Building 1035	Paints Heavy Metals	CSI	Building 1035	E
509	II - 5.6	Hazardous/Flammable Storage, Building 1079	Ignitable Materials	NFI	Building 1079	C
512	II - 5.9	Former Incinerator 67	Petroleum Products Metals Combustion Products	CSI	Building 1079	C
555	II - 5.45	Latrine and Substation, Former Building 29	Organic Wastes Heavy Metals PCBs	CSI	SE side of Building 1119	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
701	V - 5.3	Former McMillan Avenue Gas Station	Petroleum Products	CSI	Building 1141	E
607	I - 5.20	Dry Cleaning, Building 1189	Perchloroethylene	RFI	Building 1189	F
570	II - 5.59	Former Coal Storage Area	Coal By-Products	RFI Investigate w/AOC 578	Building 1199 Area	E
518	II - 5.14	Coal Storage Bins, Area of Building M-1257	Coal and Coal By-Products	CSI	Adjacent to Building M-1257	C
521	II - 5.17	Oil Storehouse 1052, Facility M-1262	Petroleum Products	NFI	Building M-1262	C
608	II - 5.89	Naval Exchange Storage Shed, Building 1263	Petroleum Products	NFI	Building 1263	F
658	II - 5.133	Gas Storage, Building 203	Petroleum Products Flammable gases	NFI	East of Building 1303	H
609	I - 5.21	Service Station, Building 1346	Ethylene Glycol Petroleum Products	RFI	Building 1346	F
507	II - 5.4	Oil Storehouse, Former Building 1010	Petroleum Products	CSI	Golf Course Area (1410)	B
653	I - 5.26	Hobby Shop, Building 1508	Petroleum Products Automotive Paint Thinner	RFI	Building 1508	H
506	II - 5.3	Flammable Storage Shelter, Building 1629	Ignitable Materials	CSI	Building 1629	A
700	V - 5.2	Golf Maintenance Building	Pesticides Petroleum Products	RFI	Building 1646	C
592	II - 5.76	Asbestos Shredding Shelter, Former Building 1225	Asbestos Waste	CSI	South of Building 1760	E

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
644	II - 5.121	Substation, Building 1793	PCBs Petroleum Products Lead	NFI	Building 1793	G
505	II - 5.2	Creosote Cross-Tie/Ballast Storage Area and Golf Course Maintenance Building	Creosote and Degradation Products	RFI	Area of Building 1803	A
514	II - 5.11	Flammable Storage, Building 1813	Paint Adhesive Petroleum Products	NFI	Building 1813	C
619	II - 5.97	Former Oil Storage Yard	Petroleum Products	CSI	Area of Buildings 1824, 1836, 316, 381	F
669	II - 5.142	Indoor Pistol Range, Building 1888	Lead	NFI	Building 1888	H
684	II - 5.154	Former Outdoor Pistol Range, Building 1888	Lead	RFI Investigate w/SWMU 14	Building 1888	I
665	II - 5.139	Pyrotechnic Storage, Building 159	Pyrotechnic Explosives	CSI	Building 1889 and NS-46	H
670	II - 5.143	Former Skeet Range, South of Building 1897	Lead Brass Shell Casings	RFI Investigate w/SWMU 14	Field South of Building 1897	H
668	II - 5.141	Hazardous Material Storage, Building 1899	Oxygen Acetylene Welding Supplies	NFI	Building 1899	H
698	IV - 5.3	Boiler House, Building 2508, Marine Reserve Training Center, Naval Annex	Lead	RFI	Building 2508, Naval Annex	K
696	IV - 5.1	Transformer Area Near Building 2509, MOMAG 11	PCBs	CSI	Building 2509, MOMAG 11	K
697	IV - 5.2	Transformer Area Near Building 2554, MOMAG 11	PCBs	NFI	Building 2554, MOMAG 11	K
625	II - 5.103	Sludge Pumphouse, Building 3901B	Petroleum Products	CSI	Building 3901B	G

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
635	II - 5.112	Paint and Oil Storehouse, Building 3902	PCBs Paints Petroleum Products Solvents Metals	RFI Investigate w/SWMU 6 and 7	Building 3902	G
629	II - 5.106	Tank Truck/Car Loading/Unloading Facility	Petroleum Products Waste Oil	CSI Investigate w/AOC 626	Building 3913	G
630	II - 5.107	POL Sampling/Test Building, Building 3914	Petroleum Products	NFI	Building 3913	G
702	V - 5.4	Paint Accumulation, Pier D	Paint Waste	CSI	Pier D	E
703	V - 5.5	Paint Accumulation, Pier F	Paint Waste	CSI	Pier F	E
502	I - 5.3	UXO Site Between Piers G and H	Three 5-inch Unexploded Shells at About 40 Feet Below MWL	CSI Investigate w/EOD Team	Between Piers G and H	J
598	II - 5.82	Sonar Dome Area, End of Pier J	Blast Residue Marine Anti-Foulant Paint	RFI	End of Pier J	E
599	I - 5.18	Pump House, Pier J	Diesel Fuel	CSI	Pier J	E
631	II - 5.108	Fueling Pier Kilo (K)	Petroleum Products	RFI	Pier K	G
500	I - 5.1	UXO Site Between Piers S and T	2 Mark 47 TORPEX Loaded Depth Bombs	CSI Investigate w/EOD Team	Between Piers S and T	J
501	I - 5.2	UXO Site in Cooper River East of Buildings X-54 and X-55	2 Mark 47 TORPEX Loaded Depth Bombs	CSI Investigate w/EOD Team	Cooper River	J

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
504	II - 5.1	Railroad System	Petroleum Products Batteries Lead Acids Coal	RFI	Basewide	L
508	II - 5.5	Former Incinerator 19	Petroleum Products Metals Polynuclear Aromatic Hydrocarbons	CSI	Between St. Johns and Avenue H	C
556	I - 5.12	Drydock Discharges	Paint Wastes Blast Residue Waste Oils	RFI	Drydocks	E
561	II - 5.50	Substation, Building 451B	PCBs Petroleum Products	RFI	Along Carolina Avenue	E
611	II - 5.90	Grease Rack and Hobby Shop, Building 1264	Petroleum Products Solvents Degreasers Lead	CSI	Ninth Street and Enterprise Avenue	F
622	II - 5.100	Ballast Water Treatment Facility, Facility 3926	Petroleum Oils Metals	CSI Investigate w/AOC 626	NSC Fuel Farm	G
626	I - 5.24	Charleston Naval Supp' ' Center Fuel Farm	Petroleum Products Waste Oil	RFI	Fuel Farm Area	G
627	II - 5.104	Oil Spill Area at Hobson Avenue and Viaduct Road	Petroleum Products	RFI	Hobson and Viaduct Roads	G
645	II - 5.122	Transformer Vault, Building 3906S	PCBs	NFI	Chicora Tank Farm	G
646	II - 5.123	Operational Storage, Building 3906Q	Petroleum Products	CSI	Chicora Tank Farm	G
647	II - 5.124	Transformer Vault, Building 3906R	PCBs	NFI	Chicora Tank Farm	G

Table 1-2A
Area of Concern Summary
Naval Base Charleston

AOC Number	RFA Vol-Sec Number	AOC Name	Materials Released, Stored, or Disposed	Investigative Approach	Location	RFI Study Zone
666	II - 5.140	Fuel Storage, Building NS-45	Petroleum Products	CSI	By Osprey Street	H
671	II - 5.144	Metering House, Former Building 3905G	Petroleum Products	CSI	North of Hobson	I
675	II - 5.148	Fuel Oil Storage, Building NS-4	Petroleum Products	CSI	Along Thompson Ave.	I
685	II - 5.155	Former Smoke Drum	Products of Incomplete Combustion	CSI	West of Juneau Ave.	I
689	II - 5.159	Southern Tip of Base (Marina Parking Area)	Dioxins	RFI	Southern Tip of Base	I
690	II - 5.160	Dredged Materials Area Road	Solid Wastes	CSI	South End of Base	I
691	II - 5.161	Waterfront	Petroleum Products	RFI	Waterfront	J
692	II - 5.162	Free Product Along Cooper River	Petroleum Products	RFI	Waterfront	J
693	II - 5.163	Fuse and Primer House, Former Building 117	Petroleum Products Reactives	CSI	Clouter Creek Dredge Area	K
694	II - 5.164	Former Naval Ammunition Depot	Explosives Heavy Metals	CSI Investigate w/EOD Team	Clouter Creek Dredge Area	K
699	V - 5.1	Storm Sewer System	Industrial Wastes	RFI	Basewide	L
553	Not Included in this Document	Reserved	—	—	—	E
591	Not Included in this Document	Reserved	—	—	—	E
593	Not Included in this Document	Reserved	—	—	—	E

2.0 DESCRIPTION OF FACILITY OPERATIONS AND WASTE GENERATION

2.1 Naval Base Charleston

A description of the facility operations and waste generation information for Naval Base Charleston can be found in the RCRA Facility Assessment dated August 1987. The 1987 RFA was produced by EBASCO Services, Inc. under USEPA contract.

2.2 Naval Station Annex

2.2.1 Facility Description

The Naval Station Annex, referred to as the Naval Annex, is a noncontiguous portion of Naval Base Charleston located in North Charleston, South Carolina, approximately three miles northwest of Naval Base Charleston. It is located at the intersection of Remount Road and Interstate 26, and is comprised of 42 acres of land used for housing, small maintenance activities, training, administration, and storage.

Prior to World War II, the Naval Annex property was undeveloped and wooded. In 1942, the Air Force acquired the property and commenced development of the site as a weather forecasting station. The facility was used for this purpose throughout the World War II era; afterwards the facility was turned over to the 792nd Squadron of the Tactical Air Command, who converted the site into a radar station. Radar station operations commenced in 1954. Additional development in the 1950s resulted in the entire property being developed by approximately 1960. Air Force radar station operations continued until 1981, when the radar station was dismantled and the property transferred to the U.S. Navy for use as a mobile mine assembly facility. Mobile Mine Assembly Group 11 (MOMAG 11) has been the primary tenant since 1981.

2.2.2 Industrial Operations and Waste Generation

Industrial operations at the Naval Annex are limited to mine assembly activities and maintenance functions related to equipment and vehicles. Equipment and vehicle maintenance activities are currently the primary sources of wastes, which consist chiefly of waste petroleum products.

Small quantities of hazardous wastes, such as spent solvents and waste paints, are generated in abrasive blasting and painting activities conducted as part of the mine assembly operations in Building 2556. The Naval Annex is classified as a small quantity generator of hazardous waste. All petroleum and hazardous wastes are manifested and transported offsite for disposal.

Several buildings at the Naval Annex previously utilized onsite boilers for heating purposes. The majority of these activities were discontinued following the Air Force-Navy property transfer. The fuel source for these boilers was #2 fuel oil.

2.2.3 Wastewater Treatment

Sanitary Sewer System

The majority of wastewaters generated at Naval Annex are discharged into the North Charleston Sewer District (NCSD) sanitary sewer system. The NCSD discharge is comprised entirely of domestic wastewater; no known industrial wastewaters currently enter the municipal system. However, the water phase discharge from an oil/water separator located at Building 2505 currently discharges into the municipal storm sewer system.

Onsite Treatment

An onsite sewage treatment plant was formerly located on the Naval Annex property during the period of Air Force ownership. The plant was installed in 1958 and remained in service until the middle 1970s. It was disassembled and removed in 1981 prior to the property transfer to the Navy. Sludge generated in the sewage plant was dewatered in an onsite sludge drying bed. This bed has since been covered and is in use by the Navy as a sports activity field. This site is now designated as SWMU #162.

No water treatment activities are currently conducted at the Naval Annex.

Storm Water Drainage

All storm water runoff from the Naval Annex is collected in a series of ditches and underground sewer lines which eventually discharge into the North Charleston municipal storm sewer system. The municipal system discharges into various points on the Cooper River.

3.0 ENVIRONMENTAL SETTING

3.1 Naval Base Charleston

A description of environmental setting information for Naval Base Charleston can be found in the RCRA Facility Assessment dated August 1987. The 1987 RFA was produced by EBASCO Services, Inc. under USEPA contract.

3.2 Naval Base Annex

3.2.1 Regional Geology

3.2.1.1 Physiography

The Naval Station Annex, referred to as the Naval Annex, is a noncontiguous portion of Naval Base Charleston located in North Charleston, South Carolina, approximately three miles northwest of Naval Base Charleston. It is located in the lower South Carolina Coastal Plain Physiographic Province and is centrally located on the North Charleston upland area located immediately north of the Charleston Peninsula formed by the confluence of the Ashley and Cooper Rivers.

Topography in the area is typical of the South Carolina lower coastal plain, having low relief plains broken only by the meandering courses of sluggish streams and rivers which flow toward the coast past occasional marine terrace escarpments. Topography at the Naval Annex is essentially flat. Elevations in this area range from less than 50 feet above mean sea level (msl) to sea level. The Naval Annex is not within the 100-year flood zone.

3.2.1.2 Stratigraphy and Structure

The geology of the Charleston area is typical of the southern part of the Atlantic Coastal Plain. A seaward-thickening wedge of Cretaceous and younger sediments is underlain by older igneous and metamorphic rock.

The sedimentary formations of the Coastal Plain consist of Upper Cretaceous, Tertiary, and Pleistocene sediments that strike in a general northeast-southwest direction and dip from 12 to 30 feet per mile in a south-southeasterly direction.

The uppermost surficial deposits in the Charleston area are composed of interbedded sand, shells, silt, and clay that are approximately 15 to 80 feet thick. Cretaceous and younger sediments thicken seaward and are underlain by older igneous and metamorphic rock. Surface exposures at the Naval Annex consist of recent and/or Pleistocene sands, silts, and clays of high organic content.

The surficial deposits are underlain by the Cooper Marl Formation, which is composed primarily of calcareous clay, and the Santee Limestone Formation, which is composed of poorly indurated, fossiliferous limestone. The Santee Limestone outcrops approximately 40 miles to the northwest of Naval Base Charleston at both Lake Marion in Orangeburg County and in southeastern Calhoun County. The Santee Limestone is, in turn, successively underlain by the Black Mingo, Peedee, Black Creek, Mittendorf, and Cape Fear Formations, which consist primarily of sandy silt and clay. The geology in this area has also been documented as the Hawthorn Formation, which is a fine, sandy, phosphatic limestone with thin remnants of sand and clay.

The Charleston area has a history of seismic activity, dominated by the Great Charleston Earthquake of 1886. Approximately four hundred earthquakes have been recorded in the Charleston area during the period of 1754-1970.

3.2.2 Regional Hydrology

The Naval Annex is located in Charleston County within the Cooper River Drainage Basin, approximately one mile west of Goose Creek and the Goose Creek Reservoir, 3.5 miles northwest of the Cooper River, and two miles east of the Ashley River.

The Cooper River and its tributaries, including Goose Creek, are buffered by broad extensive salt marshes. Meandering drainageways within the marshes are frequently flooded by tidewater. Semidiurnal tides occur in the Charleston Harbor, which are characterized by the occurrence of two high water and two low water heights each tidal day. Tides in the Cooper River near Goose Creek occur in a similar pattern, and take place approximately one hour later than in Charleston Harbor. The tidal range in the Cooper River at the entrance of Goose Creek is 5.2 feet.

3.2.3 Regional Hydrogeology

Groundwater supplies in the Charleston area are generally obtained from shallow aquifers, the Santee Limestone, and the Black Mingo formations. The shallow aquifers consist of discontinuous layers of sand, clay, and occasional beds of shell and limestone. Generally, the thickness of the shallow aquifers is less than 30 feet; however, some areas contain 40 to 65 feet of aquifer thickness. The shallow aquifers are generally used as drinking water supplies in coastal areas where deeper aquifers have experienced salt water intrusion, such as to the east of the Cooper River in the towns of Mt. Pleasant, Isle of Palms, and Sullivans Island. No known drinking water wells are located in the vicinity of the Naval Annex.

The more abundant potable groundwater supplies in the region are provided by the Santee Limestone and Black Mingo formations. These formations underlie the Cooper Marl, which acts as a confining unit, resulting in artesian conditions throughout the majority or these formations. Although the Santee Limestone is normally capable of providing sufficient yields to satisfy most domestic requirements, the majority of wells tapping into this limestone extend even deeper to reach the uppermost sand beds of the Blank Mingo, augmenting well yields.

Groundwater in the region generally flows to the southeast. However, conditions such as topography, transmissivity differences, and pumpage may affect groundwater flow in localized areas.

3.2.4 Climatology

The climate in the Charleston area is temperate with warm summers, mild winters, and ample precipitation. The weather is largely controlled by the west to east motion of pressure systems and fronts, except in the summer when tropical air persists. The mountains in the northern portion of the state serve as a barrier to cold air masses from the northwest, and the Bermuda high pressure system limits the progress of cold fronts into the area. These conditions produce relatively mild temperate winters. Summers are hot and humid, but relatively moderate with regard to temperature extremes, largely due to the influence of the Gulf Stream.

3.2.4.1 Temperatures

The average daily maximum and minimum air temperatures from 1970 to 1985 for the Charleston area are 24.3 and 12.4 °C. The temperatures are generally moderated by marine influences and are often 2-3 °C lower in the summer and 3-8 °C higher in the winter than those areas further inland from the harbor. Temperatures higher than 38 °C and lower than - 6.5 °C are unusual for the area.

3.2.4.2 Winds

The wind direction and velocity in the Charleston area are highly variable. The inland portions of the region are subjected to a southwest to northeast wind regime. The prevailing winds are northerly in the fall and winter, and southerly in the spring and summer. The monthly average wind velocities for the area range from a low of 12.1 kph in May to a high of 16.7 kph in March.

3.2.4.3 Rainfall

The Charleston area receives an annual average precipitation of 124.9 cm which is almost exclusively rainfall. Very little precipitation is recorded as snow, sleet, or hail. The greatest mean monthly precipitation is normally received in July while the smallest amount normally occurs in November.

3.2.4.4 Humidity

Relative humidity in the Charleston area ranges from 50 to 90 percent and can exhibit large fluctuations. It is generally higher during the summer months and the coastal areas tend to exhibit a slightly lower relative humidity than inland portions of the area.

3.2.4.5 Climate Extremes

The primary concern with regard to climate extremes are the occurrence of tropical cyclones or hurricanes. Hurricanes frequent the east coast of the United States, and almost always have some effect on the weather around Charleston Harbor typically between August and December. The last hurricane to make landfall in the Charleston area was Hurricane Hugo, a class IV hurricane which struck Charleston in September 1989 and caused severe damage. Tornados are extremely rare in the general vicinity but have occurred in the inland portions of Charleston County.

3.2.5 Land Use in the Vicinity of the Facility

The areas surrounding the Naval Annex are highly developed and characterized by commercial, industrial, and residential land use. The Charleston Air Force Base, Charleston International Airport, and several industrial facilities are located adjacent to the property to the west. The areas north, south, and east of the property are primarily commercial and light industrial properties. Interstate 26 is located immediately east of the Naval Annex; Rivers Avenue is located east of I-26. Rivers Avenue is highly developed with commercial establishments such as restaurants, automotive repair facilities, strip shopping centers, etc. Remount Road is located immediately north of the Naval Annex. Air Force residential housing is situated north of Remount Road.

3.2.6 Environmental Monitoring

No environmental monitoring and/or sampling has been performed at the Naval Annex. A visual subsurface soil investigation was performed adjacent to an aboveground petroleum storage tank

at Building 2513 in the Spring of 1993. However, no soil sampling or analysis was conducted as part of this investigation. According to Naval Annex personnel, no other environmental sampling has been performed at the facility. Media potentially subject to future environmental monitoring include air, surface water, sediment, soil, soil gas, and groundwater.

3.2.7 Target Populations and Drinking Water Sources

All the shallow groundwater at the Naval Annex eventually discharges to the Cooper River either directly or indirectly via its tributaries. Contaminants, if present in the shallow groundwater system and not attenuated by subsurface soils, would flow southeast eventually discharging into the Cooper River. However, the flow rate in the shallow system is expected to be rather slow due to the fine-grained nature of the of the sediments and the low gradient. Some contaminants, particularly metals, are likely to be attenuated by adsorption onto clay minerals. Furthermore, no potable use is made of the shallow groundwater in the area of the Naval Annex. The main potable groundwater supplies in the area are provided by the Santee Limestone and Black Mingo formations which range from 200 to 500 feet in depth. However, it is possible that privately installed wells in the shallow aquifer exist in the vicinity of the Naval Annex. Contamination emanating from the SWMUs and AOCs identified at the Naval Annex could affect these shallow water sources; however, deeper aquifers would most likely be threatened only by upgradient contamination sources.

Pathways also exist for any surface contaminants emanating from contaminated sites to migrate beyond installation boundaries via stormwater drainage. Stormwater is conveyed by natural and manmade drainage channels into the NCSD storm sewer system, which ultimately discharges into the Cooper River. Thus, surface contaminants at the Naval Annex have the potential to migrate off the installation and indirectly enter the Cooper River.

Although aquatic habitats in the Cooper River may be threatened by both surface and subsurface contaminant migration, exposure to humans through consumption would be minimal since these

surface bodies are not used as potable water sources. However, the Cooper River is used for recreational boating and other water sports; recreational users of the Cooper River may be considered a potential target population.

3.3 References

1994. *Environmental Assessment for the Consolidation of the NISE East Facility, Charleston, South Carolina*. U. S. Department of the Navy Southern Division.

1994. *Final Comprehensive Sampling and Analysis Plan, Naval Base Charleston*. Environmental and Safety Designs, Inc.

1987. *RCRA Facility Assessment*. EBASCO Services, Inc.

1985. *The Groundwater Resources of Charleston, Berkely, and Dorchester Counties South Carolina*. State of South Carolina Water Resources Commission.

4.0 SOLID WASTE MANAGEMENT UNITS

4.1 SWMU #161 — Vehicle Maintenance Shop, Marine Reserve Center

4.1.1 Unit Characteristics

SMWU #161 consists of a gravel parking area and vehicle washing area associated with Building 2505 at the Marine Reserve Center. The gravel parking area is located adjacent to the south side building and heavy equipment such as trucks and backhoes are parked in this area. The construction of the parking area includes a layer of 1-inch to 1.5-inch graphite gravel on top of two layers of half-inch run-of-crusher (ROC) construction gravel, all on top of the natural sandy clay. Both the parking area and Building 2505 were constructed in 1960 and used by the Air Force as a vehicle maintenance shop. The building and associated property were transferred to the Marine Corps in 1981. The Marine Corps continues to use the facility as a vehicle maintenance shop. The parking area is surrounded by a chain link fence.

A vehicle wash bay was constructed over a portion of the parking area in 1993. Prior to the construction of the wash bay, the area was used for small boat storage. The wash bay is equipped with a drainage system and collecting tank, the contents of which is pumped into an approximately 250-gallon oil/water separator; water from this unit is discharged into the Naval Annex storm sewer system (SWMU #166). This discharge should be permitted under the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act (CWA). Waste oil accumulated in this unit is collected and disposed of offsite by a private contractor. Lithium batteries are stored in a locker outside the vehicle wash bay area.

No underground storage tanks (USTs) are known to have ever existed at this unit. Drainage ditches around Building 2505 collect all storm water runoff except for drainage from the vehicle washing area. Two storm drains are located within the eastern fenceline of the parking area with a manhole located at the southeasternmost corner of the facility. Facility drainage ditches ultimately drain into the North Charleston storm sewer system. Storm water from the wash bay area enters the oil/water separator system. No documented spills have occurred at this unit;

however, evidence of several small visible oil stains were noted in the wash bay area. Figure 4-E locates SWMU #161 at the Marine Reserve Center and Figure 4-1 provides further detail.

4.1.2 Waste Characteristics

Chemicals associated with motor vehicle maintenance are located within the confines of this SWMU. These chemicals include petroleum products such as lubricating oil, motor oil, and antifreeze. Typical constituents these wastes include benzene, ethylbenzene, toluene, xylene, polynuclear aromatic hydrocarbons, ethylene glycol, and heavy metals in waste oil.

4.1.3 Migration Pathways

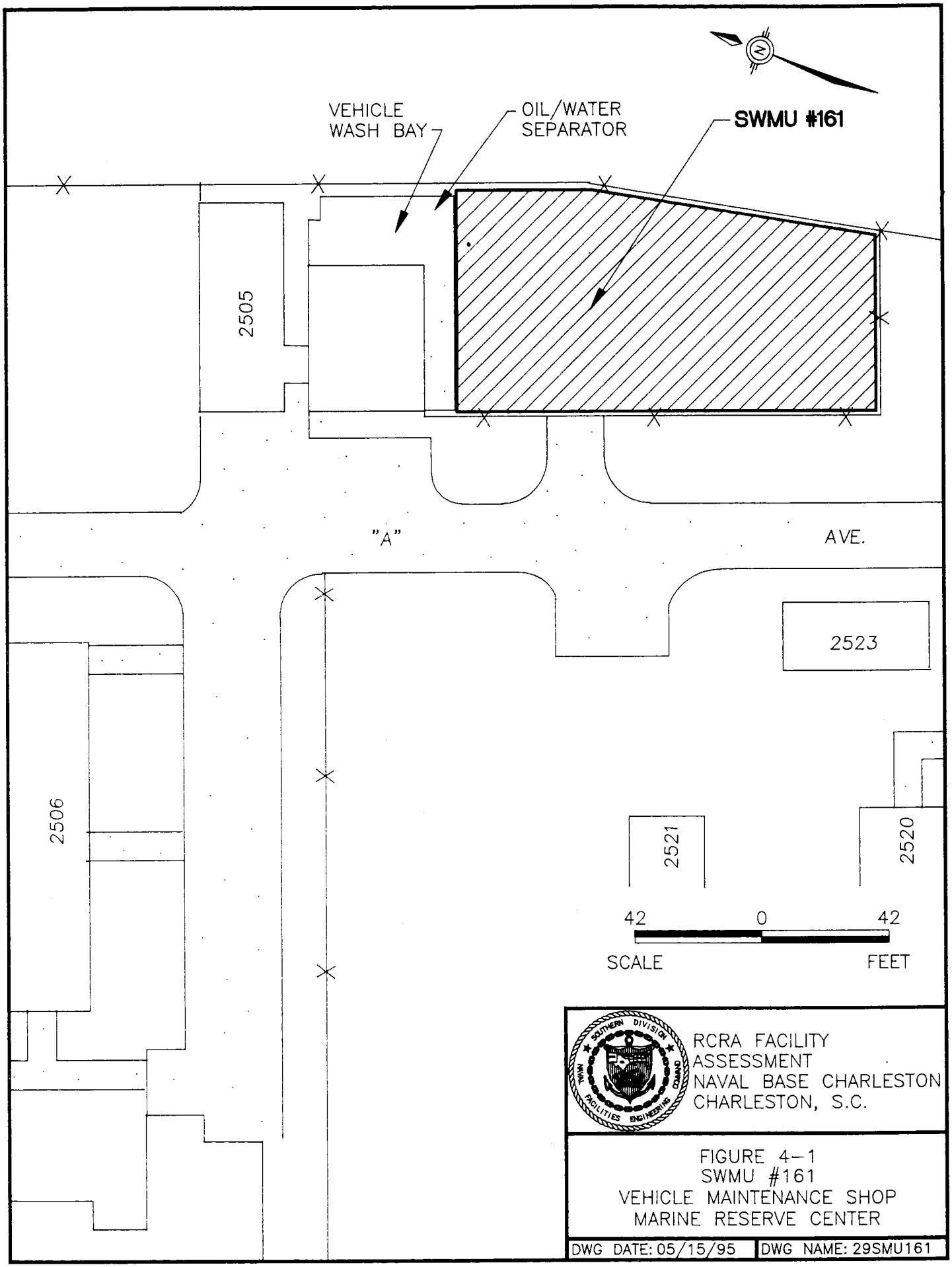
Soil beneath the gravel parking area is a potential migration pathway for petroleum products to impact groundwater. It should be noted that the soil/groundwater interface is usually several inches to several feet lower at more inland areas such as the Marine Reserve Center than at low lying areas such as Naval Base Charleston. Surface water runoff to the drainage ditches around this facility provides another potential migration pathway. Based on information from soil boring data collected during construction of the facility, a subbase of sand or sandy clay is present. It is unlikely that this subbase, in combination with the parking area construction materials, would significantly retard downward migration.

4.1.4 Evidence of Release

Evidence of minor spills due to routine maintenance activities were noted in the gravel parking area during the visual site inspection. No significant documented spills are known to have occurred at this unit. Evidence of several small oil stains were visually noted in the contained portion of the wash bay area.

4.1.5 Exposure Potential

The Naval Annex residential area is located approximately 700 feet northwest of this unit, and no surface water bodies are in the vicinity. However, as noted in Section 4.1.4, no evidence



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-1
SWMU #161
VEHICLE MAINTENANCE SHOP
MARINE RESERVE CENTER

DWG DATE: 05/15/95 | DWG NAME: 29SMU161

of release exists that would indicate potential exposure of building occupants, area receptors, or future users.

4.1.6 Recommended Action

A confirmatory sampling investigation (CSI) is recommended based upon evidence of release to the storm sewer system and potential migration pathways. In addition, the CNSY Occupational Safety, Health, and Environmental Office (referred to as Code 106) have been properly notified of the storm sewer discharge; the discharge will be either eliminated or properly permitted.

4.2 SWMU #162 — Sludge Drying Field, MOMAG 11

4.2.1 Unit Characteristics

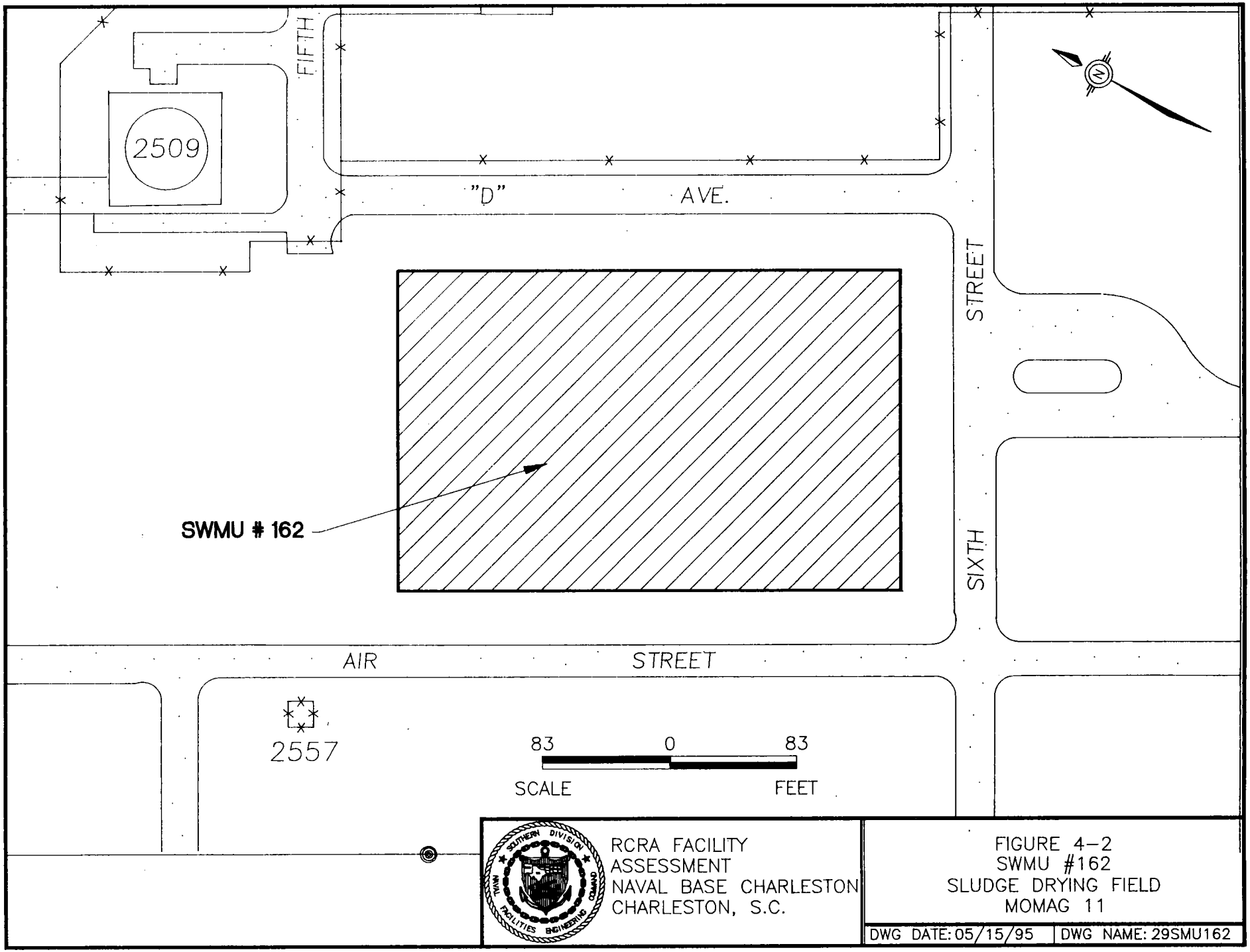
SWMU #162 consists of a former sludge drying field located at Naval Annex, Mobile Mine Assembly Group (MOMAG 11). This site was used for the dewatering of wastewater treatment sludge from an Air Force operated sewage treatment plant. The period of operation of the unit could not be determined; however, the unit was transferred to MOMAG 11 in the 1960s and has not been operated during the period of Naval control. No information has been found indicating whether dewatered sludge has ever been removed from the unit. A soccer field has subsequently been constructed in the sludge drying field area. Figure 4-E locates SWMU #162 at MOMAG 11; Figure 4-2 provides further detail.

4.2.2 Waste Characteristics

Treated sanitary sewage sludge was deposited in this unit for an unknown period of time. It is possible that this sludge contained paint residues or heavy metals from Air Force industrial operations that would therefore remain within the unit. Decomposition of the sewage wastes also creates the potential for subsurface generation of methane and other gases.

4.2.3 Migration Pathways

Based upon interviews with Naval and Air Force personnel, it is possible that a liner was installed in the unit prior to use. However, no documentation or other evidence confirming this could be located. Therefore, soil, groundwater, and subsurface gas are all potential migration pathways. Venting of subsurface gases to the surface could also occur, creating a potential migration pathway via air. Surface water runoff would not come into contact with the buried sludge and is therefore not considered a potential migration pathway.


FIFTH
2509
"D" AVE.
STREET
SWMU # 162
SIXTH
AIR STREET
2557
83 0 83
SCALE FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-2
SWMU #162
SLUDGE DRYING FIELD
MOMAG 11
DWG DATE: 05/15/95
DWG NAME: 29SMU162

4.2.4 Evidence of Release

Review of facility documents and interviews with Navy and Air Force Base Civil Engineer Squadron personnel provided no indications of past releases from this unit. Additionally, visual inspection of the site indicated no aboveground evidence of releases.

4.2.5 Exposure Potential

Participants and spectators of soccer games held at the soccer field (former sludge drying field) are potential receptors of contaminants. If a liner is not present or intact, soil, groundwater, and subsurface gas migration may also have further exposed MOMAG 11 employees and surrounding areas. Exposure of both future users of the unit and users of surrounding properties to contaminants is also possible.

4.2.6 Recommended Action

A CSI is recommended for this site due to the waste compounds potentially present in the sludge, the release and migration potentials, and the possible exposure to present and future users. Although a liner may be present within the unit, it will not be possible to determine the liner integrity. Consequently, further evaluation of this unit will be conducted as though no such liner exists.

4.3 SWMU #163 — Concrete Pit Area 10' x 10' x 2' at MOMAG 11

4.3.1 Unit Characteristics

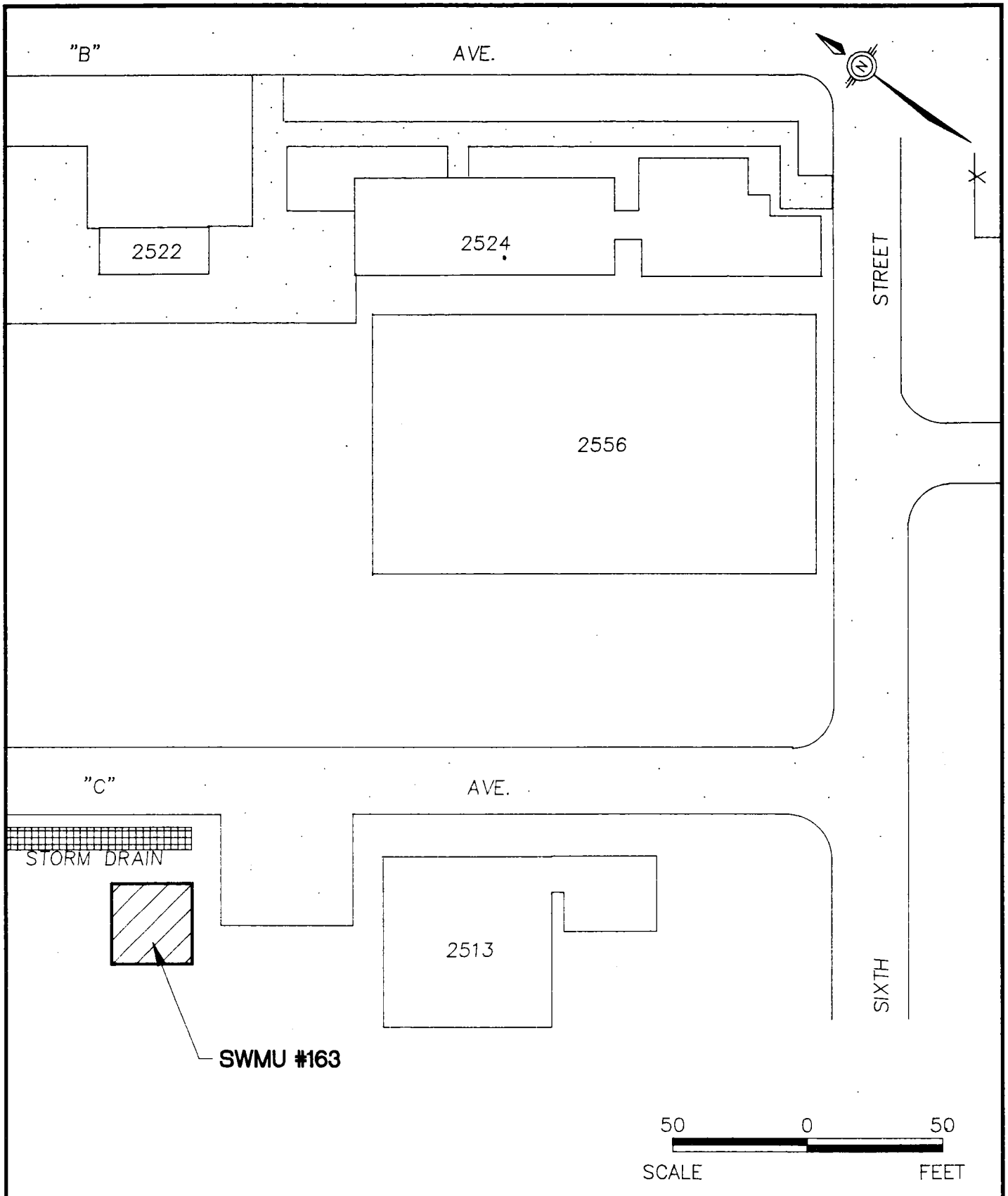
SWMU #163 consists of a 10' x 10' x 2' uncovered concrete-lined pit located approximately 100 feet north of Building 2513 at Naval Annex MOMAG 11. The pit was formerly used as a less-than-90-day Accumulation Area (AA) for hazardous waste generated at the facility that is eventually containerized. Hazardous waste accumulation in the unit commenced in the middle 1980s, and was discontinued in the spring of 1994 when MOMAG 11 was reclassified as a small quantity hazardous waste generator and a new less-than-180-day AA (SWMU #167) was placed in service. The concrete base and walls of this unit are heavily cracked. Figure 4-E provides the location of this SWMU in relation to nearby structures and Figure 4-3 provides further detail.

4.3.2 Waste Characteristics

Waste accumulated in this AA consisted of spent solvents and paint wastes containing volatile organic compounds (VOCs) and heavy metals including arsenic, barium, cadmium, lead, mercury, silver, and chromium.

4.3.3 Migration Pathways

Due to cracks within the concrete structure, soil and groundwater are potential migration pathways for wastes released from this unit. Migration via surface water runoff is also possible due to the cracks in the containment walls, which extend two feet above the surface. A drainage ditch which ultimately discharges into the North Charleston storm sewer system is located approximately 10 feet from the pit. VOC migration via air and subsurface gas pathways is also possible because of the former accumulation of spent solvents in the unit.



RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-3
SWMU #163
CONCRETE PIT AREA 10'x10'x2'
AT MOMAG 11

DWG DATE: 05/15/95 | DWG NAME: 29SMU163

4.3.4 Evidence of Release

No documented releases are known to have occurred within this unit. However, an area of approximately four square feet of stressed vegetation adjacent to the pit was noticed during the visual site inspection (VSI). The stressed vegetation may be an indication of a past release.

4.3.5 Exposure Potential

This accumulation site is currently inactive. Exposure to receptors would therefore be through offsite migration by groundwater, subsurface gas, and surface water runoff. No surface water bodies are located around this unit. The potential exists for exposure to current and future users should invasive procedures be undertaken at the unit.

4.3.6 Recommended Action

A CSI is recommended to verify whether a release has occurred due to the wastes known to have been located in this unit and the visual evidence of a possible release (stressed vegetation).

4.4 SWMU #164 — Blasting Operation, MOMAG 11

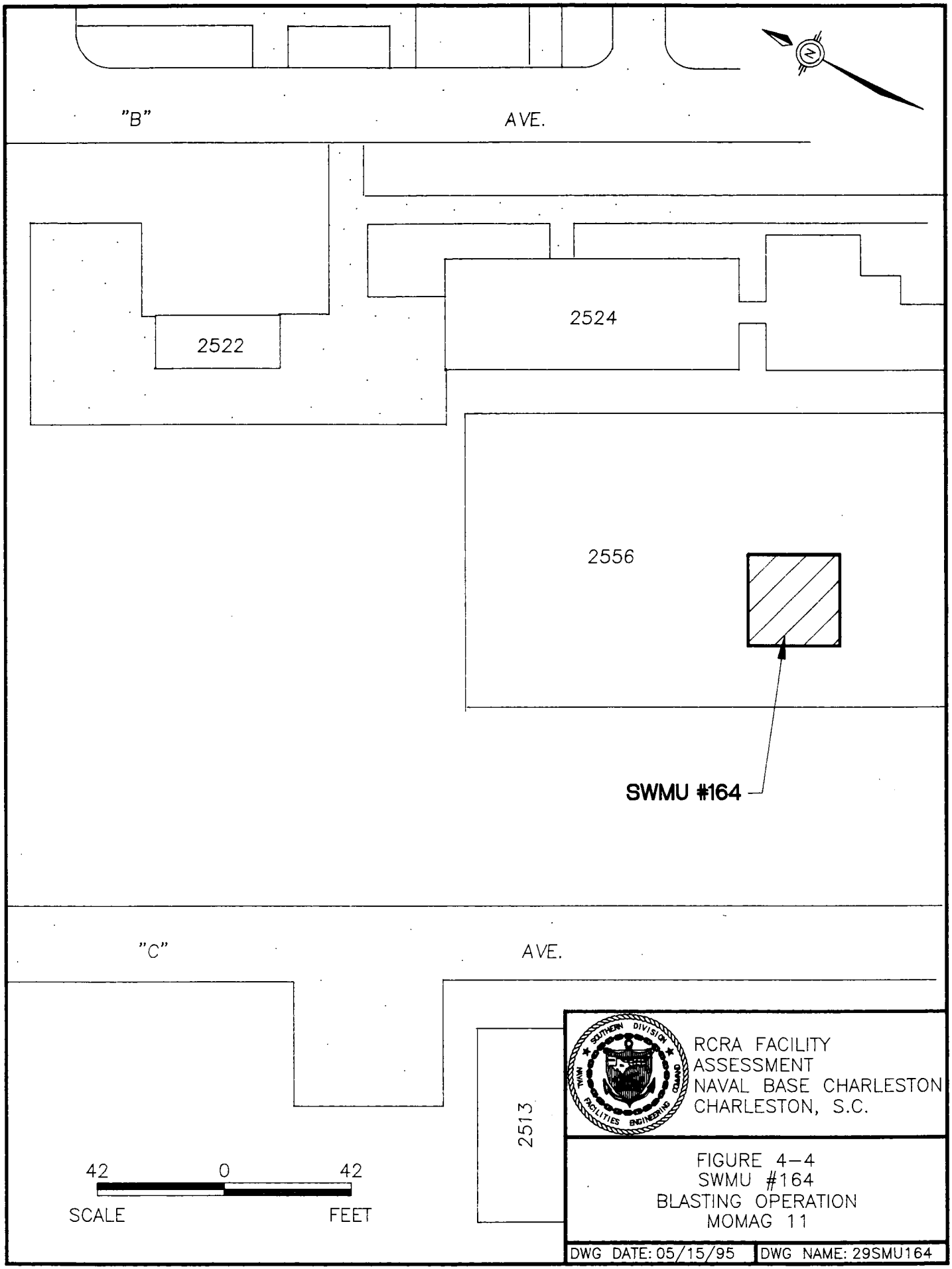
4.4.1 Unit Characteristics

SWMU #164 consists of an abrasive blasting booth located in Building 2556 at Naval Annex MOMAG 11. This booth, which was installed in approximately 1986, consists of a 15' x 15' x 10' metal structure underlain with concrete. The floor of the booth includes a metal grate to recover blast media during abrasive blasting operations. Blasting is conducted to remove paint from various types of equipment. Blast media currently consists of Starblast aluminum oxide; however, other materials may have been used in the past. No documentation describing previously used blast media were located during the preliminary review.

The booth operates under a negative pressure system in order to recover blast media for reuse. During operation, exhaust air from the booth, containing airborne blast media, enters a cyclone separator where particulates are removed. The separated particulates settle into a drum, and are then fed back into the booth as makeup blast media. After leaving the cyclone, the exhaust air passes through a baghouse for particulate removal and is then routed back into the booth for use as makeup air. The baghouse is classified as self-cleaning. This is accomplished by periodic vibration of the baghouse unit. Particulates fall from the baghouse unit into a drum and are disposed of as hazardous waste. Figure 4-E provides the location of Building 2556 and Figure 4-4 locates the SWMU within the building.

4.4.2 Waste Characteristics

Blasting is occasionally conducted to remove lead-based and cadmium-containing paints from equipment. Other paints known to have been removed in this unit are not considered hazardous. The Starblast blast media currently being used contains less than two percent silica; blasting materials used in the past could not be determined.


"B" AVE.
2522
2524
2556
SWMU #164
"C" AVE.
2513
42 0 42
SCALE FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-4
SWMU #164
BLASTING OPERATION
MOMAG 11
DWG DATE: 05/15/95
DWG NAME: 29SMU164

4.4.3 Migration Pathways

Fugitive emissions of airborne particulates, including lead and cadmium particulates, may occur from this system. MOMAG 11 personnel report that, due to the age of the unit, some blast media escapes under the door of the blast booth during normal operations. Visual inspection of the unit revealed areas of dust outside the booth. An exterior bay door with dimensions of approximately 20' x 20' is located approximately 35 feet from the booth. This constitutes a possible airborne migration route outside the building. Soil and groundwater are protected by the concrete floor within the building; however, deposition of particulates escaping the building may potentially result in soil and groundwater contamination. Surface water runoff, subsurface migration through soil, and transport by groundwater from these areas is therefore a possibility. No surface water bodies are located in the vicinity of the unit.

4.4.4 Evidence of Release

No visual indications of surficial contamination were detected during the preliminary review. No documentation or public/employee complaints exists which would indicate a release from this unit. However, interviews with site personnel and visual inspections confirmed the presence of dust around the booth.

4.4.5 Exposure Potential

The most probable route of exposure is through inhalation of particulates potentially contaminated with lead and cadmium. Employees who perform abrasive blasting are required to wear proper personal protective equipment and are monitored regularly for exposure levels in accordance with Naval Base Charleston health and safety requirements. Future users of the site may be exposed to similar particulates if comparable activities are conducted.

4.4.6 Recommended Action

A CSI is recommended in the area outside of the bay door to establish if lead or cadmium contamination exists from deposition of airborne particulates or if exposure outside the building is possible by inhalation of airborne particulates.

4.5 SWMU #165 — Painting Operation, MOMAG 11

4.5.1 Unit Characteristics

SWMU #165 consists of a paint booth located within Building 2556 at Naval Annex MOMAG 11. Painting is conducted inside a 15' x 15' x 8' paint booth underlain by a concrete slab; the unit is approximately eleven years old. Figure 4-E provides the location of Building 2556 and Figure 4-5 locates SWMU #165 within the building.

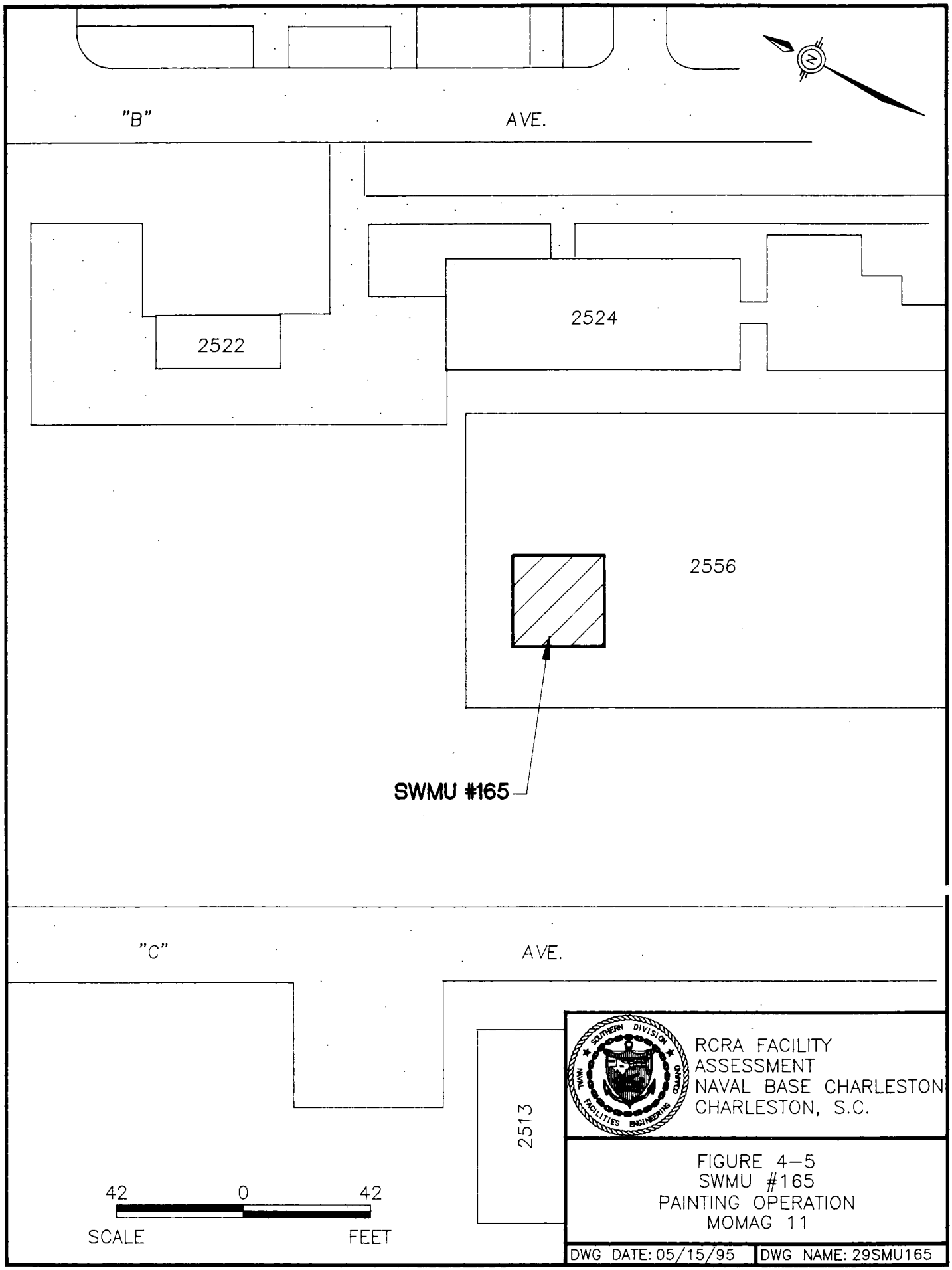
All painting is conducted by hand using spray guns. Barrier paper is applied to the floor to contain paint spilling or settling on the floor. The booth is operated under negative pressure with make-up air provided through side filter panels; the booth ventilation system filters air from within the booth prior to exhausting outside the building. Cleaning of the booth is conducted by hand using paint thinner; lead-based paint wastes generated during cleaning are handled as hazardous wastes.

4.5.2 Waste Characteristics

Water-based and oil-based paint wastes are the common wastes known to be associated with this unit. Lead-based paint is occasionally utilized within this unit. Wastes at this unit consist of filters, paint wastes, and thinners.

4.5.3 Migration Pathways

All painting is conducted with the doors of the booth shut and the ventilation system operating. This effectively contains airborne migration from within the booth. Offsite migration from this unit via soil, groundwater, surface water runoff, air, and subsurface gas is unlikely due to the containment provided by the building and the concrete floor. According to base personnel, the filter system is inspected and filters are changed on a regular basis to minimize the probability of airborne releases.


"B" AVE.
2522
2524
2556
SWMU #165
"C" AVE.
2513
42 0 42
SCALE FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-5
SWMU #165
PAINTING OPERATION
MOMAG 11
DWG DATE: 05/15/95
DWG NAME: 29SMU165

4.5.4 Evidence of Release

Small stains are evident outside the booth; these are contained within the building. No spills or releases are known to have occurred outside the building.

4.5.5 Exposure Potential

The painting operation is properly maintained and all wastes are contained; therefore the exposure potential through release to soil, groundwater, air, or surface water is not likely. Exposure is restricted to personnel conducting activities inside the booth. Personnel involved in painting operations are required to wear proper personal protective equipment in accordance with Naval Base Charleston health and safety requirements.

4.5.6 Recommended Action

No further investigation (NFI) is recommended for this unit because the area is well maintained, the absence of likely migration pathways, and the absence of evidence of releases to the environment.

4.6 SWMU #166 — Sewer System, Naval Annex

4.6.1 Unit Characteristics

SWMU #166 consists of the sanitary sewer system serving the Naval Annex, excluding the housing area. It is comprised of approximately 5300 linear feet of gravity sewer lines. Most lines are constructed of vitrified clay, although some are constructed of ductile iron, cast iron, polyvinyl chloride (PVC), or polypropylene. All wastewater generated at the Naval Annex, excluding the housing area, is collected by a single trunk line. Wastewater entering the system consists of domestic wastewater only. All wastewater collected in the system is routed into the North Charleston Sewer District (NCSD) system for treatment in the publicly owned treatment works (POTW) prior to discharge into the Cooper River. No discharge agreement with NCSD is needed for this type of discharge. Figure 4-6 shows a schematic of the present sanitary sewer system, and Figure 4-E locates SWMU #166 at the Naval Annex.

According to an October 19, 1960 schematic drawing reviewed at the CNSY Public Works Department, a sewage treatment facility was formerly located adjacent to the sludge drying field at Fifth Street and Avenue D. No information was available as to how long the facility operated, the waste treatment processes used, waste materials treated at the facility, or when operations ceased. A September 2, 1958 schematic also showed a septic tank system located between Fourth and Fifth Street and Avenues B and C. The associated leach or tile field contained 26 lines and was located in this same area. It is unknown how long the septic system operated or what was discharged through the system. Other schematics showed a water treatment facility associated with Building 2535, a sewage pumping station associated with Building 2557, an oil/water separator associated with Building 2505 (SWMU #161), and an abandoned sewage line associated with Building 2533.

A

B

C

D

1 2 3 4

Q 15

OIL/WATER SEPARATOR &SUMP PIT

NOT LOCATED

2505

4" DI

4" DI

2535

"A"

13 AVE. 6"

14

2523

2521

6"

2517

8"VC

2520

6"

12

8"VC

8"VC

6" LINE ABANDONED

2533

11

6"

2555

16

2501

2506

17 18

19

8"VC

2550

2508

8"VC

2507

8"VC

2552

2525

6"

2511

8"VC

8"VC

20

7

8

9

10

"B"

AVE.

6"VC

6"VC

2524

2554

STREET

2522

2556

2553

5

8"VC

5

STREET

"C"

AVE.

4

6"

6"

2513

2532

8"VC

FIFTH

SIXTH

2530

2536

C.O.

6" DI

C.O.

6"

2509

16" PVC

"D"

21

8"VC

3

2

AVE.

8"VC

44

AIR

STREET

2557

HOUSING

CHARLESTON A.F.B.

AVE.

STREET

FOURTH

VECTOR

HOUSING

CHARLESTON A.F.B.

LEGEND:

- BLDG OR STRUCTURE
- ROADS, WALKS OR PAVED AREAS
- MANHOLE
- PLUG
- SECURITY FENCE
- DIRECTION OF FLOW

1000 0 1000

SCALE FEET

RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

FIGURE 4-6
SWMU #166
SEWER SYSTEM
NAVAL ANNEX

Dr by: E/AH	Tr by: E/AH	
Ck by: E/AH	App by: E/AH	Sheet 1
Date: 05/15/95	DWG Name: 29SMU166	Of 1

00084 I01X

4.6.2 Waste Characteristics

No monitoring of the sanitary sewer discharge is known to have ever been conducted. The exact composition of the wastewater is therefore unknown. No known industrial discharges currently enter the sanitary sewer system. However, a review of industrial processes conducted at the Naval Annex indicate possible contaminants such as heavy metals, petroleum products, and waste paints/solvents. Also, limited biological degradation may occur within the sewer system, generating waste products such as methane and hydrogen sulfide gas.

4.6.3 Migration Pathways

Due to the nature of the sewer line construction, a certain amount of leakage/infiltration is expected. As a consequence, soil and groundwater at leakage points could potentially serve as contaminant migration pathway. Since the sanitary sewer system is an underground system, surface water runoff is not considered a potential pathway. Use of solvents at the Naval Annex presents the possibility of VOCs entering the sanitary sewer system. Air and subsurface gas are therefore migration pathways due to the possible presence of VOCs as well as biological degradation gases.

4.6.4 Evidence of Release

No spill reports, inspection reports, employee interviews, or visual observations have provided any indications of releases from this SWMU.

4.6.5 Exposure Potential

The potential for exposure exists based on the integrity of the sewer lines. This would specifically apply to onsite workers and to personnel/residents in areas where subsurface gas from leakage points vents to the surface. Offsite exposure through ingestion of contaminated groundwater is also a possibility.

4.6.6 Recommended Action

A CSI is recommended for this SWMU based on the unknown integrity of the unit and the potential for release.

4.7 SWMU #167 — Less-Than-180-Day Accumulation Area, MOMAG 11, CNSY Permit #94

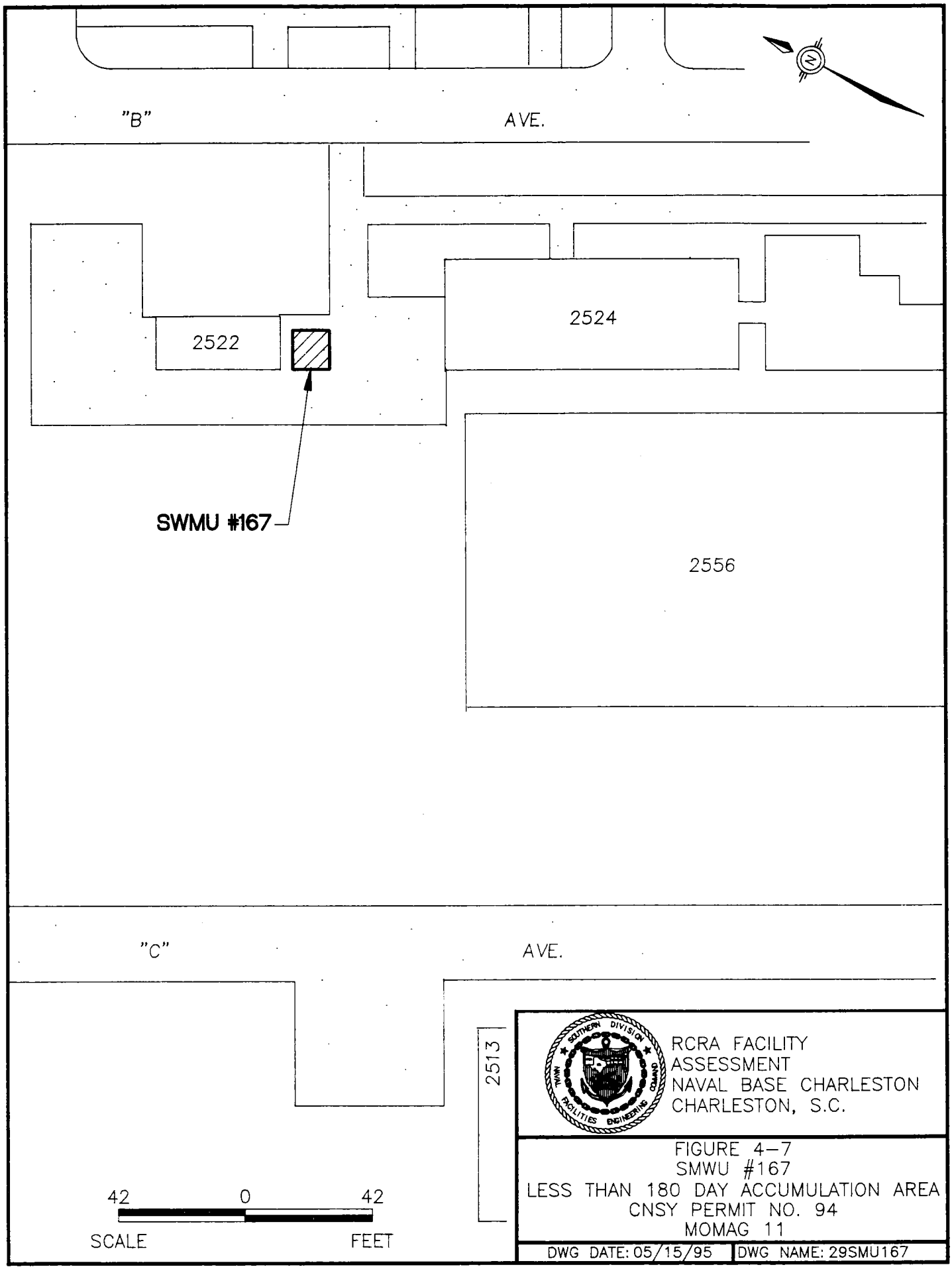
4.7.1 Unit Characteristics

Naval Annex MOMAG 11 is classified as a small quantity generator of hazardous waste, EPA I.D. #SC0000328906. SWMU #167 consists of the MOMAG 11 less-than-180-day Accumulation Area (AA). The unit consists of a portable 8' x 10' x 8' structure located on asphalt pavement located south of Building 2522. The design of the structure includes a grated floor on which drums and other containers are placed and is underlain by a containment system with a 300 gallon capacity sump. The containment system is not equipped with drains; any spilled materials must be pumped out for disposal. The structure is kept locked except when waste containers are loaded or unloaded. Access to the unit is restricted to authorized personnel.

Hazardous wastes from various generation points throughout MOMAG 11 are accumulated at this AA prior to manifesting for offsite transportation by a permitted transporter under contract with the Defense Reutilization and Marketing Office (DRMO). SWMU #167 is located south of Building 2522, as is illustrated on Figure 4-E; details are provided in Figure 4-7.

4.7.2 Waste Characteristics

Hazardous wastes generated at Naval Annex MOMAG 11 include waste paints, oils, thinners, spent solvents, used batteries, and empty aerosol cans. At the time of the site inspection, this AA had a total of 12 containers including six 55-gallon drums, three 10-gallon metal containers, one 15-gallon container, and two smaller metal containers. The major constituents of concern are VOCs, heavy metals, and petroleum hydrocarbons.


"B" AVE.
2522
2524
SWMU #167
2556
"C" AVE.
2513
42 0 42
SCALE FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-7
SMWU #167
LESS THAN 180 DAY ACCUMULATION AREA
CNSY PERMIT NO. 94
MOMAG 11
DWG DATE: 05/15/95
DWG NAME: 29SMU167

4.7.3 Migration Pathways

The design of the AA structure is such that releases of hazardous wastes are prevented. Soil, groundwater, and surface water migration are therefore unlikely migration pathways. However, hazardous wastes containing VOCs may result in fugitive air emissions while the unit is in operation.

4.7.4 Evidence of Release

Review of spill and inspection reports, employee interviews, and visual observations found no indications of any spills or releases at this AA.

4.7.5 Exposure Potential

This SWMU consists of a locked metal container for which access is restricted to authorized Navy personnel. No sensitive environments are known to exist in the vicinity of the AA. For these reasons, the exposure potential from this unit is expected to be minimal. The unit is not a fixed structure and will be removed upon closure of the facility therefore eliminating the exposure potential for future users.

4.7.6 Recommended Action

NFI is recommended for this SWMU due to the design of the unit, the limited migration potential, and the lack of evidence of a release from this unit.

4.8 SWMU #168 — Building 2A, Temporary Metal Storage Area

4.8.1 Unit Characteristics

The temporary metal storage area in Building 2A has been designated as SWMU #168; the building is a two story poured concrete structure with a steel frame located between Buildings 2 and 59. A portion of the building is used for temporary pallet storage of metal parts and components, including steel, zinc, etc. Zinc ingots are wrapped in a green hermiculite material for storage in the unit. The floor of the building is concrete; no cracks were evident during the visual survey. Building 2A is located at map coordinates K-43 on Figure 4-B. The site location is illustrated on Figure 4-8.

4.8.2 Waste Characteristics

This unit is used to store metal parts and components including zinc parts. None of the metals stored in this unit are considered to be hazardous.

4.8.3 Migration Pathways

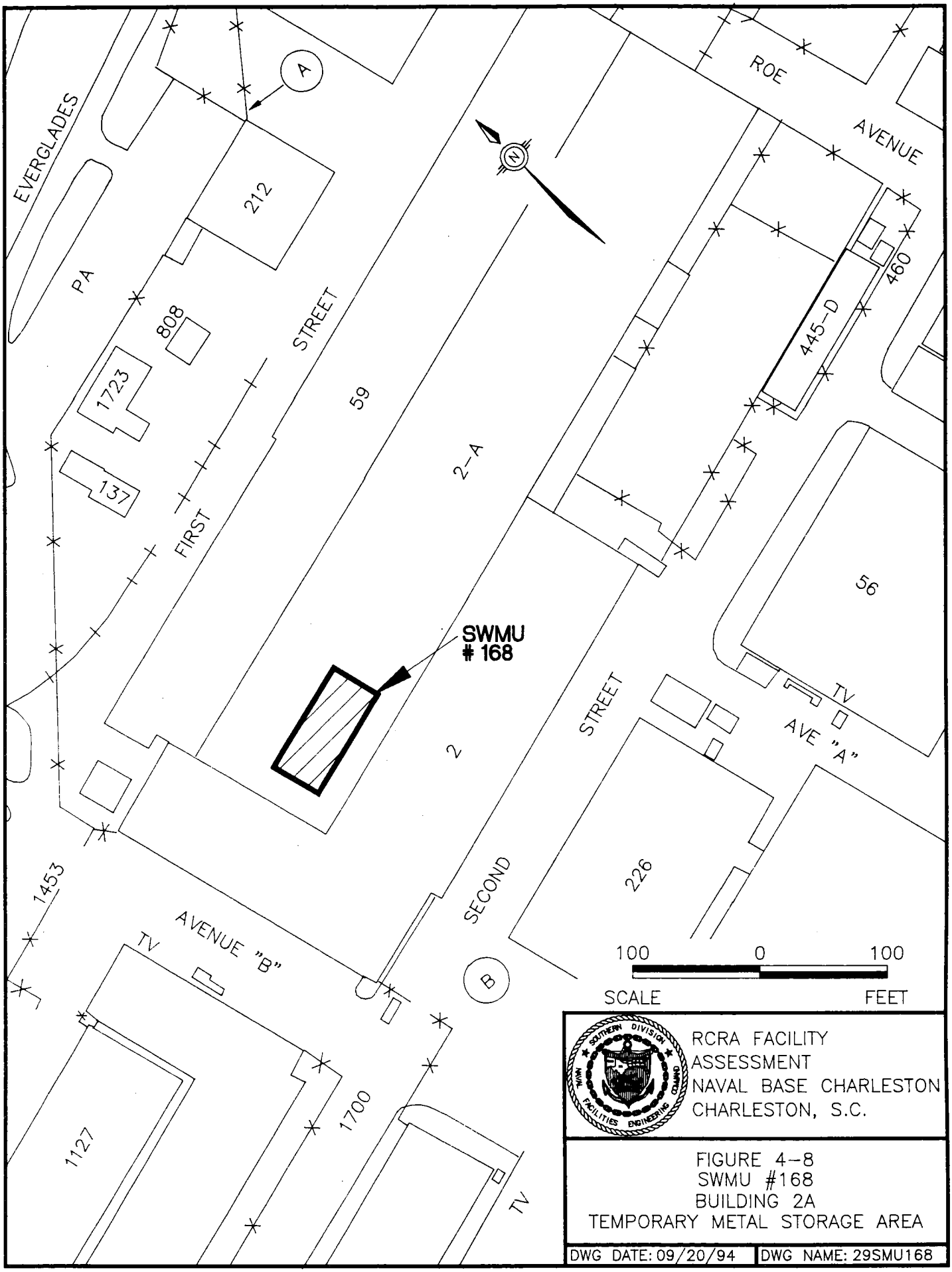
No cracks are evident in the concrete floor of the building; therefore, no contamination of the soil or groundwater beneath the unit is expected. Because the entire storage area is contained within the building, migration via surface water runoff is not possible. Due to the nature of the wastes, airborne migration is not possible.

4.8.4 Evidence of Release

Review of spill reports and inspection reports, employee interviews, and visual observations of the unit found no indications of a release from this unit.

4.8.5 Exposure Potential

This site is located in the Controlled Industrial Area (CIA) of the base, which is not in close proximity to any residential areas. The Cooper River is located approximately 400 feet east of



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-8
SWMU #168
BUILDING 2A
TEMPORARY METAL STORAGE AREA

DWG DATE: 09/20/94 | DWG NAME: 29SMU168

Building 2A so migration to ecological receptors in the River is not anticipated. Potential exposure would therefore be limited to present and future users of this unit.

4.8.6 Recommended Action

NFI is recommended for this SWMU because no hazardous constituents are or ever have been stored within the unit.

4.9 SWMU #169 — Building 57, Touch-up Painting Operations

4.9.1 Unit Characteristics

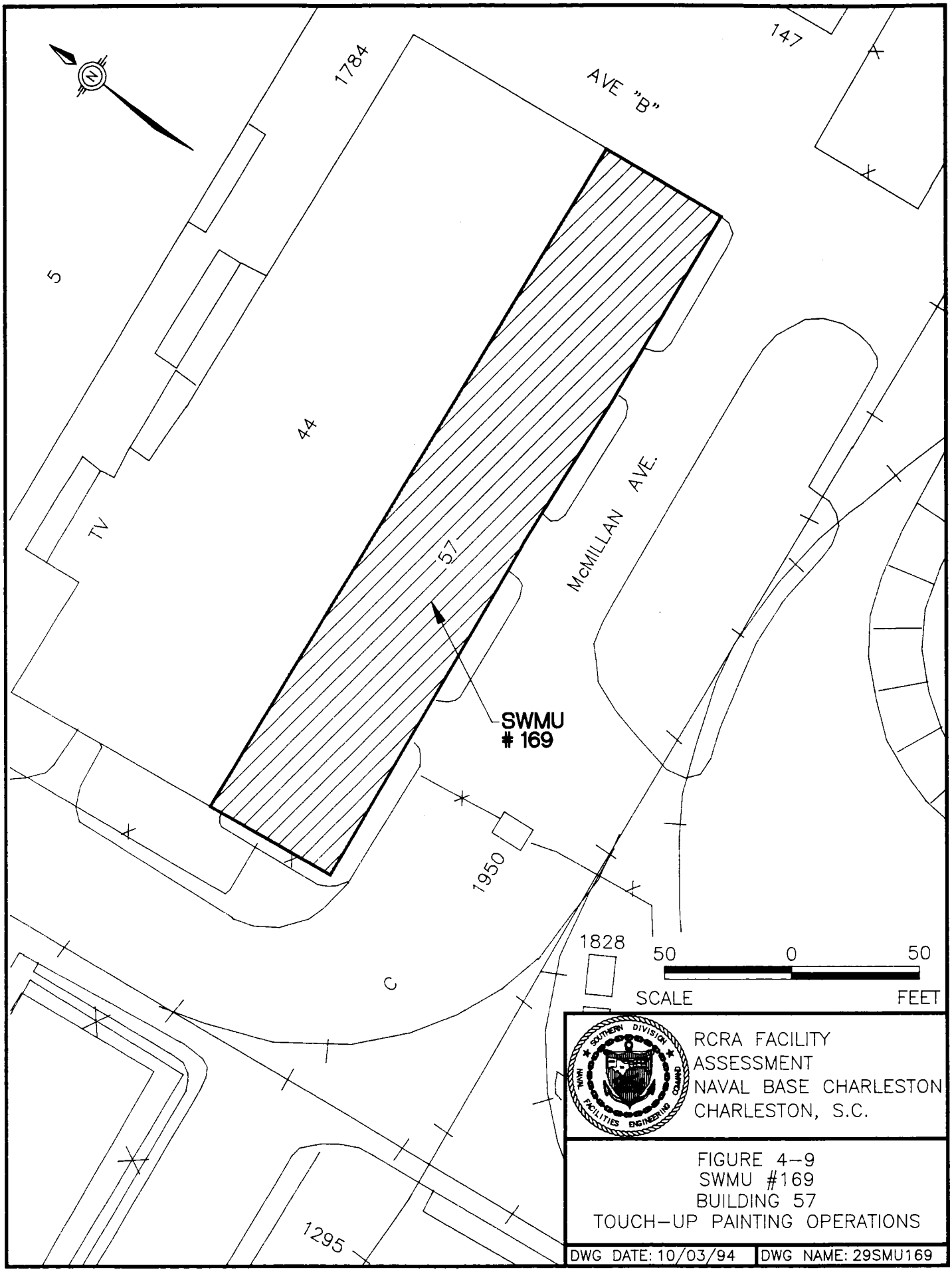
SWMU #169 consists of the touch-up painting areas within Building 57. Building 57 is a 2-story structure which was constructed in approximately 1940. Processes at this facility include small-scale painting performed in conjunction with equipment maintenance and the manufacture of wire rope. The floor of Building 57 consists of an approximately 6-inch thick concrete foundation overlayed with asphalt floor tile. No evidence of cracking in the foundation was noted and no floor drains are located in the building. Paint and paint thinner are stored at this facility in locked metal storage cabinets. The quantity of such materials onsite varies, but the design of the storage cabinets is such no containers of capacity greater than one gallon can be stored. Figure 4-B locates this SWMU at coordinate G-42; Figure 4-9 provides further detail.

4.9.2 Waste Characteristics

The primary wastes associated with this unit include water and oil-based paints, aerosol spray paint, and paint thinner of which VOCs may be a constituent. Since this facility has been in operation since 1940, the period of operation of this unit would suggest lead-based paint may have been used in the past.

4.9.3 Migration Pathways

Offsite migration is not expected due to the small quantities of material used for touch-up painting operations and the integrity of the building walls and foundation. No floor drains are located in the building. In the event of a release outside of the building, such as during loading and unloading operations, the asphalt pavement would contain the spill. Visual indication of past paint spills would be evident unless the area has been repaved. The use of paints and paint thinners containing VOCs indicate a potential for minor fugitive air emissions from the unit. The unit is located approximately 200 feet from Drydock #1 and the Cooper River.


1784
AVE "B"
147
5
44
TV
57
McMILLAN AVE.
SWMU
169
1950
1828
C
1295
50
0
50
SCALE
FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-9
SWMU #169
BUILDING 57
TOUCH-UP PAINTING OPERATIONS
DWG DATE: 10/03/94
DWG NAME: 29SMU169

4.9.4 Evidence of Release

Several locations were noted during the visual site inspection where releases of small quantities of paint (i.e., one quart or less) had occurred within the interior of Building 57. These spills were contained within the building. Review of spill reports and inspection reports, employee interviews, and visual observations of the unit found no other indications of a release from this unit.

4.9.5 Exposure Potential

This site is located in the CIA, which is not in close proximity to any residential areas. The limited quantities of materials used and storage practices limit exposure to employees who perform touch-up painting operations. This unit is not located near residential areas or ecological receptors within the Cooper River. Discontinuation of painting activities should eliminate exposure for future users of this site.

4.9.6 Recommended Action

NFI is recommended for this SWMU due to the absence of any visual evidence or documentation of a significant release. Visual evidence indicates only minor paint spills which were contained within the building.

4.10 SWMU #170 — Drydock #1 Area, PCB Removal Operations

4.10.1 Unit Characteristics

SWMU #170 consists of the storage area for missile launching tubes removed from decommissioned ballistic missile submarines. Missile tubes are stored in this area for removal of PCB-containing components. It is estimated that missile tube dismantling began at SWMU #170 in the middle 1980s. No secondary containment exists around the missile tube dismantling area. SWMU #170 is located near Drydock #1. Figure 4-B shows Drydock #1 in the CIA on the western bank of the Cooper River at map coordinates H-41; Figure 4-10 provides further detail.

4.10.2 Waste Characteristics

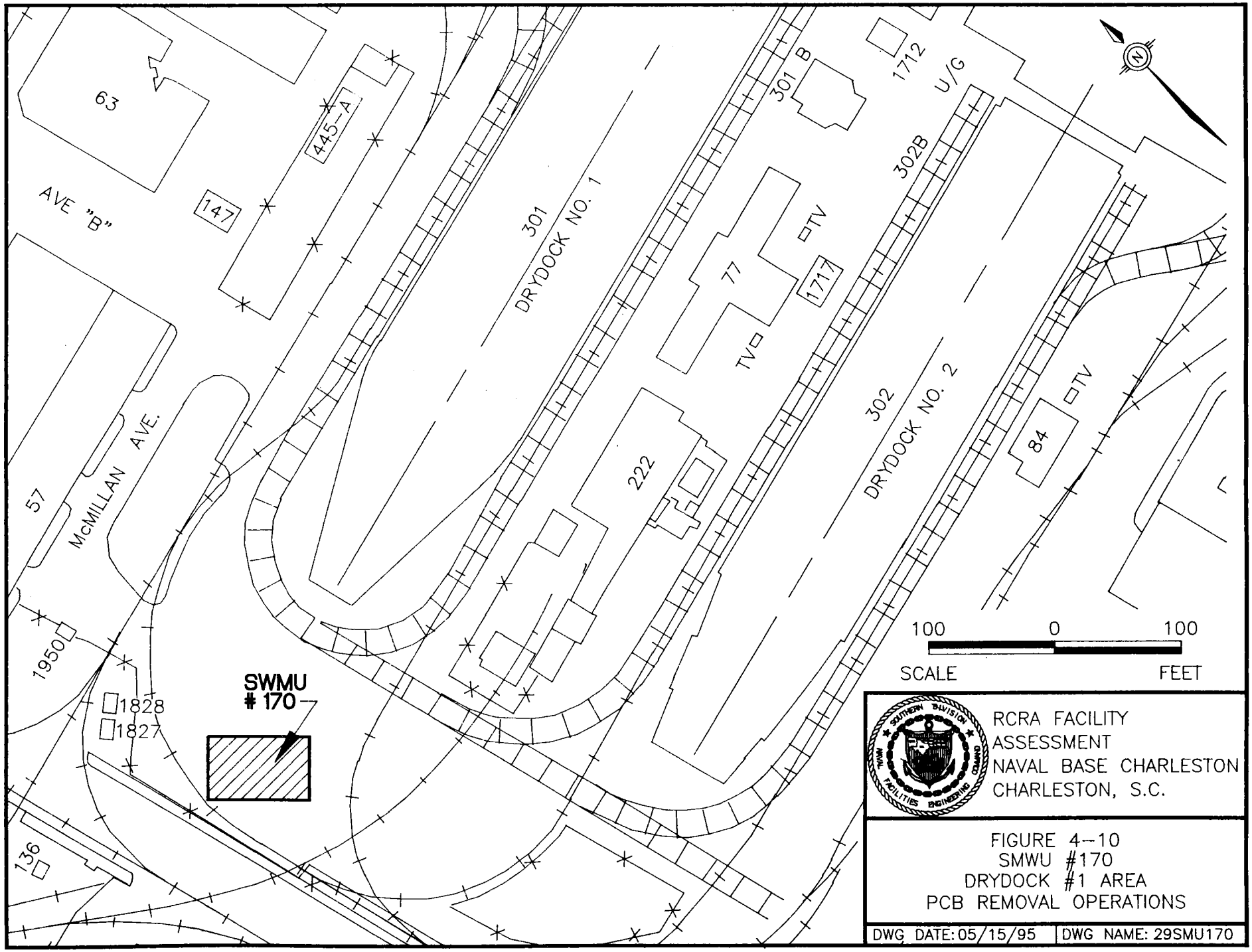
The principal wastes involving hazardous constituents are PCBs found in missile tube septum materials. PCB materials are removed at SWMU #170 prior to disposal of the tubes as scrap metal. Components containing PCBs are then transported to Building 212 for removal of the septum by abrasive blasting. The disassembly methods include specific precautions to prevent the release of PCBs to the environment during both disassembly and transport to Building 212. However, no documentation exists verifying that environmental sampling has been performed to ensure that no releases of PCB-containing materials have occurred at SWMU #170.

4.10.3 Migration Pathways

Due to the proximity of Drydock #1 to the Cooper River, surface water runoff may provide a path for PCBs to reach the Cooper River. The entire SWMU 170 area is paved with concrete which would protect underlying soil and groundwater. Due to the non-mobile nature of the PCB wastes, airborne migration is not likely.

4.10.4 Evidence of Release

The preliminary review identified no visual or physical evidence, inspection reports, or analytical data which indicate any releases at this unit.


63
445-A
AVE "B"
147
301
DRYDOCK NO. 1
301 B
1712
U/G
302B
77
TV
1717
TV
302
DRYDOCK NO. 2
84
TV
222
57
McMILLAN AVE.
1950
1828
1827
SWMU
170
136
100
0
100
SCALE
FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-10
SMWU #170
DRYDOCK #1 AREA
PCB REMOVAL OPERATIONS
DWG DATE: 05/15/95
DWG NAME: 29SMU170

4.10.5 Exposure Potential

Due to the proximity of this unit to the Cooper River, potential exposure is possible for ecological receptors in the Cooper River through uncontrolled surface water runoff. This could also apply to future users of this area. The potential for contamination of the Cooper River from PCBs within the drydock basin is increased due to the flushing action from frequent filling and draining of the basin as part of normal drydock procedures. No residential areas are located within the CIA.

4.10.6 Recommended Action

A CSI is recommended based upon the possibility of releases of PCB-containing materials handled in this area, the existence of migration pathways, and the exposure potential. Potential releases to Drydock #1 will be addressed under AOC #556 (Drydock Discharges).

4.11 SWMU #171 — Drydock #2 Area, PCB Removal Operations

4.11.1 Unit Characteristics

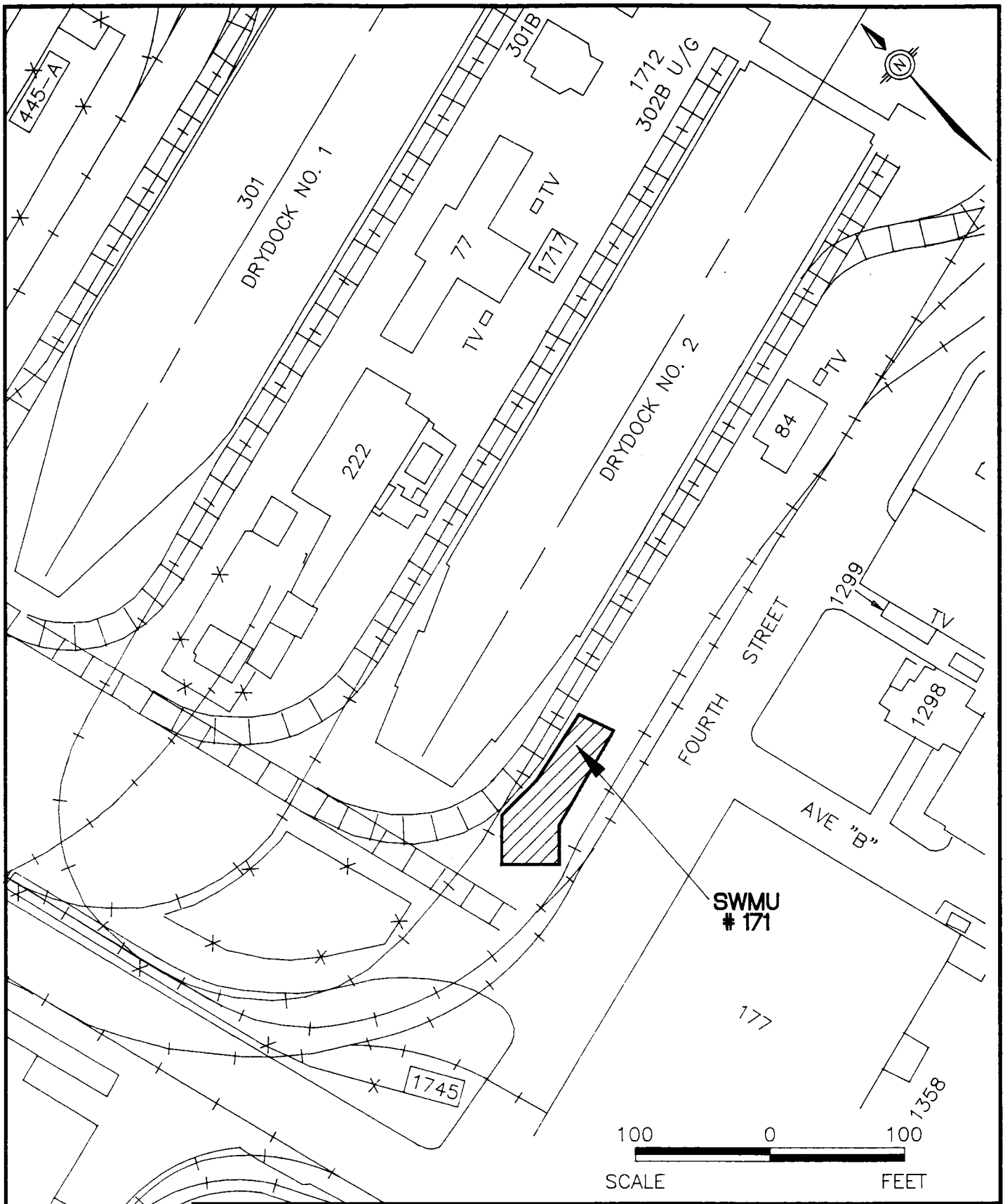
SWMU #171 consists of the missile launching tubes dismantling area at Drydock #2. Missile tube septum materials are known to contain PCBs. It is estimated that missile tube dismantling began at SWMU #171 in the middle 1980s. Figure 4-B locates Drydock #2 at map coordinates G-40 in the CIA on the western shore of the Cooper River; Figure 4-11 provides further detail.

4.11.2 Waste Characteristics

The principal wastes involving hazardous constituents are PCBs found in missile tube septum materials. Missile tubes are disassembled in this unit prior to disposal of the tubes as scrap metal. Components containing PCBs are then transported to Building 212 for removal of the septum by abrasive blasting. The disassembly methods include specific precautions to prevent the release of PCBs to the environment during both disassembly and transport to Building 212. However, no documentation exists verifying that environmental sampling has been performed to ensure that no releases of PCB-containing materials have occurred at SWMU #171.

4.11.3 Migration Pathways

A potential for a release occurs when the missile tubes are disassembled at SWMU #171 prior to removal of the septum materials. The primary migration pathway for this unit is surface water runoff into Drydock #2 since the entire surface surrounding Drydock #2 is paved with concrete. Such surface water migration creates a potential for exposure to ecological receptors in the Cooper River. The concrete pavement in the area minimizes the potential for exposure to soil and groundwater. Based upon the non-volatile nature of the PCB wastes, airborne migration is not likely.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-11
SWMU #171
DRYDOCK #2 AREA
PCB REMOVAL OPERATIONS

DWG DATE: 05/15/95 | DWG NAME: 29SMU171

4.11.4 Evidence of Release

The preliminary review identified no visual or physical evidence, inspection reports, or analytical data which would indicate any releases at this unit.

4.11.5 Exposure Potential

Due to the proximity of this unit to the Cooper River, potential exposure is possible for ecological receptors in the Cooper River through uncontrolled surface water runoff. This could also apply to future users of this area. The potential for contamination of the Cooper River from PCBs within the drydock is increased due to the flushing action from frequent filling and draining of the as part of normal drydock procedures. No residential areas are located within the CIA.

4.11.6 Recommended Action

A CSI is recommended to verify that no PCB contamination exists at this site. This recommendation is based upon the possibility of releases of PCB-containing materials handled in this area, the existence of migration pathways, and the exposure potential associated with the contaminant of concern. Potential releases to Drydock #1 will be addressed under AOC #556 (Drydock Discharges).

4.12 SWMU #172 — Building 80, Steam Cleaning Operations

4.12.1 Unit Characteristics

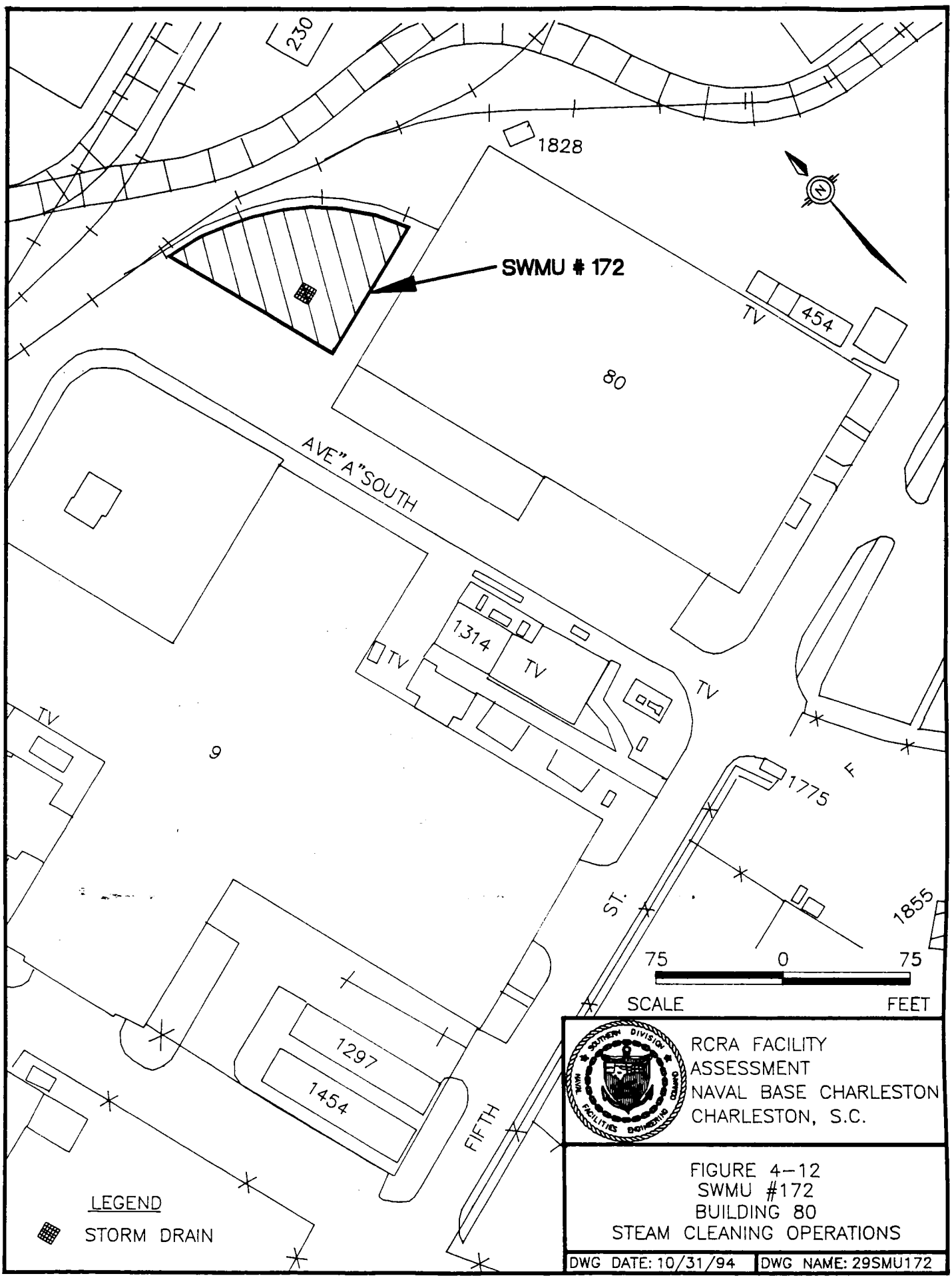
SWMU #172 consists of an area near Building 80 where steam cleaning operations are conducted. Steam cleaning is performed on various types of equipment, including small engines, generators, and construction equipment. Cleaning is conducted to remove dirt and petroleum products including grease and oil. The unit consists of a concrete-paved area designed with curbing and sloping surfaces so that all liquids drain into two storm drains located outside the north side of Building 80. The drains were identified by facility personnel and a letter to the EPA where wastes, hazardous or otherwise, were disposed of. The facility personnel operated on the premise that the drains discharged to an oil-water separator; however, it was determined that the drains do not discharge to an oil/water separator, but instead discharge directly into the storm sewer system which ultimately discharges to the Cooper River. This discharge should be permitted under the National Pollutant Discharge Elimination System (NPDES) of the CWA. Diesel fuel, SAE 30 oil, and steam cleaning compounds stored in 55-gallon drums were observed in the area as well. A drip pan beneath the diesel fuel dispensers was full during the inspection. No cracking or deterioration of the concrete surface in the area was noted during the preliminary review. The unit is not roofed or enclosed. Figure 4-B locates Building 80 at map coordinates H-39, Figure 4-12 locates SWMU #172 outside the northern side of Building 80.

4.12.2 Waste Characteristics

The wastes of concern for this unit have been identified as petroleum products associated with engine/vehicle operations. These include compounds such as diesel fuel, motor oil, grease, and transmission oils. Typical components of such petroleum products include benzene, ethylbenzene, toluene, xylene, polynuclear aromatic hydrocarbons, and heavy metals.

4.12.3 Migration Pathways

Waste from both dumping and steam cleaning activities have been discharged into the storm drains located outside of Building 80. These operations were performed under the premise that


230
1828
SWMU # 172
454
TV
80
AVE "A" SOUTH
1314
TV
TV
TV
TV
9
4
1775
ST.
1855
75
0
75
SCALE
FEET
1297
1454
FIFTH
LEGEND
STORM DRAIN
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-12
SWMU #172
BUILDING 80
STEAM CLEANING OPERATIONS
DWG DATE: 10/31/94
DWG NAME: 29SMU172

the drains discharged to an oil/water separator. It was determined that these drains enter the storm sewer system and discharge into the Cooper River and not to an oil/water separator. Soil and groundwater are possible migration pathways due to leaks and infiltration of the storm sewer. The unit is neither roofed nor enclosed, therefore, the potential for airborne releases from this unit due to the inherent characteristics of steam cleaning activities is also significant. The storm sewer system will be investigated as AOC #699.

4.12.4 Evidence of Release

During the visual site inspection, numerous oil stains were observed on the concrete surface within the steam cleaning area. No visual evidence of releases were noted in surrounding areas. No spill or inspection reports provided further indications of releases at this unit.

4.12.5 Exposure Potential

The stains on the concrete surface resulted from normal steam cleaning operations. Due to the slope of the concrete, potentially contaminated surface runoff from this area empties into the storm drains and ultimately into the Cooper River. The concrete inhibits migration to the soil and groundwater underlying this unit; however, a potential exposure still exists due to leaks and infiltration of the storm sewer system.

4.12.6 Recommended Action

A CSI is recommended to determine whether petroleum contamination exists based on the evidence of releases and the associated migration pathways. It is expected that the bulk of contaminants at this unit are captured within the storm sewer system. An RFI is therefore recommended for the portion of the storm sewer system associated with the unit; the storm sewer system will be addressed as AOC #699. The CNSY Occupational Safety, Health and Environmental office has been notified of the storm sewer waste disposal activities conducted at this site; proceedings are underway to cease such disposal activities.

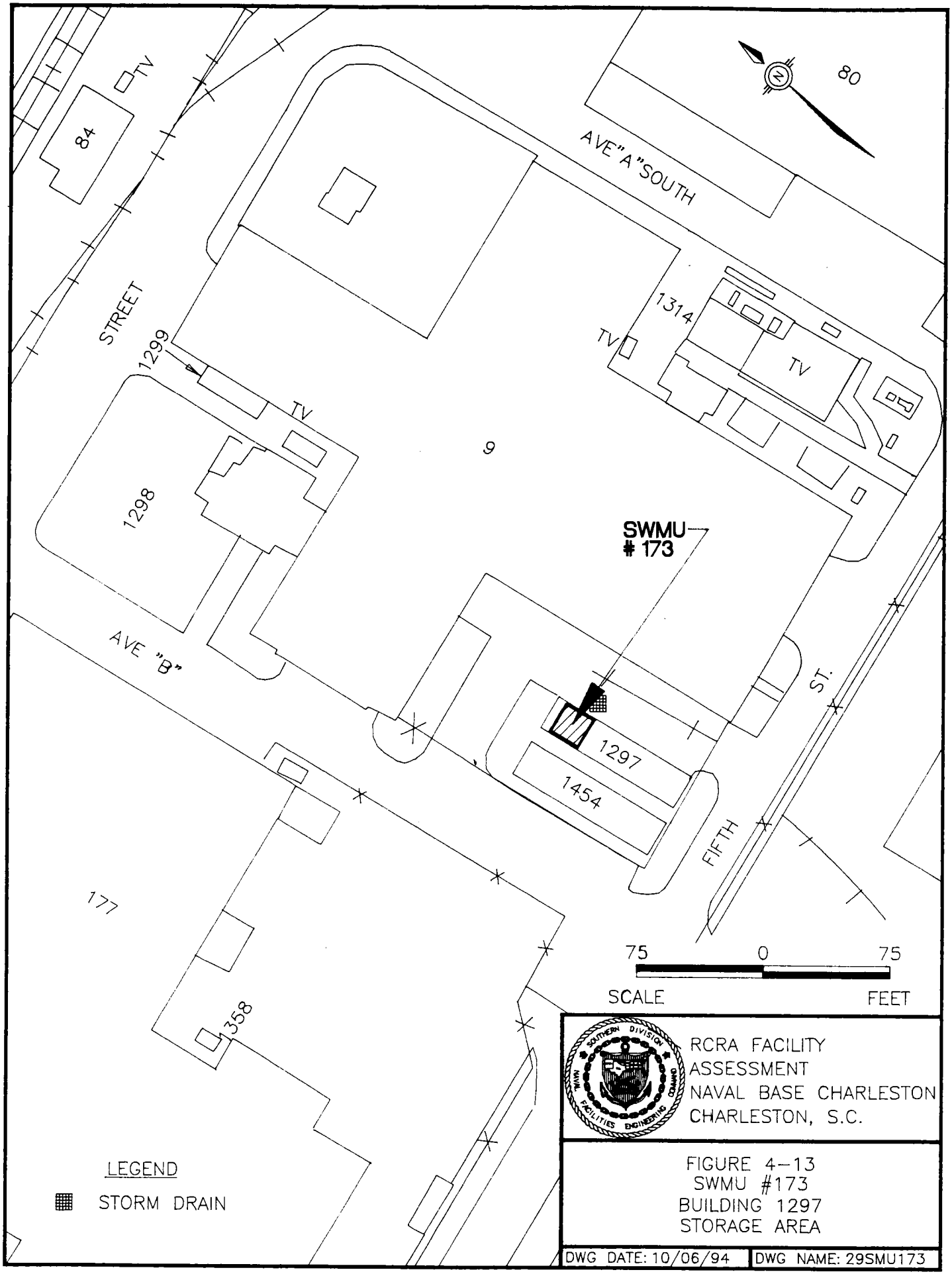
4.13 SWMU #173 — Building 1297, Storage Area

4.13.1 Unit Characteristics

SWMU #173 consists of separate storage areas for lead ingots and hazardous materials at Building 1297 in the CIA. Building 1297 is a one-story concrete block structure with a concrete floor and a flat, concrete roof. The building is segregated into ten 10' x 20' storage areas, each of which is accessed through an exterior door. Each storage room is also equipped with an approximate 6'x 6' opening in the roof; the opening is used for transfers of materials to and from the unit. One unit is used for the storage of lead ingots; its roof opening is now protected by a non-watertight wood cover. Another unit is used for the storage of hazardous materials; leaks were observed in the roof of this room. Two storm drains are located in front of the building; the storm drains connect to the Naval Base Charleston storm sewer system which ultimately empties into the Cooper River. Within the lead storage room, lead ingots within the storage room are covered with a plastic tarpaulin; however, other materials stored in the room are uncovered. These include zinc ingots and several drums containing metal slag. Within the hazardous materials storage room, materials were stored on wooden pallets, in boxes, damaged cardboard drums, and in 75-gallon and 55-gallon steel drums. Figure 4-8 locates Building 1297 at map coordinates C-4; Figure 4-13 locates SWMU #173 with Building 1297.

4.13.2 Waste Characteristics

Lead and zinc wastes are stored in the lead storage unit. The lead is stored as ingots and may also be present in drums. Zinc ingots are also present. Several drums containing metal slag are also stored in the unit; the slag was analyzed for TCLP metals content in October 1994. All metals were below detection limits except for barium. The barium content was 0.6 mg/l, well below the regulatory limit of 100 mg/l for classification as hazardous waste. Within the hazardous materials storage room, Steinex, linseed oil, Dexil sand additive, Aluminum Hot Top, Tusil, Green sand additive, and Bronze Hot Top were identified by container labels. Other boxes containing what appeared to be salt blocks were also observed. Legible Hazardous Material Information Codes on the labels of the stored items indicate the presence of materials



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-13
SWMU #173
BUILDING 1297
STORAGE AREA

DWG DATE: 10/06/94 | DWG NAME: 29SMU173

classified either as extreme hazards to human health, highly reactive, or as having the possibility of detonating under certain conditions.

4.13.3 Migration Pathways

Storm water entering the unit via the roof and flowing out under the door creates a potential for migration via surface water. Runoff exiting Building 1297 enters the Naval Base Charleston storm drain system, which in turn empties into the Cooper River. The area between the building and storm drain is paved with concrete. No degradation of the asphalt was noted, so the potential for migration via the soil and groundwater pathways is minimal. Since several drums of various volatile compounds and hazardous materials are present in the building, airborne migration of these materials is possible.

4.13.4 Evidence of Release

Dust and sand from the stored materials were observed on the floor of the hazardous materials storage room. No other reports, inspection reports, employee interviews, or visual evidence provided any indications of releases in this room or the lead storage room within this unit.

4.13.5 Exposure Potential

Due to the nature of the waste, it is anticipated that exposure is limited to workers who frequent the vicinity of the unit. The storm drain system is a potential receptor if surface water has migrated from inside the unit. This may in turn expose ecological receptors in the Cooper River. No residential areas exist in the CIA. A potential for exposure also exists for future users of the unit.

4.13.6 Recommended Action

A CSI is recommended based on the storage of multiple hazardous wastes without containment and the evidence of releases from the unit. The potential release of contaminated surface water

to the storm drain will be addressed as a possible contributor to waste entering the Cooper River and will be investigated separately under the RFI program.

4.14 SWMU #174 — Air Compressor Oil Blowdown, Building 97

4.14.1 Unit Characteristics

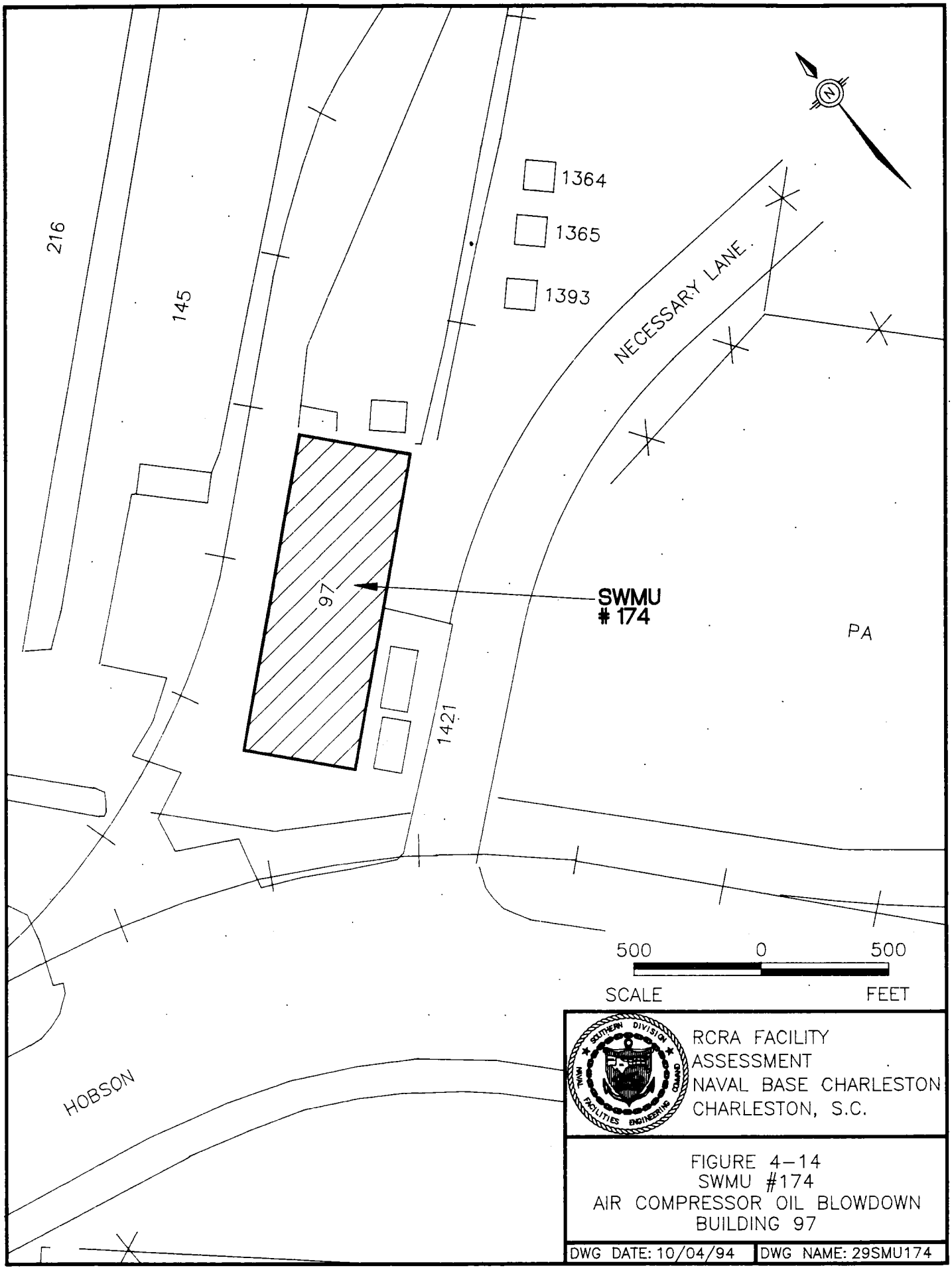
Building 97 has been designated as SWMU #174. The facility is a 3,935 square foot concrete block building that supplies high pressure air to various areas of the base. The building, which is also referred to as the Air Compressor House, was built in 1943 and modified in 1988. The building contains two air compressor turbines connected to the Naval Base Charleston high pressure air system. The turbines are located above two approximately 5-foot deep concrete-lined pits that catch any petroleum based lubricating oils leaking or ejected from the turbine during normal operations. No cracking or deterioration of the concrete was evident during the site inspection. This unit was designated as a SWMU because of this oil blowdown as well as the associated storage of bulk lubricating oil in 5-gallon containers and 55-gallon drums. Building 97 is located at coordinates G-37 on Figure 4-C and Figure 4-14 provides the location of the SWMU within the building.

4.14.2 Waste Characteristics

Petroleum lubricating oils for operations of the air compressor turbines are utilized at this facility. Typical components of such petroleum products include benzene, ethylbenzene, toluene, xylene, polynuclear aromatic hydrocarbons, and heavy metals in waste oil captured in the containment pits.

4.14.3 Migration Pathways

The concrete catch basins and the building structure itself contains any release of oil within the building. Consequently, the potential for migration via the soil, groundwater, surface water, and sediment pathways are unlikely. The potential exists for airborne migration of volatile components of the lubricating oils.


216
145
1364
1365
1393
NECESSARY LANE
97
SWMU
174
PA
1421
HOBSON
500
0
500
SCALE
FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-14
SWMU #174
AIR COMPRESSOR OIL BLOWDOWN
BUILDING 97
DWG DATE: 10/04/94
DWG NAME: 29SMU174

4.14.4 Evidence of Release

No spill reports, inspection reports, or employee interviews were found to indicate any releases from this unit. No stains or spills outside of the catch basin were noted during the VSI.

4.14.5 Exposure Potential

No residential areas or sensitive environments are located in the vicinity of SWMU #174. Access to the building is restricted to authorized personnel only; therefore, the potential for exposure is limited to Naval Base Charleston employees. Potential exposure exists for future users of the site if the unit remains operational.

4.14.6 Recommended Action

NFI is recommended for this SWMU due to the condition of the storage pit, the lack of migration pathways, and the lack of evidence of a release from this unit.

4.15 SWMU #175 — Crane Painting Area, Near Building 1277

4.15.1 Unit Characteristics

SWMU #175 is the site of a former crane painting area near Building 1277 which ceased operations in 1993. The area is currently paved with asphalt and mobile crane tracks are located through the unit. No visual evidence exists at the unit of the former painting activities. No other information exists regarding the period of operation, the operating practices, and the types of materials used. The unit is approximately 300 feet from the Cooper River. SWMU #175 is located at map coordinates H-33 on Figure 4-C. The site location is illustrated on Figure 4-15.

4.15.2 Waste Characteristics

A preliminary review found no information on the types of paints utilized at this unit. However, typical paint constituents could include heavy metals, lead, acetone, xylene, and toluene. Blast media may also be a concern for this site.

4.15.3 Migration Pathways

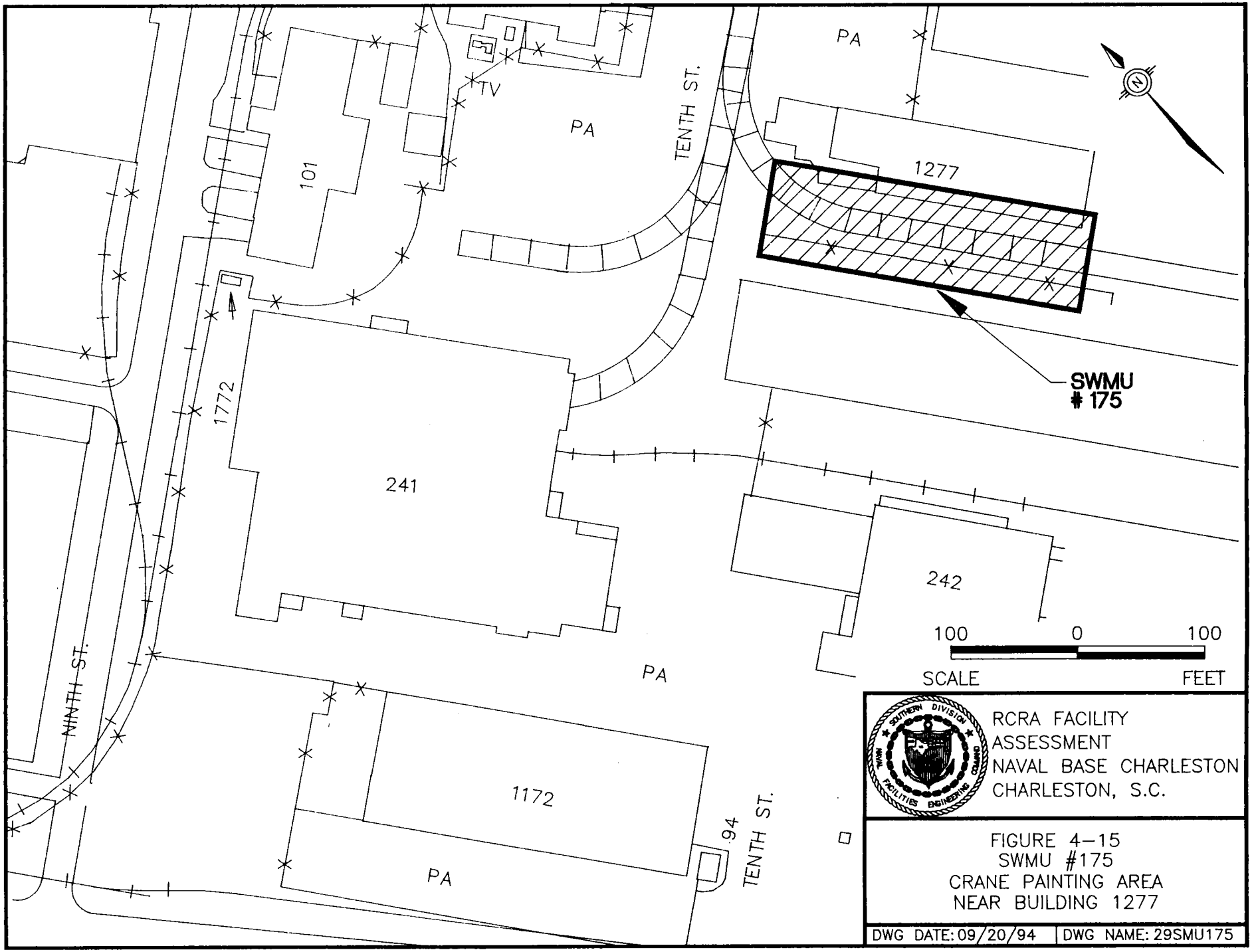
Based upon the waste characteristics, soil, groundwater, surface runoff, subsurface gas, and air are potential migration pathways for the constituents of concern.

4.15.4 Evidence of Release

No spill reports, inspection reports, documented employee complaints, employee interviews, or visual observations provided any indications of releases from this site.

4.15.5 Exposure Potential

The unit is located approximately 300 feet from the Cooper River. Since there was no evidence of any containment structures associated with this unit, past operations may have resulted in exposure to ecological receptors in the Cooper River. The potential for exposure to both present employees and future occupants of the units also exists.


PA
TV
PA
TENTH ST.
101
1277
SWMU
175
1772
241
242
100
0
100
SCALE
FEET
PA
NINTH ST.
1172
94
TENTH ST.
PA
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-15
SWMU #175
CRANE PAINTING AREA
NEAR BUILDING 1277
DWG DATE: 09/20/94
DWG NAME: 29SMU175

4.15.6 Recommended Action

An RFI is recommended for this unit due to the probability of past releases from this unit.

4.16 SWMU #176 — Transformer Oil Leak, Near Building 657

4.16.1 Unit Characteristics

SWMU #176 is the site of a transformer vault used to supply power to Building 657. The unit is located on a 3' x 6' concrete pad. Based on visual observations, the unit appears to have been installed within the past 5 to 10 years. However, no information exists to confirm the age of the unit. An oil/water separator is located south of the transformer adjacent to Building 657 which is used for grease removal from food related waste. Figure 4-D locates SWMU #176 at map coordinates F-16 and Figure 4-16 provides further detail.

4.16.2 Waste Characteristics

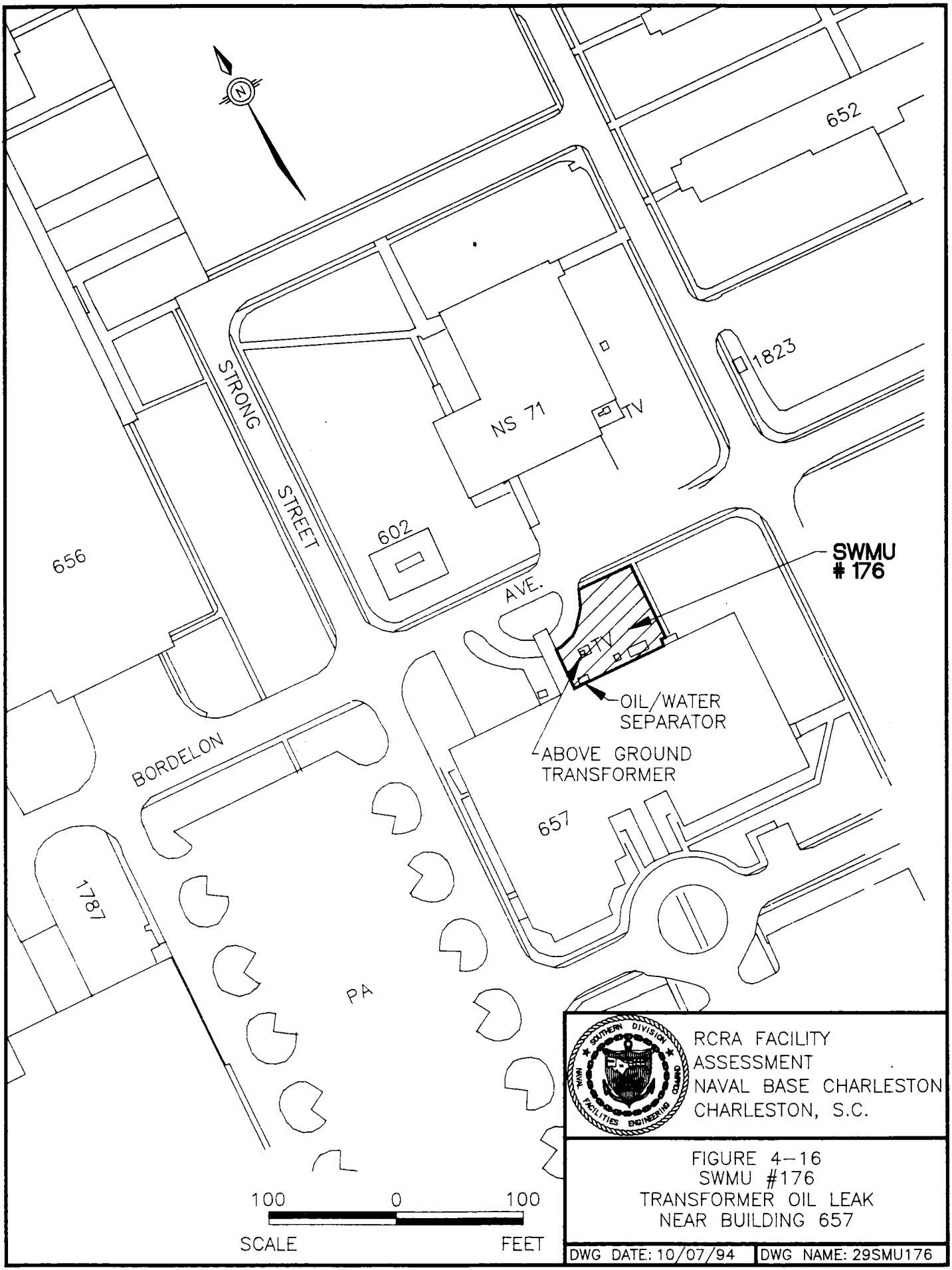
The primary constituent of concern for this unit is PCB-containing dielectric fluid. No documentation was found to indicate whether the dielectric fluids in the transformer have ever been sampled and analyzed. It is therefore possible that the dielectric fluids within this transformer contain PCBs.

4.16.3 Migration Pathways

No containment is in place to capture any leaks or spilled materials from the aboveground unit. For this reason, potential migration pathways include soil, groundwater, and surface water runoff. Since PCBs are nonvolatile compounds which are not considered very mobile, air and subsurface gas are not considered potential pathways.

4.16.4 Evidence of Release

The preliminary review found no evidence of releases from this unit. No spill or inspection reports were accessible to indicate any past releases from this transformer. No visual indications of releases such as staining or stressed vegetation were detected at the unit.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-16
SWMU #176
TRANSFORMER OIL LEAK
NEAR BUILDING 657

DWG DATE: 10/07/94 | DWG NAME: 29SMU176

4.16.5 Exposure Potential

No residential areas exist in the vicinity of this unit, which is located approximately 2500 feet from the Cooper River. The area is an active component of the Naval Base Electrical distribution system; therefore, the potential for exposure exists for these current users as well as for future users of this site.

4.16.6 Recommended Action

NFI is recommended based upon the age of the transformer, lack of evidence of release through visual observations, reports, interviews and limited exposure potential.

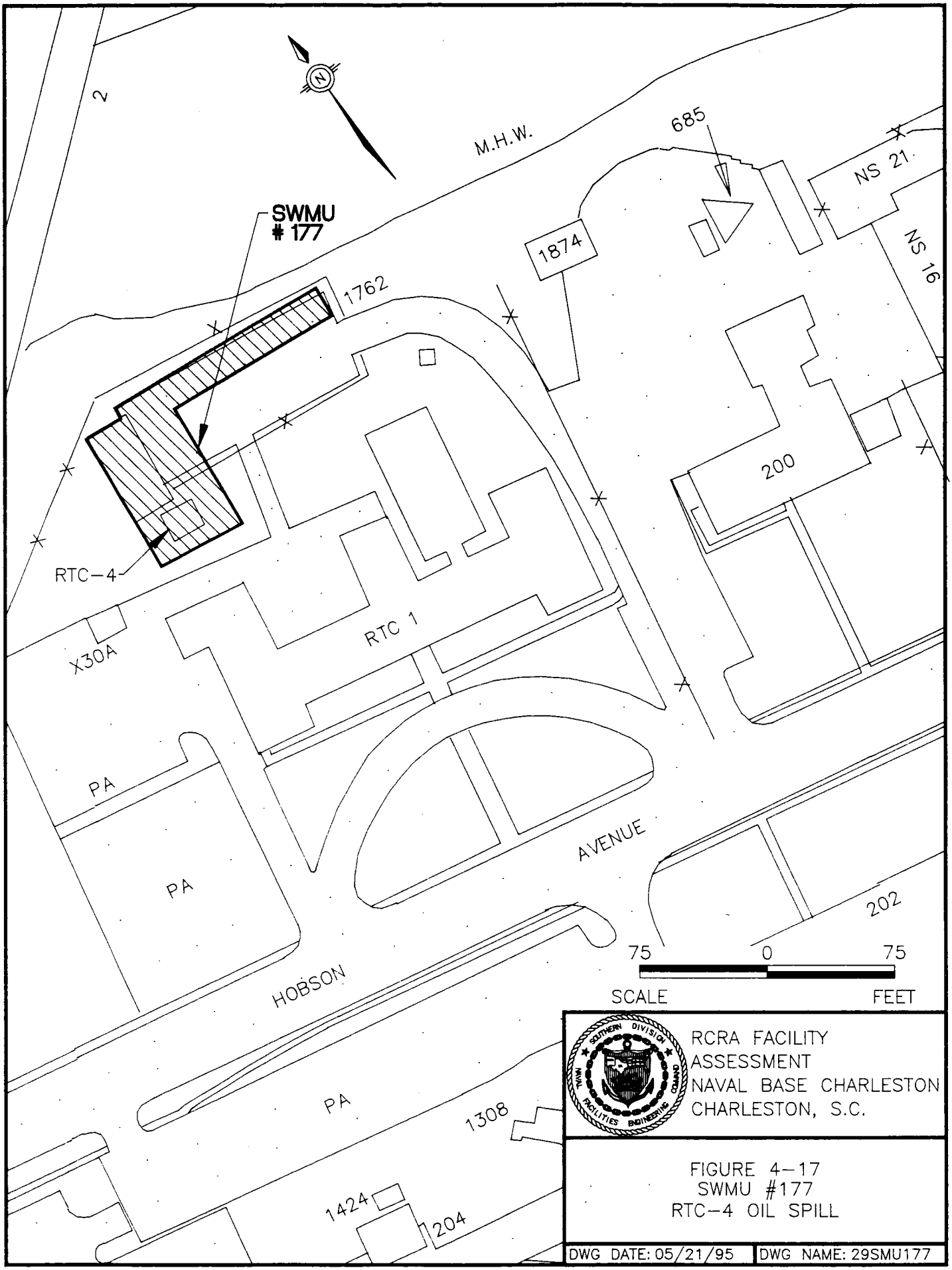
4.17 SWMU #177 — RTC-4 Oil Spill

4.17.1 Unit Characteristics

SWMU #177 consists of two adjacent buildings both of which have been designated as Building RTC-4. The original RTC-4 was a 24' x 60' metal structure used to house heavy equipment including backhoes and trackhoes. Recently, however, the designation RTC-4 has been given to a newer facility built adjacent to the former RTC-4. The new RTC-4 is used to store lawn mowers and other lawn maintenance equipment. This unit was designated as a SWMU because of oil spillage associated with operations at these two buildings. Visual inspection of the buildings found indications of minor oil spillage on the asphalt surfaces both inside and outside the buildings. During the visual inspection of the original RTC-4, staining from a large petroleum spill (i.e., several gallons) was observed within the building; the characteristics of the stain indicate that it may have been a spill of waste motor oil. The asphalt surface throughout the area is in poor condition. Stains were also observed outside of the building in the parking area resulting from a hydraulic fluid release from a facility fork lift. The buildings are located approximately 50 feet from the western bank of the Cooper River. SWMU #177 is shown on Figure 4-D, at coordinates L-19 and Figure 4-17 provides the location at grid coordinates M-18.

4.17.2 Waste Characteristics

Wastes associated with this SWMU include petroleum products associated with internal combustion engine operations. These include compounds such as lubricating oil, anti-freeze, and motor oil. Minor spillage consisting of drippage from vehicles and other equipment is known to have occurred. Visual evidence of a motor oil spill of several gallons was noted during the visual site inspection.


SWMU
177
M.H.W.
685
NS 21
NS 16
1874
1762
200
RTC–4
X30A
RTC 1
PA
PA
PA
AVENUE
HOBSON
202
1308
1424
204
75
0
75
SCALE
FEET
RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4–17
SWMU #177
RTC–4 OIL SPILL
DWG DATE: 05/21/95
DWG NAME: 29SMU177

4.17.3 Migration Pathways

Due to the proximity of this unit to the Cooper River and the characteristics exhibited by the potential contaminants, surface water runoff to the Cooper River is a potential migration pathway. The poor condition of the asphalt surface increases the potential for soil and groundwater migration. Air and subsurface gas are also considered possible pathways due to possible VOCs within the petroleum compounds.

4.17.4 Evidence of Release

During the visual site inspection, spills of petroleum products consisting of drippage from vehicles and other equipment was noted on the asphalt pavement both inside and outside the buildings. Staining from a large petroleum spill (i.e., several gallons) was observed within the original RTC-4 building; the characteristics of the stain indicate that it may have been a spill of waste motor oil. No spill reports, inspection reports, documented employee complaints, or employee interviews provided any additional indications of releases at this site.

4.17.5 Exposure Potential

Due to the nature of the wastes stored at this unit and its proximity to the Cooper River, the potential exists for exposure to ecological receptors in the Cooper River. Naval Base Charleston personnel who frequent this unit and future users of this area may also be potential receptors. No residential areas are located in the vicinity of this unit.

4.17.6 Recommended Action

A CSI is recommended based on the physical evidence of releases at this unit, the migration pathways and the unit's proximity to the Cooper River.

4.18 SWMU #178 — Site of Apparent Transformer Fire Outside of Building NS-53

4.18.1 Unit Characteristics

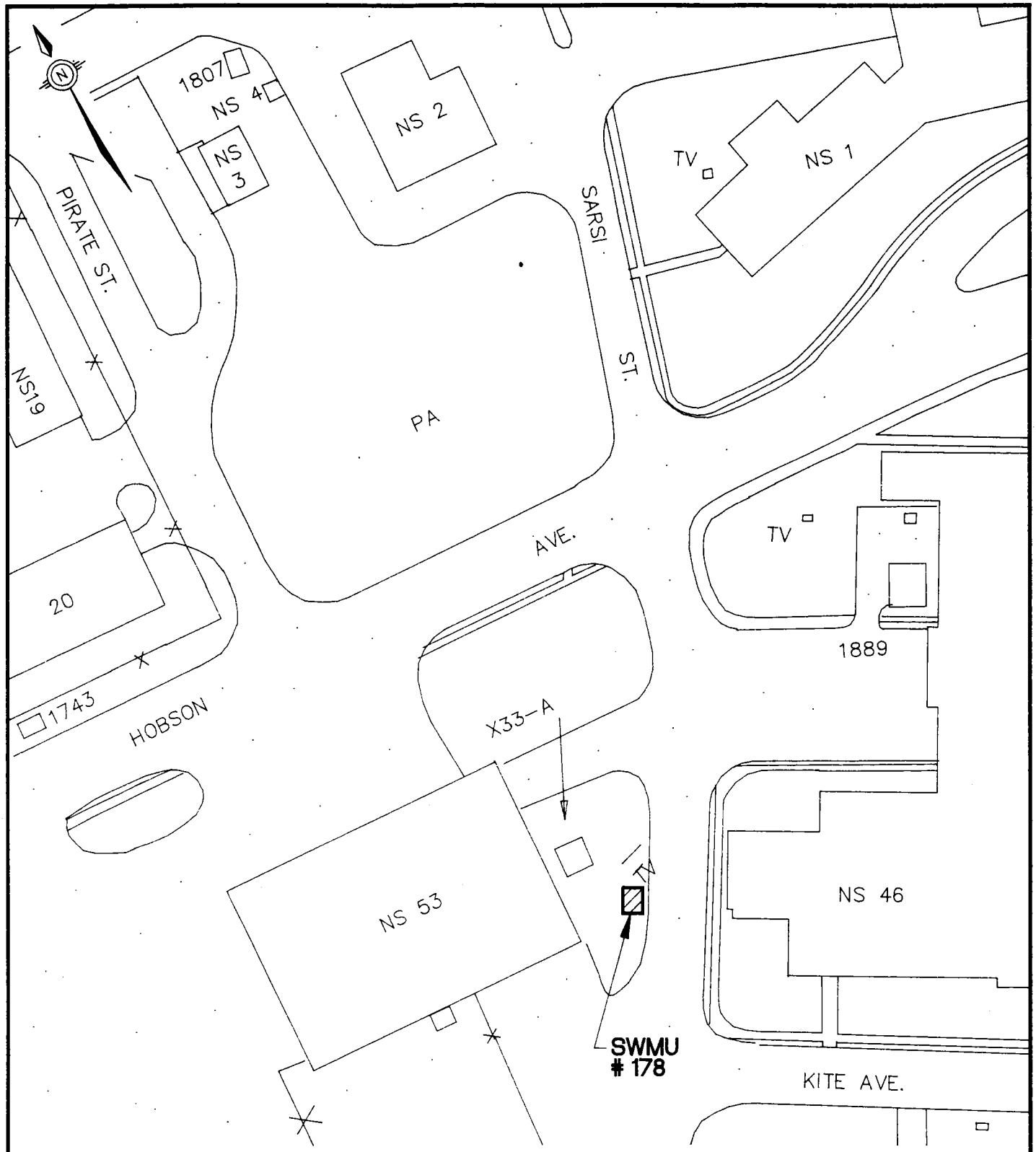
SWMU #178 consists of a single pole-mounted transformer situated above a concrete slab outside of Building NS-53. The transformer is mounted on a platform suspended at an elevation of approximately 20 feet. The platform is supported by two poles of approximate eight-inch diameter. The concrete pad has dimensions of 12' x 9' x 6" and is located inside a barbed-wire fence. Visual inspection of the unit revealed that the wooden poles and platform had a blackened, burned appearance, possibly indicating a past fire at the structure. However, closer inspection revealed that the wooden structure was soaked in a creosote-like preservative. This material was noted to be running down the poles and drippage was noted on the concrete pad. For this reason, as well as the through document review and employee interviews, it does not appear that this unit was ever involved in a fire. A storm drain is located approximately 4 feet from the southeast corner of the fence around the pad. Figure 4-D locates NS-53 at map coordinates L-16, and Figure 4-18 provides further detail.

4.18.2 Waste Characteristics

Wastes associated with this unit include possible PCBs from the transformer dielectric fluids as well as creosote-like and other petroleum products associated with wood preservatives. Typical components of such petroleum products include benzene, ethylbenzene, toluene, xylene, and polynuclear aromatic hydrocarbons.

4.18.3 Migration Pathways

No containment exists around the concrete pad; therefore, migration of contaminants via storm water runoff is possible. Runoff would likely enter the adjacent storm sewer drain and enter the Cooper River, located approximately 600 feet from the unit. This could also result in migration through the soil and groundwater. Air and subsurface gas are not considered potential pathways for PCB contaminants; however, the potential for migration of the wood preservative chemicals via these pathways is a possibility.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-18
SWMU #178
SITE OF APPARENT TRANSFORMER FIRE
OUTSIDE OF BUILDING NS-53

DWG DATE: 09/20/94 | DWG NAME: 29SMU178

4.18.4 Evidence of Release

A visual inspection of the site indicated stains on the concrete pad where the wood preservative materials had dripped onto the pavement; the grass around the slab was dead. This area is reportedly treated with a herbicide as part of the base routine maintenance program to minimize vegetative growth; however, the stressed vegetation indicated soil stressors. No spill reports, inspection reports, documented public complaints, or employee interviews provided any additional indications of releases from this site.

4.18.5 Exposure Potential

The visual indications of a release are located inside a barbed wire fence limiting exposure to those employees who enter the fenced area and future users of this site. Soil and groundwater may also have been affected at this site. Runoff from the site entering the base storm water sewer system could potentially expose ecological receptors in the Cooper River located approximately 600 feet from the unit.

4.18.6 Recommended Action

A CSI is recommended based upon the potential contaminants associated with this unit, the potential migration pathways, and visual evidence of releases at the unit.

4.19 SWMU #179 — Satellite Accumulation Area, Building 222, Shipping and Receiving, CNSY Permit #90

4.19.1 Unit Characteristics

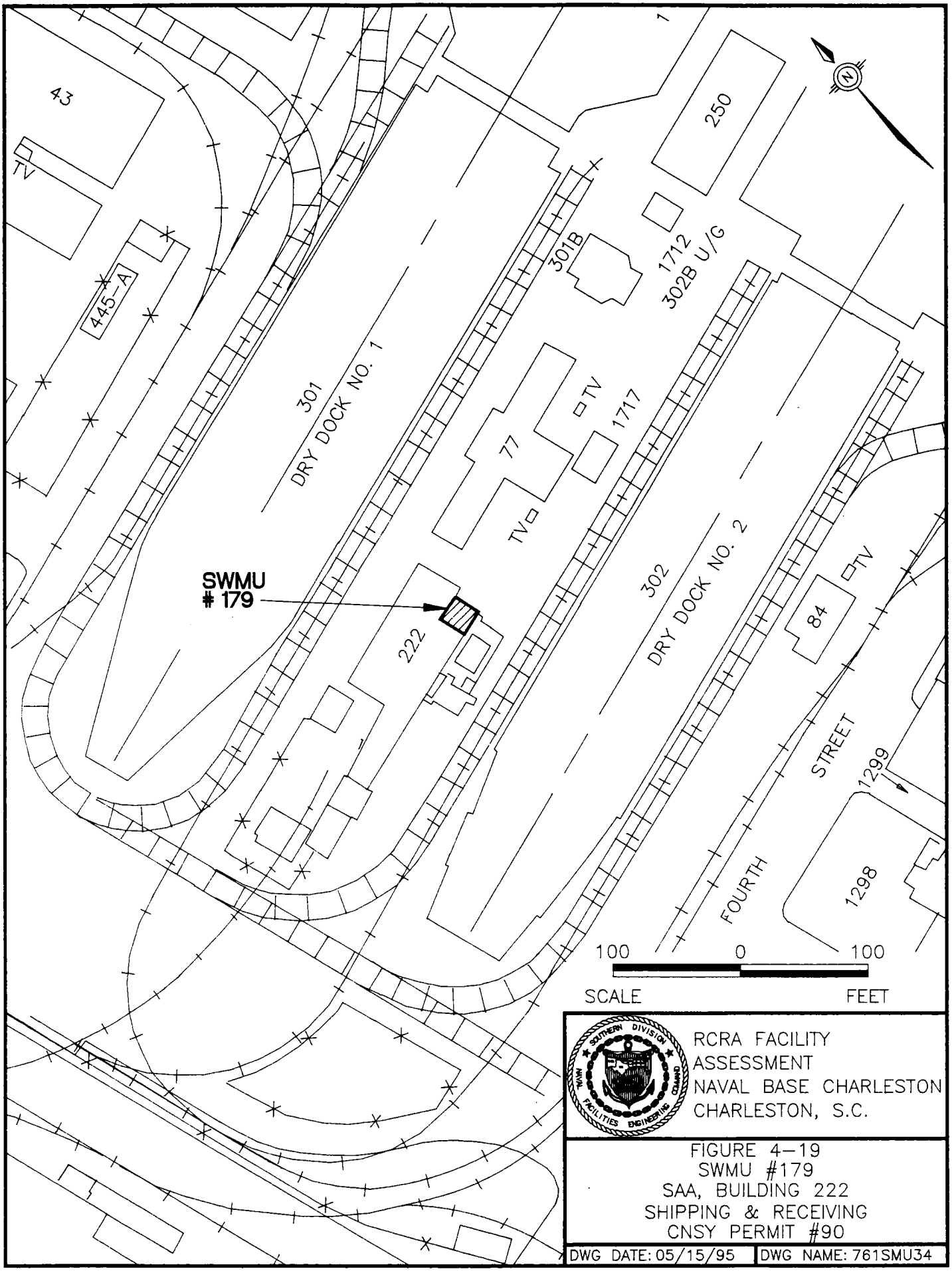
SWMU #179 consists of a satellite accumulation area (SAA) located on the first floor of Building 222 in the shipping and receiving area; this facility is an element of the CNSY hazardous waste management system. Hazardous and/or mixed wastes are accumulated [in accordance with 40 CFR 262.34(c) and SCHWMR R.61-79.262.34(c)] within this unit. Hazardous waste is then transferred to Building 1640, a permitted hazardous waste storage facility where hazardous wastes generated basewide are stored prior to shipment offsite for treatment and/or disposal. Mixed wastes are transferred to Building 246 for storage pending offsite disposal per the Federal Facility Compliance Act. Wastes are stored in 55-gallon drums on an epoxy sealed concrete floor. No floor drains are located within this unit. Building 222 is located at map coordinates G-41 on Figure 4-B. The SWMU location is illustrated in Figure 4-19.

4.19.2 Waste Characteristics

Wastes associated with this SAA include flammable wastes (solvents and paints), lead, cadmium, brass, and bronze.

4.19.3 Migration Pathways

Soil, groundwater, surface water, and subsurface gas are considered unlikely pathways because of the containment provided by the building itself and the epoxy sealed concrete floor. Visual inspection of the floor revealed no cracking or deterioration in the vicinity of this SAA. The potential for migration via the air pathway exists due to the presence of flammable volatile materials.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-19
SWMU #179
SAA, BUILDING 222
SHIPPING & RECEIVING
CNSY PERMIT #90

DWG DATE: 05/15/95 | DWG NAME: 761SMU34

4.19.4 Evidence of Release

The preliminary review found no spill reports, inspection reports, employee interviews, or visual observations which would indicate any releases at this unit.

4.19.5 Exposure Potential

No residential areas or sensitive environments are located in the vicinity of this SAA. The limited storage capacity, nature of waste, and lack of evidence of releases limits potential exposure to Naval Base Charleston employees and future users of this site.

4.19.6 Recommended Action

NFI is recommended for this SWMU due to the use of proper storage practices, the lack of evidence of release, and the limited migration pathways.

4.20 SWMU #180 — Building 222, Satellite Accumulation Area, New Fuel Enclosure, CNSY Permit #102

4.20.1 Unit Characteristics

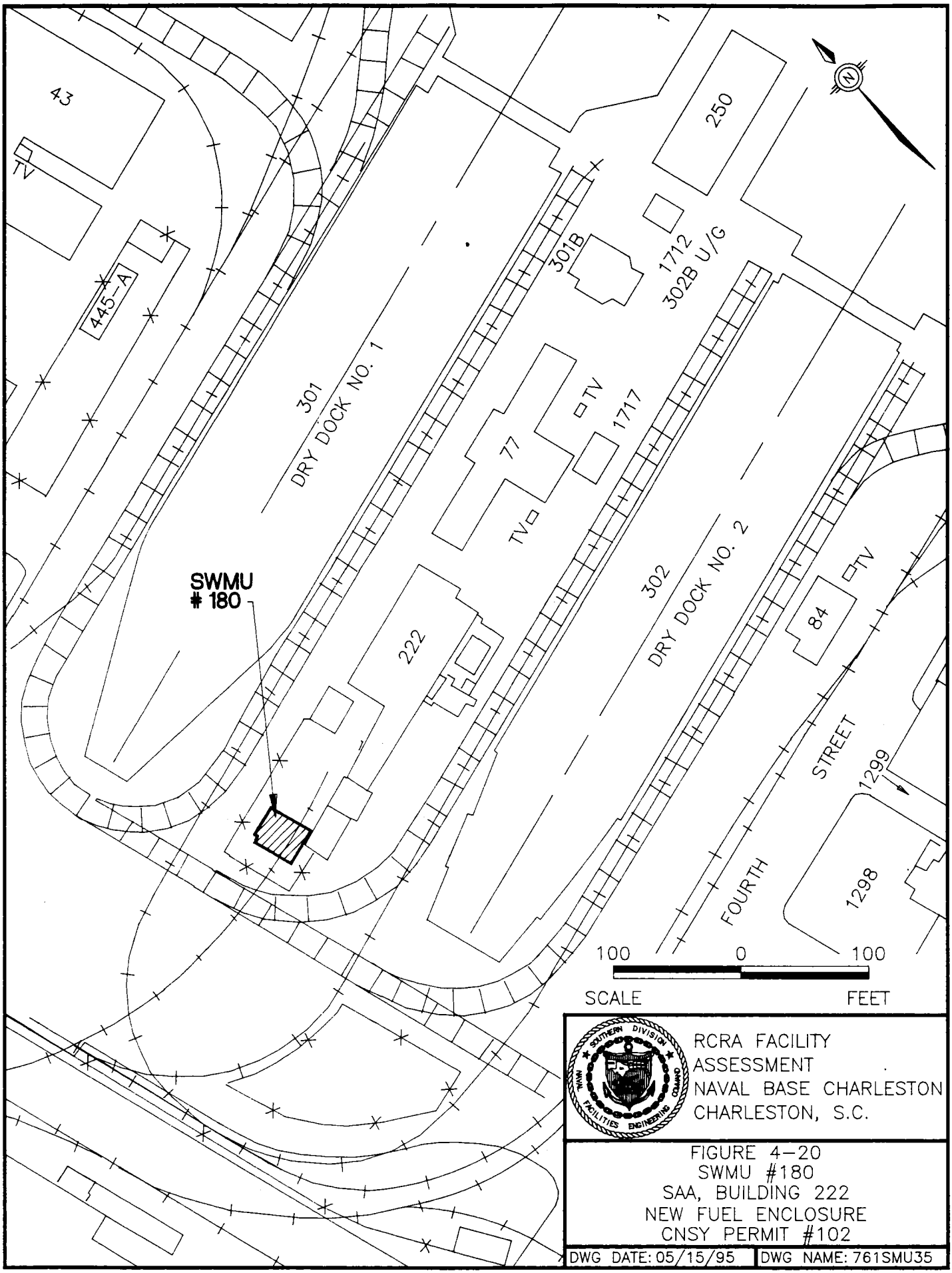
SWMU #180 consists of a satellite accumulation area (SAA) located within the New Fuel Enclosure (NFE) at Building 222; the facility is an element of the CNSY hazardous waste management system. Hazardous and/or mixed wastes are accumulated [in accordance with 40 CFR 262.34(c) and SCHWMR R.61-79.262.34(c)] within this unit. Hazardous waste is then transferred to Building 1640, a permitted hazardous waste storage facility where hazardous wastes generated basewide are stored prior to shipment offsite for treatment and/or disposal. Mixed wastes are transferred to Building 246 for storage pending offsite disposal per the Federal Facility Compliance Act. The NFE is constructed of metal walls painted with a special epoxy paint and the floors are constructed of seal-welded stainless steel. Wastes are stored in 55-gallon drums on the stainless steel floor. Building 222 is located at map coordinates G-41 on Figure 4-B. The SWMU location is illustrated in Figure 4-20.

4.20.2 Waste Characteristics

Wastes associated with this unit consist of flammable wastes (solvents and paints), lead, cadmium, brass, and bronze.

4.20.3 Migration Pathways

Soil, groundwater, surface water, and subsurface gas are considered unlikely pathways because of the containment provided by the building itself and the seal-welded stainless steel floor. Visual inspection of the floor revealed no cracking or deterioration in the vicinity of this SAA. The potential for migration via the air pathway exists due to the presence of flammable volatile materials.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-20
SWMU #180
SAA, BUILDING 222
NEW FUEL ENCLOSURE
CNSY PERMIT #102

DWG DATE: 05/15/95 | DWG NAME: 761SMU35

4.20.4 Evidence of Release

The preliminary review found no spill reports, inspection reports, employee interviews, or visual observations which would indicate any releases at this unit.

4.20.5 Exposure Potential

No residential areas or sensitive environments are located in the vicinity of this SAA. The limited storage capacity, nature of waste, and lack of evidence of releases limits potential exposure to Naval Base Charleston employees and future users of this site.

4.20.6 Recommended Action

NFI is recommended for this SWMU due to the use of proper storage practices, the lack of evidence of release, and the limited migration pathways.

J WATER BODIES
L BASEWIDE SITES (i.e. - sewer system)
A
B
C
D
COOPER RIVER
CENTER LINE CHANNEL PROJECT DEPTH 42'
INNER CHANNEL LINE
MEAN HIGH WATER
18 HOLE GOLF COURSE 1410
SWMU #1 DRMO STORAGE
SWMU #40 BLDG. 1640 DRMO
SWMU #38 MICELLANEOUS STORAGE
SWMU #2 LEAD CONT. AREA
SWMU #39 POL DRUM STORAGE
SWMU #41 BLDG. 1624
SWMU #42 ASPHALT PLANT
SWMU #43 BLDG. 1628
SWMU #44 COAL STORAGE AREA
SWMU #47 BURNING DUMP
SWMU #45 BLDG. NH-51 SAA
SWMU #46 BLDG. NH-21 SAA
SWMU #48 BLDG. 234 SAA
SWMU #186 BLDG. 58 PERMIT #105
SWMU #49 BLDG. 219
SWMU #50 BLDG. NH-1 SAA
SWMU #51 BLDG. NH-51 SAA
SWMU #52 BLDG. NH-51 SAA
SEABOARD COASTLINE RR
BOUNDARY LINE
NOT TO SCALE
NAVAL BASE CHARLESTON FACILITY LOCATION MAP
1972 3° 00' WEST
LEGEND
D - RCRA INVESTIGATION ZONES
300 0 300 600 900
GRAPHIC SCALE
RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 4-A
SOLID WASTE MANAGEMENT UNIT
SITE LOCATION MAP
ZONES A-D
Dr by: E.GRIGGS
Tr by: E.ROGERS
Ck by: E.GRIGGS
App by: E.GRIGGS
Date: 02/23/95
DWG Name: 76SROV5A
Sheet 1
Of 1

00084IB2X

RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-B
SOLID WASTE MANAGEMENT UNIT
SITE LOCATION MAP
ZONE E

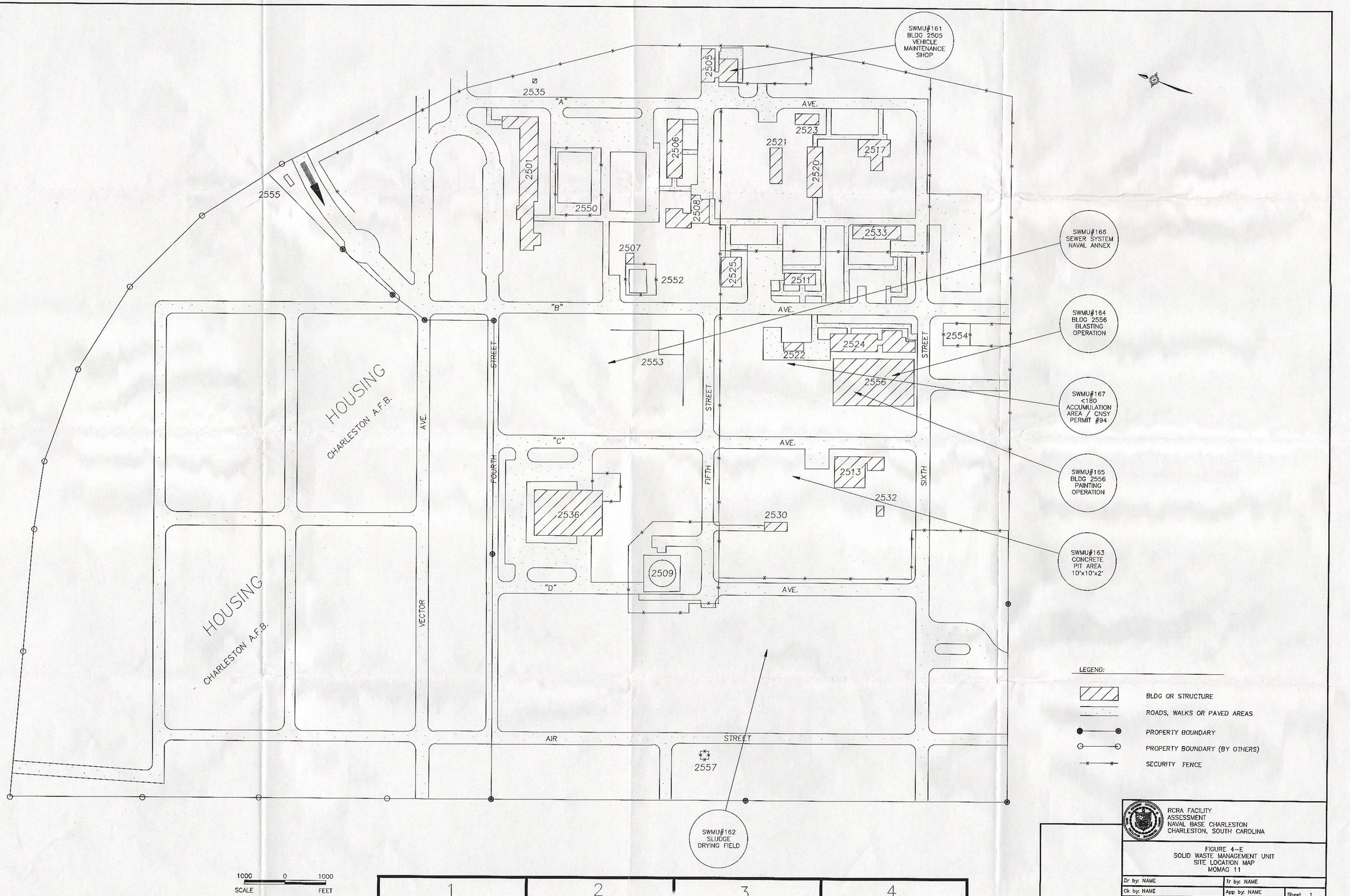
Dr by: E.GRIGGS	Tr by: E.ROGERS	
Ck by: E.GRIGGS	App by: E.GRIGGS	Sheet 1
Date: 02/23/95	DWG Name: 76SROV6A	Of 1

RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 4-C
SOLID WASTE MANAGEMENT UNIT
SITE LOCATION MAP
ZONES F-G

Dr by: E.GRIGGS	Tr by: E.ROGERS	
Ck by: E.GRIGGS	App by: E.GRIGGS	Sheet 1
Date: 02/23/95	DWG Name: 76SROV7A	Of 1

LEGEND
D - RCRA INVESTIGATION ZONES
J WATER BODIES
COOPER RIVER
H
I
DREDGED MATERIALS AREA
L BASEWIDE SITES (i.e. - sewer system)
SHIPYARD RIVER
MARINA
MATCH LINE
BOUNDARY LINE
CENTERLINE CHANNEL PROJECT DEPTH 42'
INNER CHANNEL LINE
SWMU #13 CURRENT FIRE FIGHTER AREA
SWMU #141 PIER Q SAA
SWMU #140 PIER P SAA
SWMU #139 PIER P SAA
SWMU #123 BLDG. 636 SAA
SWMU #124 BLDG. 1508 SAA
SWMU #122 BLDG 636 SAA
SWMU #19 SOLID WASTE TRANSFER
SWMU #20 WASTE DISPOSAL AREA
SWMU #128 BLDG. 202 SAA
SWMU #125 BLDG. 202 SAA
SWMU #177 RTC-4 OIL SPILL
SWMU #126 BLDG. 202 SAA
SWMU #129 BLDG. 202 SAA
SWMU #127 BLDG. 202 SAA
SWMU #130 BLDG. 202 SAA
SWMU #160 PORT SERVICES
SWMU #17 OIL SPILL AREA
SWMU #136 BLDG. NS-53 SAA
SWMU #178 APPARENT TRANSFORMER FIRE BLDG NS53
SWMU #142 BLDG. 681 SAA
SWMU #138 BLDG. 1776 SAA
SWMU #15 INCINERATOR
SWMU #14 CHEMICAL DISPOSAL AREA
SWMU #16 PAINT STORAGE BUNKER
ABANDONED SUBSURFACE CHEMICAL DISPOSAL AREA
SWMU #132 BLDG. 61 SAA
SWMU #134 BLDG. 61 SAA
SWMU #133 BLDG. 61 SAA
SWMU #135 BLDG. 61 SAA
SWMU #176 TRANSFORMER OIL LEAK BLDG 657
TWO MARK-17 DEPTH BOMBS JETTISONED 8 OCTOBER 1943
SWMU #131 BLDG. NS-67 SAA
SWMU #137 BLDG. 675 SAA
SWMU #12 FIRE FIGHTER TRAINING AREA
SWMU #121 BLDG. 801 SAA
SWMU #9 CLOSED LANDFILL
SWMU #159 BLDG 665 SAA
NAVAL DEGAUSSING STATION
NOT TO SCALE
NAVAL BASE CHARLESTON FACILITY LOCATION MAP
GRAPHIC SCALE
RCRA FACILITY ASSESSMENT NAVAL BASE CHARLESTON CHARLESTON, S.C.
FIGURE 4-D SOLID WASTE MANAGEMENT UNIT SITE LOCATION MAP ZONES H-J
Dr by: E.GRIGGS
Tr by: E.ROGERS
Ck by: E.GRIGGS
App by: E.GRIGGS
Sheet 1 Of 1
Date: 02/23/95
DWG Name: 76SRDV8A



LEGEND:

- BLDG OR STRUCTURE
- ROADS, WALKS OR PAVED AREAS
- PROPERTY BOUNDARY
- PROPERTY BOUNDARY (BY OTHERS)
- SECURITY FENCE

RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

FIGURE 4-E
SOLID WASTE MANAGEMENT UNIT
SITE LOCATION MAP
MOMAG 11

Dr by: NAME	Tr by: NAME		
Ck by: NAME	App by: NAME	Sheet	1
Date: 10/18/94	DWG Name: 29ANXSMU	Of	1

5.0 AREAS OF CONCERN

5.1 AOC #696 — Transformer Area Near Building 2509, MOMAG 11

5.1.1 Unit Characteristics

AOC #696 consists of five transformers (2 former, 3 present) located north of Building 2509 at Naval Annex MOMAG 11. In 1991 sampling was performed on the five transformers to determine if the dielectric fluid contained PCBs. Results showed that the dielectric fluid contained less-than-50 ppm PCBs. That same year two of the five transformers were removed from service. The remaining transformers are situated on a 24' x 24' x 6" concrete slab, and supply power to Building 2509. Figure 5-E locates this site at MOMAG 11, at coordinates D-3 and Figure 5-1 depicts the site relative to the current features of the area.

5.1.2 Waste Characteristics

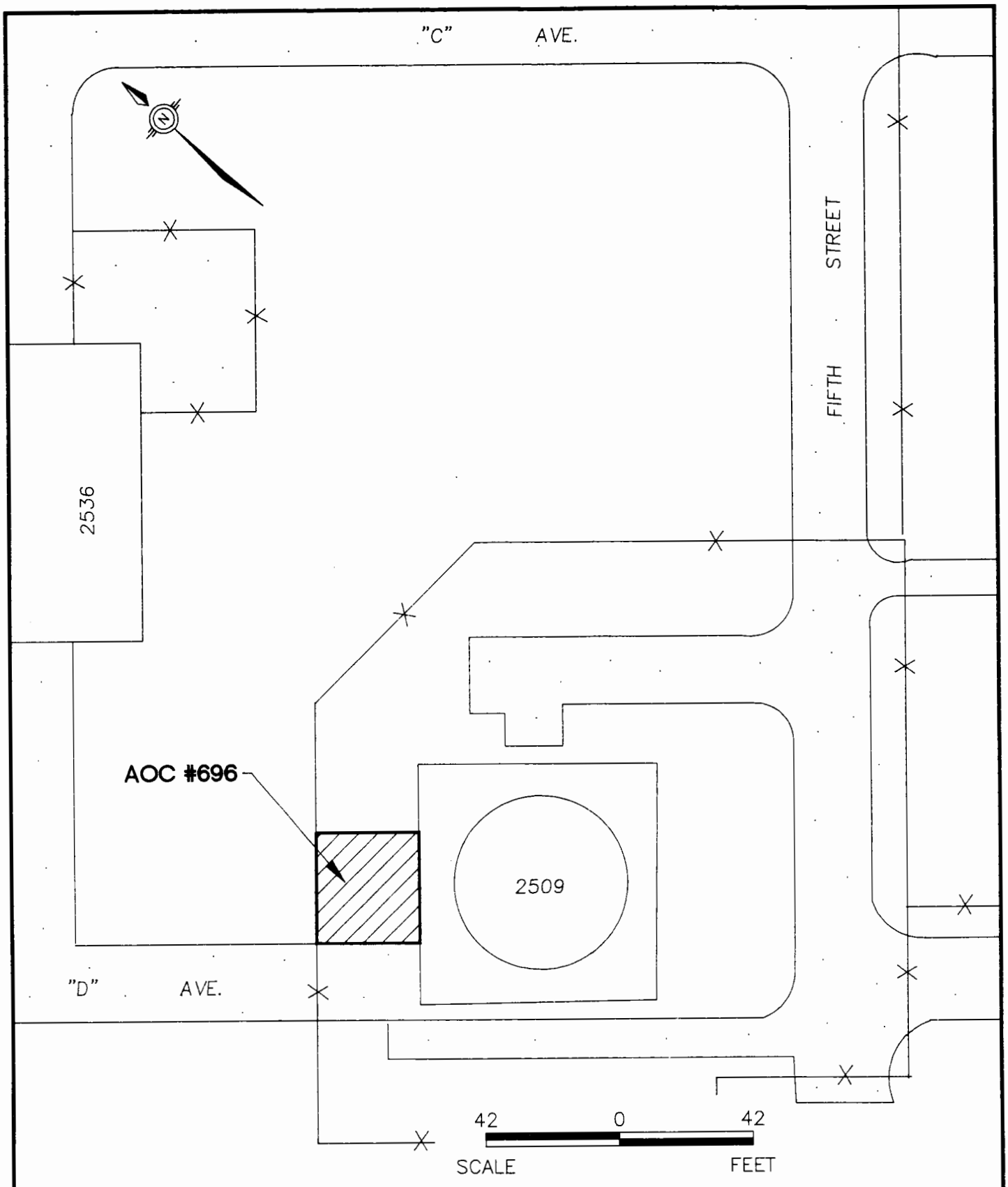
The primary constituent of concern for this AOC is dielectric fluid which may contain PCBs. However, these transformers have been sampled and analyzed for PCB content and all have been found to contain less-than-50 ppm PCBs, and therefore classified as non-PCB units.

5.1.3 Migration Pathways

No containment is associated with this unit. Consequently, soil, groundwater, and surface water are potential migration pathways. Due to the nonvolatile nature of the contaminants of concern, air and subsurface gas are not considered potential pathways.

5.1.4 Evidence of Release

During the time of the site inspection, a past release from the middle transformer was noted. The concrete around the unit was heavily stained, and the vegetation surrounding the concrete slab was stressed. No additional indications of releases were found during the preliminary review.



RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 5-1
AOC 696
TRANSFORMER AREA NEAR BLDG 2509
MOMAG 11

DWG DATE: 05/16/95 | DWG NAME: 29AOC696

5.1.5 Exposure Potential

A residential area is located within 450 feet of the unit. The base storm water drainage system should prevent surficial migration into the residential area. Exposure may occur to present and future users of this area.

5.1.6 Recommended Action

A CSI is recommended based on the evidence of past release, the stressed vegetation encountered during the VSI, and potential for PCB exposure. The CSI will determine the vegetative stressor interfering with ambient vegetative growth.

5.2 AOC #697 — Transformer Area Near Building 2554, MOMAG 11

5.2.1 Unit Characteristics

AOC #697 consists of an electrical substation designated as Facility 2554. It was constructed in 1961 and consists of an approximately 18' x 18' gravel area surrounded by a chain link fence. The substation is situated in the center of the gravel area, and contains two transformers as well as incoming and outgoing power lines. Figure 5-E locates this site at MOMAG 11, at coordinates B-4 and Figure 5-2 depicts the site relative to the current features of the area.

5.2.2 Waste Characteristics

The primary constituent of concern at this AOC is dielectric fluid which may contain PCBs. However, these transformers have been sampled and analyzed for PCB content and all have been found to contain less-than-50 ppm PCBs, and therefore classified as non-PCB units.

5.2.3 Migration Pathways

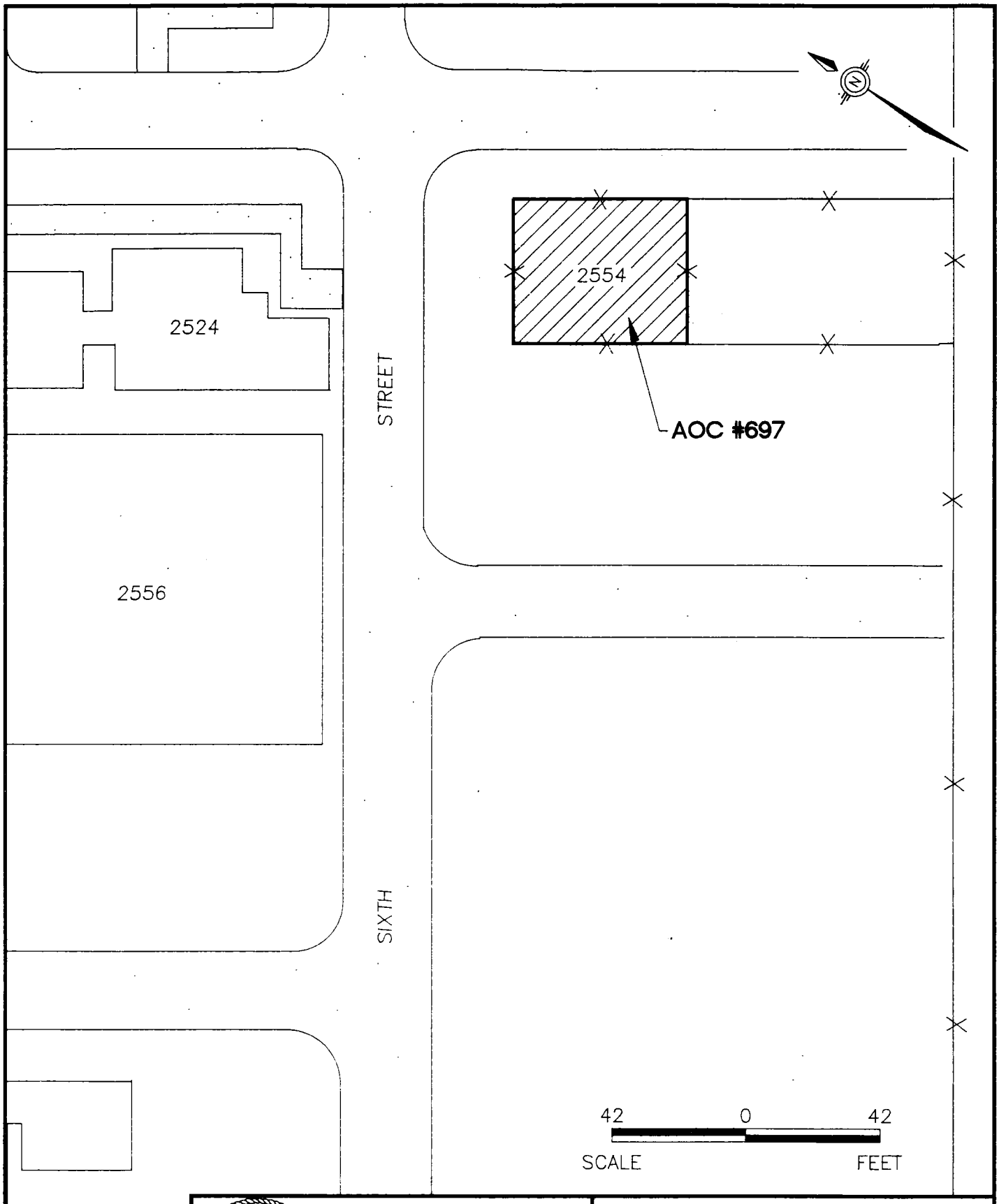
No containment is associated with this unit. Consequently, soil, groundwater, and surface water runoff are potential migration pathways. Due to the nonvolatile nature of the contaminants of concern, air and subsurface gas are not considered potential pathways.

5.2.4 Evidence of Release

No indications of releases from this unit were found during the preliminary review. However, visual inspection of the unit revealed staining of the transformer concrete base.

5.2.5 Exposure Potential

A residential area is located within 450 feet of the unit. The base storm water drainage system should prevent surficial migration into the residential area. Exposure may occur to present and future users of this area.



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 5-2
AOC 697
TRANSFORMER AREA NEAR BLDG 2554
MOMAG 11

DWG DATE: 05/16/95 | DWG NAME: 29AOC697

5.2.6 Recommended Action

NFI is recommended for this site due to no visual or documented release information associated with this AOC and the limited migration pathways.

5.3 AOC #698 — Building 2508, Boiler House, Marine Corp Reserve Training Center, Naval Annex

5.3.1 Unit Characteristics

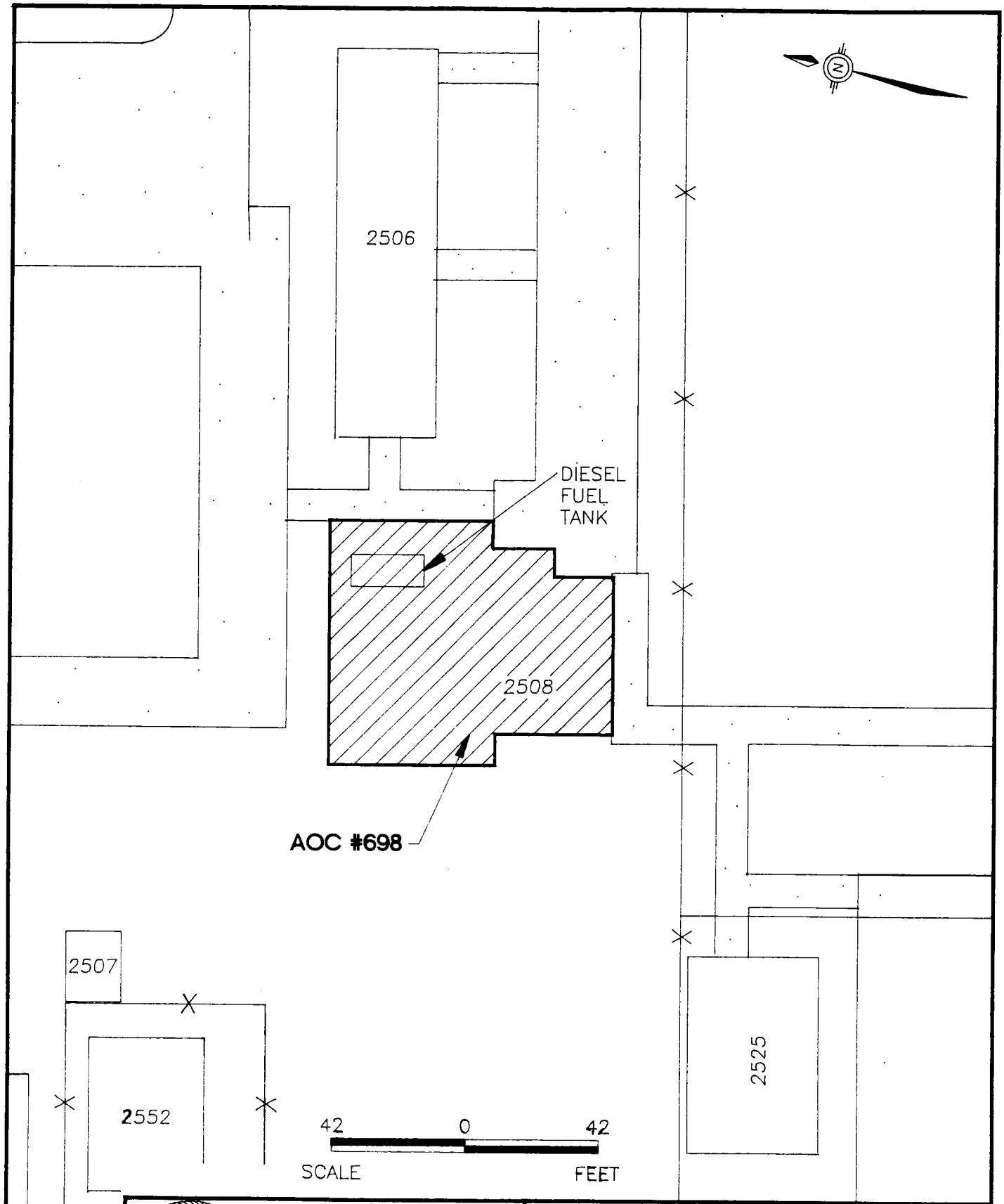
AOC #698 consists of Building 2505, a former boiler house, located at the Marine Corp Reserve Training Center. The unit is designated as an AOC because of the presence of peeling lead-based paint which is present on both the interior and exterior of the building. The building was formerly operated as a boiler house and has been out of service for several years. A large (approximately 7500 gallon) above-ground storage tank is situated inside a concrete containment structure approximately 35 feet from the building. The tank is also coated with peeling paint which may contain lead. Figure 5-E locates this site at MOMAG 11, at coordinates B-3 and Figure 5-3 depicts the site relative to the current features of the area.

5.3.2 Waste Characteristics

The constituent of concern for this unit is lead contained in a paint matrix.

5.3.3 Migration Pathways

Paint chips that have fallen to the ground are subject to decomposition by weather and human activities such as grass cutting. As the size of the paint chips becomes smaller, the surface area is increased, which in turn increases the oxidation potential. As lead-based paint oxidizes, a lead-containing powder forms that is readily leachable and will migrate to soil and may percolate through the soil into the groundwater. As such, soil and groundwater are potential migration pathways. Surface water runoff provides another migration route for both paint chips and lead



RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 5-3
AOC #698
BUILDING 2508, BOILER HOUSE
MARINE CORPS RESERVE TRAINING CENTER
NAVAL ANNEX

DWG DATE: 05/21/95 | DWG NAME: 29AOC698

that has been leached. Surface water from this site migrates to the North Charleston storm sewer system. Migration of lead-containing dust particles is also a viable pathway.

5.3.4 Evidence of Release

Visual inspection of the site revealed paint chips strewn on ground surrounding Building 2508. Laboratory testing of soils taken from areas visually determined to contain paint chips confirm elevated levels of lead in the soil. This testing was conducted using method SW-836 for analysis of toxicity characteristic leachate procedure (TCLP) metals.

5.3.5 Exposure Potential

Exposure to lead-based paint chips may occur to military and civilian personnel involved in maintenance of the grounds in the area, as well as workers involved in the removal of the paint from the walls. No residential areas, aquatic habitats, or ecologically sensitive environments are in close proximity to the site.

5.3.6 Recommended Action

An RFI is recommended for this site due to the evidence of a release and exposure potential to future users.

J WATER BODIES
COOPER RIVER
A
B
C
D
L BASEWIDE SITES (i.e. - sewer system)
18 HOLE GOLF COURSE 1410
AOC #506 BLDG. 1629 FLAMMABLE STORAGE
AOC #504 RAILROAD SYSTEM
AOC #505 CROSS-TIE STORAGE
AOC #507 OIL STORE HOUSE
AOC #700 BLDG. 1646 GOLF MAINT.
AOC #509 BLDG. 1079 HAZ/FLAM
AOC #512 INCINERATOR BLDG.
AOC #516 BLDG. 233 WASH AREA
AOC #515 BLDG. 51 INCINERATOR
AOC #513 OLD MORGUE
AOC #510 BLDG. NH-21 LAB
AOC #508 INCINERATOR
AOC #511 OIL HOUSE
AOC #514 BLDG. 1813 FLAMMABLE STORAGE
AOC #517 BLDG. M-192 RANGE
AOC #520 BLDG. M-1051 GARBAGE
AOC #519 BLDG. 1081 BOILERHOUSE
AOC #518 COAL BINS
AOC #521 BLDG. 1052 OIL HOUSE
AOC #523 BLDG. M-1234 GAS STATION STORAGE
AOC #701 GAS STATION BLDG #1141
AOC #522 BLDG. 198 GREASE & WASH
AOC #524 SUBSTATION 415-A
SEABOARD COASTLINE RR
BOUNDARY LINE
NOT TO SCALE
NAVAL BASE CHARLESTON FACILITY LOCATION MAP
LEGEND
D - RCRA INVESTIGATION ZONES
GRAPHIC SCALE
RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 5-A
AREA OF CONCERN
SITE LOCATION MAP
ZONES A-D
Dr by: E.GRIGGS
Tr by: E.ROGERS
Ck by: E.GRIGGS
App by: E.GRIGGS
Date: 02/23/95
DWG Name: 76SROV1A
Sheet 1 Of 1

00084IB3X

(J) WATER BODIES

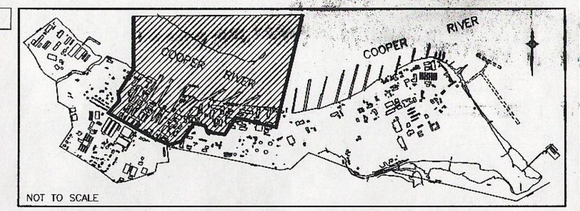
COOPER RIVER

AOC #536 SWITCHING SUBSTATION (460)
AOC #543 FORMER PLATING PLANT
AOC #542 BLDG. 22 ACETYLENE PLANT
AOC #544 BLDG. 221 PICKLING PLANT
AOC #537 SUBSTATION (342)
AOC #546 GALVANIZING SHOP (1025)
AOC #550 BOILER-HOUSE (1111)
AOC #551 BOILER-HOUSE PIER 314
AOC #555 LATRINE & SUBSTATION (20)
AOC #556 DRY DOCK DISCHARGES
AOC #525 BLDG. 223 PAINT SHOP
AOC #535 LATRINE (28)
AOC #529 BLDG. 2A COATING
AOC #534 LATRINE (27)
AOC #526 BLDG. 212 PAINT AREA
AOC #552 GALVANIZING SHOP (1030)
AOC #557 LATRINE (1020)
AOC #562 SUBSTATION (84)
AOC #567 SUBSTATION (75)
AOC #565 BLDG. 194 PAINT SHOP STORAGE
AOC #558 SUBSTATION (177)
AOC #584 SUBSTATION (451-H)
AOC #528 BLDG. 59 STEAM CLEANING
AOC #541 OIL STORAGE (38)
AOC #540 BLDG. 226 PLATING PLANT
AOC #527 TRANSFORMER HOUSE (24)
AOC #532 BLDG. 2 COPPER TANK
AOC #533 FORMER SWITCHING SUBSTATION
AOC #530 PAINT & OIL STORAGE BLDG 35
AOC #531 SWITCHING SUBSTATION (459)
AOC #538 BLDG. 6 FORGE SHOP
AOC #539 BLDG. 6 2YOLO
AOC #545 BLDG. 3 SURFACE COATING
AOC #547 BLDG. 5 FIBERGLASS SHOP
AOC #548 BLDG. 5 ELEVATOR
AOC #549 SCRAP YARD (1054)
AOC #553 SERVICE STATION (136)
AOC #554 PAINT SHOP (1003)
AOC #504 RAILROAD SYSTEM
AOC #559 CENTRAL POWER STA. (32)
AOC #560 DISINFECTOR (34)
AOC #561 SUBSTATION (451-B)
AOC #563 LOCOMOTIVE HOUSE (37)
AOC #569 FORMER SERVICE STA. 1279
AOC #570 COAL STORAGE AREA
AOC #571 BLDG. 177 PAINT BOOTHS
AOC #572 BLDG. 177 MOTOR AREA
AOC #573 BLDG. 177 ANODIZING
AOC #577 BLDG. 25 PAINT BOOTH
AOC #578 TRANSPORT. SHOP (25)
AOC #574 BLDG. 9 FUEL TANK
AOC #579 PAINT SHOP (1035)
AOC #580 PATTERN & ELEC. SHOP (10)
AOC #564 BLDG. 80 OIL/WATER SEPARATOR
AOC #575 SUBSTATION (454)
AOC #576 PRINT OFFICE (1012)
AOC #581 SUBSTATION RADIO LAB (20)
AOC #582 SUBSTATION (455)
AOC #583 BLDG. 236 NE CORNER
AOC #587 AVGAS STORAGE (21)
AOC #586 TEMPORARY POWERHOUSE (1014)
AOC #588 BLDG. 218 PAINT BOOTH
AOC #585 LATRINE (36)
AOC #589 SUBSTATION (85)
AOC #594 RADCON TRAINING OFFICE
AOC #595 LOCOMOTIVE SHED (119)
AOC #693 FUSE/PRIMER HOUSE (117)
AOC #694 FORMER AMMUNITION DEPOT
AOC #599 PIER J PUMP HOUSE
AOC #600 COALING PIER (318-L)
AOC #601 OIL PIER (319)
AOC #597 SUBSTATION (91)
AOC #598 SONAR DOME AREA
AOC #602 SUBSTATION (95)
AOC #603 BURNING DUMP
AOC #604 SUBSTATION (96)
AOC #605 BLDG. 1278 SW AREA
AOC #596 TORPEDO STORAGE (101)
AOC #595 BLDG. 1018 STORAGE
AOC #593 INCINERATOR (1711)
AOC #592 ASBESTOS SHREDDING (1225)
AOC #590 ALLEY BETWEEN 794&1760
AOC #591 CONTAMINATED STORAGE (1760)

INNER CHANNEL LINE
CENTER LINE CHANNEL PROJECT DEPTH 42'
PROJECT DEPTH 35'
PROJECT DEPTH 41'
FLOOD
EBB

(E)

(L) BASEWIDE SITES
(i.e. - sewer system)



NAVAL BASE CHARLESTON FACILITY LOCATION MAP

LEGEND

(D) – RCRA INVESTIGATION ZONES

300 0 300 600 900
GRAPHIC SCALE

RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.

FIGURE 5-B
AREA OF CONCERN
SITE LOCATION MAP
ZONE E

Dr by: E.GRIGGS	Tr by: E.ROGERS		
Ck by: E.GRIGGS	App by: E.GRIGGS	Sheet	1
Date: 02/23/95	DWG Name: 76SROV2A	Of	1

NAVAL BASE CHARLESTON FACILITY LOCATION MAP
NOT TO SCALE
COOPER RIVER
J WATER BODIES
L BASEWIDE SITES (i.e. - sewer system)
F
G
COOPER RIVER
AOC #504 RAILROAD SYSTEM
AOC #606 BLDG. 187 PAINT BOOTH
AOC #607 BLDG. 1189 DRY CLEANING
AOC #608 PAINT STORAGE (1263)
AOC #609 BLDG. 1346 GAS STATION
AOC #610 BLDG. 241 PAINT BOOTH
AOC #611 GREASE RACK AND HOBBY SHOP
AOC #612 SUBSTATION (94)
AOC #613 OLD LOCOMOTIVE SHOP
AOC #614 BLDG. 242 PAINT BOOTH
AOC #615 FORMER BLDG 1391 CHAIN LOCKER
AOC #616 PAINT SHOP (1201)
AOC #617 BLDG. 69 FORMER GALVANIZING
AOC #618 SWITCHING SUBSTATION (466)
AOC #619 OIL STORAGE YARD
AOC #620 BLDG. 68 BATTERY SHOP
AOC #621 BLDG. 68 BATTERY CRACKING
AOC #622 BALLAST WATER TRTMT. FAC. (3926)
AOC #623 STRIPPER CONCRETE TANK
AOC #624 FUEL OIL BOOSTER PUMPHOUSE
AOC #625 SLUDGE PUMPHOUSE (3901B)
AOC #626 NSC FUEL FARM
AOC #627 OIL SPILL LOCATION
AOC #628 BLDG. 68 SE AREA
AOC #629 POL UNLOADING FACILITY (3913)
AOC #630 BLDG. 3913 POL SAMPLING
AOC #631 FUELING PIER K
AOC #632 SUBSTATION (124)
AOC #633 SUBSTATION (451-C)
AOC #504 RAILROAD SYSTEM
AOC #634 FLAMMABLE STORAGE (1814)
AOC #635 OIL STOREHOUSE (3902)
AOC #636 TORPEDO MAGAZINE (161)
AOC #637 DUMP AREA
AOC #638 TORPEDO WORKSHOP (132)
AOC #639 ALCOHOL STORAGE
AOC #640 FUEL OIL PIER (322)
AOC #641 STRIPPER PUMP-HOUSE
AOC #642 PISTOL RANGE
AOC #643 SUBSTATION (125)
AOC #644 SUBSTATION (1793)
NCOPSDC SEWAGE PUMPING STATION
BOUNDARY LINE
LONG TERM P.O.V. STORAGE
LEGEND
D - RCRA INVESTIGATION ZONES
GRAPHIC SCALE
RCRA FACILITY ASSESSMENT NAVAL BASE CHARLESTON CHARLESTON, S.C.
FIGURE 5-C AREA OF CONCERN SITE LOCATION MAP ZONES F-G
Dr by: E.GRIGGS
Tr by: E.ROGERS
Ck by: E.GRIGGS
App by: E.GRIGGS
Date: 02/23/95
DWG Name: 76SROV3A
Sheet 1 Of 1


LEGEND
D - RCRA INVESTIGATION ZONES
J WATER BODIES
H
I
L BASEWIDE SITES (i.e. - sewer system)
COOPER RIVER
NOT TO SCALE
NAVAL BASE CHARLESTON FACILITY LOCATION MAP
DREDGED MATERIALS AREA
AOC #592 FREE OIL AREAS IN RIVER
AOC #500 UXO SITE BETWEEN PIERS SAND
AOC #679 WASH RACK
AOC #680 BLDG. NS-26 NE SIDE
AOC #681 BLDG. 681 BLAST BOOTH
AOC #682 BLDG. 681 SPRAY BOOTH
AOC #691 WATER FRONT
AOC #683 TRANSFORMER VAULT
AOC #666 FUEL STORAGE (NS-45)
AOC #667 CBU-412 VEHICLE AREA
AOC #668 HAZ MAT STORAGE (1899)
AOC #685 SMOKE DRUM (157)
AOC #684 OLD PISTOL RANGE (1888)
AOC #669 BLDG. 1888 RANGE
AOC #670 FIELD SOUTH OF BLDG. 1897
AOC #686 HIGH EXPLOSIVES STG. (54)
AOC #501 UXO SITE IN COOPER RIVER
AOC #687 HIGH EXPLOSIVES STG. (55)
AOC #688 HIGH EXPLOSIVES STG. (56)
AOC #689 SOUTHERN TIP OF BASE
AOC #690 SPOILS AREA ROAD
AOC #678 FIRE FIGHTING SCHOOL (2-V)
AOC #676 INCINERATOR
AOC #675 FUEL OIL STORAGE (NS-4)
AOC #677 BLDG. NS-2 GROUNDS
AOC #665 PYROTECHNIC STORAGE (159)
AOC #674 PAINT STORAGE (RTC4)
AOC #664 TRANSFORMER VAULT (X33A)
AOC #660 MOQUITO CONTROL (31)
AOC #663 GAS/DIESEL PUMPING (851)
AOC #659 DIESEL STORAGE (14)
AOC #673 PAINT AND OIL STORAGE (169)
AOC #672 SUBSTATION (126)
AOC #671 METER HOUSE (39056)
AOC #658 GAS STORAGE (203)
AOC #652 BLDG. 636 SPRAY BOOTH
AOC #662 BLDG. NS-54 GAS STATION
AOC #661 EXPLOSIVES STORAGE
AOC #653 BLDG. 1508 MWR HOBBY SHOP
AOC #651 SANDBLASTERS INC. STORAGE
AOC #650 METAL TRADES, INC. STORAGE
AOC #648 TRANSFORMER VAULT
AOC #649 BRASWELL SHIPYARDS STORAGE
AOC #657 ENGINE OVERHAUL FAC. (645)
AOC #655 OIL SPILL BEHIND EXCHANGE
AOC #654 SEPTIC TANK AND DRAIN FIELD
AOC #503 UXOSITE SOUTH OF BLDG. 665
AOC #656 BETWEEN BLDGS. 602 & NS-71
ABANDONED SUBSURFACE CHEMICAL DISPOSAL AREA
TWO MARK-17 DEPTH BOMBS JETTISONED 8 OCTOBER 1943
INNER CHANNEL LINE
CENTERLINE CHANNEL PROJECT DEPTH 42'
MARINA
MATCH LINE
BOUNDARY LINE
SHIPYARD
RIVER
NAVAL DEGAUSSING STATION
GRAPHIC SCALE
RCRA FACILITY ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 5-D
AREA OF CONCERN
SITE LOCATION MAP
ZONES H-J
Dr by: E.GRIGGS
Tr by: E.ROGERS
Ck by: E.GRIGGS
App by: E.GRIGGS
Date: 02/23/95
DWG Name: 76SROV4A
Sheet 1
Of 1

A

B

C

D

AOC #698
BUILDING 2508
BOILER
HOUSE

AOC #697
BLDG 2554
TRANSFORMER
AREA

AOC #696
NEAR BLDG 2509
TRANSFORMER
AREA

2535
2555
2505
2501
2550
2506
2508
2507
2552
2523
2521
2517
2520
2533
2525
2511
2554
2524
2522
2556
2553
2536
2513
2532
2530
2509
2557

"A"
"B"
"C"
"D"

AVE.
STREET
FOURTH
FIFTH
SIXTH
VECTOR
AIR

HOUSING
CHARLESTON A.F.B.

1000 0 1000
SCALE FEET

1 2 3 4

LEGEND:

- BLDG OR STRUCTURE
- ROADS, WALKS OR PAVED AREAS
- PROPERTY BOUNDARY
- PROPERTY BOUNDARY (BY OTHERS)
- SECURITY FENCE

RCRA FACILITY
ASSESSMENT
NAVAL BASE CHARLESTON
CHARLESTON, SOUTH CAROLINA

FIGURE 5-E
AREA OF CONCERN
SITE LOCATION MAP
MOMAG 11

Dr by: NAME		Tr by: NAME	
Ck by: NAME		App by: NAME	Sheet 1
Date: 10/03/94	DWG Name: 29ANXAOC		Of 1

6.0 SIGNATORY REQUIREMENT

Condition I.E. of the HSWA portion of RCRA Part B Permit (EPA SCO 170 022 560) states that "All applications, reports, or information submitted to the Regional Administrator shall be signed and certified in accordance with 40 CFR §270.11." The certification reads as follows:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Commander,
Charleston Naval Shipyard

Date