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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK
PLAN AREA OF CONCERN 721 REVISION 1 CNC CHARLESTON SC
4/1/2003
ENSAFE INC.

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY
CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA
CTO-0164**

**AOC 721 RFI WORK PLAN
Revision: 1**

**SOUTHDIV Contract Number:
N62467-89-D-0318**

Prepared for:

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA**

Prepared by:

**ENSAFE INC.
313 WINGO WAY
MOUNT PLEASANT, SOUTH CAROLINA 29464
(843) 884-0029**

April 2003

Release of this document requires the prior notification of the Commanding Officer of the Southern Division, Naval Facilities Engineering Command, Naval Base Charleston, South Carolina.

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The Contractor, EnSafe Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0318 is complete, accurate, and complies with all requirements of the contract.

**Date: April 2003
Signature: _____
Name: Charles A. Vernoy
Title: Task Order Manager**

CERTIFICATION PAGE

REGISTERED SOUTH CAROLINA PROFESSIONAL ENGINEER CERTIFICATION. I certify that the data and interpretations presented in this *AOC 721 RFI Work Plan* are true and accurate to the best of my knowledge as a registered South Carolina Professional Engineer.

Henry Fellers, P.E.
Registration Number 19318

Date

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ACRONYMS

AOC	Area of Concern
BCT	Base Realignment and Closure Act Cleanup Team
BEQ	benzo(a)pyrene equivalent
BGS	Below Ground Surface
C	Contingent
CLEAN	Comprehensive Long-Term Environmental Action Navy
CMS	Corrective Measures Study
CNC	Charleston Naval Complex
COC	Constituent of Concern
COPC	Constituent of Potential Concern
CSAP	Comprehensive Sampling and Analysis Plan
DET	Navy Environmental Detachment
ERA	Ecological Risk Assessment
HHRA	Human Health Risk Assessment
HSWA	Hazardous and Solid Waste Amendment
IM	Interim Measure
ISM	Interim Stabilization Measure
MCL	Maximum Contaminant Level
MHW	Mean High Water
MSL	Mean Sea Level
NFA	No Further Action
ORP	Oxidation/Reduction Potential
P	Primary
PCB	Polychlorinated Biphenyl
RBC	Risk-Based Concentration
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SAP	Sampling and Analysis Plan
SCDHEC	South Carolina Department of Health and Environmental Control
SSL	Soil Screening Level
SSV	Sediment Screening Value
SVOC	Semivolatile Organic Compound
SWMU	Solid Waste Management Unit

TDS	Total Dissolved Solid
TOC	Total Organic Carbon
TSS	Total Suspended Solid
V	Verification
VOC	Volatile Organic Compound

1.0 INTRODUCTION

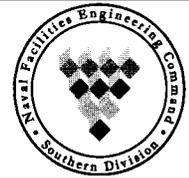
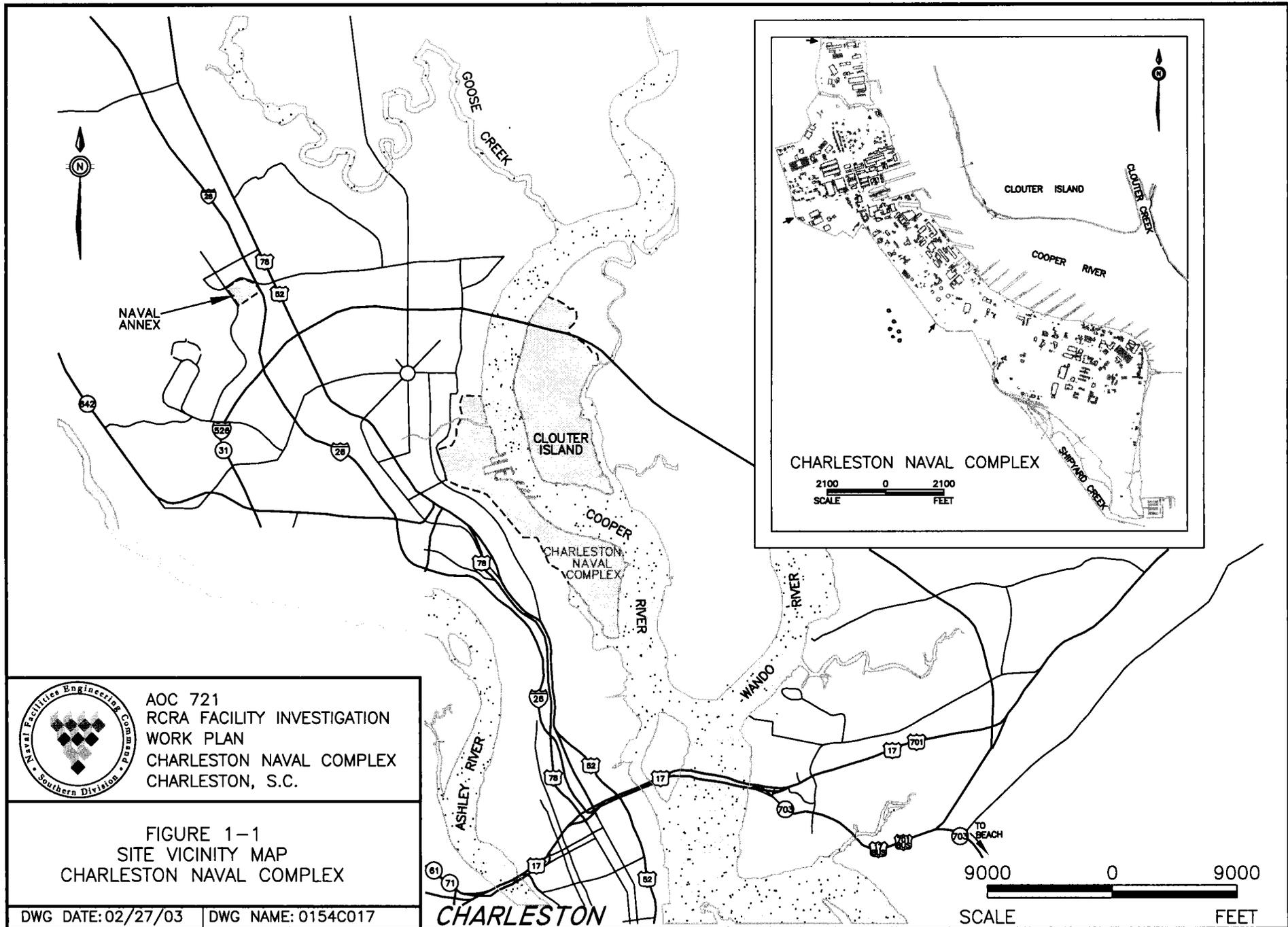
As part of the U.S. Navy Comprehensive Long-Term Environmental Action Navy (CLEAN) program, this Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan has been prepared for Area of Concern (AOC) 721, Zone C, at the Charleston Naval Complex (CNC). The environmental investigation and remediation at CNC are required by the Hazardous and Solid Waste Amendments (HSWA) portion of the RCRA Part B permit. The conditions outlined in it are consistent with RCRA Corrective Action Program objectives designed to evaluate the nature and extent of any hazardous waste or constituent releases and to identify, develop, and implement appropriate corrective measures to protect human health and the environment. Figure 1-1 depicts the location of CNC. The approximate location of AOC 721 is depicted in Figure 1-2.

The scope of the AOC 721 RFI is to identify human health concerns and potential releases from the site into Noisette Creek and to determine if CNC-related contaminants transported offsite adversely affect the environment. This work plan addresses sampling and analysis requirements specific to potential data gaps noted during the evaluation of existing data from Solid Waste Management Unit (SWMU) 44 within the AOC 721 boundary and from the evaluation of surface topography at AOC 721 to identify migration pathways to Noisette Creek.

The work plan describes the proposed level of effort to identify constituents of potential concern (COPCs) that exceed Zone C reference (background) and regulatory screening criteria for sediment and groundwater and may be retained for further evaluation for the ecological risk assessment (ERA) and human health risk assessment (HHRA).

1.1 Site Description

AOC 721 is approximately 1.6 acres based on coordinates from CH2M-Jones and is located in the northernmost portion of Zone C west of Avenue D north and just south of Noisette Creek as illustrated in Figure 1-3. The site area includes a 650 foot long drainage ditch on the western side of the site that begins at the northernmost acre of the SWMU 44 investigation area and runs northeast along the former perimeter road and discharges into Noisette Creek. A surface topography survey will be conducted to accurately determine site boundaries and surface flow runoff during the RFI.



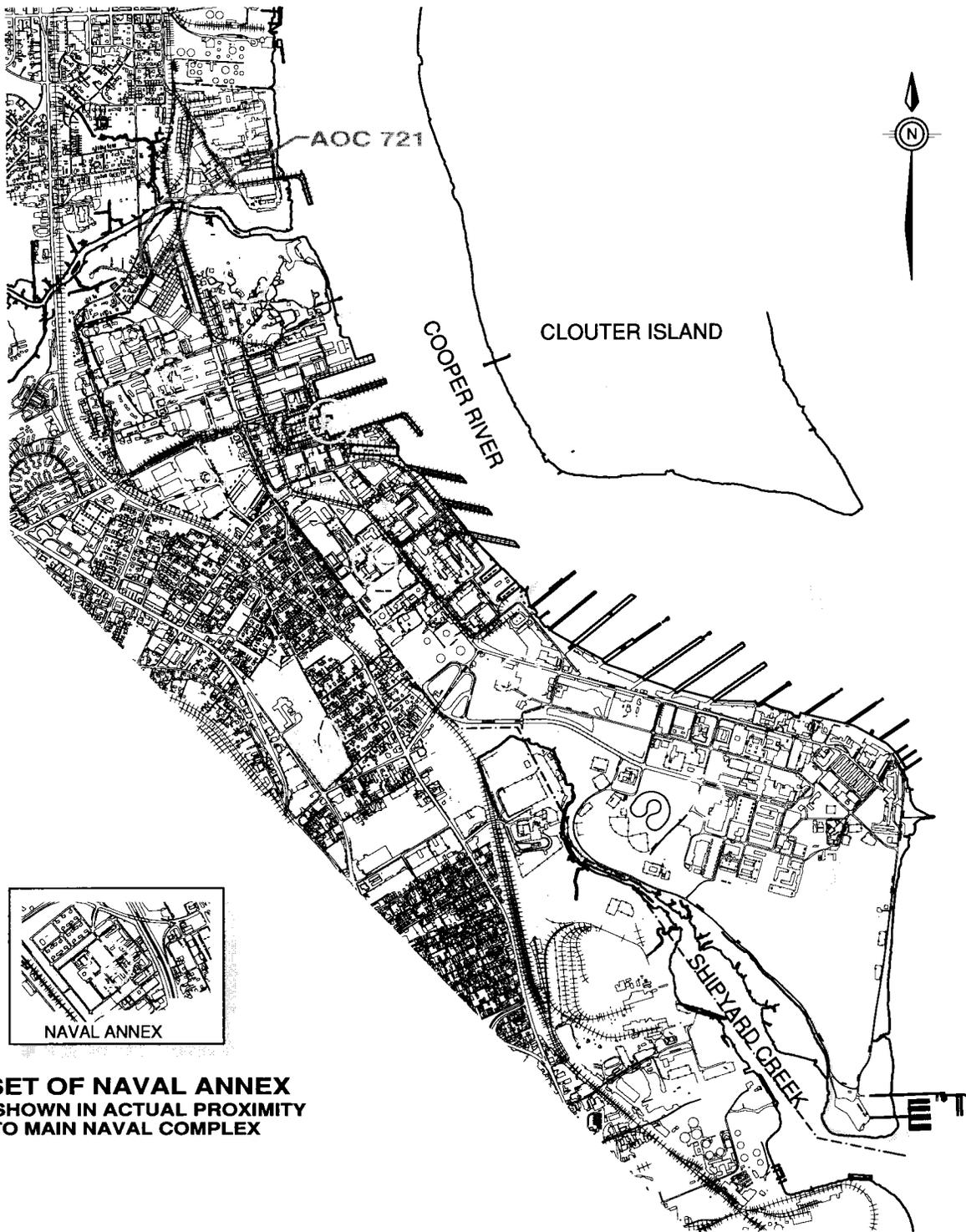
AOC 721
 RCRA FACILITY INVESTIGATION
 WORK PLAN
 CHARLESTON NAVAL COMPLEX
 CHARLESTON, S.C.

FIGURE 1-1
 SITE VICINITY MAP
 CHARLESTON NAVAL COMPLEX

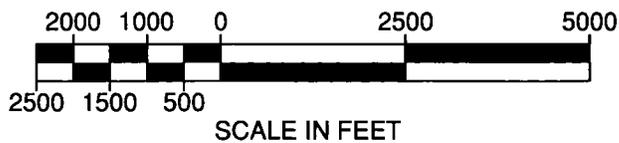
DWG DATE: 02/27/03 | DWG NAME: 0154C017

CHARLESTON

9000 0 9000
 SCALE FEET



**INSET OF NAVAL ANNEX
NOT SHOWN IN ACTUAL PROXIMITY
TO MAIN NAVAL COMPLEX**

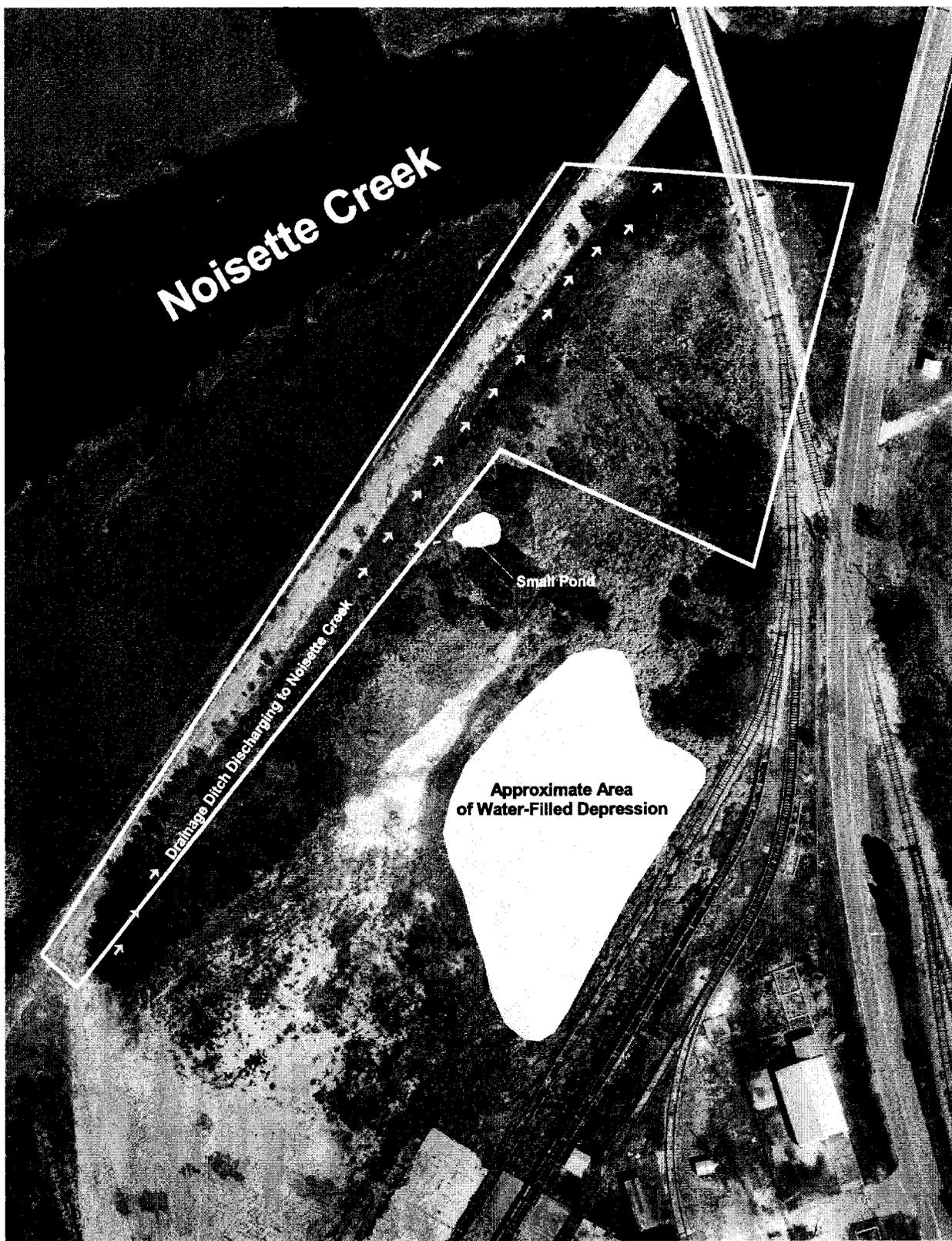


AOC 721
RCRA FACILITY INVESTIGATION
WORK PLAN
CHARLESTON NAVAL COMPLEX
CHARLESTON, SC

FIGURE 1-2
SITE LOCATION MAP
CHARLESTON NAVAL COMPLEX

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DWG Name: 0154C016



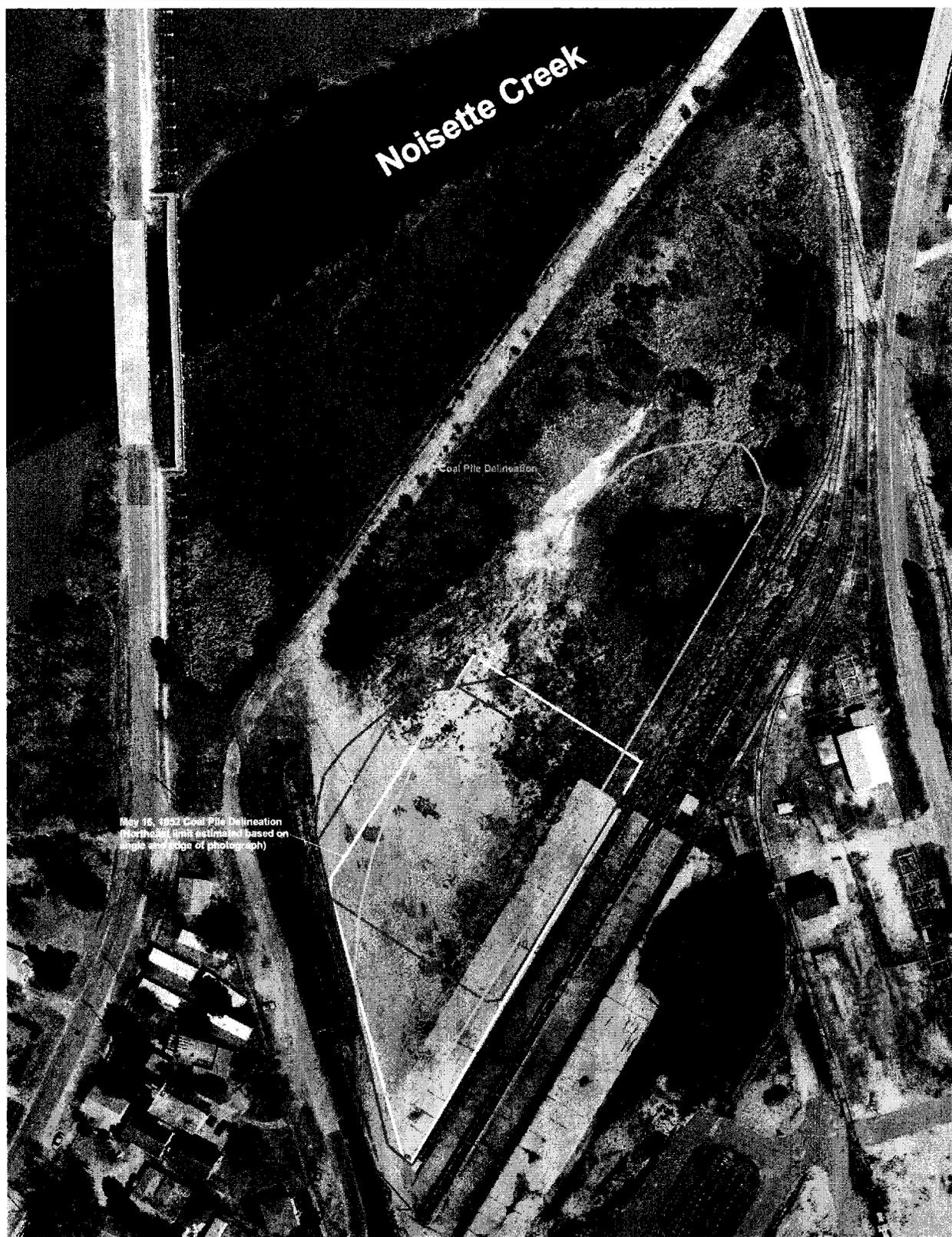
LEGEND	
	Ditch Drainage
	Small Pond
	1996 Removal - North Pond
	Proposed Pre-RFI AOC 721 Boundary


AOC 721
RCRA Facility Investigation Work Plan
Charleston Naval Complex
Charleston, South Carolina

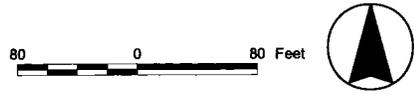
Figure 1-3
AOC 721 Site Features Map

For purposes of site description, the area encompassing AOC 721 is an extension of the boundary area of SWMU 44. The entire site area was formerly a marsh that was filled with dredge materials in the early 1920s. A coal storage facility was located within the footprint of SWMU 44 area from 1941 until 1996. Coal at the facility was stored in two areas; one on either side of the elevated railroad trestle. Aerial photographs taken in the 1950s show the coal storage facility as a non-vegetated area indicating that site activity utilized the entire acreage north of the railroad for coal storage. Figure 1-4 indicates that coal was stored within the boundaries of AOC 721. No other activities have been documented for the site.

The amount of coal stored at the facility varied greatly and at one point extended well north along the railroad tracks. The photographs also showed that coal was not stored in a narrow strip around the site to the west and north. The narrow strip north of the coal may have been for vehicle access or as a buffer between coal storage and the perimeter road and drainage ditches. The site area currently consists of grasses, small trees, and a drainage ditch along the northern edge. Two ponds, resulting from coal pile removal actions in 1996, are located within SWMU 44 boundaries and are approximately 100 to 200 feet in diameter. One pond area is located north of the railroad and is the larger of the two ponds. The other pond is located south of the railroad. Aerial photographs taken in the spring of 1998 show these ponds as heavily vegetated.



LEGEND	
	1996 Coal Pile
	Aug 21, 1957 Coal Pile
	Apr 11, 1958 Coal Pile
	May 16, 1952 Coal Pile




AOC 721
 RCRA Facility Investigation Work Plan
 Charleston Naval Complex
 Charleston, South Carolina

Figure 1-4
Coal Pile Distribution Map

2.0 SITE HISTORY

Since AOC 721 is an extension of SWMU 44, site history descriptions will reflect activities associated with SWMU 44. During the Corrective Measures Study (CMS) investigation by CH2M-Jones for SWMU 44, elevated concentrations of arsenic were detected in soil samples collected north of the SWMU 44 1996 coal pile footprint area. The recommendation to make this area a site separate from SWMU 44 was made to the South Carolina Department of Health and Environmental Control (SCDHEC) in a letter from the Navy dated 26 November 2001. The need to classify the area associated with elevated arsenic detections in the area north of the SWMU 44 footprint as another site was presented in the January 2002 *CMS Work Plan/Interim Measure (IM) Completion Report* (CH2M-Jones). Review of partnering meeting minutes from the April 2002 Base Realignment and Closure Act Cleanup Team (BCT) indicate that a new AOC needed to be created to address those arsenic exceedances.

No activities other than the filling of marsh area with dredge materials and coal storage have been documented for the area between Noisette Creek and the elevated railroad trestle built for the storage and transfer of coal used at the power house (Building 32). These are the same activities associated with SWMU 44, which is in the same area and directly adjoins AOC 721. Portions of what is now classified as AOC 721 were included in the 1996 Interim Stabilization Measures (ISM) coal removal. Therefore, the list of analyses for investigating AOC 721 will be the same as proposed for SWMU 44 in the *Zone C RFI Work Plan* (EnSafe/Allen & Hoshall, 1995), and subsequently refined based on SWMU 44 soil and sediment data collected north of the elevated railroad trestle and groundwater data from SWMU 44 monitoring wells 044005 through 044008.

3.0 PREVIOUS INVESTIGATIONS

Initial sampling events conducted between 1981 and 1985 identified metals and suspended solids in surface water and storm water runoff samples. A RCRA Facility Assessment (RFA) to evaluate the coal storage facility was conducted in 1995. Findings of the 1981-1985 sampling events and the RFA led to RFI activities which began in 1995 and continued until 1997. The *Zone C RFI Report* (EnSafe, November 14, 1997) identified aluminum, arsenic, beryllium, and benzo(a)pyrene equivalents (BEQs) as SWMU 44 constituents of concern (COCs) in soil and aluminum, antimony, arsenic, beryllium, and manganese as SWMU 44 groundwater COCs. The bulk coal stored at the site acted as a source of contamination to soil and storm water runoff, and an IM performed by Navy Environmental Detachment (DET) to remove the existing coal pile and surface soil to a visual standard was conducted in 1996. A CMS following the RFI began in 1999 and was completed in 2002. A second IM for removal of SWMU 44 arsenic-impacted soils near the elevated trestle was conducted in 2001 by CH2M-Jones to meet remediation goals that would allow unrestricted land use. The *CMS Work Plan/Interim Measure Completion Report* concluded that SWMU 44 should be considered for No Further Action (NFA) status. SWMU 44 received NFA status documented in a letter from the SCDHEC dated 13 May 2002.

AOC 721 is located along the northern portion of the SWMU 44/coal storage investigation area. Arsenic exceedances in the area designated as AOC 721 are approximately 150 feet north of the 1996 north coal pile footprint and in the drainage ditch that runs along the northern edge of the site toward Noisette Creek. Elevated detections of arsenic in soil and groundwater outside the immediate vicinity of the 1996 coal storage piles were classified as a new site separate from SWMU 44.

To date no samples have been collected specifically for AOC 721. However, soil, groundwater, and sediment data have been collected in the AOC 721 footprint as part of SWMU 44 investigations creating a pre-existing database in the AOC 721 area. These data will be used to develop an investigation strategy and work plan for AOC 721. The following sections summarize the sampling history of SWMU 44 by media.

3.1 Soil

SWMU 44 soil sample collection conducted during the SWMU 44 RFI, CMS and IM activities included surface and subsurface intervals. Table 3.1 presents a historical summary of SWMU 44 soil sampling.

Table 3.1 SWMU 44 Soil Sampling Summary			
Boring Location	Sample Interval (Depth bgs)	Sample Date	Analysis
044SB001-044SB008 (EnSafe)	0 to 1 foot	1995	Metals and cyanide (and one duplicate analyzed for metals, cyanide, herbicides, organophosphorus pesticides, hexavalent chromium, and dioxins)
044SB004 (EnSafe)	3 to 5 foot	1995	Metals and cyanide
044SB023, 044SB024 (EnSafe)	0 to 1 foot	1995	Metals
044SB025, 044SB026 (EnSafe)	0 to 1 foot	1995	Metals
044SS001-044SS009 (EnSafe)	0 to 1 foot	1997	SVOCs and metals
044SB027, 044SB028 (EnSafe)	0 to 1 foot	1997	Metals
044SB027, 044SB028 (EnSafe)	>3 foot (varies)	1997	Metals
044SBC01-044SC050 (EnSafe)	0 to 1 foot	1999	SVOCs and metals (and four duplicates analyzed for SVOCs and metals)
044SBC001-044SBC008, 044SBC010-044SBC033, 044SBC035, 044SBC037-044SBC049 (EnSafe)	3 to 5 foot	1999	SVOCs and metals (and four duplicates analyzed for SVOCs and metals)
044SS001 (CH2M-Jones)	0 to 1 foot	2001	VOCs, SVOCs, metals
044SB029-044SB032, 044SB036-044SB043, 044SB047-044SB052, 044SB062-044SB066, 044SB071-044SB076 (CH2M- Jones)	0 to 1 foot	2001	Arsenic
044SB034, 044SB035, 044SB053, 044SB058, 044SB059, 044SB060, and 044SB061 (CH2M-Jones)	3 to 5 foot	2001	Arsenic

Notes:

- BGS = Below Ground Surface
- SVOC = Semivolatile Organic Compound
- VOC = Volatile Organic Compound

3.2 Groundwater

Groundwater sample collection was conducted during SWMU 44 RFI and CMS investigative activities. Table 3.2 presents a historical summary of SWMU 44 groundwater sampling.

Table 3.2 SWMU 44 Groundwater Sampling Summary				
Sampling Round	Sample Date	Wells Sampled	Sample Analyses	Comments
1	April – June 1995 (EnSafe)	044001-044005, 044007 and 044008 044006	Metals and cyanide Chloride, cyanide, sulfate, metals, pesticides, PCBs, SVOCs, VOCs, and TDS	RFI
2	January 1996 (EnSafe)	044001-044008	SVOCs, metals, pesticides, PCBs, cyanide, chloride, sulfate, and TDS; Dioxins included in well 044004	RFI
3	May 1996 (EnSafe)	044001-044008	SVOCs, metals, pesticides, PCBs, cyanide, chloride, sulfate, and TDS; Dioxins included in well 044004	RFI
4	June 1996 (EnSafe)	044001-044008	SVOCs, metals, pesticides, PCBs, cyanide, chloride, sulfate, and TDS; Dioxins included in well 044004	RFI
5	July 1997 (EnSafe)	044001-044007 044008	SVOCs, metals SVOCs, metals, pesticides, PCBs, and VOCs	Post IM Removal
6	January 1999 (EnSafe)	044001 and 044007	Metals and TSS	CMS Activities
7	July 1999 (EnSafe)	044001-004008	Metals	CMS Activities

Notes:

- CMS = Corrective Measures Study
- IM = Interim Measure
- PCB = Polychlorinated Biphenyl
- RFI = RCRA Facility Investigation
- SVOC = Semivolatile Organic Compound
- TDS = Total Dissolved Solid
- TSS = Total Suspended Solid
- VOC = Volatile Organic Compound

3.3 Sediment

Sediment samples were collected at 21 locations during the Zone C/SWMU 44 RFI and at 10 locations during the Zone J RFI. However, only five (044M0013, 044M0014, 044M0015, 044M0016, and 044M0017) of the terrestrial SWMU 44 sediment sample locations are within the AOC 721 footprint. Four SWMU 044 sediment samples (044M0018, 044M0019, 044M0020, and

044M0022) were collected near the drainage ditch and Noisette Creek confluence. Sample 044M0018 was the only sample collected upstream at a distance of approximately 150 feet from the AOC 721 ditch/Noisette Creek confluence. These samples were analyzed only for total organic carbon (TOC) and will not be evaluated for potential sediment COPCs. Table 3.3 presents a summary of SWMU 44 sediment sampling.

Table 3.3 SWMU 44 Sediment Sampling Summary			
Sample Location	Sample Interval (Depth bgs)	Date Collected	Analysis
044M0001– 044M0017	0-6"	1995 (EnSafe)	Metals, TOC
044M0018 – 044M0022	0-6"	1996 (EnSafe)	TOC
044MC001, 044MC002	0-6"	1999 (EnSafe)	Metals, TOC

Notes:

BGS = Below Ground Surface
 TOC = Total organic carbon

4.0 SURFACE TOPOGRAPHY

A topographic contour map was made of the land surface associated with AOC 721 and SWMU 44 north of the coal unloading trestle to identify potential migration pathways and subsequent sample locations for this work plan. Northing, easting, and ground elevation data were collected and contoured by a registered land surveyor. Data were collected on 25 foot centers, and at the top and toe of major elevation changes such as the drainage ditch along the northern edge of AOC 721. Data were electronically contoured using 0.5 foot contour intervals. Figure 4-1 depicts AOC 721 site topography.

A topographic divide extends northeast from monitoring well 044004 through monitoring well 044006 trends across the site area. This divide breaks the site area into two major runoff directions. The first direction is towards the Northwest which is towards AOC 721 and the drainage ditch. The second runoff direction is towards the southeast and the water-filled depression created by the 1996 coal removal ISM. Arrows on the map indicate general direction of surface runoff.

Mean high water (MHW) for the base is 3.5 feet mean sea level (msl). The MHW line is also depicted on Figure 4-1. However, extremely high tides may exceed the MHW elevation at certain times of the year.

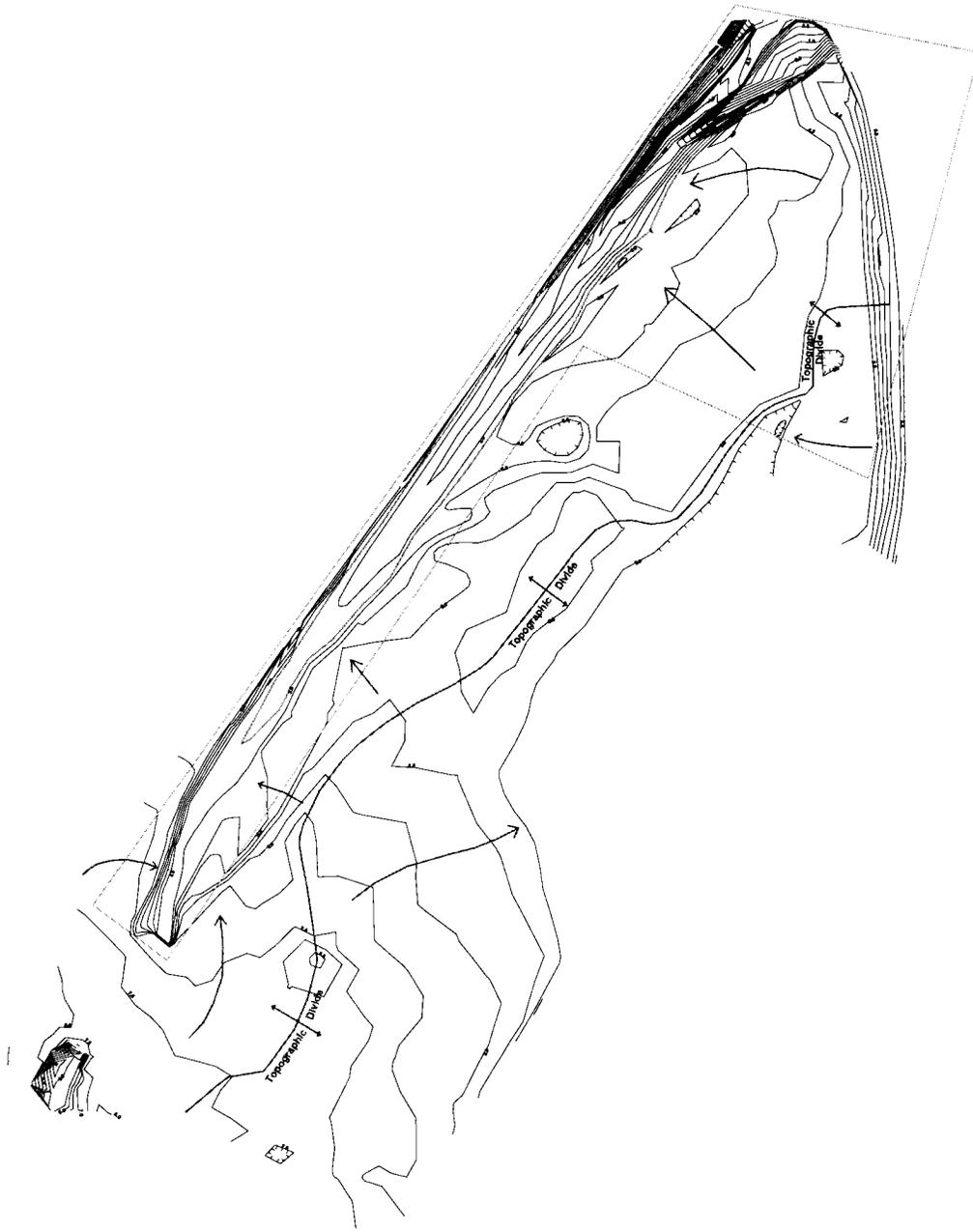
4.1 Site Features

Predominant features in the AOC 721 site area are:

- A 650 foot long drainage ditch running northeast along the northern perimeter of AOC 721. Elevation along the flowline of this ditch ranges from 4 feet at the head of the ditch to -2 ft msl at the mouth. The flowline is fairly straight from the ditch confluence with Noisette Creek to a point just 60 feet from the head of the ditch.
- The water-filled depression north of the SWMU 44 coal unloading trestle. The 1996 removal ISM created a depression which has since filled with water and vegetation such as cattails. This depression is located east of the topographic divide and appears to be isolated from drainages in the site area.

- A small pond located just east of the ditch and southwest of the 044SS006 sample location that drains into the 650 foot long ditch flowing to Noisette Creek.
- The railroad grade that forms a topographic ridge through the northeast section of AOC 721.
- A southwest to northeast trending topographic divide that essentially bisects the SWMU 44 RFI study area north of the unloading trestle.

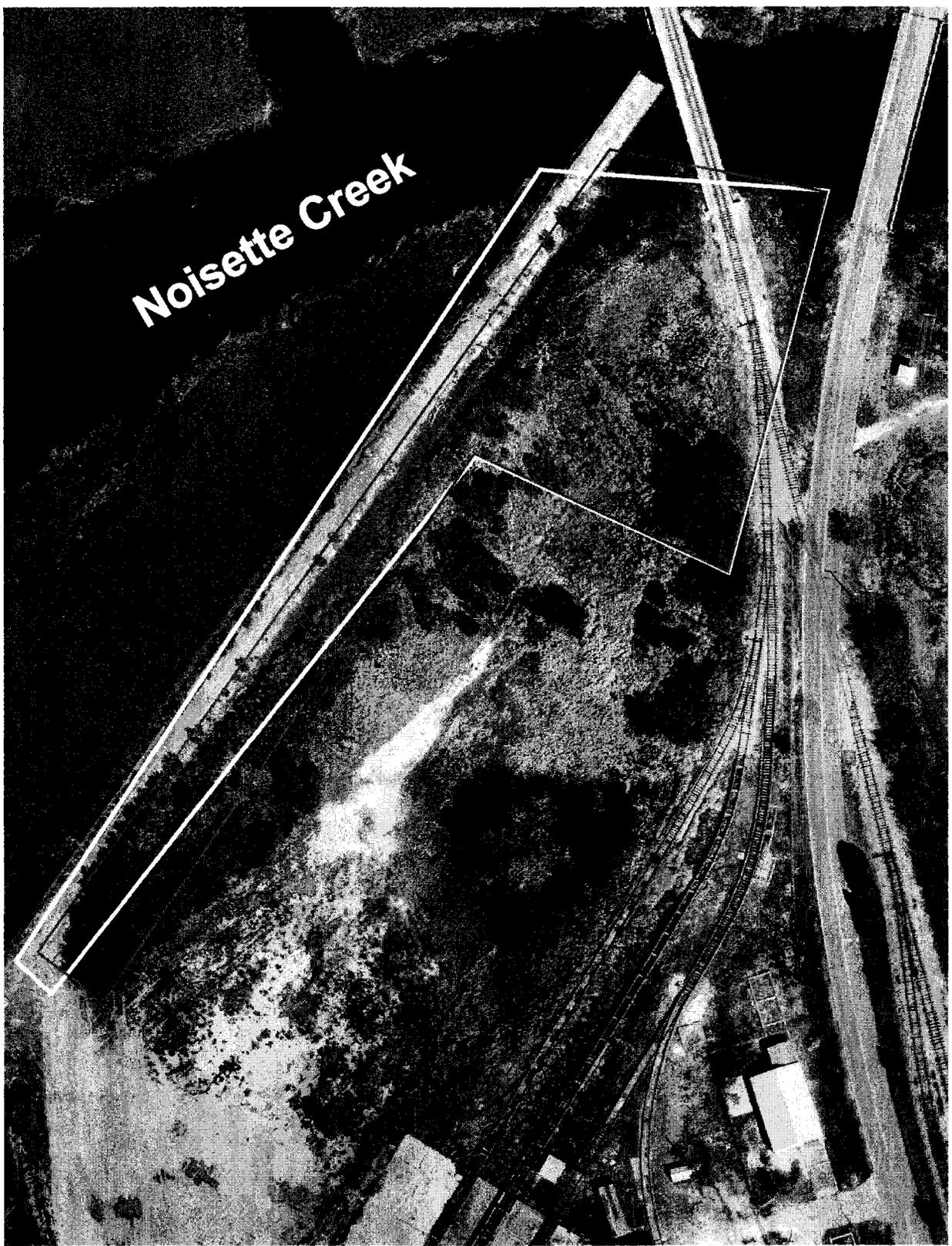
The AOC 721 perimeter has been adjusted using the topographic survey and site features. Adjusted and original proposed AOC 721 perimeters are presented on Figure 4-2.



LEGEND	
	Mean High Water Elevation
	Topographic Contour
	Subarea Topographic Contour
	2000 AOC 721 RW Boundary

NOTE: Contour Interval is 0.5 foot
 Elevations to East Mean Sea Level (MSL) 1985
 Mean High Water elevations to 0.5 foot MSL.

	AOC 721 RCRA Facility Investigation Work Plan Charleston Naval Complex Charleston, South Carolina
	Figure 4-1 Land Surface Contours
Date: March 2003	AOC 721 Work Plan Job



Noisette Creek

60 0 60 Feet



LEGEND



2003 Proposed AOC 721 RFI Boundary

Pre-RFI AOC 721 Boundary



AOC 721
RCRA Facility Investigation Work Plan
Charleston Naval Complex
Charleston, South Carolina

Figure 4-2
Proposed Revision to
AOC 721 Boundaries

5.0 REVIEW OF EXISTING DATA

Data from previous SWMU 44 investigations were evaluated against screening criteria to determine which compounds warrant evaluation in the AOC 721 RFI. Nature and extent of contamination within the vicinity of AOC 721 boundaries using SWMU 44 samples will substantiate determination of AOC 721 sample locations. Tabulated soil, groundwater, and sediment sample analytical data screened against regulatory criteria are presented by media in Appendix A. Analytical data for existing SWMU 44 samples may be reviewed in the CNC Zone J website.

A background data set was established by evaluating grid soil and shallow grid groundwater sample locations from Zones A, B, C, G, H, and I in order to have a large enough sample population. Grid locations in these zones that reflect similar characteristics to those of SWMU 44 and AOC 721 were selected for the AOC 721 background data set. SWMU 44 and AOC 721 are situated in an area that consists of made ground that was created by filling a low-lying area, and is in close proximity to tidally influenced surface water bodies. Detections in the background data set were screened for maximum detected concentration by analyte and then used to set the upper limit in background for screening SWMU 44 data.

5.1 Soil

Soil sample data from SWMU 44 locations within the vicinity of AOC 721 boundaries were screened with respect to delineation using AOC 721 background concentration, risk based concentration (RBC), soil screening level (SSL), and sediment screening value (SSV) criteria. Data were screened against the background data set to establish the first tier of screening. SWMU 44 detections that exceeded background screen were then screened against RBC, SSL, and SSV criteria to determine analytes for which AOC 721 soil locations will be sampled. Constituents exceeding screening criteria from locations that presented potential concerns for AOC 721 were used in developing a list of contaminants for the AOC 721 RFI sampling and analysis plan (SAP).

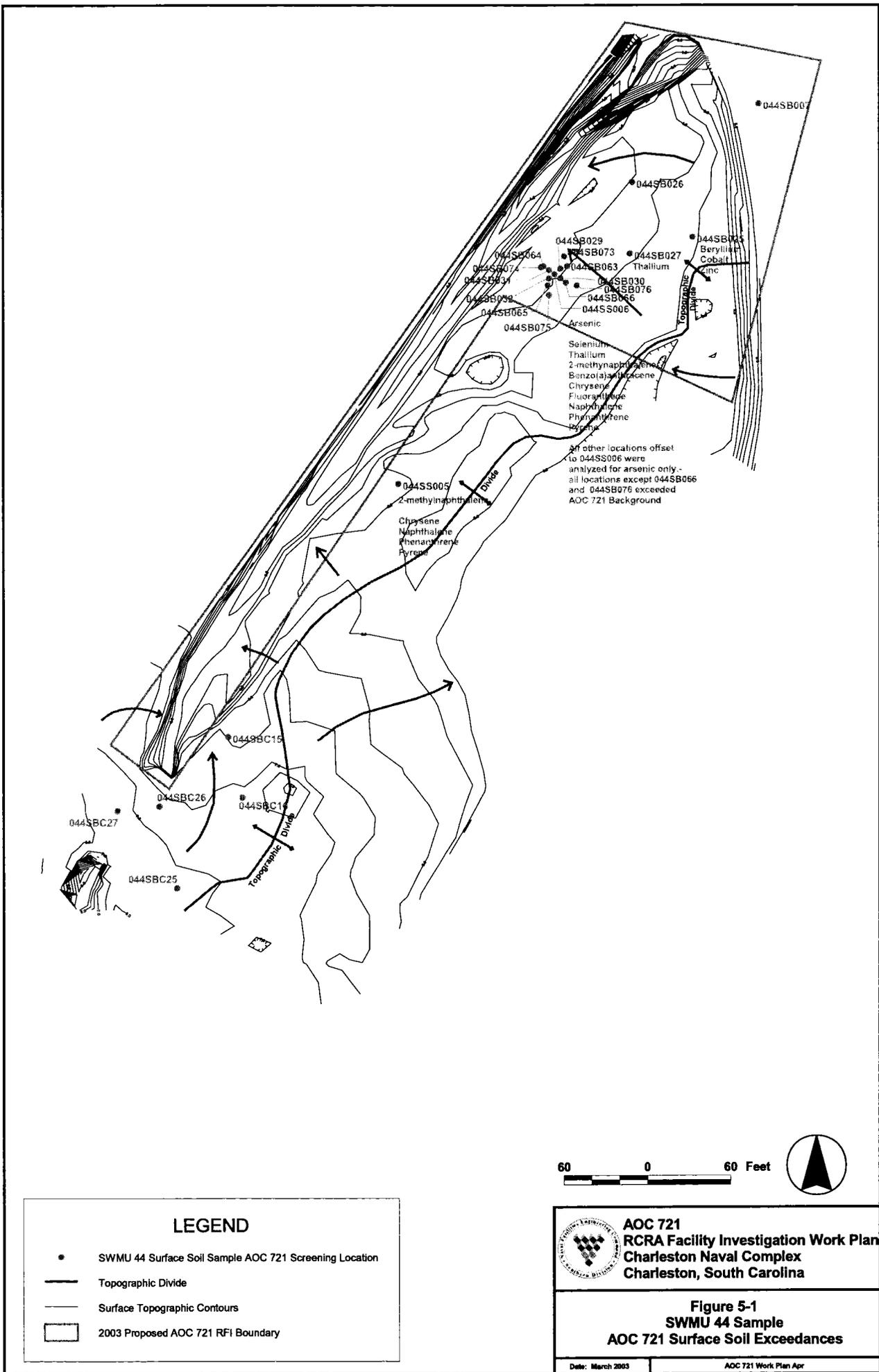
5.1.1 Surface

The following surface soil sample locations either within the confines or within the upland topographic surface drainage directly associated with AOC 721 were screened against AOC 721 surface soil background data set, USEPA Region III October 2002 RBC, SSL (DAF 10), and USEPA Region IV SSV concentration values to determine COPC constituents for analysis of AOC 721

samples:

044SB007	044SB031	044SB073	044SBC25
044SB025	044SB032	044SB074	044SBC26
044SB026	044SB063	044SB075	044SBC27
044SB027	044SB064	044SB076	044SS005
044SB029	044SB065	044SBC15	044SS006
044SB030	044SB066	044SBC16	

Sample locations in the north coal storage area that had exceedances but were sampled prior to the 1996 removal action were removed from consideration. Surface topography was also evaluated in determining SWMU 44 contaminant runoff potential. Contaminants at locations that had potential for surface runoff into AOC 721 were retained as COPCs. Sample proximity to the AOC and to drainages that flow into the AOC was also considered in determining AOC 721 SAP COPCs with respect to analysis of AOC 721 sediment samples. Figure 5-1 depicts SWMU 44 surface soil sample exceedances and relationship to AOC 721. Table 5.1 summarizes SWMU 44 surface soil constituents that present potential concern for AOC 721.



044SB007

044SB026

044SB029

044SB073

044SB027

044SB025

Beryllium

Cobalt

Zinc

044SB064

044SB074

044SB031

044SB059

044SB065

044SB075

044SB063

Thallium

044SB030

044SB076

044SB066

044SS006

Arsenic

Selenium

Thallium

2-methylnaphthalene

Benzol(a) Anthracene

Chrysene

Fluoranthene

Naphthalene

Phenanthrene

Pyrene

Other locations offset to 044SS006 were analyzed for arsenic only - all locations except 044SB066 and 044SB076 exceeded AOC 721 Background

044SS005

2-methylnaphthalene

Chrysene

Naphthalene

Phenanthrene

Pyrene

044SBC15

044SBC26

044SBC1

044SBC27

044SBC25

60 0 60 Feet



Table 5.1
AOC 721 Surface Soil Constituents of Potential Concern from SWMU 44 Data
Charleston Naval Complex, Charleston, SC

Constituent	Reason for Concern
Arsenic	Arsenic detections at 044SB029 – 044SB032, 044SB063 – 044SB065, 044SB073 – 044SB075, and 044SS006 exceed all screening criteria and require delineation. Arsenic exceedance at location 044SS005 located outside of AOC 721 has potential for runoff into the AOC 721 ditch.
Beryllium	Detection of beryllium at location 044SB025 exceeded the AOC 721 Background concentration of 1.7 mg/kg and requires delineation.
Cobalt	Cobalt detection at 044SB025 (13.6 mg/kg) exceeded the AOC 721 background concentration of 11.4 mg/kg and requires delineation.
Iron	Detection of iron at location 044SS006 exceeded the AOC 721 Background concentration of 48,700 mg/kg which is greater than the RBC concentration of 2300 mg/kg. The maximum concentration of iron is 90,500 mg/kg at 044SS006. The amount of iron consumed based on the resident child intake scenario would be 1.16 mg/day which is less than the recommended daily iron intake of 15 mg for a child. Additional characterization of iron is not proposed.
Selenium	Detection of selenium at 044SS006 exceeded AOC 721 background and SSL values and requires delineation.
Thallium	Detection of thallium at locations 044SB027 and 044SS006 exceeded AOC 721 background (0.55 mg/kg) and RBC (0.55 mg/kg) concentrations and requires delineation.
Zinc	Detection of zinc at 044SB025 exceeded the SSV of 124 mg/kg and requires delineation.
2-Methylnaphthalene	Detection of 2-methylnaphthalene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation. SSV exceedance at 044SS005 has potential for runoff into AOC 721 ditch.
Benzo(a)Anthracene	Detection of benzo(a)anthracene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation.
Chrysene	Detection of chrysene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation. SSV exceedance at 044SS005 has potential for runoff into AOC 721 ditch.
Fluoranthene	Detection of fluoranthene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation.
Naphthalene	Detection of naphthalene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation. Naphthalene SSV exceedance at 044SS005 outside of AOC 721 has potential for runoff into the AOC 721 ditch.
Phenanthrene	Detection of phenanthrene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation. Phenanthrene SSV exceedance at 044SS005 outside of AOC 721 has potential for runoff into the AOC 721 ditch.
Pyrene	Detection of pyrene at location 044SS006 exceeded the SSV of 0.33 mg/kg and requires delineation. Pyrene SSV exceedance at 044SS005 outside of AOC 721 has potential for runoff into the AOC 721 ditch.

Notes:

RBC = Risk Based Concentration
 SSL = Soil Screening Level
 SSV = Sediment Screening Value

PAH detections in soil were evaluated with respect to distance from railroad lines and surface runoff directions, and do not appear to be the result of proximity or runoff from railroad lines. Location 044SBC27 PAH detections are most likely the result of pavement associated with the former Cosgrove Avenue roadbed. There were no PAH detections at down slope locations 044SBC15 and

044SBC26 indicating that detections at location 044SBC27 are not impacting AOC 721.

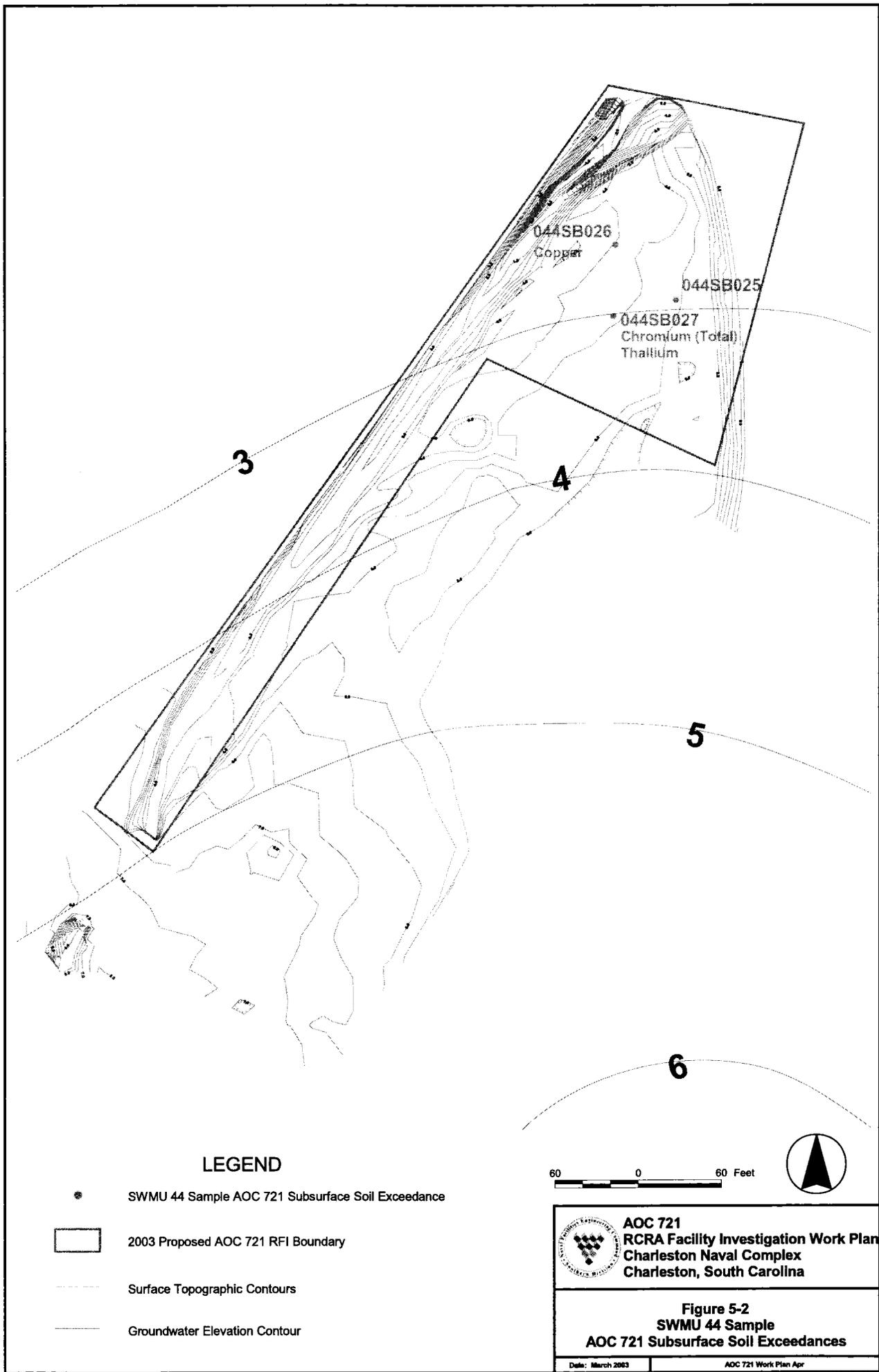
5.1.2 Subsurface

Subsurface soil sample locations within the confines of AOC 721 were screened against SSL concentration values to determine COPC constituents for analysis in AOC 721 samples. The Zone C subsurface soil background value was used when no SSL value was listed. Subsurface samples collected at locations 044SB026 and 044SB027 are the only subsurface soil samples collected in the AOC 721 footprint. These locations were used in determining subsurface soil constituents of potential concern for AOC 721 and are summarized in Table 5.2. Figure 5-2 depicts SWMU 44 subsurface soil sample exceedances and locations in AOC 721.

Table 5.2	
AOC 721 Subsurface Soil Constituents of Potential Concern from SWMU 44 Data Charleston Naval Complex, Charleston, SC	
Constituent	Reason for Concern
Chromium	Detection of chromium at location 044SB027 exceeds the SSL value of 19 mg/kg. Subsurface sample locations to the north and northeast (044SB026 and 044SB025) do not have chromium SSL exceedances. Chromium was not detected in SWMU 44 groundwater samples from wells down gradient of these soil locations. No additional investigation of chromium in AOC 721 subsurface soil is proposed.
Copper	Detection of copper at 044SB026 exceeds background (9.2 mg/kg). It is also detected at concentrations exceeding background in SWMU 44 subsurface soil locations east of the drainage ditch. However, no additional investigation of copper in AOC 721 subsurface soil or groundwater is proposed since SWMU 44 is NFA and exceedances of copper in SWMU 44 soil are typically greater than those in AOC 721.
Thallium	Detection of thallium at 044SB027 (3.2 mg/kg) exceeds the SSL value of 0.35 mg/kg. However, subsurface sample locations to the north and northeast (044SB026 and 044SB025) do not have thallium detections. Single occurrence thallium detections occurred in groundwater samples 044GW00504 (3.8 UG/L), 044GW00605 (6.0 UG/L), and 044GW00703 (3.1 UG/L). Wells 044005 and 044006 are located up gradient of AOC 721 in SWMU 44 which is designated NFA. Four subsequent rounds at down gradient well 044007 were non-detect. No additional investigation of thallium in AOC 721 subsurface soil is proposed.

Notes:

MCL = Maximum Contaminant Level
 RBC = Risk Based Concentration
 SSL = Soil Screening Level



LEGEND

- * SWMU 44 Sample AOC 721 Subsurface Soil Exceedance
- 2003 Proposed AOC 721 RFI Boundary
- - - - - Surface Topographic Contours
- Groundwater Elevation Contour

60 0 60 Feet



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Figure 5-2
SWMU 44 Sample
AOC 721 Subsurface Soil Exceedances

5.2 Groundwater

SWMU 44 groundwater data from wells 044005, 044006, and 044007 were screened against the AOC 721 background data set to establish the first tier of screening. Detections in SWMU 44 wells 5, 6, and 7 that exceeded background screening were then screened against MCL criteria for Human Health (the RBC was used if there was no listed MCL), and against Ecological criteria (Saltwater Chronic and Saltwater Acute (if no Chronic)) to determine analytes for which AOC 721 groundwater RFI locations will be sampled. AOC 721 groundwater samples will also include analytes listed in surface soil exceedances and those geochemical parameters presented in the RFI Work Plan. Figure 5-3 depicts SWMU 44 groundwater sample exceedances and location related to AOC 721. Table 5.3 summarizes SWMU 44 groundwater sample constituents that present potential concern for AOC 721.

SVOCs detected in first-round groundwater samples were not detected in subsequent rounds and are therefore not considered to be reflective of site groundwater conditions.

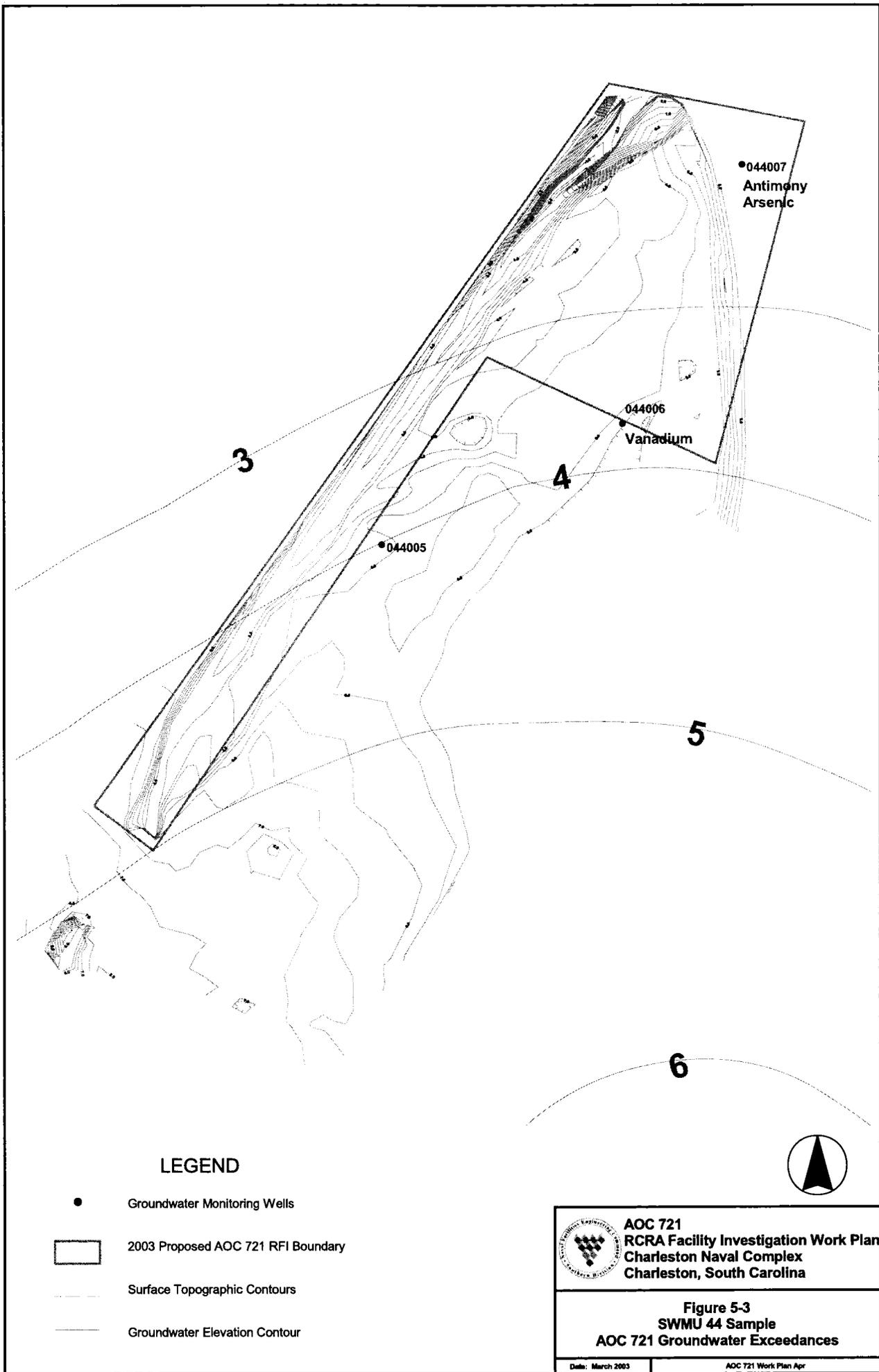
Constituent	Reason for Concern
Antimony	Exceeded AOC 721 background (3.1 UG/L), MCL (6 UG/L), and RBC (1.5 UG/L) concentrations in well 044007.
Arsenic	Exceeded AOC 721 background (43 UG/L), MCL (50 UG/L), and RBC (0.045 UG/L) values in well 044007. No source area evident. Elevated levels of arsenic in groundwater may be from geochemical reactions in the aquifer.
Vanadium	Exceeded AOC 721 background (12.9 UG/L) and RBC (26 UG/L) concentrations in well 044006 as a single event up gradient of AOC 721.

Notes:

MCL = Maximum Contaminant Level
 RBC = Risk Based Concentration

5.3 Sediment

SWMU 44 RFI and CMS sediment samples (044M013 – 044M0017) are located in areas within AOC 721 where direct soil exposure was possible and were evaluated in the same manner as surface soil. SWMU 44 RFI sediment locations 044M0013 through 044M0016 are located within the AOC 721 boundary and near the drainage ditch. Location 044M0017 is located in the north end and near the western perimeter of the AOC. All other upland SWMU 44 sediment locations are either located outside of AOC 721 or were collected prior to the removal action, and were not evaluated in developing this work plan. SWMU 44 sediment samples 044M0018 through 044M0020 are located



LEGEND

- Groundwater Monitoring Wells
- 2003 Proposed AOC 721 RFI Boundary
- - - Surface Topographic Contours
- Groundwater Elevation Contour



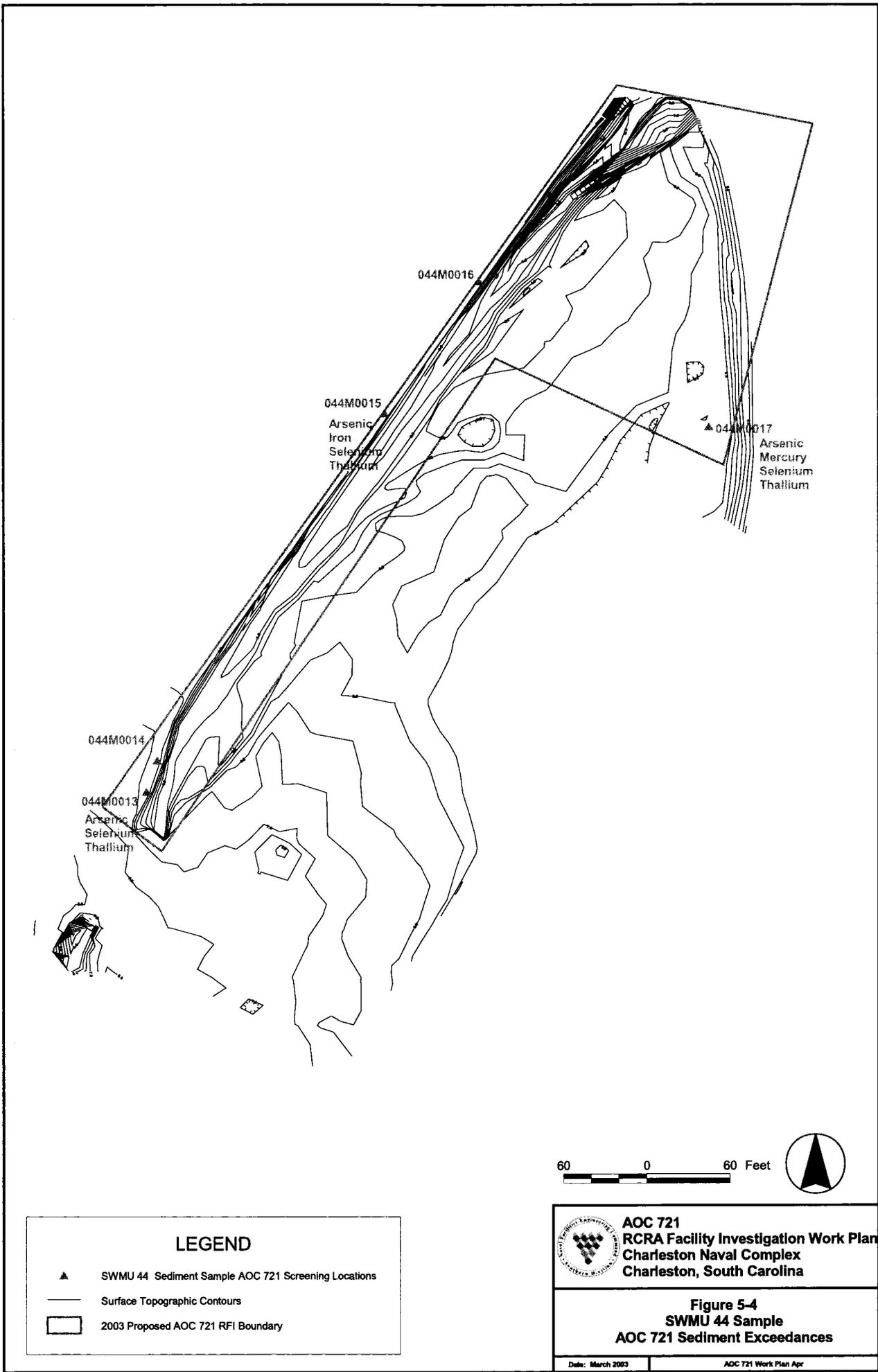
**AOC 721
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Charleston Naval Complex
Charleston, South Carolina**

**Figure 5-3
SWMU 44 Sample
AOC 721 Groundwater Exceedances**

in Noisette Creek, and analyzed only for TOC, therefore were not evaluated in developing this work plan.

Metals were the only exceedances in SWMU 44 sediment samples evaluated for development of the AOC 721 SAP. Sediment sample locations 044M0013 through 044M0017 reported various combinations of metals that exceeded screening criteria. Figure 5-4 depicts SWMU 44 sediment sample exceedances and locations related to AOC 721. Table 5.4 summarizes SWMU 44 sediment sample constituents that present potential concern for AOC 721.

Table 5.4	
AOC 721 Sediment Constituents of Potential Concern from SWMU 44 Data Charleston Naval Complex, Charleston, SC	
Constituent	Reason for Concern
Arsenic	Detection of arsenic at locations 044M0013, 044M0015, and 044M0017 exceeded AOC 721 background (28.7 mg/kg), RBC (0.43 mg/kg), and SSV (7.24 mg/kg) criteria requiring delineation.
Iron	Detection of iron at 044M0015 exceeded the AOC 721 background (48,700 mg/kg) and RBC (2300 mg/kg). The concentration of iron at 044M0015 is 93,700 mg/kg. The amount of iron consumed based on the resident child intake scenario would be 1.21 mg/day which is less than the recommended daily iron intake of 15 mg for a child. Additional characterization of iron is not proposed.
Mercury	Detection of mercury at 044M0015 exceeded the SSV (0.13 mg/kg) and AOC 721 background (1.50 mg/kg) requiring delineation.
Selenium	Detection of selenium at locations 044M0013, 044M0015, and 044M0017 exceeded the SSL (2.5 mg/kg) and AOC 721 background (2.80 mg/kg) requiring delineation.
Thallium	Detection of thallium at locations 044M0013, 044M0015, and 044M0017 exceeded the RBC (0.55 mg/kg) and AOC 721 background (0.55 mg/kg) requiring delineation.



044M0016

044M0015

Arsenic
Iron
Selenium
Thallium

▲ 044M0017

Arsenic
Mercury
Selenium
Thallium

044M0014

044M0013

Arsenic
Selenium
Thallium

LEGEND

- ▲ SWMU 44 Sediment Sample AOC 721 Screening Locations
- Surface Topographic Contours
- 2003 Proposed AOC 721 RFI Boundary

60 0 60 Feet



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Figure 5-4
SWMU 44 Sample
AOC 721 Sediment Exceedances

6.0 SAMPLING AND ANALYSIS PLAN

The following sections summarize the proposed AOC 721 RFI SAP. The AOC 721 SAP is presented by media type. All environmental samples will be analyzed by a SCDHEC certified laboratory, and the data will be evaluated by a third party data validation firm according to current USEPA Data Validation Guidelines.

6.1 Soil Sampling and Analysis

A total of 20 soil sample locations are proposed to define the extent of COPCs defined in Section 5 of this document (Figure 6-1). Table 6.1 lists sample location, compounds, and the primary purpose of the proposed sample location.

Table 6.1 AOC 721 Proposed Soil Sample Locations Charleston Naval Complex, Charleston, SC		
Location	Parameters	Purpose
721SB001	2-methylnaphthalene, chrysene, naphthalene, pyrene, and phenanthrene	Determine if parameters are in soil and potential for runoff from 044SS005 entering drainage ditch.
721SB002	arsenic, mercury, selenium, and thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044M0017
721SB003	arsenic, mercury, selenium, and thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044M0017
721SB004	arsenic, mercury, selenium, and thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044M0017
721SB005	arsenic, mercury, selenium, and thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044M0017
721SB006	arsenic, selenium, thallium, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Determine constituent concentrations and delineate screening criteria exceedances at 044SS006
721SB06A	arsenic, selenium, thallium, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Determine constituent concentrations and delineate screening criteria exceedances at 044SS006
721SB06B	arsenic, selenium, thallium, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Determine constituent concentrations and delineate screening criteria exceedances at 044SS006
721SB06C	arsenic, selenium, thallium, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Determine constituent concentrations and delineate screening criteria exceedances at 044SS006
721SB06D	arsenic, selenium, thallium, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Determine constituent concentrations and delineate screening criteria exceedances at 044SS006
721SB007	Thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044SB027
721SB07A	Thallium	Determine constituent concentrations and

Table 6.1
AOC 721 Proposed Soil Sample Locations
Charleston Naval Complex, Charleston, SC

Location	Parameters	Purpose
		delineate screening criteria exceedances at 044SB027
721SB07B	Thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044SB027
721SB07C	Thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044SB027
721SB07D	Thallium	Determine constituent concentrations and delineate screening criteria exceedances at 044SB027
721SB008	beryllium, cobalt, and zinc	Determine constituent concentrations and delineate screening criteria exceedances at 044SB025
721SB08A	beryllium, cobalt, and zinc	Determine constituent concentrations and delineate screening criteria exceedances at 044SB025
721SB08B	beryllium, cobalt, and zinc	Determine constituent concentrations and delineate screening criteria exceedances at 044SB025
721SB08C	beryllium, cobalt, and zinc	Determine constituent concentrations and delineate screening criteria exceedances at 044SB025
721SB08D	beryllium, cobalt, and zinc	Determine constituent concentrations and delineate screening criteria exceedances at 044SB025



LEGEND

- Proposed Soil Sample Locations
- ✕ BWMU 44 Soil Sample ACC 721 Sampling Locations
- △ BWMU 44 Sediment Sample ACC 721 Sampling Locations
- Mean High Water Elevation
- Topographic Divide
- Surface Topographic Contours
- 2803 ACC 721 RFI Boundary

ACC 721
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Figure 4-1
ACC 721 RFI
Soil Sample Locations

2803 ACC 721 RFI Boundary

Soil samples will be collected from the upper (0-1 ft bgs) interval. Collection of soil samples will be in accordance with the *Comprehensive Sampling and Analysis Plan (CSAP)* (EnSafe/Allen & Hoshall July 1996). Sampling will begin with collection at the 20 proposed locations. A second round of samples may be collected where AOC 721 soil samples do not completely delineate verified exceedances. Offset distances will be approximately 20 feet where practicable depending on location accessibility. Contingent sample locations will be determined based on analytical results.

6.2 Groundwater Sampling and Analysis

Groundwater samples will be collected from existing monitoring wells 044005, 044006, and 044007 (Figure 6-2). Samples of groundwater will be collected three times over a six week period to verify groundwater screening criteria exceedances and to evaluate temporal changes in detected concentrations of the COPCs defined in Section 5 of this document. Soil COPCs identified in Section 5 will be added to groundwater analyte list in an agreement with SCDHEC during the March 27, 2003 discussion regarding analyte selection. Soil constituents will be added to the groundwater analyte list of the well closest to the soil exceedance location and to those wells downgradient of the exceedance. However, soil constituents will be dropped from the groundwater analyte list if the soil constituent is not detected in the first round of groundwater sample collection. For the first groundwater sampling event at AOC 721, all three wells will be sampled for the same parameters identified as a concern at the site.

Groundwater redox conditions will be evaluated by analyzing samples for TOC, oxidation/reduction potential (ORP), Iron ²⁺ (Fe ²⁺), and Iron ³⁺ (Fe ³⁺). ORP values will be measured in the field during well purge using instrumentation such as a Horiba U-22 and flow through cell. Analysis for Fe ²⁺ will be performed using HACH test Method 8146 and spectrophotometer. Analysis for Fe ³⁺ will be performed using HACH test Method 8147 and spectrophotometer. Results from the two HACH analyses for iron will be compared with laboratory detected concentrations of total iron.

Table 6.2 lists well location, compounds, and primary purpose of the proposed sample at each location. Samples will be collected in accordance with the CSAP using low-flow techniques.

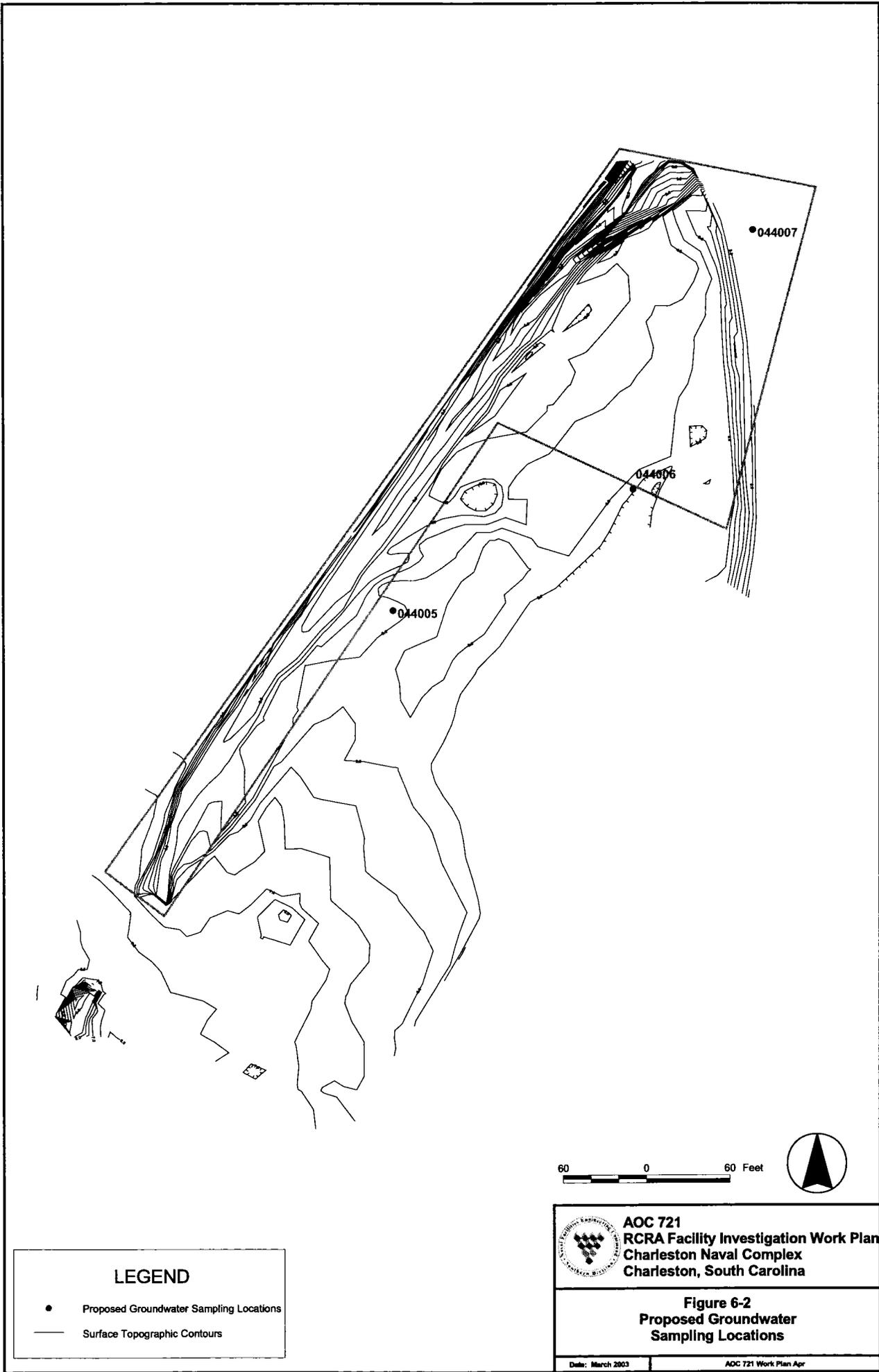
Table 6.2 AOC 721 Proposed Groundwater Sample Locations Charleston Naval Complex, Charleston, SC		
Location	Parameters	Purpose
044005	TOC, Fe ²⁺ , Fe ³⁺ , ORP, antimony, vanadium, thallium, iron, <i>arsenic, beryllium, cobalt, mercury, selenium, zinc, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene</i>	Determine ORP and dissolved constituent concentrations
044006	TOC, Fe ²⁺ , Fe ³⁺ , ORP, vanadium, thallium, iron, <i>arsenic, beryllium, cobalt, mercury, selenium, zinc, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene</i>	Determine ORP and dissolved constituent concentrations
044007	TOC, Fe ²⁺ , Fe ³⁺ , ORP, antimony, vanadium, thallium, iron, <i>arsenic, beryllium, cobalt, mercury, selenium, zinc, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene</i>	Determine ORP and dissolved constituent concentrations

Note:

ORP = Oxidation/Reduction Potential

TOC = Total Organic Carbon

Italicized analytes are those constituents based on soil sample list closest to or up gradient of the associated well.



LEGEND

- Proposed Groundwater Sampling Locations
- Surface Topographic Contours

60 0 60 Feet



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Figure 6-2
Proposed Groundwater
Sampling Locations

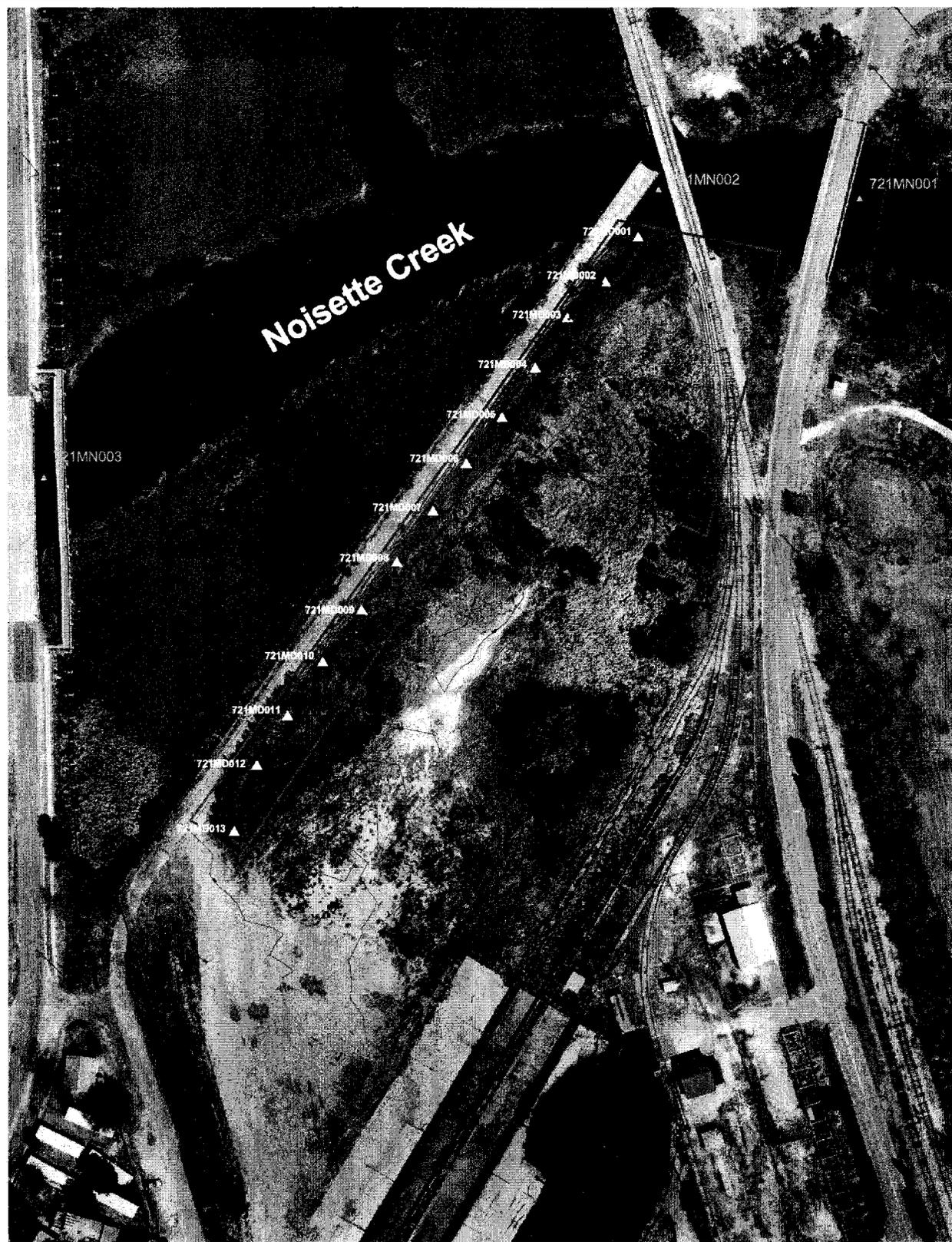
Date: March 2003 AOC 721 Work Plan Apr

6.3 Sediment Sampling and Analysis

A total of 16 (13 primary and three contingent) sediment sample locations are proposed along the northeast trending drainage ditch and in Noisette Creek (see Figure 6-3). Thirteen sediment sample locations (721MD001 – 721MD0013) are proposed for the drainage ditch and are spaced every 50 feet along the drainage centerline. Sediment from the drainage ditch enters Noisette Creek just west of the Noisette Creek railroad bridge that parallels Avenue D North. Three sediment sample locations (721MN001 – 721MN003) are contingent locations pending results of the thirteen primary locations in the drainage ditch. Noisette Creek has efficient flushing capabilities, and more than 90 percent of storm water runoff and suspended sediment load can be flushed to the Cooper River in one tidal cycle. Consequently, the residence time of SWMU 44/AOC 721 storm water runoff sediment in Noisette Creek is limited. The primary source of AOC 721 storm water runoff sediment into Noisette Creek is the drainage ditch that runs along the north edge of the site. This ditch also receives storm water from other areas of the site and from North Charleston.

Table 6.3 lists sample location, compounds, and the primary purpose of the proposed sample at each location. Samples will be collected in accordance with the CSAP.

Table 6.3 AOC 721 Proposed Sediment Sample Locations Charleston Naval Complex, Charleston, SC		
Location	Parameters	Purpose
721MD001 - 721MD013	arsenic, beryllium, cobalt, mercury, selenium, thallium, zinc, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene	Primary sample location to determine constituent concentrations from previous data and possible runoff from upland sources, and delineate screening criteria exceedances in the drainage ditch – determine if sediment to Noisette Creek source present
721MN001	Determined from exceedances detected in primary ditch sediment samples.	Contingency location to determine constituent concentrations and delineate screening criteria exceedances in Noisette Creek – down stream location
721MN002	Determined from exceedances detected in primary ditch sediment samples.	Contingency location to determine constituent concentrations and delineate screening criteria exceedances in Noisette Creek – confluence location (ditch/Noisette Creek)
721MN003	Determined from exceedances detected in primary ditch sediment samples.	Contingency location to determine constituent concentrations and delineate screening criteria exceedances in Noisette Creek – upstream location



LEGEND	
▲	Proposed AOC 721 Ditch Sediment Sample
△	Proposed AOC 721 Noisette Creek Sediment Sample
	Surface Topographic Contours

80 0 80 Feet

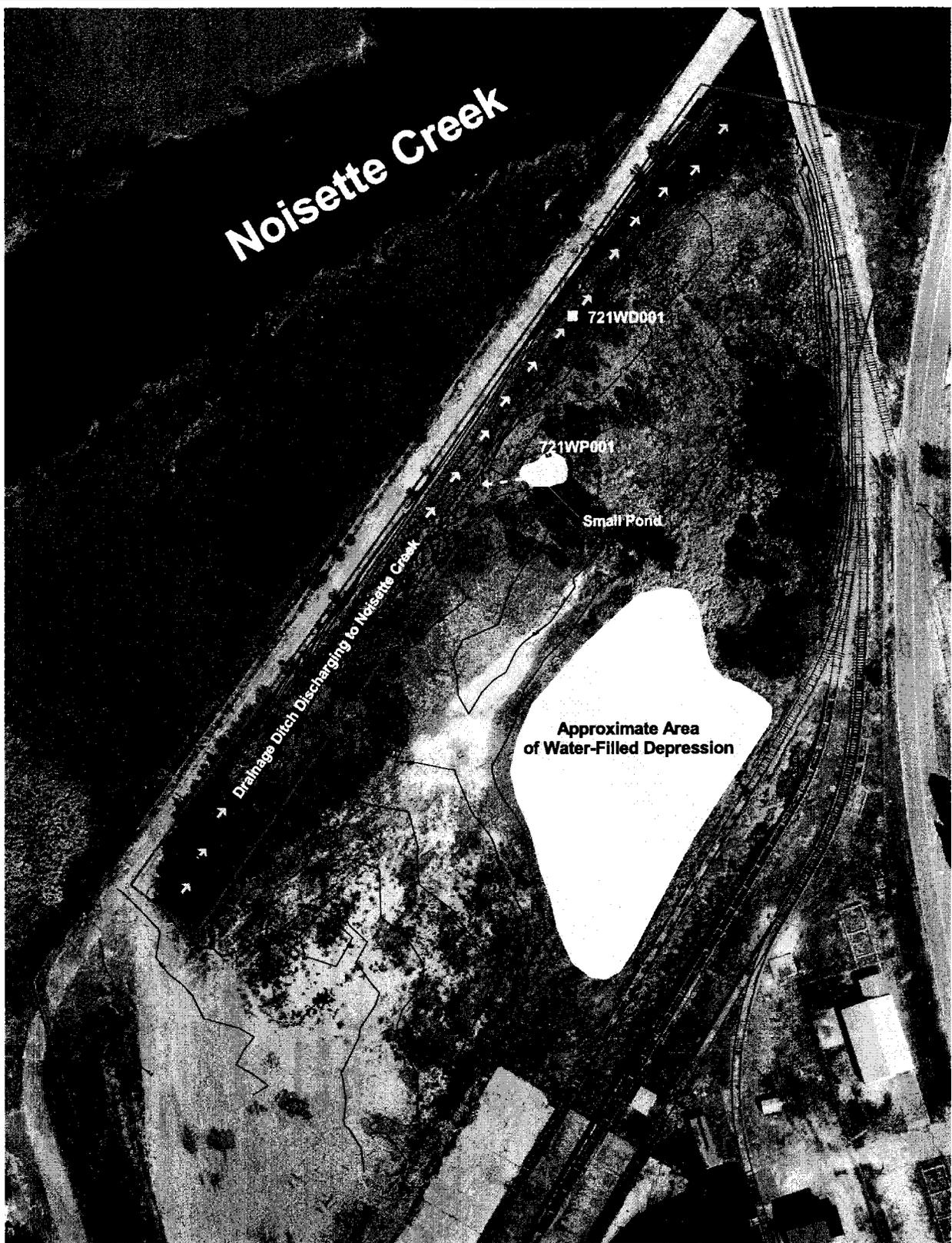


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Figure 6-3
Proposed Sediment Sampling Locations

6.4 Surface Water Sampling and Analysis

Two surface water sample locations are proposed for AOC 721 (Figure 6-4). One sample (721WP001) will be collected from the small pond that adjoins the AOC 721 drainage ditch. A second location (721WD001) will be at the lower end of the drainage ditch. Collection of samples from location 721WD001 will be at low and high tides to determine variations in water quality resulting from tidal inundation. Samples of surface water will not be collected from the large pond resulting from the 1996 coal removal action at SWMU 44. AOC 721 surface water samples will be analyzed for arsenic, beryllium, calcium, cobalt, magnesium, mercury, potassium, sodium, selenium, thallium, zinc, 2-methylnaphthalene, benzo(a)anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, pyrene, chloride, sulfate, TDS, salinity, and total suspended solids (TSS).



LEGEND

- Proposed AOC 721 Surface Water Sample Location
- Surface Topographic Contours
- Small Pond
- 1996 Removal - North Pond
- Ditch Drainage

60 0 60 Feet



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Charleston Naval Complex
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Figure 6-4
Proposed Surface Water
Sampling Locations

7.0 REFERENCES

- CH2M-Jones. (January 2002). *CMS Work Plan/Interim Measure Completion Report*. Charleston, South Carolina.
- EnSafe/Allen & Hoshall. (1995). *Zone C RFI Work Plan*. Charleston, South Carolina.
- EnSafe/Allen & Hoshall. (July 1996). *Comprehensive Sampling and Analysis Plan*. Charleston, South Carolina.
- EnSafe Inc. (November 14, 1997). *Zone C RFI Report*. Charleston, South Carolina.

5.0 SIGNATORY REQUIREMENT

Condition I.E. of the Hazardous and Solid Waste Amendments (HSWA) portion of RCRA Part B Permit (EPA SCO 170 022 560) states: *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 is, to 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.

Robert A. Harrell, Jr., P.E.
Engineer-In-Charge

Date

Appendix A
Data Screening Tables

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SB00501	ALUMINUM	8790	MG/KG	=	METAL	9976	7800	NL	NL	2
044SB00601a	ALUMINUM	17500	MG/KG	=	METAL	9976	7800	NL	NL	2
044SB00701	ALUMINUM	5920	MG/KG	=	METAL	9976	7800	NL	NL	#
044SB02501	ALUMINUM	36600	MG/KG	=	METAL	9976	7800	NL	NL	1,2
044SB02601	ALUMINUM	2800	MG/KG	=	METAL	9976	7800	NL	NL	#
044SB02701	ALUMINUM	21900	MG/KG	=	METAL	9976	7800	NL	NL	1,2
044SS00401	ALUMINUM	3810	MG/KG	=	METAL	9976	7800	NL	NL	#
044SS00501	ALUMINUM	6290	MG/KG	=	METAL	9976	7800	NL	NL	#
044SS00601	ALUMINUM	8560	MG/KG	=	METAL	9976	7800	NL	NL	2
044SB02701	ANTIMONY	0.48	MG/KG	J	METAL	0.44	3.1	2.5	12	1
044SS00401	ANTIMONY	0.33	MG/KG	J	METAL	0.44	3.1	2.5	12	#
044SS00501	ANTIMONY	0.71	MG/KG	J	METAL	0.44	3.1	2.5	12	1
044SS00601	ANTIMONY	1	MG/KG	J	METAL	0.44	3.1	2.5	12	1
044SB00501	ARSENIC	13.8	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2
044SB00601a	ARSENIC	103	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB00701	ARSENIC	19	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB02501	ARSENIC	26.6	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB02601	ARSENIC	2.8	MG/KG	J	METAL	8.4	0.43	14.5	7.24	2
044SB02701	ARSENIC	22.4	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB02901	ARSENIC	85	MG/KG	S=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB02901	ARSENIC	69.3	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03001	ARSENIC	130	MG/KG	S=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03001	ARSENIC	104	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03101	ARSENIC	340	MG/KG	S=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03101	ARSENIC	283	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03201	ARSENIC	97.8	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB03201	ARSENIC	110	MG/KG	S=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB06301	ARSENIC	76.8	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB06401	ARSENIC	233	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB06501	ARSENIC	85.6	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SB06601	ARSENIC	18.2	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB07301	ARSENIC	50.9	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB07401	ARSENIC	68.4	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB07501	ARSENIC	73.8	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB07601	ARSENIC	11.7	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,4
044SBC1501	ARSENIC	12.1	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,4
044SBC2601	ARSENIC	7.7	MG/KG	J	METAL	8.4	0.43	14.5	7.24	2,4
044SBC2701	ARSENIC	24.9	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SS00401	ARSENIC	3.3	MG/KG	J	METAL	8.4	0.43	14.5	7.24	2
044SS00501	ARSENIC	21.6	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SS00601	ARSENIC	98.5	MG/KG	J	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044SB00501	BARIUM	26.1	MG/KG	=	METAL	56	550	800	NL	#
044SB00601a	BARIUM	55.4	MG/KG	=	METAL	56	550	800	NL	#
044SB00701	BARIUM	27.2	MG/KG	=	METAL	56	550	800	NL	#
044SB02501	BARIUM	46.4	MG/KG	J	METAL	56	550	800	NL	#
044SB02601	BARIUM	6.7	MG/KG	J	METAL	56	550	800	NL	#
044SB02701	BARIUM	29.9	MG/KG	=	METAL	56	550	800	NL	#
044SS00401	BARIUM	8.4	MG/KG	=	METAL	56	550	800	NL	#
044SS00501	BARIUM	25.5	MG/KG	=	METAL	56	550	800	NL	#
044SS00601	BARIUM	62	MG/KG	=	METAL	56	550	800	NL	1
044SB00501	BERYLLIUM	0.46	MG/KG	J	METAL	0.19	16	31.5	NL	1
044SB00601a	BERYLLIUM	2	MG/KG	J	METAL	0.19	16	31.5	NL	1
044SB00701	BERYLLIUM	0.26	MG/KG	J	METAL	0.19	16	31.5	NL	1
044SB02501	BERYLLIUM	1.9	MG/KG	=	METAL	0.19	16	31.5	NL	1
044SB02601	BERYLLIUM	0.16	MG/KG	J	METAL	0.19	16	31.5	NL	#
044SB00501	CADMIUM	0.44	MG/KG	J	METAL	0.178	3.9	4	1	1
044SB00601a	CADMIUM	3.6	MG/KG	=	METAL	0.178	3.9	4	1	1,4
044SB00701	CADMIUM	0.9	MG/KG	=	METAL	0.178	3.9	4	1	1
044SB02501	CADMIUM	0.51	MG/KG	J	METAL	0.178	3.9	4	1	1
044SBC1501	CADMIUM	0.54	MG/KG	J	METAL	0.178	3.9	4	1	1

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SBC2701	CADMIUM	0.96	MG/KG	J	METAL	0.178	3.9	4	1	1
044SB00501	CALCIUM	2030	MG/KG	J	METAL	31426	NL	NL	NL	EN
044SB00601a	CALCIUM	1350	MG/KG	J	METAL	31426	NL	NL	NL	EN
044SB00701	CALCIUM	128000	MG/KG	J	METAL	31426	NL	NL	NL	EN
044SB02501	CALCIUM	27900	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SB02601	CALCIUM	5840	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SB02701	CALCIUM	3540	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SS00401	CALCIUM	74100	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SS00501	CALCIUM	1160	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SS00601	CALCIUM	7850	MG/KG	=	METAL	31426	NL	NL	NL	EN
044SB00501	CHROMIUM, TOTAL	15.1	MG/KG	J	METAL	19.6	23 (VI)	19	52.3	#
044SB00601a	CHROMIUM, TOTAL	46.9	MG/KG	J	METAL	19.6	23 (VI)	19	52.3	1,2,3
044SB00701	CHROMIUM, TOTAL	18.2	MG/KG	J	METAL	19.6	23 (VI)	19	52.3	#
044SB02501	CHROMIUM, TOTAL	54.3	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,2,3,4
044SB02601	CHROMIUM, TOTAL	7.3	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	#
044SB02701	CHROMIUM, TOTAL	38.2	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,3
044SS00401	CHROMIUM, TOTAL	21.7	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,3
044SS00501	CHROMIUM, TOTAL	13.6	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	#
044SS00601	CHROMIUM, TOTAL	45.1	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,2,3
044SB00501	COBALT	3.5	MG/KG	J	METAL	2	160	NL	NL	1
044SB00601a	COBALT	8.6	MG/KG	J	METAL	2	160	NL	NL	1
044SB00701	COBALT	2.5	MG/KG	J	METAL	2	160	NL	NL	1
044SB02501	COBALT	13.6	MG/KG	J	METAL	2	160	NL	NL	1
044SB02601	COBALT	5.6	MG/KG	J	METAL	2	160	NL	NL	1
044SB02701	COBALT	8.3	MG/KG	=	METAL	2	160	NL	NL	1
044SS00601	COBALT	5.6	MG/KG	=	METAL	2	160	NL	NL	1
044SB00501	COPPER	24.1	MG/KG	J	METAL	22	310	NL	18.7	1,4
044SB00601a	COPPER	122	MG/KG	J	METAL	22	310	NL	18.7	1,4
044SB00701	COPPER	38	MG/KG	J	METAL	22	310	NL	18.7	1,4
044SB02501	COPPER	43.9	MG/KG	J	METAL	22	310	NL	18.7	1,4

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SB02601	COPPER	4.5	MG/KG	J	METAL	22	310	NL	18.7	#
044SB02701	COPPER	46.5	MG/KG	=	METAL	22	310	NL	18.7	1,4
044SBC1501	COPPER	14.8	MG/KG	J	METAL	22	310	NL	18.7	#
044SBC2601	COPPER	1.9	MG/KG	J	METAL	22	310	NL	18.7	#
044SBC2701	COPPER	74.2	MG/KG	J	METAL	22	310	NL	18.7	1,4
044SS00401	COPPER	5.1	MG/KG	=	METAL	22	310	NL	18.7	#
044SS00501	COPPER	22.4	MG/KG	=	METAL	22	310	NL	18.7	1,4
044SS00601	COPPER	69.4	MG/KG	=	METAL	22	310	NL	18.7	1,4
044SB00501	IRON	10800	MG/KG	J	METAL	7696	2300	NL	NL	1,2
044SB00601a	IRON	99500	MG/KG	J	METAL	7696	2300	NL	NL	1,2
044SB00701	IRON	8760	MG/KG	J	METAL	7696	2300	NL	NL	1,2
044SB02501	IRON	31900	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044SB02601	IRON	3520	MG/KG	=	METAL	7696	2300	NL	NL	2
044SB02701	IRON	27800	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044SS00401	IRON	4320	MG/KG	=	METAL	7696	2300	NL	NL	2
044SS00501	IRON	10500	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044SS00601	IRON	90500	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044SB00501	LEAD	32.1	MG/KG	J	METAL	138	NL	NL	30.2	4
044SB00601a	LEAD	37.8	MG/KG	J	METAL	138	NL	NL	30.2	4
044SB00701	LEAD	82.7	MG/KG	J	METAL	138	NL	NL	30.2	4
044SB02501	LEAD	64.2	MG/KG	=	METAL	138	NL	NL	30.2	4
044SB02601	LEAD	26.1	MG/KG	=	METAL	138	NL	NL	30.2	#
044SB02701	LEAD	40.5	MG/KG	=	METAL	138	NL	NL	30.2	4
044SS00401	LEAD	4.2	MG/KG	=	METAL	138	NL	NL	30.2	#
044SS00501	LEAD	33.4	MG/KG	=	METAL	138	NL	NL	30.2	4
044SS00601	LEAD	49.7	MG/KG	=	METAL	138	NL	NL	30.2	4
044SB00501	MAGNESIUM	942	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SB00601a	MAGNESIUM	2090	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SB00701	MAGNESIUM	2450	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SB02501	MAGNESIUM	5780	MG/KG	=	METAL	1148	NL	NL	NL	EN

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SB02601	MAGNESIUM	514	MG/KG	J	METAL	1148	NL	NL	NL	EN
044SB02701	MAGNESIUM	5790	MG/KG	J	METAL	1148	NL	NL	NL	EN
044SS00401	MAGNESIUM	2330	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SS00501	MAGNESIUM	703	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SS00601	MAGNESIUM	1870	MG/KG	=	METAL	1148	NL	NL	NL	EN
044SB00501	MANGANESE	86.3	MG/KG	J	METAL	86	160	NL	NL	1
044SB00601a	MANGANESE	96.3	MG/KG	J	METAL	86	160	NL	NL	1
044SB00701	MANGANESE	111	MG/KG	J	METAL	86	160	NL	NL	1
044SB02501	MANGANESE	408	MG/KG	=	METAL	86	160	NL	NL	1,2
044SB02601	MANGANESE	199	MG/KG	=	METAL	86	160	NL	NL	1,2
044SB02701	MANGANESE	150	MG/KG	=	METAL	86	160	NL	NL	1
044SS00401	MANGANESE	53.3	MG/KG	=	METAL	86	160	NL	NL	#
044SS00501	MANGANESE	23.4	MG/KG	=	METAL	86	160	NL	NL	#
044SS00601	MANGANESE	37.5	MG/KG	=	METAL	86	160	NL	NL	#
044SB00501	MERCURY	0.2	MG/KG	J	METAL	0.2	2.3	1	0.13	1,4
044SB00701	MERCURY	1	MG/KG	J	METAL	0.2	2.3	1	0.13	1,3,4
044SB02501	MERCURY	0.53	MG/KG	=	METAL	0.2	2.3	1	0.13	1,4
044SB02601	MERCURY	0.15	MG/KG	=	METAL	0.2	2.3	1	0.13	4
044SB02701	MERCURY	0.21	MG/KG	=	METAL	0.2	2.3	1	0.13	1,4
044SBC1501	MERCURY	0.05	MG/KG	=	METAL	0.2	2.3	1	0.13	#
044SBC2701	MERCURY	0.65	MG/KG	=	METAL	0.2	2.3	1	0.13	1,4
044SS00501	MERCURY	0.34	MG/KG	=	METAL	0.2	2.3	1	0.13	1,4
044SB00501	NICKEL	9.2	MG/KG	=	METAL	7.4	160	65	15.9	1
044SB00601a	NICKEL	43.4	MG/KG	=	METAL	7.4	160	65	15.9	1,4
044SB00701	NICKEL	16.6	MG/KG	=	METAL	7.4	160	65	15.9	1,4
044SB02501	NICKEL	36.9	MG/KG	=	METAL	7.4	160	65	15.9	1,4
044SB02601	NICKEL	14	MG/KG	=	METAL	7.4	160	65	15.9	1
044SB02701	NICKEL	11.6	MG/KG	J	METAL	7.4	160	65	15.9	1
044SBC1501	NICKEL	26.2	MG/KG	J	METAL	7.4	160	65	15.9	1,4
044SBC2601	NICKEL	2.5	MG/KG	J	METAL	7.4	160	65	15.9	#

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SBC2701	NICKEL	14.6	MG/KG	J	METAL	7.4	160	65	15.9	1
044SS00401	NICKEL	10.2	MG/KG	=	METAL	7.4	160	65	15.9	1
044SS00501	NICKEL	5.5	MG/KG	=	METAL	7.4	160	65	15.9	#
044SS00601	NICKEL	21.3	MG/KG	=	METAL	7.4	160	65	15.9	1,4
044SB00501	POTASSIUM	714	MG/KG	J	METAL	516	NL	NL	NL	EN
044SB00601a	POTASSIUM	8610	MG/KG	J	METAL	516	NL	NL	NL	EN
044SB00701	POTASSIUM	1070	MG/KG	J	METAL	516	NL	NL	NL	EN
044SB02501	POTASSIUM	3810	MG/KG	=	METAL	516	NL	NL	NL	EN
044SB02601	POTASSIUM	252	MG/KG	J	METAL	516	NL	NL	NL	EN
044SB02701	POTASSIUM	3090	MG/KG	J	METAL	516	NL	NL	NL	EN
044SS00401	POTASSIUM	553	MG/KG	J	METAL	516	NL	NL	NL	EN
044SS00501	POTASSIUM	474	MG/KG	J	METAL	516	NL	NL	NL	EN
044SS00601	POTASSIUM	3620	MG/KG	=	METAL	516	NL	NL	NL	EN
044SB00501	SELENIUM	1.2	MG/KG	J	METAL	1	39	2.5	NL	1
044SB00601a	SELENIUM	8.8	MG/KG	J	METAL	1	39	2.5	NL	1,4
044SB00701	SELENIUM	0.99	MG/KG	J	METAL	1	39	2.5	NL	#
044SB02501	SELENIUM	0.72	MG/KG	J	METAL	1	39	2.5	NL	#
044SB02701	SELENIUM	2.6	MG/KG	=	METAL	1	39	2.5	NL	1,4
044SBC1501	SELENIUM	0.95	MG/KG	J	METAL	1	39	2.5	NL	#
044SS00401	SELENIUM	0.93	MG/KG	=	METAL	1	39	2.5	NL	#
044SS00501	SELENIUM	1.6	MG/KG	=	METAL	1	39	2.5	NL	1
044SS00601	SELENIUM	6.1	MG/KG	=	METAL	1	39	2.5	NL	1,4
044SB00501	SODIUM	518	MG/KG	J	METAL	346	NL	NL	NL	EN
044SB00601a	SODIUM	3240	MG/KG	J	METAL	346	NL	NL	NL	EN
044SB00701	SODIUM	506	MG/KG	J	METAL	346	NL	NL	NL	EN
044SB02501	SODIUM	7270	MG/KG	J	METAL	346	NL	NL	NL	EN
044SB02601	SODIUM	367	MG/KG	J	METAL	346	NL	NL	NL	EN
044SB02701	SODIUM	10100	MG/KG	=	METAL	346	NL	NL	NL	EN
044SB00601a	THALLIUM	2.4	MG/KG	J	METAL	0.5	0.55	0.35	NL	1,2,3
044SB02701	THALLIUM	3.7	MG/KG	=	METAL	0.5	0.55	0.35	NL	1,2,3

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SS00601	THALLIUM	8.3	MG/KG	=	METAL	0.5	0.55	0.35	NL	1,2,3
044SB00701	Tin (Sn)	1.3	MG/KG	J	METAL	2.8	4700	NL	NL	#
044SB00501	VANADIUM	18.7	MG/KG	=	METAL	17.6	55	3000	NL	1
044SB00601a	VANADIUM	42	MG/KG	=	METAL	17.6	55	3000	NL	1
044SB00701	VANADIUM	15	MG/KG	=	METAL	17.6	55	3000	NL	1
044SB02501	VANADIUM	68.2	MG/KG	=	METAL	17.6	55	3000	NL	1,2
044SB02601	VANADIUM	7.1	MG/KG	J	METAL	17.6	55	3000	NL	#
044SB02701	VANADIUM	68.5	MG/KG	=	METAL	17.6	55	3000	NL	1,2
044SS00401	VANADIUM	13.4	MG/KG	=	METAL	17.6	55	3000	NL	#
044SS00501	VANADIUM	21.9	MG/KG	=	METAL	17.6	55	3000	NL	1
044SS00601	VANADIUM	45.7	MG/KG	=	METAL	17.6	55	3000	NL	1
044SB00501	ZINC	68.1	MG/KG	=	METAL	152	2300	6000	124	#
044SB00601a	ZINC	123	MG/KG	=	METAL	152	2300	6000	124	#
044SB00701	ZINC	93.6	MG/KG	=	METAL	152	2300	6000	124	#
044SB02501	ZINC	279	MG/KG	=	METAL	152	2300	6000	124	1,4
044SB02601	ZINC	65.5	MG/KG	=	METAL	152	2300	6000	124	#
044SB02701	ZINC	166	MG/KG	=	METAL	152	2300	6000	124	1,4
044SS00401	ZINC	25.7	MG/KG	=	METAL	152	2300	6000	124	#
044SS00501	ZINC	38.3	MG/KG	=	METAL	152	2300	6000	124	#
044SS00601	ZINC	78.8	MG/KG	=	METAL	152	2300	6000	124	#
044SS00501	1,2,4-TRICHLOROBENZENE	0.084	MG/KG	J	SVOA	NL	78	2.5	NL	#
044SBC1501	2-METHYLNAPHTHALENE	0.032	MG/KG	J	SVOA	NL	NL	NL	0.33	#
044SBC2701	2-METHYLNAPHTHALENE	0.29	MG/KG	J	SVOA	NL	NL	NL	0.33	#
044SS00501	2-METHYLNAPHTHALENE	1.3	MG/KG	=	SVOA	NL	NL	NL	0.33	4
044SS00601	2-METHYLNAPHTHALENE	2.4	MG/KG	=	SVOA	NL	NL	NL	0.33	4
044SBC2701	ACENAPHTHENE	0.46	MG/KG	=	SVOA	NL	470	285	0.33	4
044SS00601	ACENAPHTHENE	0.09	MG/KG	J	SVOA	NL	470	285	0.33	#
044SBC2701	ACENAPHTHYLENE	0.24	MG/KG	J	SVOA	NL	NL	NL	0.33	#
044SBC2701	ANTHRACENE	1.5	MG/KG	=	SVOA	NL	2300	6000	0.33	4
044SS00601	ANTHRACENE	0.12	MG/KG	J	SVOA	NL	2300	6000	0.33	#

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SBC2701	BENZO(a)ANTHRACENE	2.7	MG/KG	J	SVOA	NL	0.87	1	0.33	2,3,4
044SS00501	BENZO(a)ANTHRACENE	0.21	MG/KG	J	SVOA	NL	0.87	1	0.33	#
044SS00601	BENZO(a)ANTHRACENE	0.38	MG/KG	J	SVOA	NL	0.87	1	0.33	4
044SBC2701	BENZO(a)PYRENE	2.7	MG/KG	J	SVOA	NL	0.87	4	0.33	2,4
044SS00501	BENZO(a)PYRENE	0.18	MG/KG	J	SVOA	NL	0.87	4	0.33	#
044SS00601	BENZO(a)PYRENE	0.22	MG/KG	J	SVOA	NL	0.87	4	0.33	#
044SBC1501	BENZO(b)FLUORANTHENE	0.027	MG/KG	J	SVOA	NL	0.87	2.5	NL	#
044SBC2701	BENZO(b)FLUORANTHENE	2.5	MG/KG	J	SVOA	NL	0.87	2.5	NL	2,3
044SS00501	BENZO(b)FLUORANTHENE	0.25	MG/KG	J	SVOA	NL	0.87	2.5	NL	#
044SS00601	BENZO(b)FLUORANTHENE	0.4	MG/KG	J	SVOA	NL	0.87	2.5	NL	#
044SBC2701	BENZO(g,h,i)PERYLENE	0.79	MG/KG	J	SVOA	NL	NL	NL	NL	NL
044SS00501	BENZO(g,h,i)PERYLENE	0.099	MG/KG	J	SVOA	NL	NL	NL	NL	NL
044SS00601	BENZO(g,h,i)PERYLENE	0.11	MG/KG	J	SVOA	NL	NL	NL	NL	NL
044SBC2701	BENZO(k)FLUORANTHENE	3.1	MG/KG	J	SVOA	NL	8.7	24.5	NL	#
044SS00501	BENZO(k)FLUORANTHENE	0.15	MG/KG	J	SVOA	NL	8.7	24.5	NL	#
044SS00601	BENZO(k)FLUORANTHENE	0.21	MG/KG	J	SVOA	NL	8.7	24.5	NL	#
044SBC1501	CHRYSENE	0.038	MG/KG	J	SVOA	NL	87	80	0.33	#
044SBC2701	CHRYSENE	2.7	MG/KG	J	SVOA	NL	87	80	0.33	4
044SS00501	CHRYSENE	0.34	MG/KG	J	SVOA	NL	87	80	0.33	4
044SS00601	CHRYSENE	0.76	MG/KG	=	SVOA	NL	87	80	0.33	4
044SBC2701	DIBENZ(a,h)ANTHRACENE	0.53	MG/KG	J	SVOA	NL	0.087	1	0.33	2,4
044SBC2701	DIBENZOFURAN	0.65	MG/KG	=	SVOA	NL	31	NL	NL	#
044SS00501	DIBENZOFURAN	0.3	MG/KG	J	SVOA	NL	31	NL	NL	#
044SS00601	DIBENZOFURAN	0.67	MG/KG	=	SVOA	NL	31	NL	NL	#
044SBC2701	FLUORANTHENE	7	MG/KG	=	SVOA	NL	310	2150	0.33	4
044SS00501	FLUORANTHENE	0.26	MG/KG	J	SVOA	NL	310	2150	0.33	#
044SS00601	FLUORANTHENE	0.69	MG/KG	=	SVOA	NL	310	2150	0.33	4
044SBC2701	FLUORENE	0.6	MG/KG	=	SVOA	NL	310	280	0.33	4
044SS00601	FLUORENE	0.063	MG/KG	J	SVOA	NL	310	280	0.33	#
044SBC2701	INDENO(1,2,3-c,d)PYRENE	0.88	MG/KG	J	SVOA	NL	0.87	7	NL	2

Table A.1A
 SWMU 44 Surface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044SS00501	INDENO(1,2,3-c,d)PYRENE	0.074	MG/KG	J	SVOA	NL	0.87	7	NL	#
044SS00601	INDENO(1,2,3-c,d)PYRENE	0.07	MG/KG	J	SVOA	NL	0.87	7	NL	#
044SBC2701	NAPHTHALENE	0.31	MG/KG	J	SVOA	NL	160	42	0.33	#
044SS00501	NAPHTHALENE	0.77	MG/KG	=	SVOA	NL	160	42	0.33	4
044SS00601	NAPHTHALENE	1.2	MG/KG	=	SVOA	NL	160	42	0.33	4
044SBC1501	PHENANTHRENE	0.045	MG/KG	J	SVOA	NL	NL	NL	0.33	4
044SBC2701	PHENANTHRENE	7.9	MG/KG	=	SVOA	NL	NL	NL	0.33	4
044SS00501	PHENANTHRENE	0.87	MG/KG	=	SVOA	NL	NL	NL	0.33	4
044SS00601	PHENANTHRENE	2.6	MG/KG	=	SVOA	NL	NL	NL	0.33	4
044SBC2701	PYRENE	7.1	MG/KG	=	SVOA	NL	230	2100	0.33	4
044SS00501	PYRENE	0.33	MG/KG	J	SVOA	NL	230	2100	0.33	4
044SS00601	PYRENE	0.59	MG/KG	=	SVOA	NL	230	2100	0.33	4

Note:

= DOES NOT EXCEED LISTED SCREENING CRITERIA
 EN = ESSENTIAL NUTRIENT - NOT SCREENED
 NL = NOT LISTED

Table A.1B
 SWMU 44 Subsurface Soil
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) SSL	Equals or Exceeds Criteria
044SB02702	ALUMINUM	394	MG/KG	=	METAL	12962	NL	#
044SB02703	ALUMINUM	16400	MG/KG	=	METAL	12962	NL	1
044SB02703	ANTIMONY	0.55	MG/KG	J	METAL	0.32	2.5	1
044SB02703	ARSENIC	7.8	MG/KG	=	METAL	6.6	14.5	#
044SB02702	BARIUM	1.4	MG/KG	=	METAL	34	800	#
044SB02703	BARIUM	21.5	MG/KG	=	METAL	34	800	#
044SB02702	CALCIUM	268	MG/KG	=	METAL	9272	NL	EN
044SB02703	CALCIUM	2650	MG/KG	=	METAL	9272	NL	EN
044SB02702	CHROMIUM, TOTAL	1	MG/KG	J	METAL	19.2	19	#
044SB02703	CHROMIUM, TOTAL	37.1	MG/KG	=	METAL	19.2	19	1,2
044SB02703	COBALT	6.3	MG/KG	J	METAL	2.4	NL	1
044SB02702	COPPER	0.59	MG/KG	J	METAL	9.2	NL	#
044SB02703	COPPER	7.3	MG/KG	=	METAL	9.2	NL	#
044SB02702	IRON	568	MG/KG	=	METAL	11278	NL	#
044SB02703	IRON	26100	MG/KG	=	METAL	11278	NL	1
044SB02702	LEAD	0.84	MG/KG	=	METAL	28	NL	#
044SB02703	LEAD	13.5	MG/KG	=	METAL	28	NL	#
044SB02702	MAGNESIUM	326	MG/KG	J	METAL	1180	NL	EN
044SB02703	MAGNESIUM	6410	MG/KG	J	METAL	1180	NL	EN
044SB02702	MANGANESE	5.7	MG/KG	=	METAL	108	NL	#
044SB02703	MANGANESE	289	MG/KG	=	METAL	108	NL	#
044SB02702	NICKEL	0.32	MG/KG	J	METAL	4.6	65	#
044SB02703	NICKEL	10.9	MG/KG	J	METAL	4.6	65	1
044SB02702	POTASSIUM	145	MG/KG	J	METAL	692	NL	EN
044SB02703	POTASSIUM	3720	MG/KG	J	METAL	692	NL	EN
044SB02703	SELENIUM	2.4	MG/KG	=	METAL	1.1	2.5	#
044SB02702	SODIUM	1880	MG/KG	=	METAL	350	NL	EN
044SB02703	SODIUM	13100	MG/KG	=	METAL	350	NL	EN
044SB02703	THALLIUM	3.2	MG/KG	=	METAL	0.58	0.35	1,2

Table A.1B
 SWMU 44 Subsurface Soil
 Detection Exceedance Screen

044SB02702	VANADIUM	0.89	MG/KG	J	METAL	22	3000	#
044SB02703	VANADIUM	36.1	MG/KG	=	METAL	22	3000	1
044SB02702	ZINC	1.4	MG/KG	J	METAL	60	6000	#
044SB02703	ZINC	39.3	MG/KG	=	METAL	60	6000	#

Note:

= DOES NOT EXCEED LISTED SCREENING CRITERIA

EN = ESSENTIAL NUTRIENT - NOT SCREENED

NL = NOT LISTED

Table A.2A
 SWMU 44 Groundwater
 Human Health Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND Zone C	(2) MCL	(3) RBC	Equals or Exceeds Criteria
044GW00702	ANTIMONY	54.1	UG/L	=	METAL	1/18/1996	NL	6	1.5	2,3
044GW00703	ANTIMONY	10.3	UG/L	J	METAL	5/10/1996	NL	6	1.5	2,3
044GW00705	ANTIMONY	35.3	UG/L	J	METAL	8/1/1997	NL	6	1.5	2,3
044GW00702	ARSENIC	109.0	UG/L	=	METAL	1/18/1996	8	50	0.045	1,2,3
044GW00704	ARSENIC	62.8	UG/L	=	METAL	6/11/1996	8	50	0.045	1,2,3
044GW00707	ARSENIC	173.0	UG/L	=	METAL	7/22/1999	8	50	0.045	1,2,3
044GW007A7	ARSENIC	127.0	UG/L	=	METAL	7/22/1999	8	50	0.045	1,2,3
044GW007B7	ARSENIC	118.0	UG/L	=	METAL	7/22/1999	8	50	0.045	1,2,3
044GW00501	CALCIUM	359000	UG/L	J	METAL	6/13/1995	164900	NL	NL	EN
044GW00502	CALCIUM	280000	UG/L	J	METAL	1/17/1996	164900	NL	NL	EN
044GW00503	CALCIUM	202000	UG/L	=	METAL	5/9/1996	164900	NL	NL	EN
044GW00504	CALCIUM	211000	UG/L	J	METAL	6/10/1996	164900	NL	NL	EN
044GW00505	CALCIUM	322000	UG/L	=	METAL	8/1/1997	164900	NL	NL	EN
044GW00506	CALCIUM	277000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN
044GW005A6	CALCIUM	270000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN
044GW005B6	CALCIUM	275000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN
044GW00601a	CALCIUM	327000	UG/L	=	METAL	4/25/1995	164900	NL	NL	EN
044GW00602	CALCIUM	446000	UG/L	J	METAL	1/17/1996	164900	NL	NL	EN
044GW00603	CALCIUM	401000	UG/L	=	METAL	5/8/1996	164900	NL	NL	EN
044GW00604	CALCIUM	267000	UG/L	J	METAL	6/11/1996	164900	NL	NL	EN
044GW00605	CALCIUM	448000	UG/L	=	METAL	7/30/1997	164900	NL	NL	EN
044GW00606	CALCIUM	391000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW006A6	CALCIUM	400000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW006B6	CALCIUM	404000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW00602	IRON	5240	UG/L	=	METAL	1/17/1996	3438	300	1100	1,2,3
044GW00605	IRON	4630	UG/L	=	METAL	7/30/1997	3438	300	1100	1,2,3
044GW00701	IRON	8710	UG/L	=	METAL	6/14/1995	3438	300	1100	1,2,3
044GW00704	IRON	4440	UG/L	=	METAL	6/11/1996	3438	300	1100	1,2,3
044GW00501	MAGNESIUM	653000	UG/L	=	METAL	6/13/1995	10216	NL	NL	EN
044GW00502	MAGNESIUM	523000	UG/L	=	METAL	1/17/1996	10216	NL	NL	EN
044GW00503	MAGNESIUM	489000	UG/L	=	METAL	5/9/1996	10216	NL	NL	EN
044GW00504	MAGNESIUM	658000	UG/L	J	METAL	6/10/1996	10216	NL	NL	EN
044GW00505	MAGNESIUM	636000	UG/L	=	METAL	8/1/1997	10216	NL	NL	EN
044GW00506	MAGNESIUM	477000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN

Table A.2A
 SWMU 44 Groundwater
 Human Health Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND Zone C	(2) MCL	(3) RBC	Equals or Exceeds Criteria
044GW005A6	MAGNESIUM	464000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN
044GW005B6	MAGNESIUM	473000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN
044GW00601a	MAGNESIUM	245000	UG/L	=	METAL	4/25/1995	10216	NL	NL	EN
044GW00602	MAGNESIUM	128000	UG/L	=	METAL	1/17/1996	10216	NL	NL	EN
044GW00603	MAGNESIUM	76700	UG/L	=	METAL	5/8/1996	10216	NL	NL	EN
044GW00604	MAGNESIUM	347000	UG/L	J	METAL	6/11/1996	10216	NL	NL	EN
044GW00605	MAGNESIUM	152000	UG/L	=	METAL	7/30/1997	10216	NL	NL	EN
044GW00606	MAGNESIUM	129000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW006A6	MAGNESIUM	128000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW006B6	MAGNESIUM	123000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW00701	MAGNESIUM	86500	UG/L	=	METAL	6/14/1995	10216	NL	NL	EN
044GW00702	MAGNESIUM	67200	UG/L	=	METAL	1/18/1996	10216	NL	NL	EN
044GW00703	MAGNESIUM	74500	UG/L	=	METAL	5/10/1996	10216	NL	NL	EN
044GW00704	MAGNESIUM	87700	UG/L	J	METAL	6/11/1996	10216	NL	NL	EN
044GW00705	MAGNESIUM	18700	UG/L	=	METAL	8/1/1997	10216	NL	NL	EN
044GW00707	MAGNESIUM	24100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW007A7	MAGNESIUM	23100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW007B7	MAGNESIUM	22100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW00501	MANGANESE	1040	UG/L	=	METAL	6/13/1995	692	NL	73	1,3
044GW00502	MANGANESE	986.0	UG/L	=	METAL	1/17/1996	692	NL	73	1,3
044GW00505	MANGANESE	692.0	UG/L	=	METAL	8/1/1997	692	NL	73	1,3
044GW00601a	MANGANESE	1990	UG/L	=	METAL	4/25/1995	692	NL	73	1,3
044GW00602	MANGANESE	2580	UG/L	=	METAL	1/17/1996	692	NL	73	1,3
044GW00604	MANGANESE	1120	UG/L	J	METAL	6/11/1996	692	NL	73	1,3
044GW00605	MANGANESE	1770	UG/L	=	METAL	7/30/1997	692	NL	73	1,3
044GW00606	MANGANESE	1060	UG/L	J	METAL	7/22/1999	692	NL	73	1,3
044GW006A6	MANGANESE	1110	UG/L	J	METAL	7/22/1999	692	NL	73	1,3
044GW006B6	MANGANESE	1150	UG/L	J	METAL	7/22/1999	692	NL	73	1,3
044GW00501	POTASSIUM	282000	UG/L	J	METAL	6/13/1995	8226	NL	NL	EN
044GW00502	POTASSIUM	226000	UG/L	J	METAL	1/17/1996	8226	NL	NL	EN
044GW00503	POTASSIUM	143000	UG/L	=	METAL	5/9/1996	8226	NL	NL	EN
044GW00504	POTASSIUM	225000	UG/L	=	METAL	6/10/1996	8226	NL	NL	EN
044GW00505	POTASSIUM	172000	UG/L	=	METAL	8/1/1997	8226	NL	NL	EN
044GW00506	POTASSIUM	194000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN

Table A.2A
 SWMU 44 Groundwater
 Human Health Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND Zone C	(2) MCL	(3) RBC	Equals or Exceeds Criteria
044GW005A6	POTASSIUM	188000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN
044GW005B6	POTASSIUM	194000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN
044GW00601a	POTASSIUM	148000	UG/L	=	METAL	4/25/1995	8226	NL	NL	EN
044GW00602	POTASSIUM	35500	UG/L	=	METAL	1/17/1996	8226	NL	NL	EN
044GW00603	POTASSIUM	29500	UG/L	=	METAL	5/8/1996	8226	NL	NL	EN
044GW00604	POTASSIUM	114000	UG/L	=	METAL	6/11/1996	8226	NL	NL	EN
044GW00605	POTASSIUM	60700	UG/L	=	METAL	7/30/1997	8226	NL	NL	EN
044GW00606	POTASSIUM	48800	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW006A6	POTASSIUM	47500	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW006B6	POTASSIUM	41800	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW00701	POTASSIUM	87400	UG/L	J	METAL	6/14/1995	8226	NL	NL	EN
044GW00702	POTASSIUM	48800	UG/L	=	METAL	1/18/1996	8226	NL	NL	EN
044GW00703	POTASSIUM	38800	UG/L	=	METAL	5/10/1996	8226	NL	NL	EN
044GW00704	POTASSIUM	56200	UG/L	=	METAL	6/11/1996	8226	NL	NL	EN
044GW00705	POTASSIUM	11800	UG/L	=	METAL	8/1/1997	8226	NL	NL	EN
044GW00707	POTASSIUM	13100	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW007A7	POTASSIUM	13200	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW007B7	POTASSIUM	13100	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW00703	SILVER	2.30	UG/L	=	METAL	5/10/1996	NL	NL	1.8	3
044GW00501	SODIUM	4640000	UG/L	=	METAL	6/13/1995	NL	NL	NL	EN
044GW00502	SODIUM	5430000	UG/L	=	METAL	1/17/1996	NL	NL	NL	EN
044GW00503	SODIUM	4580000	UG/L	=	METAL	5/9/1996	NL	NL	NL	EN
044GW00504	SODIUM	6590000	UG/L	=	METAL	6/10/1996	NL	NL	NL	EN
044GW00505	SODIUM	5180000	UG/L	=	METAL	8/1/1997	NL	NL	NL	EN
044GW00506	SODIUM	5030000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW005A6	SODIUM	4830000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW005B6	SODIUM	4920000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW00601a	SODIUM	1690000	UG/L	=	METAL	4/25/1995	NL	NL	NL	EN
044GW00602	SODIUM	643000	UG/L	=	METAL	1/17/1996	NL	NL	NL	EN
044GW00603	SODIUM	354000	UG/L	=	METAL	5/8/1996	NL	NL	NL	EN
044GW00604	SODIUM	3110000	UG/L	=	METAL	6/11/1996	NL	NL	NL	EN
044GW00605	SODIUM	939000	UG/L	=	METAL	7/30/1997	NL	NL	NL	EN
044GW00606	SODIUM	1100000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW006A6	SODIUM	1070000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN

Table A.2A
 SWMU 44 Groundwater
 Human Health Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND Zone C	(2) MCL	(3) RBC	Equals or Exceeds Criteria
044GW006B6	SODIUM	998000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW00701	SODIUM	784000	UG/L	=	METAL	6/14/1995	NL	NL	NL	EN
044GW00702	SODIUM	614000	UG/L	=	METAL	1/18/1996	NL	NL	NL	EN
044GW00703	SODIUM	686000	UG/L	=	METAL	5/10/1996	NL	NL	NL	EN
044GW00704	SODIUM	749000	UG/L	=	METAL	6/11/1996	NL	NL	NL	EN
044GW00705	SODIUM	108000	UG/L	=	METAL	8/1/1997	NL	NL	NL	EN
044GW00707	SODIUM	168000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW007A7	SODIUM	166000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW007B7	SODIUM	171000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW00504	THALLIUM	3.80	UG/L	J	METAL	6/10/1996	NL	2	0.26	2,3
044GW00605	THALLIUM	6.00	UG/L	J	METAL	7/30/1997	NL	2	0.26	2,3
044GW00703	THALLIUM	3.10	UG/L	J	METAL	5/10/1996	NL	2	0.26	2,3
044GW00604	VANADIUM	26.0	UG/L	J	METAL	6/11/1996	4	NL	26	1,3
044GW00601a	Acetophenone	1.00	UG/L	J	SVOA	4/25/1995	NL	NL	0.42	3
044GW00601a	bis(2-ETHYLHEXYL) PHTHALATE	8.00	UG/L	J	SVOA	4/25/1995	NL	NL	4.8	3

Note:

NL = Not Listed

EN = Essential Nutrient, Screening Criteria not applied

Table A.2B
 SWMU 44 Groundwater
 Ecological Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND	(2) Saltwater	(3)	Equals or Exceeds Criteria
							Zone C	Chronic	Saltwater Acute	
044GW00701	ALUMINUM	2110	UG/L	J	METAL	6/14/1995	578	NL	NL	1
044GW00605	ANTIMONY	2.60	UG/L	J	METAL	7/30/1997	NL	NL	NL	NL
044GW00702	ANTIMONY	54.1	UG/L	=	METAL	1/18/1996	NL	NL	NL	NL
044GW00703	ANTIMONY	10.3	UG/L	J	METAL	5/10/1996	NL	NL	NL	NL
044GW00705	ANTIMONY	35.3	UG/L	J	METAL	8/1/1997	NL	NL	NL	NL
044GW007U6	ANTIMONY	3.40	UG/L	J	METAL	1/7/1999	NL	NL	NL	NL
044GW00702	ARSENIC	109.0	UG/L	=	METAL	1/18/1996	8	36	69	1,2,3
044GW00704	ARSENIC	62.8	UG/L	=	METAL	6/11/1996	8	36	69	1,2,3
044GW00707	ARSENIC	173.0	UG/L	=	METAL	7/22/1999	8	36	69	1,2,3
044GW007A7	ARSENIC	127.0	UG/L	=	METAL	7/22/1999	8	36	69	1,2,3
044GW007B7	ARSENIC	118.0	UG/L	=	METAL	7/22/1999	8	36	69	1,2,3
044GW007F6	ARSENIC	43.8	UG/L	=	METAL	1/7/1999	8	36	69	1,2,3
044GW007U6	ARSENIC	45.9	UG/L	=	METAL	1/7/1999	8	36	69	1,2,3
044GW00501	BARIUM	45.6	UG/L	J	METAL	6/13/1995	22	NL	NL	1
044GW00502	BARIUM	32.1	UG/L	J	METAL	1/17/1996	22	NL	NL	1
044GW00505	BARIUM	39.6	UG/L	=	METAL	8/1/1997	22	NL	NL	1
044GW00506	BARIUM	31.3	UG/L	=	METAL	7/21/1999	22	NL	NL	1
044GW005A6	BARIUM	30.3	UG/L	=	METAL	7/21/1999	22	NL	NL	1
044GW005B6	BARIUM	31.0	UG/L	=	METAL	7/21/1999	22	NL	NL	1
044GW00601a	BARIUM	56.0	UG/L	J	METAL	4/25/1995	22	NL	NL	1
044GW00602	BARIUM	23.2	UG/L	=	METAL	1/17/1996	22	NL	NL	1
044GW00605	BARIUM	40.4	UG/L	=	METAL	7/30/1997	22	NL	NL	1
044GW00606	BARIUM	38.4	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW006A6	BARIUM	36.0	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW006B6	BARIUM	33.5	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW00701	BARIUM	22.6	UG/L	J	METAL	6/14/1995	22	NL	NL	1
044GW00702	BARIUM	22.2	UG/L	=	METAL	1/18/1996	22	NL	NL	1
044GW00705	BARIUM	45.9	UG/L	=	METAL	8/1/1997	22	NL	NL	1
044GW00707	BARIUM	98.1	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW007A7	BARIUM	91.1	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW007B7	BARIUM	84.3	UG/L	=	METAL	7/22/1999	22	NL	NL	1
044GW00504	BERYLLIUM	0.750	UG/L	J	METAL	6/10/1996	0.72	NL	NL	1
044GW00505	BERYLLIUM	0.910	UG/L	J	METAL	8/1/1997	0.72	NL	NL	1
044GW00501	CALCIUM	359000	UG/L	J	METAL	6/13/1995	164900	NL	NL	EN
044GW00502	CALCIUM	280000	UG/L	J	METAL	1/17/1996	164900	NL	NL	EN
044GW00503	CALCIUM	202000	UG/L	=	METAL	5/9/1996	164900	NL	NL	EN
044GW00504	CALCIUM	211000	UG/L	J	METAL	6/10/1996	164900	NL	NL	EN
044GW00505	CALCIUM	322000	UG/L	=	METAL	8/1/1997	164900	NL	NL	EN
044GW00506	CALCIUM	277000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN
044GW005A6	CALCIUM	270000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN
044GW005B6	CALCIUM	275000	UG/L	=	METAL	7/21/1999	164900	NL	NL	EN

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND	(2) Saltwater	(3)	Equals or Exceeds Criteria
							Zone C	Chronic	Saltwater Acute	
044GW00601a	CALCIUM	327000	UG/L	=	METAL	4/25/1995	164900	NL	NL	EN
044GW00602	CALCIUM	446000	UG/L	J	METAL	1/17/1996	164900	NL	NL	EN
044GW00603	CALCIUM	401000	UG/L	=	METAL	5/8/1996	164900	NL	NL	EN
044GW00604	CALCIUM	267000	UG/L	J	METAL	6/11/1996	164900	NL	NL	EN
044GW00605	CALCIUM	448000	UG/L	=	METAL	7/30/1997	164900	NL	NL	EN
044GW00606	CALCIUM	391000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW006A6	CALCIUM	400000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW006B6	CALCIUM	404000	UG/L	=	METAL	7/22/1999	164900	NL	NL	EN
044GW00602	COBALT	5.10	UG/L	=	METAL	1/17/1996	4	NL	NL	1
044GW00501	COPPER	3.20	UG/L	J	METAL	6/13/1995	NA	2.9	2.9	2,3
044GW00701	COPPER	8.80	UG/L	J	METAL	6/14/1995	NA	2.9	2.9	2,3
044GW00702	COPPER	4.90	UG/L	J	METAL	1/18/1996	NA	2.9	2.9	2,3
044GW00602	IRON	5240	UG/L	=	METAL	1/17/1996	3438	NL	NL	NL
044GW00605	IRON	4630	UG/L	=	METAL	7/30/1997	3438	NL	NL	NL
044GW00701	IRON	8710	UG/L	=	METAL	6/14/1995	3438	NL	NL	NL
044GW00704	IRON	4440	UG/L	=	METAL	6/11/1996	3438	NL	NL	NL
044GW00501	MAGNESIUM	653000	UG/L	=	METAL	6/13/1995	10216	NL	NL	EN
044GW00502	MAGNESIUM	523000	UG/L	=	METAL	1/17/1996	10216	NL	NL	EN
044GW00503	MAGNESIUM	489000	UG/L	=	METAL	5/9/1996	10216	NL	NL	EN
044GW00504	MAGNESIUM	658000	UG/L	J	METAL	6/10/1996	10216	NL	NL	EN
044GW00505	MAGNESIUM	636000	UG/L	=	METAL	8/1/1997	10216	NL	NL	EN
044GW00506	MAGNESIUM	477000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN
044GW005A6	MAGNESIUM	464000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN
044GW005B6	MAGNESIUM	473000	UG/L	J	METAL	7/21/1999	10216	NL	NL	EN
044GW00601a	MAGNESIUM	245000	UG/L	=	METAL	4/25/1995	10216	NL	NL	EN
044GW00602	MAGNESIUM	128000	UG/L	=	METAL	1/17/1996	10216	NL	NL	EN
044GW00603	MAGNESIUM	76700	UG/L	=	METAL	5/8/1996	10216	NL	NL	EN
044GW00604	MAGNESIUM	347000	UG/L	J	METAL	6/11/1996	10216	NL	NL	EN
044GW00605	MAGNESIUM	152000	UG/L	=	METAL	7/30/1997	10216	NL	NL	EN
044GW00606	MAGNESIUM	129000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW006A6	MAGNESIUM	128000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW006B6	MAGNESIUM	123000	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW00701	MAGNESIUM	86500	UG/L	=	METAL	6/14/1995	10216	NL	NL	EN
044GW00702	MAGNESIUM	67200	UG/L	=	METAL	1/18/1996	10216	NL	NL	EN
044GW00703	MAGNESIUM	74500	UG/L	=	METAL	5/10/1996	10216	NL	NL	EN
044GW00704	MAGNESIUM	87700	UG/L	J	METAL	6/11/1996	10216	NL	NL	EN
044GW00705	MAGNESIUM	18700	UG/L	=	METAL	8/1/1997	10216	NL	NL	EN
044GW00707	MAGNESIUM	24100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW007A7	MAGNESIUM	23100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW007B7	MAGNESIUM	22100	UG/L	J	METAL	7/22/1999	10216	NL	NL	EN
044GW00501	MANGANESE	1040	UG/L	=	METAL	6/13/1995	692	NL	NL	1
044GW00502	MANGANESE	986.0	UG/L	=	METAL	1/17/1996	692	NL	NL	1
044GW00505	MANGANESE	692.0	UG/L	=	METAL	8/1/1997	692	NL	NL	1
044GW00601a	MANGANESE	1990	UG/L	=	METAL	4/25/1995	692	NL	NL	1
044GW00602	MANGANESE	2580	UG/L	=	METAL	1/17/1996	692	NL	NL	1
044GW00604	MANGANESE	1120	UG/L	J	METAL	6/11/1996	692	NL	NL	1

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND	(2) Saltwater	(3)	Equals or Exceeds Criteria
							Zone C	Chronic	Saltwater Acute	
044GW00605	MANGANESE	1770	UG/L	=	METAL	7/30/1997	692	NL	NL	1
044GW00606	MANGANESE	1060	UG/L	J	METAL	7/22/1999	692	NL	NL	1
044GW006A6	MANGANESE	1110	UG/L	J	METAL	7/22/1999	692	NL	NL	1
044GW006B6	MANGANESE	1150	UG/L	J	METAL	7/22/1999	692	NL	NL	1
044GW00502	MERCURY	0.140	UG/L	J	METAL	1/17/1996	NA	0.025	2.1	2
044GW00602	NICKEL	10.5	UG/L	J	METAL	1/17/1996	6	8.3	75	1
044GW00501	POTASSIUM	282000	UG/L	J	METAL	6/13/1995	8226	NL	NL	EN
044GW00502	POTASSIUM	226000	UG/L	J	METAL	1/17/1996	8226	NL	NL	EN
044GW00503	POTASSIUM	143000	UG/L	=	METAL	5/9/1996	8226	NL	NL	EN
044GW00504	POTASSIUM	225000	UG/L	=	METAL	6/10/1996	8226	NL	NL	EN
044GW00505	POTASSIUM	172000	UG/L	=	METAL	8/1/1997	8226	NL	NL	EN
044GW00506	POTASSIUM	194000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN
044GW005A6	POTASSIUM	188000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN
044GW005B6	POTASSIUM	194000	UG/L	J	METAL	7/21/1999	8226	NL	NL	EN
044GW00601a	POTASSIUM	148000	UG/L	=	METAL	4/25/1995	8226	NL	NL	EN
044GW00602	POTASSIUM	35500	UG/L	=	METAL	1/17/1996	8226	NL	NL	EN
044GW00603	POTASSIUM	29500	UG/L	=	METAL	5/8/1996	8226	NL	NL	EN
044GW00604	POTASSIUM	114000	UG/L	=	METAL	6/11/1996	8226	NL	NL	EN
044GW00605	POTASSIUM	60700	UG/L	=	METAL	7/30/1997	8226	NL	NL	EN
044GW00606	POTASSIUM	48800	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW006A6	POTASSIUM	47500	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW006B6	POTASSIUM	41800	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW00701	POTASSIUM	87400	UG/L	J	METAL	6/14/1995	8226	NL	NL	EN
044GW00702	POTASSIUM	48800	UG/L	=	METAL	1/18/1996	8226	NL	NL	EN
044GW00703	POTASSIUM	38800	UG/L	=	METAL	5/10/1996	8226	NL	NL	EN
044GW00704	POTASSIUM	56200	UG/L	=	METAL	6/11/1996	8226	NL	NL	EN
044GW00705	POTASSIUM	11800	UG/L	=	METAL	8/1/1997	8226	NL	NL	EN
044GW00707	POTASSIUM	13100	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW007A7	POTASSIUM	13200	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW007B7	POTASSIUM	13100	UG/L	J	METAL	7/22/1999	8226	NL	NL	EN
044GW00605	SILVER	1.00	UG/L	J	METAL	7/30/1997	NL	0.23	2.3	2,3
044GW00703	SILVER	2.30	UG/L	=	METAL	5/10/1996	NL	0.23	2.3	2,3
044GW00501	SODIUM	4640000	UG/L	=	METAL	6/13/1995	NL	NL	NL	EN
044GW00502	SODIUM	5430000	UG/L	=	METAL	1/17/1996	NL	NL	NL	EN
044GW00503	SODIUM	4580000	UG/L	=	METAL	5/9/1996	NL	NL	NL	EN
044GW00504	SODIUM	6590000	UG/L	=	METAL	6/10/1996	NL	NL	NL	EN
044GW00505	SODIUM	5180000	UG/L	=	METAL	8/1/1997	NL	NL	NL	EN
044GW00506	SODIUM	5030000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW005A6	SODIUM	4830000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW005B6	SODIUM	4920000	UG/L	=	METAL	7/21/1999	NL	NL	NL	EN
044GW00601a	SODIUM	1690000	UG/L	=	METAL	4/25/1995	NL	NL	NL	EN
044GW00602	SODIUM	643000	UG/L	=	METAL	1/17/1996	NL	NL	NL	EN
044GW00603	SODIUM	354000	UG/L	=	METAL	5/8/1996	NL	NL	NL	EN
044GW00604	SODIUM	3110000	UG/L	=	METAL	6/11/1996	NL	NL	NL	EN
044GW00605	SODIUM	939000	UG/L	=	METAL	7/30/1997	NL	NL	NL	EN
044GW00606	SODIUM	1100000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	SAMPLE DATE	(1) BACKGROUND Zone C	(2) Saltwater Chronic	(3) Saltwater Acute	Equals or Exceeds Criteria
044GW006A6	SODIUM	1070000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW006B6	SODIUM	998000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW00701	SODIUM	784000	UG/L	=	METAL	6/14/1995	NL	NL	NL	EN
044GW00702	SODIUM	614000	UG/L	=	METAL	1/18/1996	NL	NL	NL	EN
044GW00703	SODIUM	686000	UG/L	=	METAL	5/10/1996	NL	NL	NL	EN
044GW00704	SODIUM	749000	UG/L	=	METAL	6/11/1996	NL	NL	NL	EN
044GW00705	SODIUM	108000	UG/L	=	METAL	8/1/1997	NL	NL	NL	EN
044GW00707	SODIUM	168000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW007A7	SODIUM	166000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW007B7	SODIUM	171000	UG/L	=	METAL	7/22/1999	NL	NL	NL	EN
044GW00603	Tin (Sn)	3.10	UG/L	J	METAL	5/8/1996	NL	NL	NL	NL
044GW00703	Tin (Sn)	2.60	UG/L	J	METAL	5/10/1996	NL	NL	NL	NL
044GW00601a	VANADIUM	9.90	UG/L	J	METAL	4/25/1995	4	NL	NL	1
044GW00604	VANADIUM	26.0	UG/L	J	METAL	6/11/1996	4	NL	NL	1
044GW00701	VANADIUM	6.90	UG/L	J	METAL	6/14/1995	4	NL	NL	1
044GW00702	VANADIUM	14.6	UG/L	=	METAL	1/18/1996	4	NL	NL	1
044GW00702	HEPTACHLOR	0.079	UG/L	=	PEST	1/18/1996	NL	0.0036	0.053	2,3
044GW00601a	Acetophenone	1.00	UG/L	J	SVOA	4/25/1995	NL	NL	NL	NL
044GW00503	Benzoic acid	7.00	UG/L	J	SVOA	5/9/1996	NL	NL	NL	NL
044GW00601a	bis(2-ETHYLHEXYL) PHTHALATE	8.00	UG/L	J	SVOA	4/25/1995	NL	NL	NL	NL

Note:

NL = Not Listed

EN = Essential Nutrient, Screening Criteria not applied

Table A.3
 SWMU 44 Sediment
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044M001301	ALUMINUM	6460	MG/KG	=	METAL	9976	7800	NL	NL	#
044M001401	ALUMINUM	5220	MG/KG	=	METAL	9976	7800	NL	NL	#
044M001501	ALUMINUM	5900	MG/KG	=	METAL	9976	7800	NL	NL	#
044M001601	ALUMINUM	7760	MG/KG	=	METAL	9976	7800	NL	NL	#
044M001701	ALUMINUM	4870	MG/KG	=	METAL	9976	7800	NL	NL	#
044M001301	ANTIMONY	0.53	MG/KG	J	METAL	0.44	3.1	2.5	12	1
044M001701	ANTIMONY	0.97	MG/KG	J	METAL	0.44	3.1	2.5	12	1
044M001301	ARSENIC	53.1	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044M001401	ARSENIC	11.3	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,4
044M001501	ARSENIC	67.4	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044M001601	ARSENIC	14.7	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044M001701	ARSENIC	69.2	MG/KG	=	METAL	8.4	0.43	14.5	7.24	1,2,3,4
044M001301	BARIUM	43.3	MG/KG	J	METAL	56	550	800	NL	#
044M001401	BARIUM	15.7	MG/KG	J	METAL	56	550	800	NL	#
044M001501	BARIUM	70.7	MG/KG	J	METAL	56	550	800	NL	1
044M001601	BARIUM	12.3	MG/KG	J	METAL	56	550	800	NL	#
044M001701	BARIUM	64	MG/KG	J	METAL	56	550	800	NL	1
044M001301	CADMIUM	0.22	MG/KG	=	METAL	0.178	3.9	4	1	1
044M001401	CADMIUM	0.04	MG/KG	=	METAL	0.178	3.9	4	1	#
044M001501	CADMIUM	0.84	MG/KG	=	METAL	0.178	3.9	4	1	1
044M001701	CADMIUM	0.31	MG/KG	=	METAL	0.178	3.9	4	1	1
044M001301	CALCIUM	733	MG/KG	J	METAL	31426	NL	NL	NL	EN
044M001401	CALCIUM	6850	MG/KG	J	METAL	31426	NL	NL	NL	EN
044M001501	CALCIUM	833	MG/KG	J	METAL	31426	NL	NL	NL	EN
044M001601	CALCIUM	1610	MG/KG	J	METAL	31426	NL	NL	NL	EN
044M001701	CALCIUM	12600	MG/KG	J	METAL	31426	NL	NL	NL	EN
044M001301	CHROMIUM, TOTAL	21.4	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,3
044M001401	CHROMIUM, TOTAL	10.2	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	#
044M001501	CHROMIUM, TOTAL	23.2	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,2,3
044M001601	CHROMIUM, TOTAL	12.5	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	#

Table A.3
 SWMU 44 Sediment
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044M001701	CHROMIUM, TOTAL	22.8	MG/KG	=	METAL	19.6	23 (VI)	19	52.3	1,3
044M001301	COBALT	3	MG/KG	J	METAL	2	160	NL	NL	1
044M001401	COBALT	2	MG/KG	J	METAL	2	160	NL	NL	1
044M001501	COBALT	2.2	MG/KG	J	METAL	2	160	NL	NL	1
044M001601	COBALT	3	MG/KG	J	METAL	2	160	NL	NL	1
044M001701	COBALT	8.8	MG/KG	J	METAL	2	160	NL	NL	1
044M001301	COPPER	24.3	MG/KG	=	METAL	22	310	NL	18.7	1,4
044M001401	COPPER	11.9	MG/KG	=	METAL	22	310	NL	18.7	#
044M001501	COPPER	33.9	MG/KG	=	METAL	22	310	NL	18.7	1,4
044M001601	COPPER	32.5	MG/KG	=	METAL	22	310	NL	18.7	1,4
044M001701	COPPER	51.3	MG/KG	=	METAL	22	310	NL	18.7	1,4
044M001301	IRON	38700	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044M001401	IRON	6730	MG/KG	=	METAL	7696	2300	NL	NL	2
044M001501	IRON	93700	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044M001601	IRON	13100	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044M001701	IRON	37600	MG/KG	=	METAL	7696	2300	NL	NL	1,2
044M001301	LEAD	43.7	MG/KG	=	METAL	138	NL	NL	30.2	4
044M001401	LEAD	14	MG/KG	=	METAL	138	NL	NL	30.2	#
044M001501	LEAD	35.1	MG/KG	=	METAL	138	NL	NL	30.2	4
044M001601	LEAD	43.4	MG/KG	=	METAL	138	NL	NL	30.2	4
044M001701	LEAD	63.6	MG/KG	=	METAL	138	NL	NL	30.2	4
044M001301	MAGNESIUM	791	MG/KG	=	METAL	1148	NL	NL	NL	EN
044M001401	MAGNESIUM	614	MG/KG	J	METAL	1148	NL	NL	NL	EN
044M001501	MAGNESIUM	1140	MG/KG	=	METAL	1148	NL	NL	NL	EN
044M001601	MAGNESIUM	1510	MG/KG	=	METAL	1148	NL	NL	NL	EN
044M001701	MAGNESIUM	1160	MG/KG	J	METAL	1148	NL	NL	NL	EN
044M001301	MANGANESE	45.9	MG/KG	=	METAL	86	160	NL	NL	#
044M001401	MANGANESE	36.9	MG/KG	=	METAL	86	160	NL	NL	#
044M001601	MANGANESE	72.4	MG/KG	=	METAL	86	160	NL	NL	#
044M001701	MANGANESE	85.9	MG/KG	=	METAL	86	160	NL	NL	#

Table A.3
 SWMU 44 Sediment
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044M001301	MERCURY	0.36	MG/KG	J	METAL	0.2	2.3	1	0.13	1,4
044M001401	MERCURY	0.67	MG/KG	J	METAL	0.2	2.3	1	0.13	1,4
044M001501	MERCURY	0.28	MG/KG	J	METAL	0.2	2.3	1	0.13	1,4
044M001601	MERCURY	0.47	MG/KG	J	METAL	0.2	2.3	1	0.13	1,4
044M001701	MERCURY	1.6	MG/KG	J	METAL	0.2	2.3	1	0.13	1,3,4
044M001301	NICKEL	5.4	MG/KG	J	METAL	7.4	160	65	15.9	#
044M001401	NICKEL	4.1	MG/KG	J	METAL	7.4	160	65	15.9	#
044M001501	NICKEL	3.8	MG/KG	J	METAL	7.4	160	65	15.9	#
044M001601	NICKEL	4.2	MG/KG	J	METAL	7.4	160	65	15.9	#
044M001701	NICKEL	26.7	MG/KG	J	METAL	7.4	160	65	15.9	1,4
044M001301	POTASSIUM	2030	MG/KG	J	METAL	516	NL	NL	NL	EN
044M001401	POTASSIUM	360	MG/KG	J	METAL	516	NL	NL	NL	EN
044M001501	POTASSIUM	8240	MG/KG	J	METAL	516	NL	NL	NL	EN
044M001601	POTASSIUM	739	MG/KG	J	METAL	516	NL	NL	NL	EN
044M001701	POTASSIUM	1080	MG/KG	J	METAL	516	NL	NL	NL	EN
044M001301	SELENIUM	4.6	MG/KG	J	METAL	1	39	2.5	NL	1,3
044M001401	SELENIUM	0.83	MG/KG	J	METAL	1	39	2.5	NL	#
044M001501	SELENIUM	9.3	MG/KG	J	METAL	1	39	2.5	NL	1,3
044M001701	SELENIUM	7.3	MG/KG	J	METAL	1	39	2.5	NL	1,3
044M001301	SODIUM	798	MG/KG	J	METAL	346	NL	NL	NL	1
044M001401	SODIUM	819	MG/KG	J	METAL	346	NL	NL	NL	1
044M001501	SODIUM	5860	MG/KG	J	METAL	346	NL	NL	NL	1
044M001601	SODIUM	3320	MG/KG	J	METAL	346	NL	NL	NL	1
044M001701	SODIUM	1130	MG/KG	J	METAL	346	NL	NL	NL	1
044M001301	THALLIUM	2.1	MG/KG	=	METAL	0.5	0.55	0.35	NL	1,2,3
044M001501	THALLIUM	4.6	MG/KG	=	METAL	0.5	0.55	0.35	NL	1,2,3
044M001701	THALLIUM	2.7	MG/KG	J	METAL	0.5	0.55	0.35	NL	1,2,3
044M001301	VANADIUM	23.1	MG/KG	=	METAL	17.6	55	3000	NL	1
044M001401	VANADIUM	12.6	MG/KG	=	METAL	17.6	55	3000	NL	#
044M001501	VANADIUM	33.5	MG/KG	=	METAL	17.6	55	3000	NL	1

Table A.3
 SWMU 44 Sediment
 Detection Exceedance Screen

SAMPLE	CHEMICAL NAME	RESULT	UNIT	QUALIFIER	ANALYSIS GROUP	(1) Background Zone C	(2) RBC	(3) SSL	(4) SSV	Equals or Exceeds Criteria
044M001601	VANADIUM	22.1	MG/KG	=	METAL	17.6	55	3000	NL	1
044M001701	VANADIUM	26.7	MG/KG	=	METAL	17.6	55	3000	NL	1
044M001301	ZINC	31.2	MG/KG	J	METAL	152	2300	6000	124	#
044M001401	ZINC	46.2	MG/KG	J	METAL	152	2300	6000	124	#
044M001501	ZINC	33.9	MG/KG	J	METAL	152	2300	6000	124	#
044M001601	ZINC	84.6	MG/KG	J	METAL	152	2300	6000	124	#
044M001701	ZINC	125	MG/KG	J	METAL	152	2300	6000	124	4

Note:

= DOES NOT EXCEED LISTED SCREENING CRITERIA

EN = ESSENTIAL NUTRIENT - NOT SCREENED

NL = NOT LISTED