N60200.AR.008863
NAS CECIL FIELD
5090.3a

SITE MANAGEMENT PLAN NAS CECIL FIELD FL
10/1/1993
NAVFAC SOUTHERN

SITE MANAGEMENT PLAN

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

OCTOBER 1993

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

PRINTED ON RECYCLED PAPER

NAVAL AIR STATION CECIL FIELD

JACKSONVILLE, FLORIDA

SITE MANAGEMENT PLAN

30 October 1993

Prepared by:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
N. Charleston, South Carolina

TABLE OF CONTENTS

1994 Site Management Plan
NAS Cecil Field, Jacksonville, Florida

Section	Title	Page No.
I.	INTRODUCTION	1
II.	SITE MANAGEMENT STRATEGY	1
III.	POTENTIAL SOURCES OF CONTAMINATION	2
IV.	OPERABLE UNITS	8
V.	INSTALLATION RESTORATION PROGRAM GOALS	8
VI.	SCHEDULE	8
VII.	1993 and 1994 DELIVERABLES	9
VIII.	1995 DELIVERABLES	9

ATTACHMENT A:
SITE MANAGEMENT PLAN BASELINE SCHEDULE

LIST OF TABLES

1994 Site Management Plan
NAS Cecil Field, Jacksonville, Florida

Table	Title	Page No.
1	NAS CECIL FIELD SITE DESCRIPTION CHART	3
2	OPERABLE UNITS	10

LIST OF FIGURES

1994 Site Management Plan
NAS Cecil Field, Jacksonville, Florida

Figure	Title	Page No.
1	SITE MANAGEMENT PLAN SCHEDULE	11

SITE MANAGEMENT PLAN
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
1993 -1994

I. INTRODUCTION

The Site Management Plan (SMP) is prepared in accordance with the requirements of the Federal Facility Agreement (FFA) between the United States Environmental Protection Agency (USEPA), Florida Department of Environmental Protection (FDEP), and the United States Navy. The FFA is an interagency agreement which is a requirement of Section 120 (e)(1) of the Superfund Amendments and Reauthorization Act (SARA) of 1986. Each year or as agreed to by the FFA parties the SMP is to be amended to reflect current information on progress made and planned future activities. The intent of the SMP is to provide:

- the site management strategy
- a list of known sites (and operable units [OUs], as appropriate);
- a prioritization rationale for known sites and operable units;
- a schedule of work proposed for the calendar year; and
- a projected schedule for sites and operable units beyond the current calendar year.

The SMP for NAS Cecil Field is being amended for calendar years 1993 and 1994 to incorporate changes in scope, schedule and funding for completing investigations of past waste disposal practices under the Installation Restoration Program (IRP).

II. SITE MANAGEMENT STRATEGY

The Department of Defense Installation Restoration Program (IRP) for NAS Cecil Field allows for prioritization of sites according to potential threat to human health and the environment. The SMP provides a schedule of IRP activities and is intended to be a dynamic document. The SMP will be amended as may be warranted and mutually agreed to by the Navy, USEPA, and FDEP. The principles upon which the SMP is prepared include the utilization of resources, the flexibility to meet changing and unforeseen conditions, and the ability to focus on site clean-up in a scientific and expeditious manner. These principles provide the basis of expedited remedial response at sites at NAS Cecil Field. Additional guidance and promulgation by the USEPA and FDEP were also used in preparing the SMP and will be used for implementation. In an effort to promote mutual understanding of the roles and relationships between the FFA parties (Navy, USEPA and FDEP), meetings will take place to discuss revisions to the language and provisions of the NAS Cecil Field FFA for the purpose of eliminating apparent errors, inconsistencies and/or omissions; and, to address

remedial activity implementation, lead agency authority, program management, and funding.

The methods and schedules of investigations reflect a consistent and technically sound approach. Guidance for the IRP investigations will involve the Navy/Marine Corps Installation Restoration Manual (February 1992). Additional guidance as defined in the USEPA Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (1988) and the National Oil and Hazardous Substance Contingency Plan (March 1990) will be followed for project deliverables.

The long-term goal is to complete remediation of all sites at NAS Cecil Field and includes activities which will facilitate base closure. To the extent practicable, Base Realignment and Closure (BRAC) activities will be presented as proposed to meet closure requirements for NAS Cecil Field in 1999. Since NAS Cecil Field is proposed for inclusion on the BRAC 93 list, the Navy has initiated a BRAC Cleanup Plan process that is designed to accelerate cleanup possibilities at IRP, Underground Storage Tank (UST), Resource Conservation and Recovery Act/Hazardous and Solid Waste Amendments (RCRA/HSWA), asbestos, and other sites. A BRAC Cleanup Team (BCT) will be formed to implement closure activities at the facility.

One function of the BCT will be to develop a prioritization plan for site clean-up at NAS Cecil Field by assessing candidate sites by waste characteristics, potential migration pathways, and potential receptors (human and ecological). The candidate sites would be placed in two response categories: interim remedial action or Remedial Investigation/Feasibility Study (RI/FS). The Navy will work with the FFA parties to coordinate prioritization of sites at NAS Cecil Field by accelerating the review process and adopting other partnering initiatives.

III. POTENTIAL SOURCES OF CONTAMINATION (PSCs)

Potential source of contamination (PSCs) or sites at NAS Cecil Field are briefly described in Table 1 - NAS Cecil Field Site Description Chart. The total number of IRP sites at this time is 34. PSC 13 (Day Tank) was transferred to the UST program prior to execution of work under the 1991 SMP. Since 1992, 16 PSCs have been discovered and are included in the IRP. PSCs may be added in the future as a result of USEPA site assessments and BRAC surveys.

Table 1 also presents the current investigative status for each PSC in the 1993/1994 SMP. Table 1 will be updated to be used with the quarterly report on IRP activities at NAS Cecil Field.

Table 1
NAS Cecil Field
Site Description Chart

Revised: 28 October 1993

Site No.	Operable Unit	Site Name/Size	Period of Operation	Waste Type	Sources	Description of Activity	Previous Reports
1	OU 1	Old Landfill (9 acres)	1950s-1965	Solid waste, oils, fuels, paints, paint stripper, solvents	Industrial operations and shops	Trench and fill landfill for commercial and residential wastes (solid and liquid).	1,2,15, 19,20
	Current Investigative Status: Surface water/sediment samples collected, screening of subsurface soil and groundwater completed, confirmatory subsurface soil samples collected, confirmatory surface soil samples collected, confirmatory monitoring wells installed and developed, groundwater sampling completed.						
2	OU 1	Recent Landfill (5 acres)	1965-1975	Solid waste, oils, fuels, paints, paint stripper, solvents	Industrial operations and shops	Trench and fill landfill for commercial and residential wastes (solid and liquid).	1,2,15, 19,20
	Current Investigative Status: Surface water/sediment samples collected, screening of subsurface soil and groundwater completed, confirmatory subsurface soil samples collected, confirmatory surface soil samples collected, confirmatory monitoring wells installed and developed, groundwater sampling completed.						
3	OU 8	Oil/Sludge Disposal Pit (50-100 ft in dia. and 3-5 ft deep)	1950s-1975	Waste fuels, oils, paints, paint strippers, solvents	Fuel farm, AIMD, squadrons, public works shops	At least four shallow pits were used to dispose of liquid wastes and sludge. Extent of contamination is much larger than originally anticipated.	2,15,19
	Current Investigative Status: Surface water/sediment samples collected, screening of subsurface soil and groundwater (of historical disposal pits) completed, screening of subsurface soil and groundwater of additional contaminated areas in progress, screening of approximately 70 surface soil samples (0.5 to 1.5 feet bls) completed, soil samples submitted to ABB-ES Wakefield Office for biological treatability study.						
4	–	Grease Pits (9 acres)	1950s-1983	Waste oils, greases	Installation dining facilities and facility oil/water separators	Multiple shallow pits excavated to dispose of liquid wastes (grease from dining facilities and waste oils from oil/water separators) and then covered with fill. Drums seen floating in pit; source of drums unknown. Extent of contamination larger than anticipated (22 acres). Chlorinated solvents have been detected in analytical samples of site soil and groundwater.	2,8.15, 19
	Current Investigative Status: Passive soil gas survey completed (final report available). Screening activities scheduled include groundwater sampling with the TerraProbe. Soil samples have been submitted to ABB-ES Wakefield Office for biological treatability study.						
5	OU 2	Oil Disposal Area Northwest (100 ft in dia.)	1950s	Oil, fuel	Fuel farms	Shallow, unlined pit where liquid wastes were disposed (petroleum products present)	2,15,19
	Current Investigative Status: Screening of subsurface soil and groundwater is completed, iso-concentration contours have been drawn, rationale for locations of confirmatory monitoring wells submitted and approved, field activities for delineating free product at the site have been initiated, sample of free product has been submitted to ABB-ES Wakefield Office for fingerprinting, the City of Jacksonville has collected a sample of free product for PCB analyses, soil samples have been submitted to ABB-ES Wakefield Office for biological treatability study. Proposed interim remedial action (IRA) for free product removal in 1994.						
6	–	Lake Fretwell Rubble Disposal Area (3.5 acres)	1950s-1984	Inert rubble	Asphalt from demolition of the runway, building construction debris, lumber, scrap metal, cut foliage	Rubble disposed along banks of a low-lying marsh area by public works; some of the rubble has been overlain with soil and sod; additional rubble is uncovered	2,21
	Current Investigative Status: Six surface soil samples collected for onsite 8010 and 8020 analyses. Letter report submitted to Navy on May 21, 1993. (evaluation and prioritization proposed)						

NAS Cecil Field (continued)
Site Description Chart

Site No.	Operable Unit	Site Name/Size	Period of Operation	Waste Type	Sources	Description of Activity	Previous Reports
7	OU 3	Old Fire Fighting Training Area (1/3 acre)	1950s-1975	Waste fuels, oil, solvents, paint, paint strippers	Fuel farm, AIMD, squadrons, public works shops	Burnable liquid wastes were poured onto metal objects (jets) in shallow, unlined pits and ignited for fire fighting training	2,12,25
	Current Investigative Status: Draft Field Screening Work Plan prepared in August, 1993.						
8	OU 3	Boresite Range/ Hazardous Waste Storage Area/Fire Fighting Training (6 acres)	1975-1984	Waste fuels, oil, solvents, paint, paint strippers	Fuel farm, AIMD, squadrons, public works shops	Burnable liquid wastes were poured onto metal objects (jets) in shallow, unlined pits and ignited for fire fighting training. Boresite range was used for machine gun and small arms practice. 55-gallon drums of waste were stored at the site and were used as targets for practice.	2,12,25
	Current Investigative Status: Draft Field Screening Work Plan prepared in August 1993.						
9	–	Recent Grease Pits (0.5 acre)	1983-1984	Grease mixed with water	Installation messes	Three shallow pits were used to dispose of kitchen grease; pits were used until full and then a new pit was excavated	2
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
10	OU 4	Rubble Disposal Area (6.5 acres)	1950s-1960s	Inert Rubble	Building demolition debris, runway debris	Surface disposal area with debris (demolition, roadway, metal); information is limited	2,12,25
	Current Investigative Status: Draft Field Screening Work Plan prepared in August, 1993.						
11	OU 6	Golf Course Pesticide Disposal Area (0.1 acre)	1970s-1978	Pesticides, fungicides, herbicide containers, vehicles, metal debris	Golf course pesticide shop	Between 200 and 400 empty 5-gallon cans containing pesticides were buried at the site; a limited number of unused containers of pesticides were buried in 1978.	2,12,25,26
	Current Investigative Status: IRA in progress. Focused Feasibility Study for source control submitted. Approximately 2 acres of the historical site has been cleared and a geophysical survey of the cleared area has been completed. Test pitting located the presence of 40 pesticide containers. Full and partially full containers were sampled and placed into overpack drums. Two soil samples were collected for analysis. Sample of contents of two drums submitted for offsite analyses for organophosphorus pesticides, TCL Pesticides/PCBs, and Appendix IX Herbicides (final report available), Field Screening Work Plan prepared in August, 1993.						
12	–	Public Works Rubble Disposal Area (0.5 acre)	1970s-1984	Inert rubble, lumber, concrete, wire, cable, scrap metal, drums	Public works	Majority of rubble has been buried approximately 3 feet bls, some rubble is above ground	2
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
13	–	Day Tank 2-Fuel Spill (1.5 acres)	1981	JP-5 fuel	Day tank	Location of fuel spill in 1981; approximately 500,000 gallon of JP-5 fuel was spilled; approximately 250,000 gallons was recovered. A decision was made in 1987 to allow the fuel to naturally biodegrade.	2
	Current Investigative Status: Transferred to the UST program for assessment. (evaluation and prioritization proposed)						

NAS Cecil Field (continued)
Site Description Chart

Site No.	Operable Unit	Site Name/Size	Period of Operation	Waste Type	Sources	Description of Activity	Previous Reports
14	OU 5	Blue 5 Ordinance Disposal Area (4.5 acres)	1967-1977	Fuses, 100-pound bombs, large munitions, lulu fuses, other explosive materials	Yellow water ordinance operations	Ordinance disposal by open detonation or burning	2,12,25
	Current Investigative Status: Surface water/sediment sampling completed, Draft Field Screening Work Plan prepared in August, 1993.						
15	OU 5	Blue 10 Ordinance Disposal Area (10 acres)	1960s-1977	Small arms, parachute/distress flares, Mark IV signal cartridges, rocket ignitors, CADS, 5- and 2.75-inch rockets	Yellow water ordinance operations	Ordinance disposal by open detonation or burning	2,12,25
	Current Investigative Status: Surface water/sediment sampling completed, Field Screening Work Plan has been submitted to Navy for review and approval in August, 1993.						
16	OU 7	AIMD Seepage Pit (40x3x10 ft)	1960-1980	Solvents, heavy metals, acids, blasting grit, paint residue, photo wastes	Building 313, jet engine maintenance shop	Seepage pit used to drain wastewater (containing solvents, paint, grease, metals) generated from Building 313 operations into area soils; RCRA holding tank for wastewater is also located at Site 16; glass bead separator and associated piping also present.	2,15,19,23, 24
	Current Investigative Status: IRA in progress. Focused Feasibility Study and Remedial Design for source removal submitted to regulatory agencies in August, 1993, screening of subsurface soil is complete, seepage pit has been delineated, groundwater screening will be initiated by December 1993.						
17	OU 2	Oil/Sludge Disposal Pit Southwest (2 acres)	Late 1960s - early 1970s	Waste fuels/oils	Fuel farm	Unlined shallow disposal pit	2,15,19
	Current Investigative Status: Screening of subsurface soil and groundwater has been completed, chlorinated solvents and hydrocarbons have been identified in site soils and groundwater, soil samples have been submitted to ABB-ES Wakefield Office for biological treatability study. Proposed interim remedial action (IRA) for soil removal in 1994.						
18	–	Ammunition Disposal Area (0.1 acre)	1950s	Ammunition crates, miscellaneous ordinance	Magazine area	Waste material from a nearby magazine area were trucked in and dumped over the site during the 1940s until 1950. Reportedly, all munitions were removed. As of 7/93, live munitions were still present at site according to EOD personnel.	2,5
	Current Investigative Status: Surface water/sediment sampling completed. (evaluation and prioritization proposed)						
19	–	Rowell Creek Rubble Disposal Area (3 acres)	Section until 1991	Concrete, construction debris, trees, asphalt, mattresses, wood debris, trash	Construction and operations	Limited information on disposal practices	5,8
	Current Investigative Status: Surface water/sediment sampling completed. (evaluation and prioritization proposed)						
20	–	Hazardous Waste Storage Facility					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						

NAS Cecil Field (continued)
Site Description Chart

Site No.	Operable Unit	Site Name/Size	Period of Operation	Waste Type	Sources	Description of Activity	Previous Reports
21	–	Golf Course Maintenance Area, near Building 98		Pesticides	Golf Course Maintenance Department	Trucks and spray equipment for the distribution of pesticides on the golf course were rinsed on a concrete pad. Wash water was allowed to drain into the Golf Course Tributary to Rowell Creek.	22
	Current Investigative Status: Seven surface soil samples (collected with a hand auger) have been collected – analyses indicate the presence of inorganics, several SVOCs and PAHs, and pesticides (heptachlor epoxide [58J ug/kg], dieldrin [7.3J ug/kg], 4,4'-DDE [5.2J to 30J ug/kg], 4,4'-DDD [4.7J to 650J ug/kg], 4,4'-DDT [9.7J to 12J ug/kg], alpha-chlordane [29J to 680J ug/kg], and gamma-chlordane [12J to 660J ug/kg]); three sediment samples were collected – analyses indicate the presence of inorganics, several SVOCs and PAHs, and pesticides (dieldrin [4.8J to 21J ug/kg], 4,4'-DDE [53J to 63J ug/kg], 4,4'-DDD [42J to 45J ug/kg], alpha-chlordane [34J to 350J ug/kg], and gamma-chlordane [21J to 320J ug/kg]). (evaluation and prioritization proposed)						
22	–	Golf Course Fairway 7 Area		pesticides, solid waste	Golf Course Maintenance Department, other unknown sources	Unknown; debris such as 5 gallon drums, scrap metal, concrete rubble, tin cans, etc. is visible on the surface	22
	Current Investigative Status: Three surface soil samples (collected with a hand auger) have been collected – analyses indicate the presence of inorganics, benzoic acid, and pesticides (alpha-chlordane [390J ug/kg] and gamma-chlordane [380J ug/kg]); three sediment samples were collected – analyses indicate the presence of inorganics and benzoic acid. (evaluation and prioritization proposed)						
23	–	AVORD Site					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
24	–	Pistol Range Site					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
25	–	Building 81 Transformer Storage Yard		PCBs		Several hundred transformers are currently stored on the ground surface at this site. Some 55 gallon drums are present.	
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
26	–	Building 81 DDT Site		DDT, pesticides	Building 81 operations	Building 81 is a pesticide storage building.	
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
27	–	Building 81 HAZMAT Shed				Site consists of a concrete pad with a roof constructed to prevent rain runon.	
	Current Investigative Status: No field activities in progress.(evaluation and prioritization proposed)						
28	–	North TCP Site					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
29	–	Building 313 TCP Site					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
30	–	Building 313 (East by Power Plant)					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						

NAS Cecil Field (continued)
Site Description Chart

Site No.	Operable Unit	Site Name/Size	Period of Operation	Waste Type	Sources	Description of Activity	Previous Reports
31	–	South TCP Site					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
32	–	Supply Building 335 HAZMAT Storage Area					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
33	–	DRMO Storage Area					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
34	–	Rowell Creek Ordinance Disposal Area					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						
35	–	PCBs on Perimeter Road					
	Current Investigative Status: No field activities in progress. (evaluation and prioritization proposed)						

Notes: – = not currently identified as an operable unit

1) Hydrogeologic Assessment, G&M, 1983
2) IAS, Envirodyne Engineers/NEESA, July 1985
3) NAS Cecil Field Stormwater Master Plan, Southern Division, August 1986
4) Sampling of Potable Water Wells, G&M, 1986
5) RCRA Facility Investigation, Harding and Lawson, March 1988
6) Federal Facility Agreement, no date
7) NAS Cecil Field Master Plan, Southern Division, August 1989
8) PSC Screening Work Plan, ABB-ES, February 1991
9) Community Relations Plan, ABB-ES, July 1991
10) Work Plan for OUs 1,2, and 7, ABB-ES, September 1991
11) Aquatic Sampling Report, ECT, February 1992
12) Work Plan for OUs 1,2, and 7, ABB-ES, February 1992
13) RI/FS Data Validation Report, no date included
14) Preliminary Risk Assessment OUs 1, 2, 7, ABB-ES, May 1992
15) TM for Supplemental Sampling OUs 1, 2, 7, ABB-ES, September 1992
16) Human Health RA Methodology TM OUs 1, 2, 7, ABB-ES, September 1992
17) Site Management Plan, ABB-ES, October 1992
18) ARARs Handbook, ABB-ES, October 1992
19) Ecological RA Methodology TM OUs 1, 2, 7, ABB-ES, December 1992
20) Alternative Screening Report for OU 1, ABB-ES, February, 1993
21) Letter Report to Cliff Casey, ABB-ES, May 1993 (Site 6)
22) Letter Report to Cliff Casey, ABB-ES, (Sites 21 and 22 - date not available)
23) Focused Feasibility Study for Source Control at OU 7, ABB-ES, August, 1993
24) Remedial Design for Source Control at OU 7, ABB-ES, August, 1993
25) Field Screening Work Plan for OUs 3,4,5,6, ABB-ES, August, 1993
26) Focused Feasibility Study for Source Control at Site 11, OU 6, ABB-ES, October, 1993

blank = information not available on 10/28/93

IV. OPERABLE UNITS

Operable units (OUs) are used to define investigative sets of PSCs at NAS Cecil Field based on the types of waste disposed and/or the suspected contaminants of concern. By defining OUs, PSCs can be investigated concurrently within an operable unit to meet similar remedial action objectives. The 1992 SMP contained seven OUs which were used to investigate 12 PSCs. Table 2 - NAS Cecil Field Operable Units, identifies eight OUs and related PSCs to be investigated in 1993/1994 (Site 3 was placed into a separate operable unit, OU 8, for management purposes). It is not likely that the original eighteen Potential Sources of Contamination (PSCs) (PSCs 1-12 and 14-19) will need to be broken out into any more OUs than the eight identified in this SMP. The sixteen new sites (PSCs 20-35) and sites that are identified during BRAC investigations will need to be grouped into OUs or common investigation units. All of these new sites will be grouped once the initial BRAC investigations are completed. The rationale for the PSC grouping into an operable unit is also provided in Table 2.

V. INSTALLATION RESTORATION PROGRAM GOALS

The goal of the IRP is to assess all PSCs and candidate BRAC sites which are identified. The Navy will expedite investigation and decision documents of the PSCs where the FFA parties can reach an early remedial action decision. The process may include Focused Feasibility Studies (FFS), Interim Records of Decisions (IRODs), and Interim Remedial Actions (IRAs) to achieve cleanups (i.e., drum removal, and source cleanups associated with remedial actions) prior to the NAS Cecil Field base closure.

The 1994 IRP calendar year goals for NAS Cecil Field are:

- RI/FS reports for Operable Units 1, 2, 7, and 8
- IRODs for Sites 5, 11, 16, and 17
- IRAs for Sites 11 and 16
- Prioritization plan for all remaining PSCs (including BRAC sites)
- RI/FS Work Plan for Operable Units 3, 4, 5, and 6
- Field Work for Operable Units 3, 4, 5, and 6
- Preliminary Assessments for up to 60 new sites identified from USEPA site assessments and BRAC surveys.

VI. SCHEDULE

Baseline schedules and milestones for completion of programmed IRP activities are included in Attachment A. The schedules provide primary and secondary program deliverables using a critical path method to complete project work. For primary deliverable submittals, review periods to final report issuance are as follows:

USEPA and FDEP review - 45 days
Navy response to comments - 30 days
Navy to finalize document - 30 days
Public comment period - 45 days

Expedited schedules are presented for early remedial action decisions (i.e., FFS, IROD, and IRA). For the SMP, submittal dates to the FFA parties for primary deliverables are presented in Figure 1. Figure 1 is a reference figure to show the past activities completed in 1993 and proposed IRP activities for 1994 and beyond. ROD data are provided for planning purposes by showing the estimated fiscal year quarter when the ROD (or IROD) can be signed.

As part of the Site Management Plan, the FFA parties will meet quarterly to assess the IRP progress. Figure 1 will be updated as part of the quarterly report and will be used as a baseline schedule for 1994 IRP activities. Schedule impacts will be noted in the baseline schedule and will be discussed at the quarterly meeting.

VII. 1993 and 1994 DELIVERABLES

Primary Deliverables:

Draft OU 1 RI, RA, and FS Reports	30 Mar 1994
Final OU 1 RI, RA, and FS Reports	13 Jul 1994
Draft OU 2 RI/RA Reports	10 Oct 1994
Draft OU 2 FS Report	09 Nov 1994
Draft OU 7 RI/RA Reports	07 Nov 1994
Draft OU 7 FS Report	14 Dec 1994
Draft OU 3,4,5, and 6 RI/FS Workplan	08 Mar 1994
Final OU 3,4,5, and 6 RI/FS Workplan	25 Jul 1994

Secondary Deliverables:

Final Site 5 FFS	17 Mar 1994
Final Site 5 IROD	28 Jun 1994
Final Site 11 FFS	18 Nov 1993
Final Site 11 IROD	04 Mar 1994
Final Site 16 FFS	22 Nov 1993
Final Site 16 IROD	08 Mar 1994
Final Site 17 FFS	19 Apr 1994
Final Site 17 IROD	01 Aug 1994

Designation of some of the deliverables as Primary or Secondary may be changed in the near future after all parties reach final agreement on what constitutes the apparent errors, inconsistencies and/or omissions and which ones will be corrected.

VIII. 1995 DELIVERABLES

Primary Deliverables:

Draft OU 8 RI/RA Reports	10 Jan 1995
Draft OU 8 FS Report	10 Feb 1995

Table 2
NAS Cecil Field
Operable Units

OPERABLE UNIT	PSC/SITE	OPERABLE UNIT RATIONALE
OU1	LANDFILLS PSC 1 - Old Landfill PSC 2 - Recent Landfill	Geographic proximity Waste volume and type Source for groundwater contamination
OU2	OIL/SLUDGE DISPOSAL AREAS PSC 5 - Oil Disposal Area Northwest PSC 17 - Oil/Sludge Disposal Pit Southwest	Geographic proximity Waste volume and type Source for groundwater contamination
OU3	FIRE TRAINING AREAS PSC 7 - Old Fire Fighting Training Area PSC 8 - Boresite Range Fire Fighting Training Area	Waste type
OU4	RUBBLE DISPOSAL AREAS PSC 10 - Rubble Disposal Area	Waste type
OU5	ORDNANCE DISPOSAL AREAS PSC 14 - Blue 5 Ordnance Disposal Area PSC 15 - Blue 10 Ordnance Disposal Area	Waste type Restricted area location
OU6	PESTICIDE DISPOSAL AREAS PSC 11 - Golf Course Pesticide Disposal Area	Waste type
OU7	AIMD SEEPAGE PIT PSC 11 - AIMD Seepage Pit	Proximity to RCRA unit scheduled for removal
OU8	OIL/SLUDGE DISPOSAL AREA PSC 3 - Old Sludge Disposal Area	Significant new findings showing actual extent of site contamination is much larger. Moved out of OU 2 to prevent negative impact on schedule.

SITE MANAGEMENT PLAN - NAS CECIL FIELD - STATUS DATE: OCTOBER 28, 1993

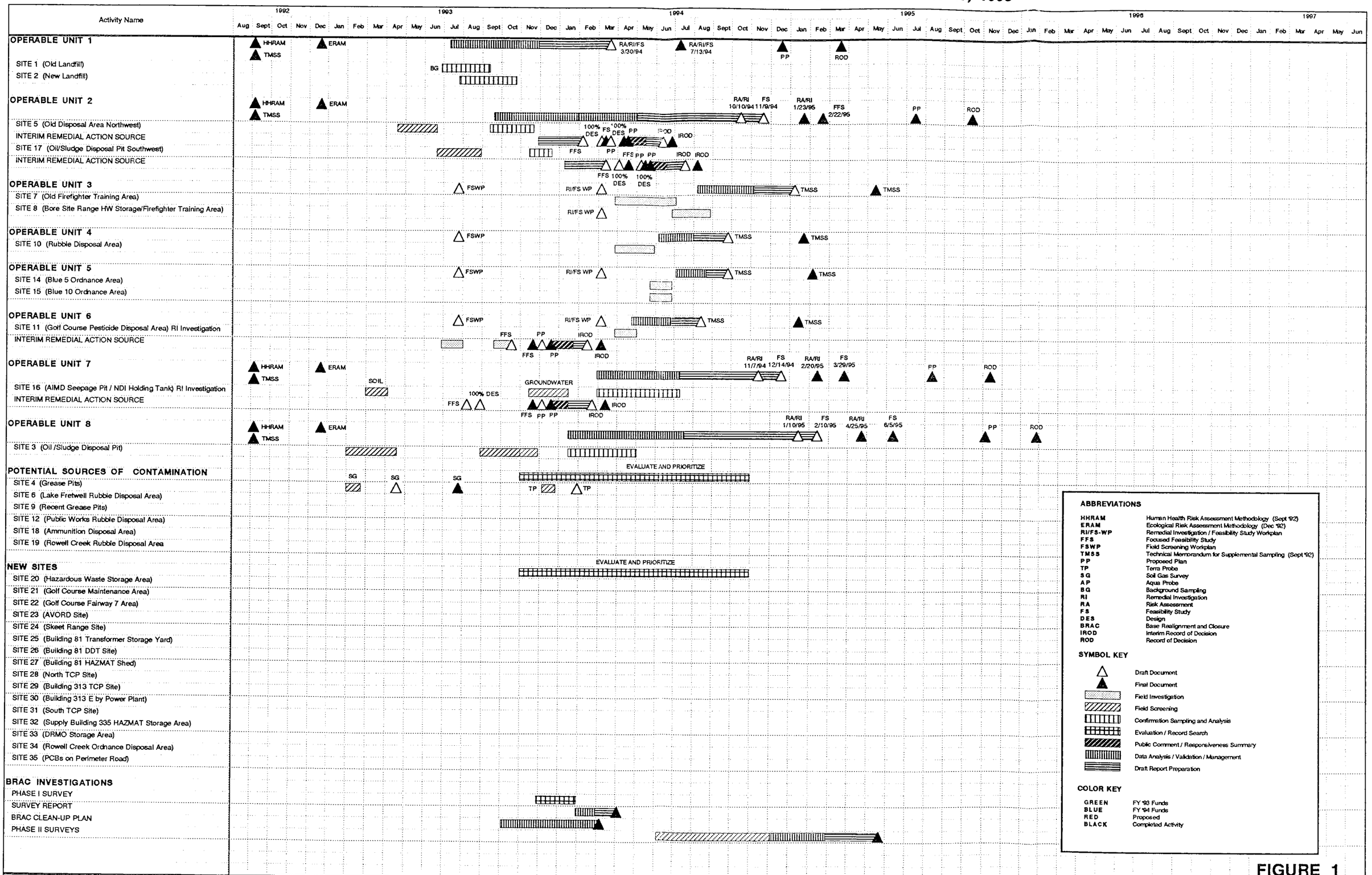
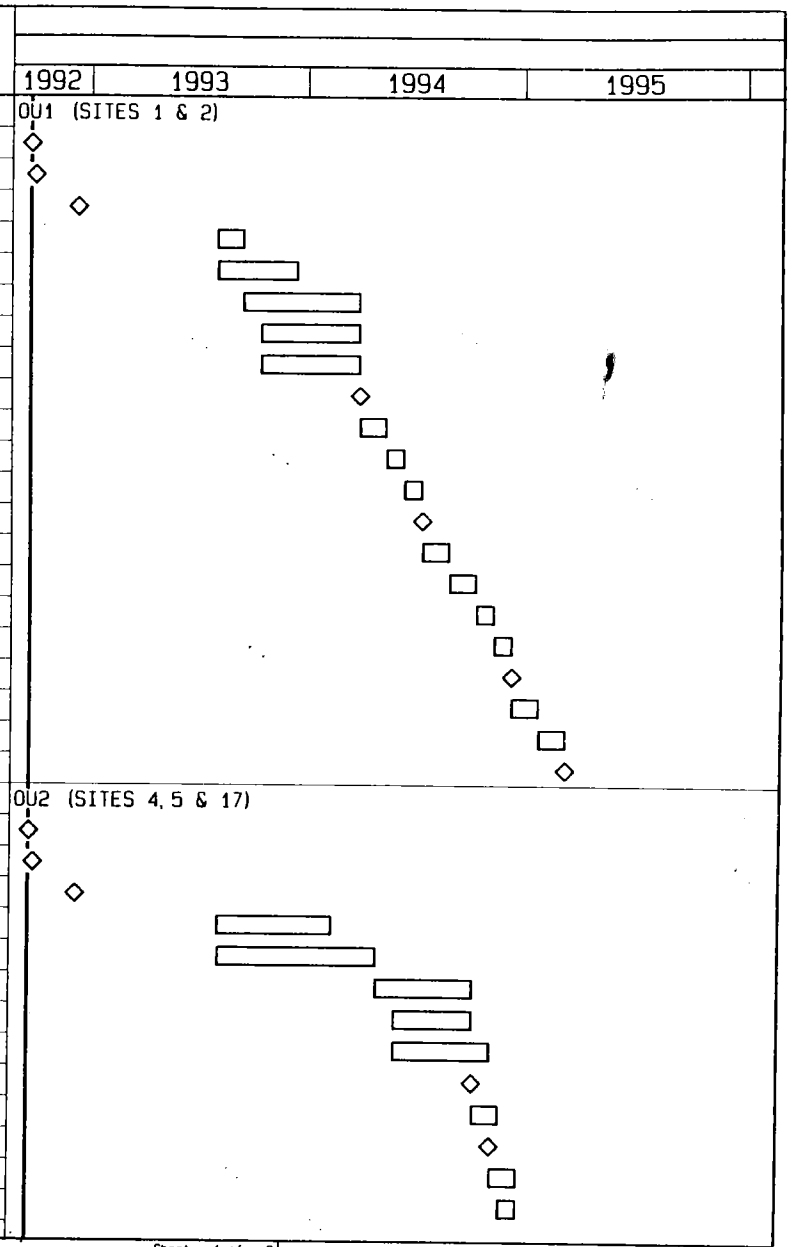


FIGURE 1

8500-02 931028WEM

ATTACHMENT A

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
OU1 (SITES 1 & 2)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
CONFIRMATORY SAMPLING	2AUG93	15SEP93	45
LABORATORY ANALYSIS, VALIDATION & DATA MANAGEMENT	3AUG93	15DEC93	135
DRAFT REMEDIAL INVESTIGATION REPORT	15SEP93	30MAR94	197
DRAFT RISK ASSESSMENT REPORT	15OCT93	30MAR94	167
DRAFT FEASIBILITY REPORT	15OCT93	30MAR94	167
SUBMIT DRAFT RI, RA, & FS REPORTS		30MAR94	0
AGENCY REVIEW DRAFT RI/RA/FS REPORTS	31MAR94	14MAY94	45
NAVY RESPONSE TO COMMENTS	15MAY94	13JUN94	30
PREPARE FINAL RI/RA/FS REPORTS	14JUN94	13JUL94	30
SUBMIT FINAL RI, RA, & FS REPORTS		13JUL94	0
PREPARE DRAFT PROPOSED PLAN	14JUL94	27AUG94	45
AGENCY REVIEW OF DRAFT PROPOSED PLAN	28AUG94	11OCT94	45
NAVY RESPONSE TO AGENCY COMMENTS ON DRAFT PP	12OCT94	10NOV94	30
PREPARE FINAL PROPOSED PLAN	11NOV94	10DEC94	30
SUBMIT FINAL PROPOSED PLAN		10DEC94	0
PUBLIC COMMENT PERIOD	11DEC94	24JAN95	45
PREPARE RECORD OF DECISION	25JAN95	10MAR95	45
SIGN RECORD OF DECISION		10MAR95	0
OU2 (SITES 4, 5 & 17)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
CONFIRMATORY SAMPLING	6AUG93	15FEB94	194
LABORATORY ANALYSIS, VALIDATION & DATA MANAGEMENT	7AUG93	1MAY94	268
REMEDIAL INVESTIGATION REPORT	1MAY94	10OCT94	163
RISK ASSESSMENT REPORT	1JUN94	10OCT94	132
FEASIBILITY STUDY REPORT	1JUN94	9NOV94	162
SUBMIT DRAFT RA & RI REPORT		10OCT94	0
AGENCY REVIEW DRAFT RA/RI REPORT	11OCT94	24NOV94	45
SUBMIT DRAFT FEASIBILITY STUDY REPORT		9NOV94	0
AGENCY REVIEW DRAFT FS REPORT	10NOV94	24DEC94	45
NAVY RESPONSE TO DRAFT RA/RI COMMENTS	25NOV94	24DEC94	30



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

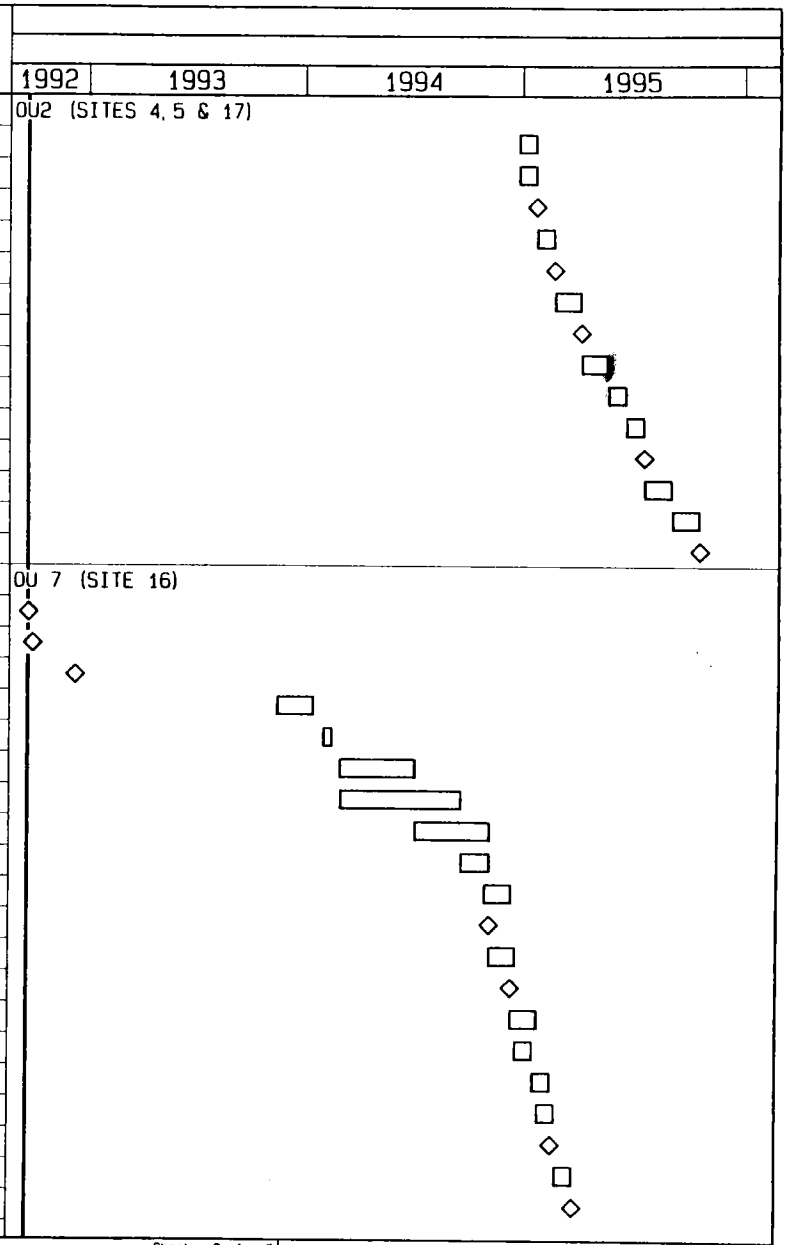
Sheet 1 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
OU2 (SITES 4, 5 & 17)			
PREPARE FINAL RA/RI REPORT	25DEC94	23JAN95	30
NAVY RESPONSE TO DRAFT FS COMMENTS	25DEC94	23JAN95	30
SUBMIT FINAL RA/RI REPORT		23JAN95	0
PREPARE FINAL FS REPORT	24JAN95	22FEB95	30
SUBMIT FINAL FS REPORT		22FEB95	0
PREPARE DRAFT PROPOSED PLAN	23FEB95	8APR95	45
SUBMIT DRAFT PROPOSED PLAN		8APR95	0
AGENCY REVIEW OF DRAFT PROPOSED PLAN	9APR95	23MAY95	45
NAVY RESPONSE TO COMMENTS ON DRAFT PP	24MAY95	22JUN95	30
PREPARE FINAL PROPOSED PLAN	23JUN95	22JUL95	30
SUBMIT FINAL PROPOSED PLAN		22JUL95	0
PUBLIC COMMENT PERIOD	23JUL95	5SEP95	45
PREPARE RECORD OF DECISION	6SEP95	20OCT95	45
SIGN RECORD OF DECISION		20OCT95	0
OU 7 (SITE 16)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
FIELD SCREENING	15NOV93	15JAN94	62
TECHNICAL MEMORANDUM	1FEB94	15FEB94	15
CONFIRMATIONAL SAMPLING	1MAR94	5JUL94	127
LABORATORY ANALYSIS, VALIDATION, DATA MANAGEMENT	2MAR94	20SEP94	203
PREPARE REMEDIAL INVESTIGATION REPORT	5JUL94	7NOV94	126
RISK ASSESSMENT REPORT	20SEP94	7NOV94	49
PREPARE DRAFT FEASIBILITY STUDY REPORT	30OCT94	14DEC94	46
SUBMIT DRAFT RA/RI REPORT		7NOV94	0
AGENCY REVIEW RA/RI REPORTS	8NOV94	22DEC94	45
SUBMIT DRAFT FEASIBILITY STUDY REPORT		14DEC94	0
AGENCY REVIEW DRAFT FS REPORT	15DEC94	28JAN95	45
NAVY RESPONSE TO DRAFT FS COMMENTS	23DEC94	21JAN95	30
PREPARE FINAL RA/RI REPORT	22JAN95	20FEB95	30
NAVY RESPONSE TO DRAFT COMMENTS	29JAN95	27FEB95	30
SUBMIT FINAL RA/RI REPORT		20FEB95	0
PREPARE FINAL FS REPORT	28FEB95	29MAR95	30
SUBMIT FINAL FS REPORT		29MAR95	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

(c) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CECL

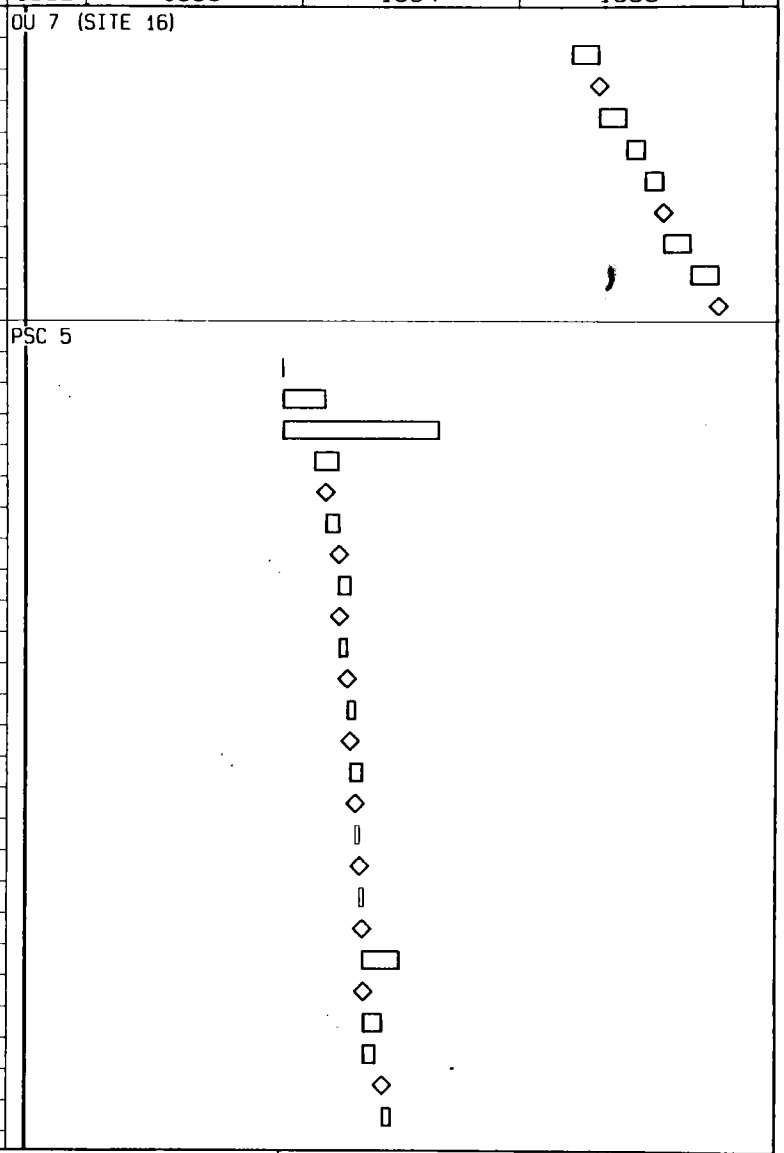
Sheet 2 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
OU 7 (SITE 16)			
PREPARE DRAFT PROPOSED PLAN	30MAR95	13MAY95	45
SUBMIT DRAFT PROPOSED PLAN		13MAY95	0
AGENCY REVIEW OF DRAFT PROPOSED PLAN	14MAY95	27JUN95	45
NAVY RESPONSE TO COMMENTS	28JUN95	27JUL95	30
PREPARE FINAL PROPOSED PLAN	28JUL95	26AUG95	30
SUBMIT FINAL PROPOSED PLAN		26AUG95	0
PUBLIC COMMENT PERIOD	27AUG95	10OCT95	45
PREPARE RECORD OF DECISION	11OCT95	24NOV95	45
SIGN RECORD OF DECISION		24NOV95	0
PSC 5			
KICKOFF MEETING AT CECIL FIELD - SITE 5	29NOV93	29NOV93	1
PREPARE FFS - SITE 5	29NOV93	8FEB94	72
INTERIM REMEDIAL ACTION SITE 5	29NOV93	17AUG94	262
PREPARE 100% DESIGN DOCUMENTS - SITE 5	21JAN94	2MAR94	41
SUBMIT DRAFT FINAL FFS - SITE 5		8FEB94	0
AGENCY & NAVY REVIEW OF DFT FNL FFS - SITE 5	9FEB94	3MAR94	23
SUBMIT 100% DESIGN TO NAVY & AGENCIES - SITE 5		2MAR94	0
AGENCY REVIEW OF 100% DESIGN - SITE 5	2MAR94	22MAR94	21
ABB-ES RCVS AGY CMNTS ON DFT FNL FFS - SITE 5		3MAR94	0
REVISE DRAFT FINAL FFS - SITE 5	4MAR94	17MAR94	14
SUBMIT FINAL FFS - SITE 5		17MAR94	0
PREPARE DRAFT FINAL PROPOSED PLAN - SITE 5	18MAR94	31MAR94	14
ABB-ES RECV ALL COMMENTS ON 100% DESIGN-SITE 5		22MAR94	0
REVISE 100% DESIGN - SITE 5	23MAR94	12APR94	21
SUBMIT DRAFT FINAL PROPOSED PLAN - SITE 5		31MAR94	0
NAVY & AGENCY RVW DRFT FNL PROPOSED PLAN-SITE 5	1APR94	7APR94	7
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - SITE 5		7APR94	0
REVISE DRAFT FINAL PROPOSED PLAN - SITE 5	8APR94	14APR94	7
SUBMIT FINAL DESIGN - SITE 5		12APR94	0
REVIEW CONTRACTORS SUBMITTAL	13APR94	14JUN94	63
SUBMIT FINAL PROPOSED PLAN - SITE 5		14APR94	0
PUBLIC COMMENT ON FFS & PROPOSED PLAN - SITE 5	15APR94	16MAY94	32
PREPARE IROD - SITE 5	15APR94	5MAY94	21
ABB-ES RECEIVES ALL PUBLIC COMMENTS - SITE 5		16MAY94	0
PREPARE RESPONSIVENESS SUMMARY - SITE 5	17MAY94	31MAY94	15



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

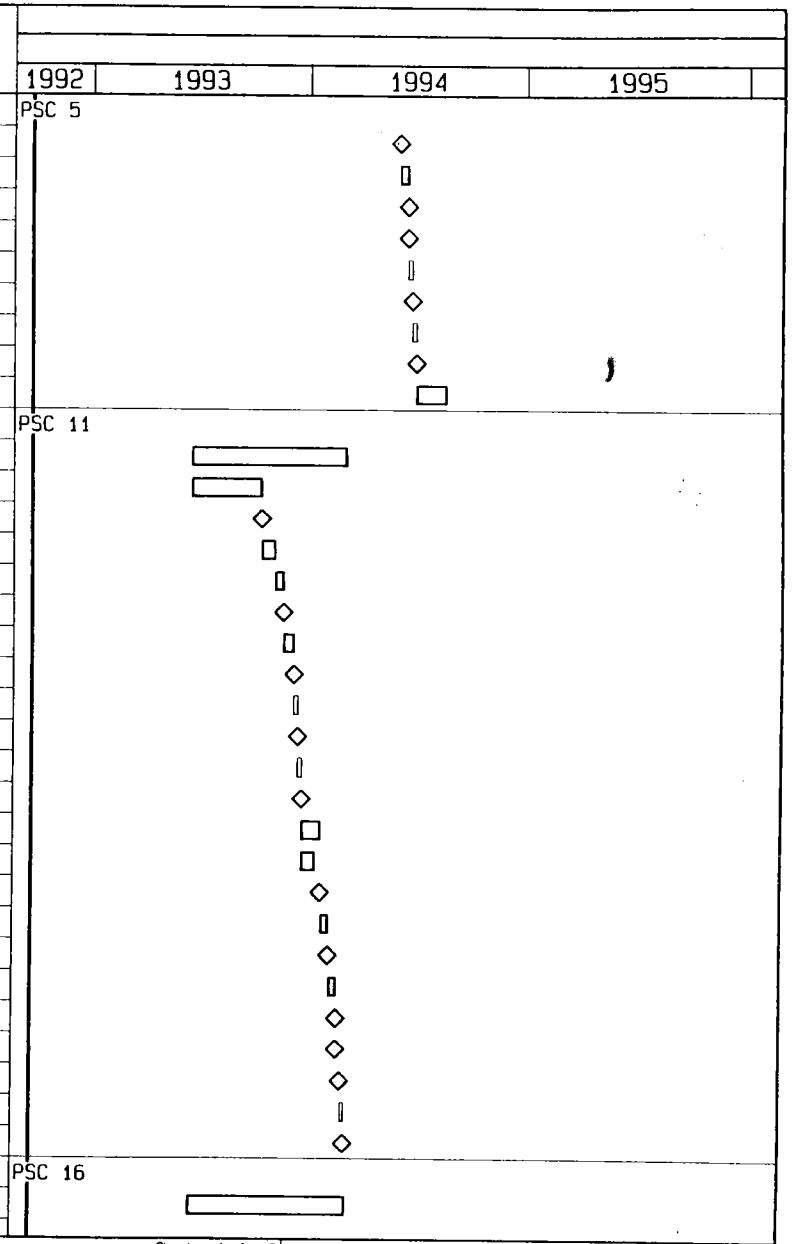
Sheet 3 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
PSC 5			
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - SITE 5		31MAY94	0
REVISE RS - SITE 5	1JUN94	14JUN94	14
SUBMIT FINAL RS TO NAVY - SITE 5		14JUN94	0
SUBMIT DRFT FNL IROD TO AGENCIES & NAVY - SITE 5		14JUN94	0
NAVY & AGENCY REVIEW OF DFT FNL IROD - SITE 5	15JUN94	21JUN94	7
ABB-ES RECEIVES ALL COMMENTS - IROD - SITE 5		21JUN94	0
REVISE DRAFT FINAL IROD - SITE 5	22JUN94	28JUN94	7
SUBMIT FINAL IROD TO NAVY - SITE 5		28JUN94	0
CONSTRUCTION ACTIVITIES	29JUN94	17AUG94	50
PSC 11			
INTERIM REMOVAL ACTION - PSC 11	18JUN93	4MAR94	260
PREPARE FFS - PSC 11	18JUN93	12OCT93	117
SUBMIT DRAFT FINAL FFS - PSC 11		12OCT93	0
AGENCY & NAVY REVIEW OF DFT FNL FFS - PSC 11	13OCT93	4NOV93	23
REVISE DRAFT FINAL FFS - PSC 11	5NOV93	18NOV93	14
SUBMIT FINAL FFS - PSC 11		18NOV93	0
PREPARE DRAFT FINAL PROPOSED PLAN - PSC 11	19NOV93	6DEC93	18
SUBMIT DRAFT FINAL PROPOSED PLAN - PSC 11		6DEC93	0
AGENCY RVW DRFT FNL PROPOSED PLAN-PSC 11	7DEC93	13DEC93	7
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - PSC 11		13DEC93	0
REVISE DRAFT FINAL PROPOSED PLAN - PSC 11	14DEC93	20DEC93	7
SUBMIT FINAL PROPOSED PLAN - PSC 11		20DEC93	0
PUBLIC COMMENT ON FFS & PROPOSED PLAN - PSC 11	21DEC93	21JAN94	32
PREPARE IROD - PSC 11	21DEC93	12JAN94	23
ABB-ES RECEIVES ALL PUBLIC COMMENTS - PSC 11		21JAN94	0
PREPARE RESPONSIVENESS SUMMARY - PSC 11	24JAN94	4FEB94	12
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - PSC 11		4FEB94	0
REVISE RS - PSC 11	7FEB94	18FEB94	12
SUBMIT FINAL RS TO NAVY - PSC 11		18FEB94	0
SUBMIT DRFT FNL IROD TO AGENCIES - PSC 11		18FEB94	0
ABB-ES RECEIVES ALL COMMENTS - IROD - PSC 11		25FEB94	0
REVISE DRAFT FINAL IROD - PSC 11	28FEB94	4MAR94	5
SUBMIT FINAL IROD TO AGENCIES - PSC 11		4MAR94	0
PSC 16			
OU7, PSC 16 INTERIM REMOVAL ACTION	18JUN93	8MAR94	264



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

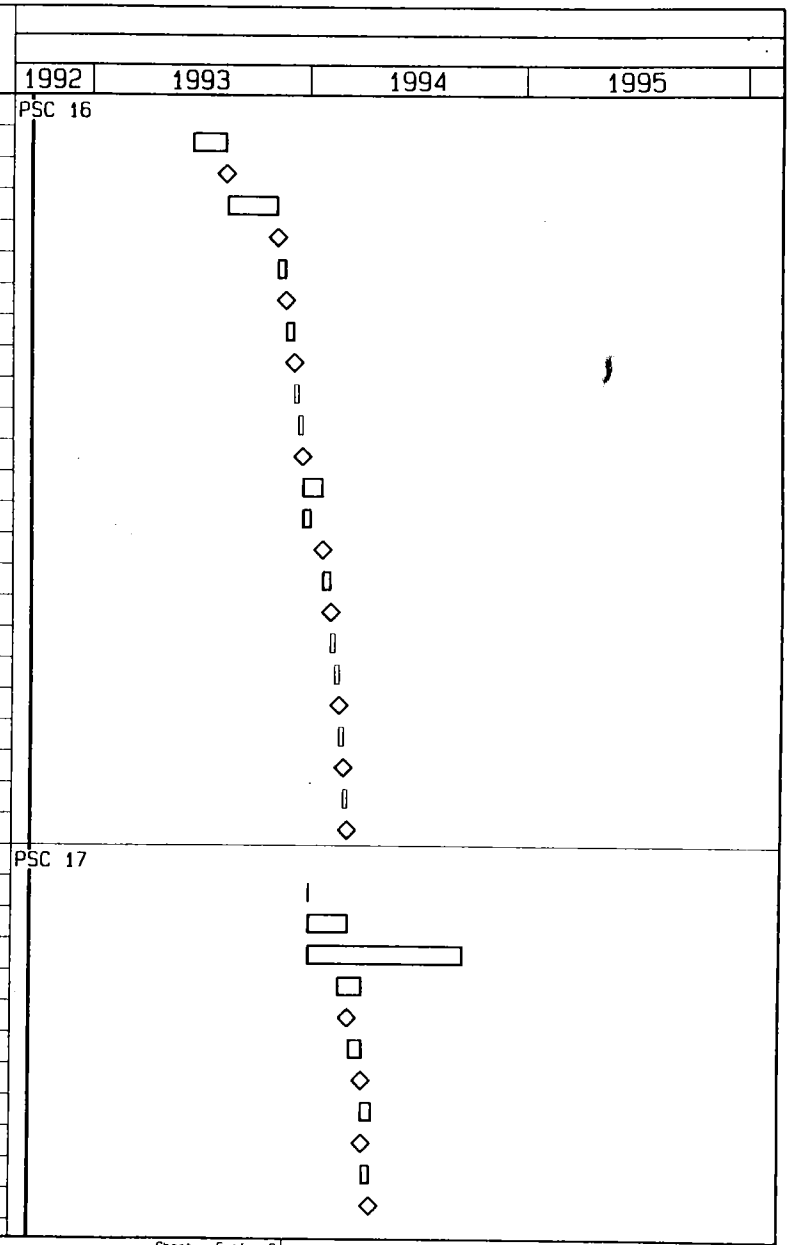
Sheet 4 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
PSC 16			
PREPARE DRAFT FINAL FFS - PSC 16	18JUN93	13AUG93	57
SUBMIT DRAFT FINAL FFS - PSC 16		13AUG93	0
AGENCY REVIEW DRAFT FINAL FFS - PSC 16	16AUG93	8NOV93	85
RCVS ALL AGENCY COMMENTS ON FFS-PSC 16		8NOV93	0
REVISE DRAFT FINAL FFS - PSC 16	9NOV93	22NOV93	14
SUBMIT FINAL FFS - PSC 16		22NOV93	0
PREPARE DRAFT FINAL PROPOSED PLAN - PSC 16	23NOV93	6DEC93	14
SUBMIT DRAFT FINAL PROPOSED PLAN - PSC 16		6DEC93	0
AGENCY RVW DRFT FNL PROPOSED PLAN-PSC 16	7DEC93	13DEC93	7
REVISE DRAFT FINAL PROPOSED PLAN - PSC 16	14DEC93	20DEC93	7
SUBMIT FINAL PROPOSED PLAN - PSC 16		20DEC93	0
PUBLIC COMMENT ON FFS AND PP - PSC 16	21DEC93	23JAN94	34
PREPARE DRAFT FINAL IROD - PSC 16	21DEC93	3JAN94	14
ABB-ES RECEIVES ALL PUBLIC COMMENTS - PSC 16		23JAN94	0
PREP DRFT FINL RESPONSIVENESS SUMMARY - PSC 16	24JAN94	6FEB94	14
SUBMIT DRAFT FINAL RS - PSC 16		6FEB94	0
AGENCY REVIEW DRAFT FINAL RS - PSC 16	7FEB94	13FEB94	7
PREPARE FINAL RS - PSC 16	14FEB94	21FEB94	8
SUBMIT DRFT FNL IROD TO AGENCIES - PSC 16		21FEB94	0
AGENCY REVIEW OF DRAFT FINAL IROD-PSC 16	22FEB94	1MAR94	8
ABB-ES RECEIVES AGENCY COMMENTS ON IROD - PSC 16		1MAR94	0
REVISE DRAFT FINAL IROD - PSC 16	2MAR94	8MAR94	7
SUBMIT FINAL IROD TO NAVY - PSC 16		8MAR94	0
PSC 17			
KICKOFF MEETING AT CECIL FIELD - SITE 17	3JAN94	3JAN94	1
PREPARE FFS - SITE 17	3JAN94	11MAR94	68
INTERIM REMOVAL ACTION SITE 17	3JAN94	20SEP94	261
PREPARE 100% DESIGN DOCUMENTS - SITE 17	23FEB94	4APR94	41
SUBMIT DRAFT FINAL FFS - SITE 17		11MAR94	0
AGENCY & NAVY REVIEW OF DFT FNL FFS - SITE 17	14MAR94	5APR94	23
SUBMIT 100% DESIGN TO NAVY & AGENCIES - SITE 17		4APR94	0
AGENCY REVIEW OF 100% DESIGN - SITE 17	4APR94	22APR94	19
ABB-ES RCVS AGY CMNTS ON DFT FNL FFS - SITE 17		5APR94	0
REVISE DRAFT FINAL FFS - SITE 17	6APR94	19APR94	14
SUBMIT FINAL FFS - SITE 17		19APR94	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

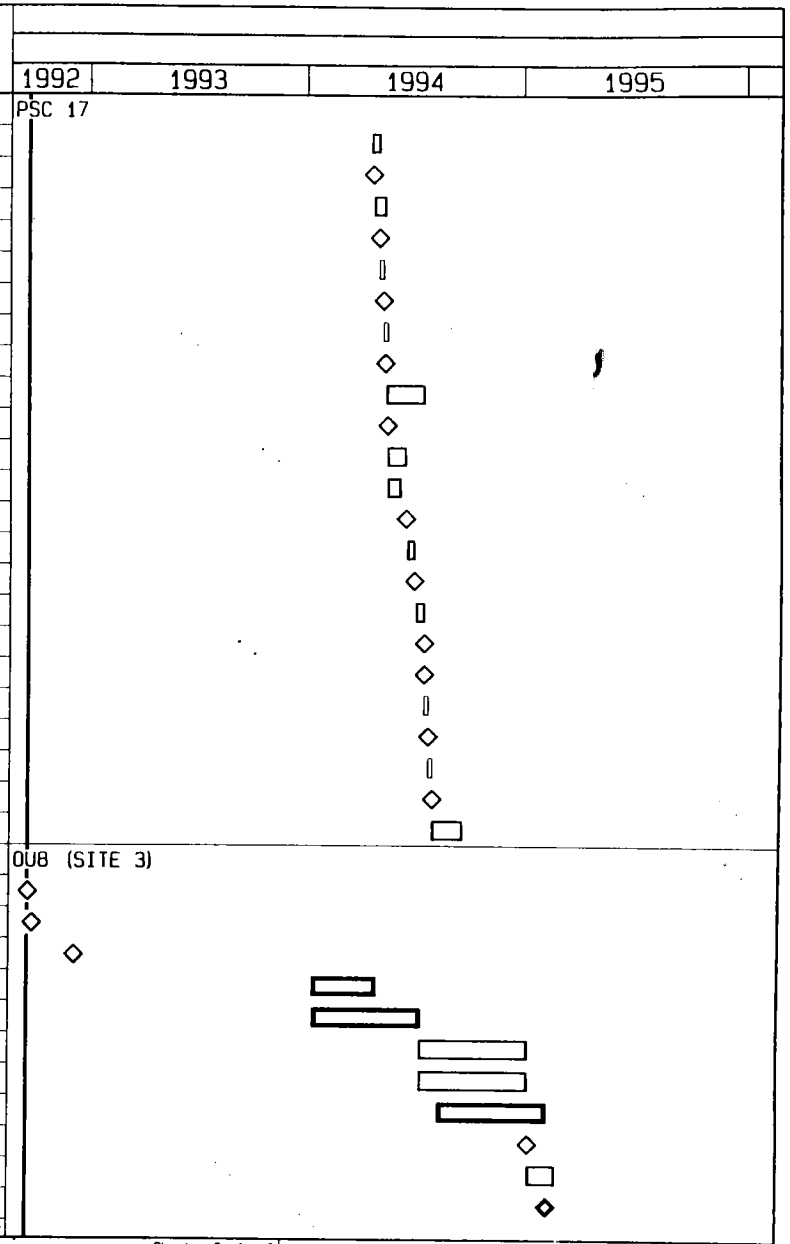
Sheet 5 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
PSC 17			
PREPARE DRAFT FINAL PROPOSED PLAN - SITE 17	20APR94	3MAY94	14
ABB-ES RECV ALL COMMENTS ON 100% DESIGN-SITE 17		22APR94	0
REVISE 100% DESIGN - SITE 17	25APR94	13MAY94	19
SUBMIT DRAFT FINAL PROPOSED PLAN - SITE 17		3MAY94	0
NAVY & AGENCY RVW DRFT FNL PROPOSED PLAN-SITE 17	4MAY94	10MAY94	7
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - SITE 17		10MAY94	0
REVISE DRAFT FINAL PROPOSED PLAN - SITE 17	11MAY94	17MAY94	7
SUBMIT FINAL DESIGN - SITE 17		13MAY94	0
REVIEW CONTRACTORS SUBMITTAL	16MAY94	18JUL94	64
SUBMIT FINAL PROPOSED PLAN - SITE 17		17MAY94	0
PUBLIC COMMENT ON FFS & PROPOSED PLAN - SITE 17	18MAY94	17JUN94	31
PREPARE IROD - SITE 17	18MAY94	8JUN94	22
ABB-ES RECEIVES ALL PUBLIC COMMENTS - SITE 17		17JUN94	0
PREPARE RESPONSIVENESS SUMMARY - SITE 17	20JUN94	1JUL94	12
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - SITE 17		1JUL94	0
REVISE RS - SITE 17	5JUL94	18JUL94	14
SUBMIT FINAL RS TO NAVY - SITE 17		18JUL94	0
SUBMIT DRFT FNL IROD TO AGENCIES & NAVY -SITE 17		18JUL94	0
NAVY & AGENCY REVIEW OF DFT FNL IROD - SITE 17	19JUL94	25JUL94	7
ABB-ES RECEIVES ALL COMMENTS - IROD - SITE 17		25JUL94	0
REVISE DRAFT FINAL IROD - SITE 17	26JUL94	1AUG94	7
SUBMIT FINAL IROD TO NAVY - SITE 17		1AUG94	0
CONSTRUCTION ACTIVITIES	2AUG94	20SEP94	50
OU8 (SITE 3)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
CONFIRMATORY SAMPLING	15JAN94	1MAY94	107
LABORATORY ANALYSIS, VALIDATION & DATA MANAGEMENT	16JAN94	15JUL94	181
RISK ASSESSMENT REPORT	15JUL94	10JAN95	180
REMEDIAL INVESTIGATION REPORT	15JUL94	10JAN95	180
FEASIBILITY STUDY REPORT	15AUG94	10FEB95	180
SUBMIT DRAFT RA & RI REPORT		10JAN95	0
AGENCY REVIEW DRAFT RA/RI REPORT	11JAN95	24FEB95	45
SUBMIT DRAFT FEASIBILITY STUDY REPORT		10FEB95	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CEGL

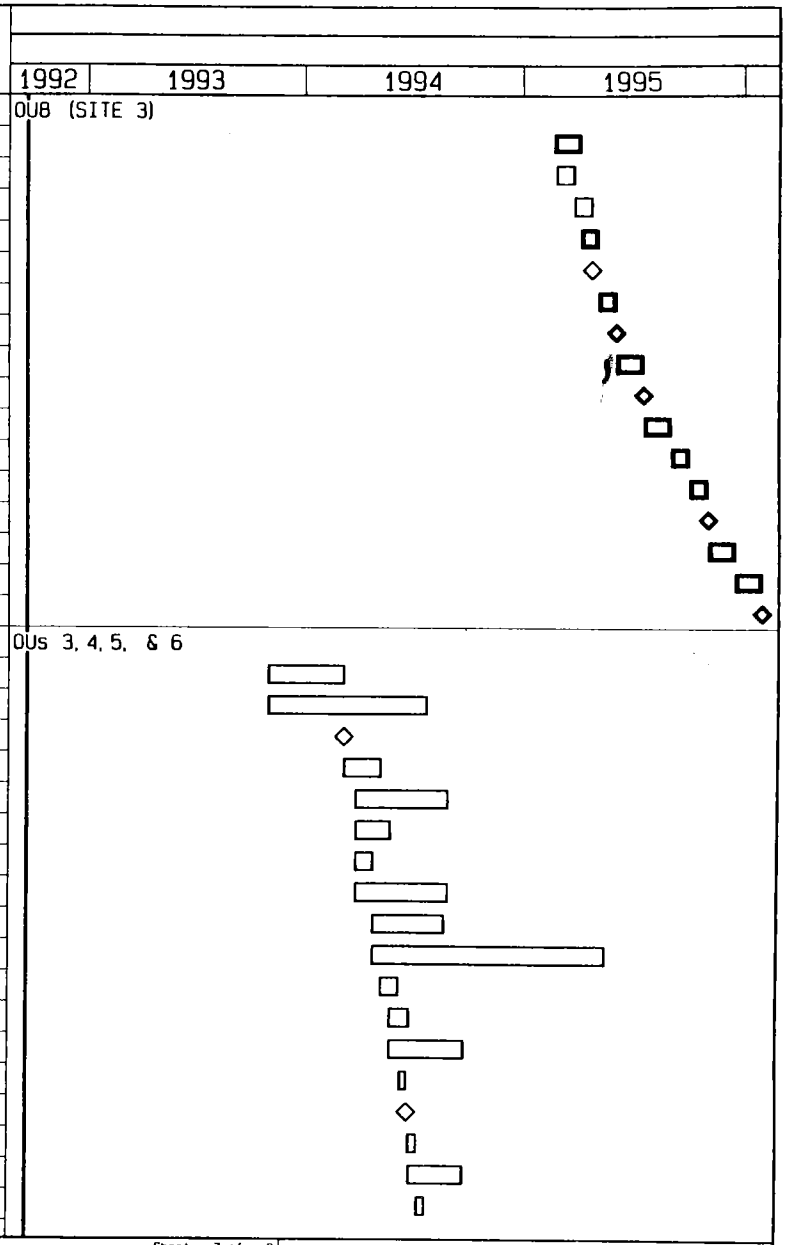
Sheet 6 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
OU8 (SITE 3)			
AGENCY REVIEW DRAFT FS REPORT	21FEB95	6APR95	45
NAVY RESPONSE TO COMMENTS	25FEB95	26MAR95	30
PREPARE FINAL RA/RI REPORT	27MAR95	25APR95	30
NAVY RESPONSE TO COMMENTS	7APR95	6MAY95	30
SUBMIT FINAL RA/RI REPORT		25APR95	0
PREPARE FINAL FS REPORT	7MAY95	5JUN95	30
SUBMIT FINAL FS REPORT		5JUN95	0
PREPARE DRAFT PROPOSED PLAN	6JUN95	20JUL95	45
SUBMIT DRAFT PROPOSED PLAN		20JUL95	0
AGENCY REVIEW OF DRAFT PROPOSED PLAN	21JUL95	3SEP95	45
NAVY RESPONSE TO COMMENTS	4SEP95	3OCT95	30
PREPARE FINAL PROPOSED PLAN	4OCT95	2NOV95	30
SUBMIT FINAL PROPOSED PLAN		2NOV95	0
PUBLIC COMMENT PERIOD	3NOV95	17DEC95	45
PREPARE RECORD OF DECISION	18DEC95	31JAN96	45
SIGN RECORD OF DECISION		31JAN96	0
OUs 3, 4, 5, & 6			
PREPARE RI/FS WORK PLAN OU'S 3, 4, 5, 6	1NOV93	8MAR94	128
RI/FS WORKPLAN OU'S 3, 4, 5, 6	1NOV93	25JUL94	267
SUBMIT DRAFT FI/FS WP OU'S 3, 4, 5, 6.		8MAR94	0
AGENCY & NAVY REVIEW OF DRAFT RF/FS WP	9MAR94	10MAY94	63
INITIAL INVESTIGATION OU 3	29MAR94	30AUG94	155
INITIAL INVESTIGATION OU 4	29MAR94	26MAY94	59
INITIAL INVESTIGATION OU 6	29MAR94	27APR94	30
INITIAL INVESTIGATION, OUs 3, 4, 5, & 6	29MAR94	30AUG94	155
DRAFT TM OU 6	27APR94	24AUG94	120
TASK 23 - TECHNICAL MEMORANDA (TM)	27APR94	19MAY95	388
RESPOND TO COMMENTS	11MAY94	10JUN94	31
INITIAL INVESTIGATION OU 5	26MAY94	28JUN94	34
DRAFT TM OU 4	26MAY94	27SEP94	125
PREPARE FINAL DRAFT RI/FS WP	13JUN94	24JUN94	12
SUBMIT FINAL DRAFT RI/FS WP		24JUN94	0
AGENCY & NAVY REVIEW OF FINAL DRAFT RF/FS WP	27JUN94	11JUL94	15
DRAFT TM OU 5	28JUN94	26SEP94	91
PREPARE FINAL RF/FS WP	12JUL94	25JUL94	14



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

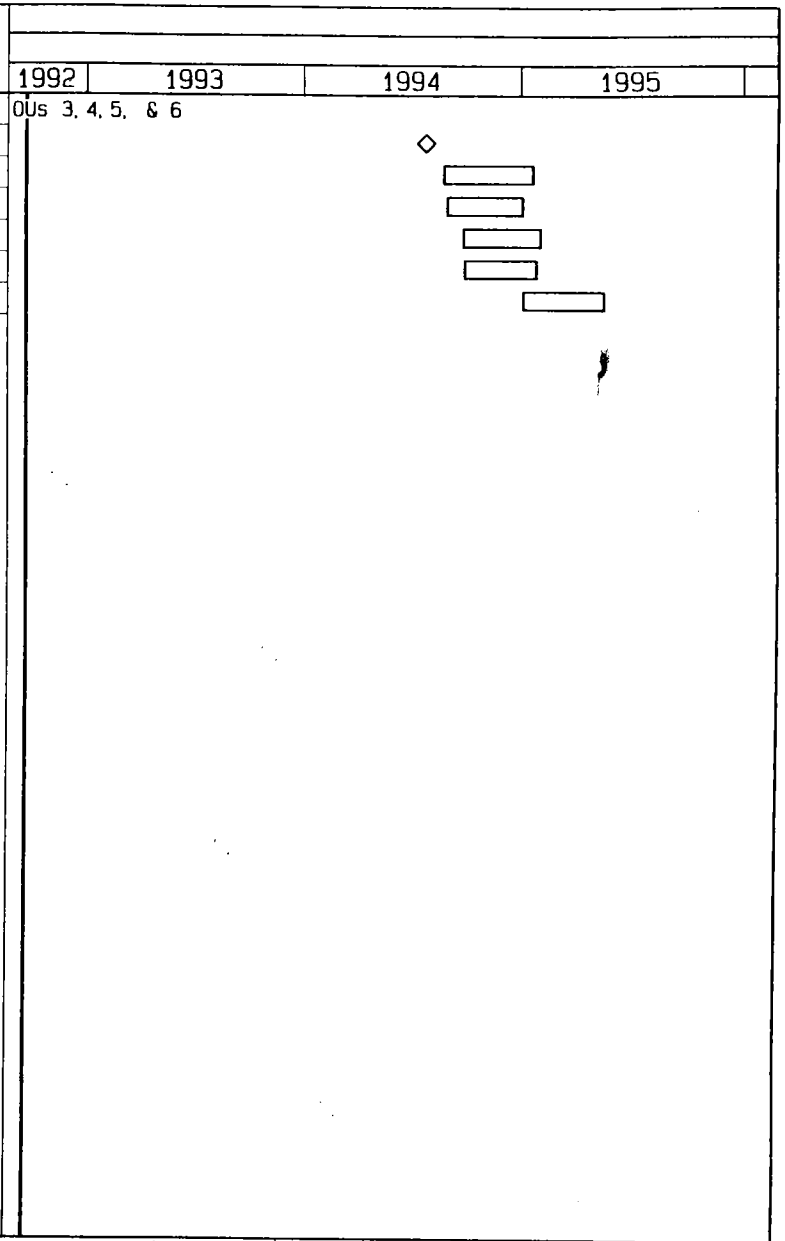
Sheet 7 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
SUBMIT FINAL RI/FS WP		25JUL94	0
FINAL TM OU 6	24AUG94	20JAN95	150
DRAFT TM OU 3.	30AUG94	3JAN95	127
FINAL TM OU 5	26SEP94	2FEB95	130
FINAL TM OU 4	28SEP94	26JAN95	121
FINAL TM OU 3	3JAN95	19MAY95	137



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

(c) Primavera Systems, Inc.

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CECL

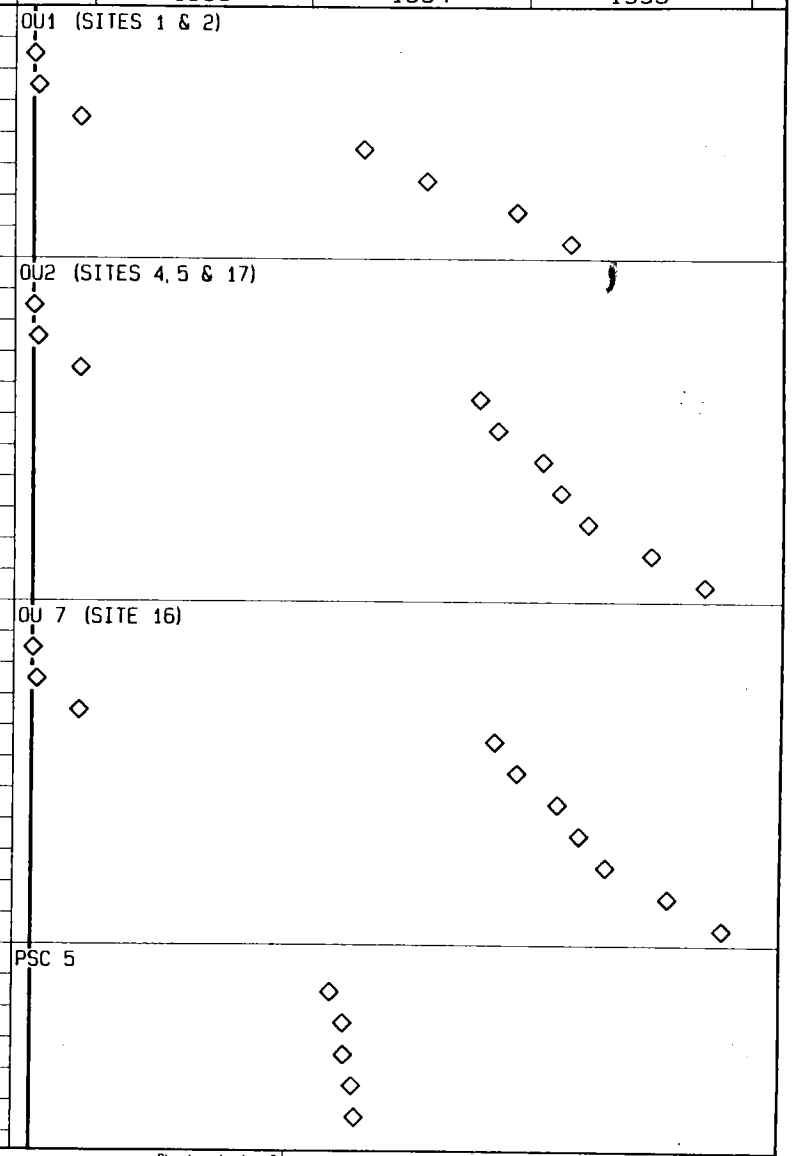
Sheet 8 of 8

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
OU1 (SITES 1 & 2)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
SUBMIT DRAFT RI, RA, & FS REPORTS		30MAR94	0
SUBMIT FINAL RI, RA, & FS REPORTS		13JUL94	0
SUBMIT FINAL PROPOSED PLAN		10DEC94	0
SIGN RECORD OF DECISION		10MAR95	0
OU2 (SITES 4, 5 & 17)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
SUBMIT DRAFT RA & RI REPORT		10OCT94	0
SUBMIT DRAFT FEASIBILITY STUDY REPORT		9NOV94	0
SUBMIT FINAL RA/RI REPORT		23JAN95	0
SUBMIT FINAL FS REPORT		22FEB95	0
SUBMIT DRAFT PROPOSED PLAN		8APR95	0
SUBMIT FINAL PROPOSED PLAN		22JUL95	0
SIGN RECORD OF DECISION		20OCT95	0
OU 7 (SITE 16)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
SUBMIT DRAFT RA/RI REPORT		7NOV94	0
SUBMIT DRAFT FEASIBILITY STUDY REPORT		14DEC94	0
SUBMIT FINAL RA/RI REPORT		20FEB95	0
SUBMIT FINAL FS REPORT		29MAR95	0
SUBMIT DRAFT PROPOSED PLAN		13MAY95	0
SUBMIT FINAL PROPOSED PLAN		26AUG95	0
SIGN RECORD OF DECISION		24NOV95	0
PSC 5			
SUBMIT DRAFT FINAL FFS - SITE 5		8FEB94	0
SUBMIT 100% DESIGN TO NAVY & AGENCIES - SITE 5		2MAR94	0
ABB-ES RCVS AGY CMNTS ON DFT FNL FFS - SITE 5		3MAR94	0
SUBMIT FINAL FFS - SITE 5		17MAR94	0
ABB-ES RECV ALL COMMENTS ON 100% DESIGN-SITE 5		22MAR94	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(C) Primavera Systems, Inc.

CECL

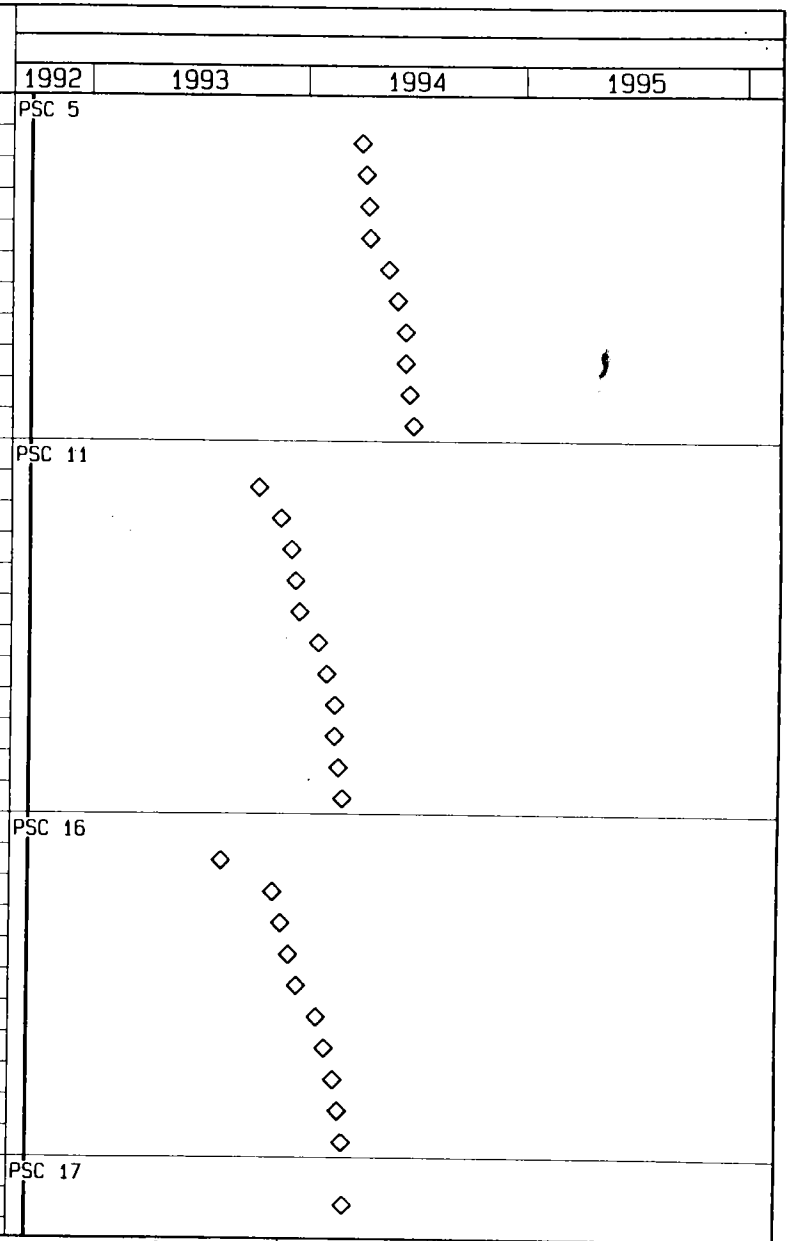
Sheet 1 of 3

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE MILESTONES

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
PSC 5			
SUBMIT DRAFT FINAL PROPOSED PLAN - SITE 5		31MAR94	0
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - SITE 5		7APR94	0
SUBMIT FINAL DESIGN - SITE 5		12APR94	0
SUBMIT FINAL PROPOSED PLAN - SITE 5		14APR94	0
ABB-ES RECEIVES ALL PUBLIC COMMENTS - SITE 5		16MAY94	0
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - SITE 5		31MAY94	0
SUBMIT FINAL RS TO NAVY - SITE 5		14JUN94	0
SUBMIT DRFT FNL IROD TO AGENCIES & NAVY - SITE 5		14JUN94	0
ABB-ES RECEIVES ALL COMMENTS - IROD - SITE 5		21JUN94	0
SUBMIT FINAL IROD TO NAVY - SITE 5		28JUN94	0
PSC 11			
SUBMIT DRAFT FINAL FFS - PSC 11		12OCT93	0
SUBMIT FINAL FFS - PSC 11		18NOV93	0
SUBMIT DRAFT FINAL PROPOSED PLAN - PSC 11		6DEC93	0
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - PSC 11		13DEC93	0
SUBMIT FINAL PROPOSED PLAN - PSC 11		20DEC93	0
ABB-ES RECEIVES ALL PUBLIC COMMENTS - PSC 11		21JAN94	0
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - PSC 11		4FEB94	0
SUBMIT FINAL RS TO NAVY - PSC 11		18FEB94	0
SUBMIT DRFT FNL IROD TO AGENCIES - PSC 11		18FEB94	0
ABB-ES RECEIVES ALL COMMENTS - IROD - PSC 11		25FEB94	0
SUBMIT FINAL IROD TO AGENCIES - PSC 11		4MAR94	0
PSC 16			
SUBMIT DRAFT FINAL FFS - PSC 16		13AUG93	0
RCVS ALL AGENCY COMMENTS ON FFS-PSC 16		8NOV93	0
SUBMIT FINAL FFS - PSC 16		22NOV93	0
SUBMIT DRAFT FINAL PROPOSED PLAN - PSC 16		6DEC93	0
SUBMIT FINAL PROPOSED PLAN - PSC 16		20DEC93	0
ABB-ES RECEIVES ALL PUBLIC COMMENTS - PSC 16		23JAN94	0
SUBMIT DRAFT FINAL RS - PSC 16		6FEB94	0
SUBMIT DRFT FNL IROD TO AGENCIES - PSC 16		21FEB94	0
ABB-ES RECEIVES AGENCY COMMENTS ON IROD - PSC 16		1MAR94	0
SUBMIT FINAL IROD TO NAVY - PSC 16		8MAR94	0
PSC 17			
SUBMIT DRAFT FINAL FFS - SITE 17		11MAR94	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

(c) Primavera Systems, Inc.

CECL

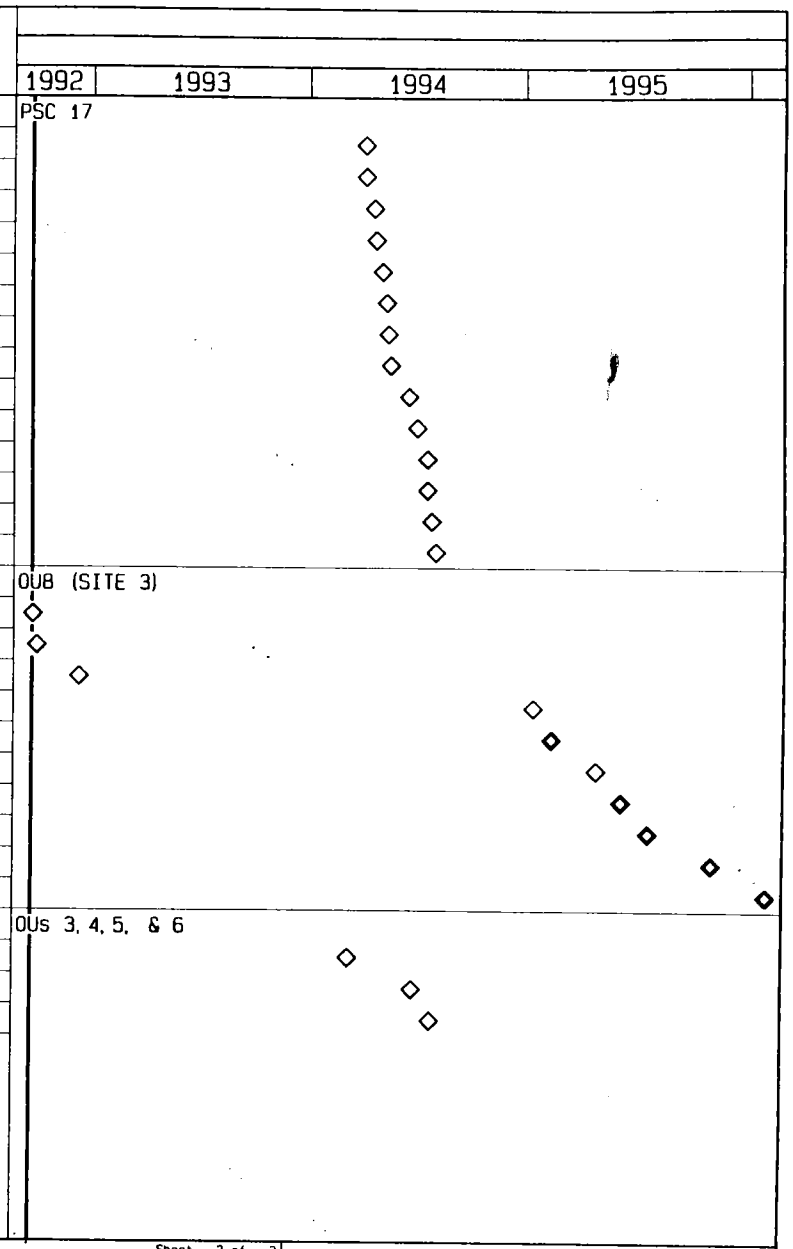
Sheet 2 of 3

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE MILESTONES

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR
PSC 17			
SUBMIT 100% DESIGN TO NAVY & AGENCIES - SITE 17		4APR94	0
ABB-ES RCVS AGY CMNTS ON DFT FNL FFS - SITE 17		5APR94	0
SUBMIT FINAL FFS - SITE 17		19APR94	0
ABB-ES RECV ALL COMMENTS ON 100% DESIGN-SITE 17		22APR94	0
SUBMIT DRAFT FINAL PROPOSED PLAN - SITE 17		3MAY94	0
ABB-ES RCVS ALL COMMENTS ON DFT FNL PP - SITE 17		10MAY94	0
SUBMIT FINAL DESIGN - SITE 17		13MAY94	0
SUBMIT FINAL PROPOSED PLAN - SITE 17		17MAY94	0
ABB-ES RECEIVES ALL PUBLIC COMMENTS - SITE 17		17JUN94	0
ABB-ES RECEIVES ALL COMMENTS ON DFT RS - SITE 17		1JUL94	0
SUBMIT FINAL RS TO NAVY - SITE 17		18JUL94	0
SUBMIT DRFT FNL IROD TO AGENCIES & NAVY -SITE 17		18JUL94	0
ABB-ES RECEIVES ALL COMMENTS - IROD - SITE 17		25JUL94	0
SUBMIT FINAL IROD TO NAVY - SITE 17		1AUG94	0
OUB (SITE 3)			
HUMAN HEALTH RISK ASSESSMENT METHODOLOGY		22SEP92	0
WORKPLAN (TMSS)		29SEP92	0
ECOLOGICAL ASSESSMENT METHODOLOGY		9DEC92	0
SUBMIT DRAFT RA & RI REPORT		10JAN95	0
SUBMIT DRAFT FEASIBILITY STUDY REPORT		10FEB95	0
SUBMIT FINAL RA/RI REPORT		25APR95	0
SUBMIT FINAL FS REPORT		5JUN95	0
SUBMIT DRAFT PROPOSED PLAN		20JUL95	0
SUBMIT FINAL PROPOSED PLAN		2NOV95	0
SIGN RECORD OF DECISION		31JAN96	0
OUs 3, 4, 5, & 6			
SUBMIT DRAFT FI/FS WP OU'S 3, 4, 5, 6.		8MAR94	0
SUBMIT FINAL DRAFT RI/FS WP		24JUN94	0
SUBMIT FINAL RI/FS WP		25JUL94	0



Plot Date 28OCT93
Data Date 22SEP92
Project Start 22SEP92
Project Finish 31JAN96

(c) Primavera Systems, Inc

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

CECL

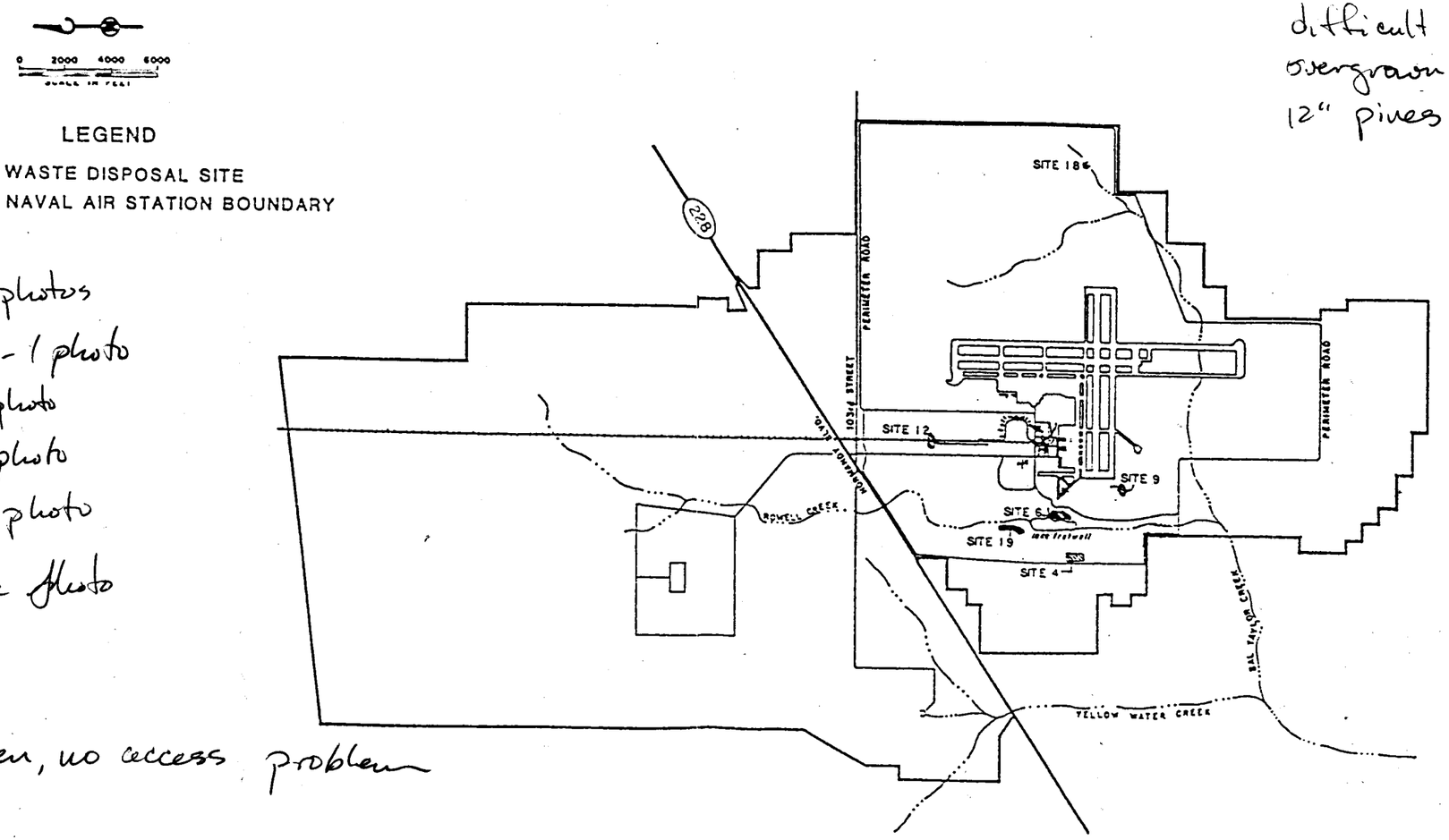
Sheet 3 of 3

NAVYCLEAN
NAS CECIL FIELD SITE MGMT PLAN
BASELINE SCHEDULE MILESTONES

ABB ENVIRONMENTAL SERVICES, INC.

Date	Revision	Checked	Approved

Site 12 -
difficult access
overgrown ditch
12" pines



① site 6 - two photos
Lake Fretwell - 1 photo
② site 3 - one photo
③ site 4 - one photo
④ site 5 - one photo
⑤ site 17 - one photo
⑥ site 2

site 9 - open, no access problem

Site 19 -
Misc. Rubble
mostly wooded
some open areas
6"-8" pines
waist high
undergrowth

Site Location Map
Figure 1 - 1

PSC Screening Work Plan
NAS Cecil Field
May 1990

Site 6 - part of site is cleared, part brush
part heavily wooded

Site 3 - easy access

Site 4 - knee high underbrush
widely spaced 12" diam. ~~trees~~ pines

Site 5 - waist high underbrush
8" - 12" pines
some access, heavy woods between site & lake

site 17

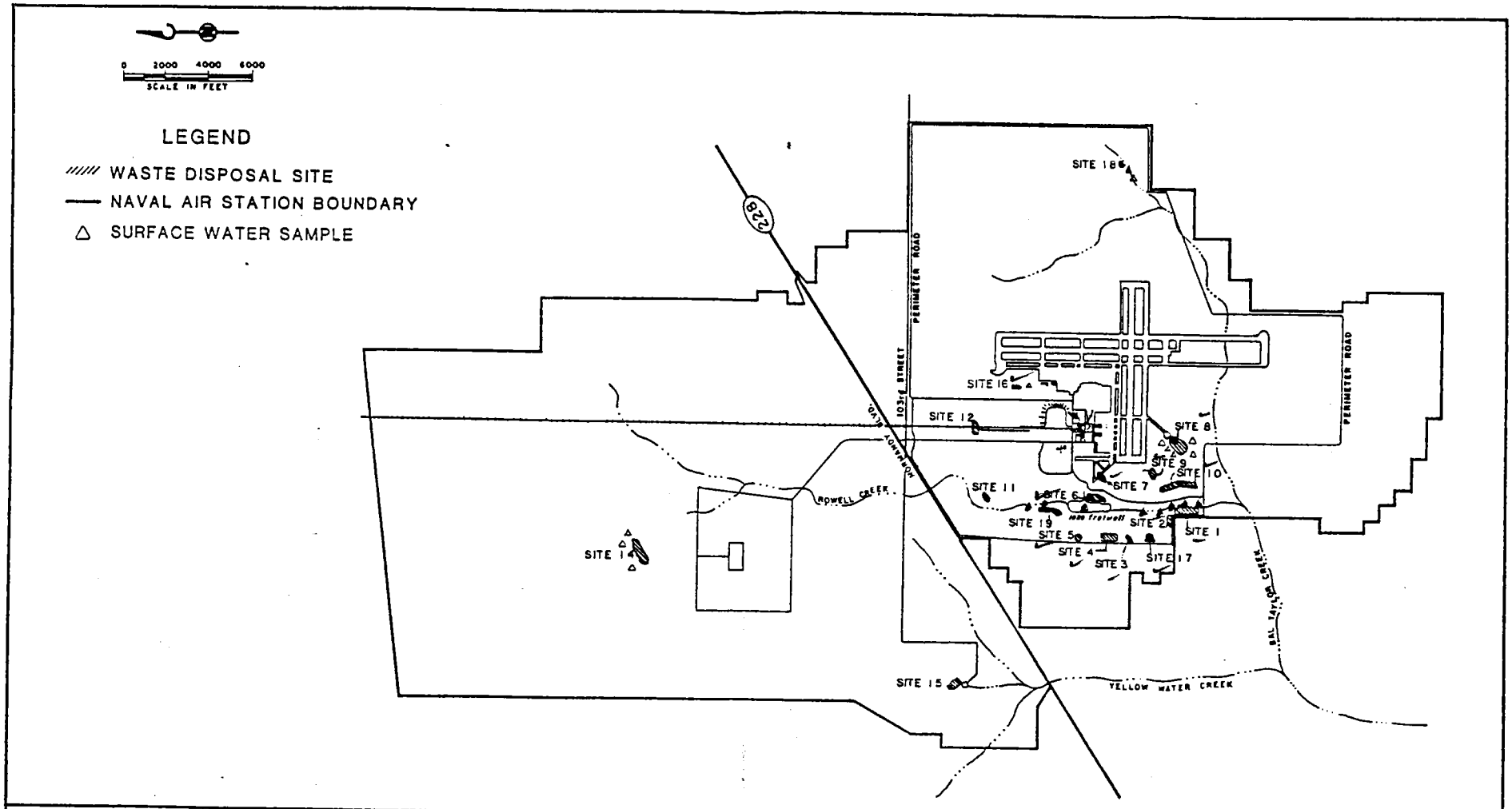
site 2 - waist high brush
pines to 4"
site bordered by pine forest
evidence of bird hunting

site 1 - 6" - 8" pines 10' apart

site 10 - very difficult access

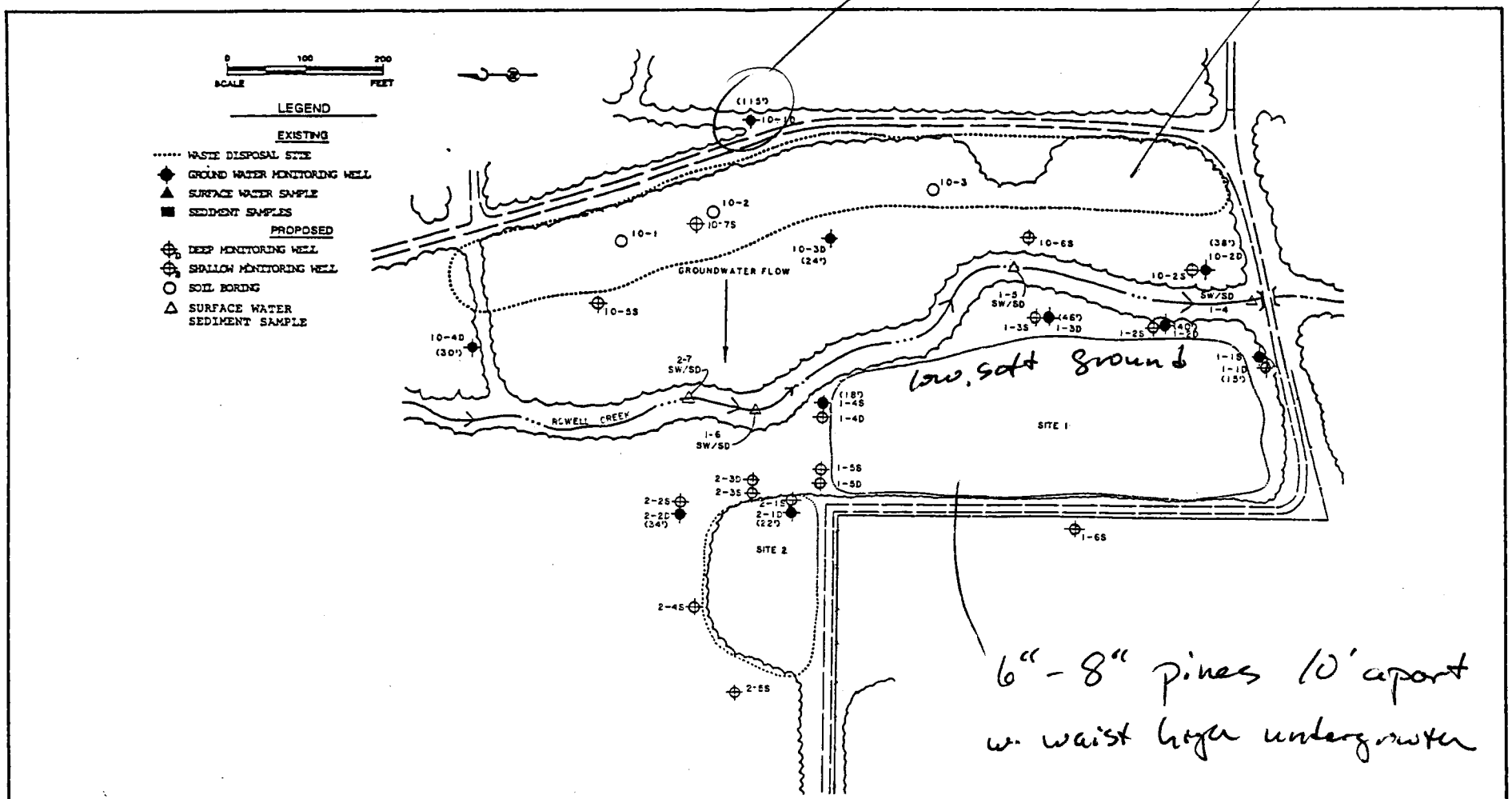
site 9 - open, no access problem
at end of aircraft clearance
area - may need to coordinate
w. aircraft activity

site 8 - open, no access problems
fire training area (abandoned)
weapon handling area - access
may be restricted at times



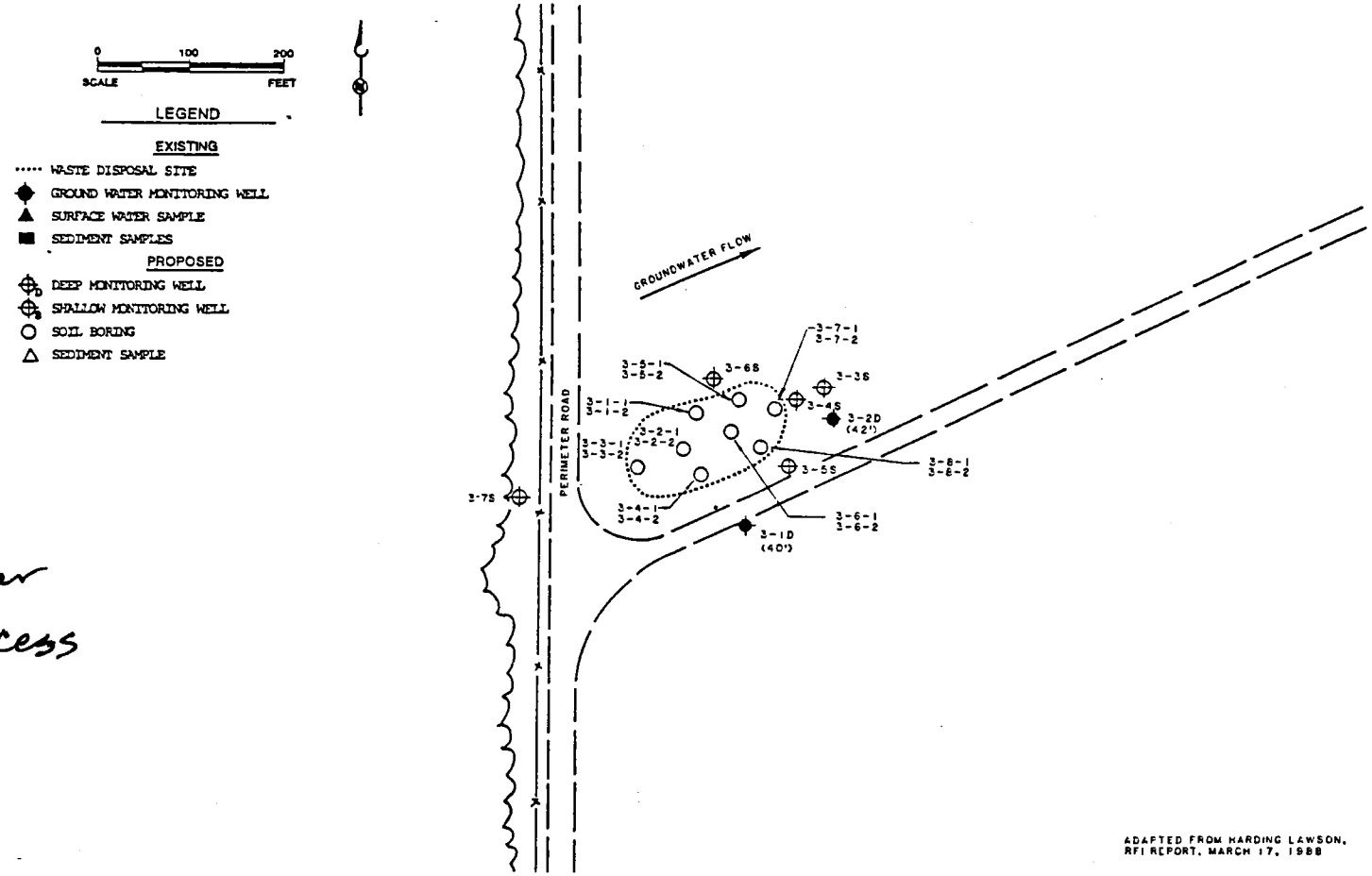
Proposed Surface Water
Location Map Summary
Figure 4 - 14

RI/FS Work Plan
NAS Cecil Field
May 1990



Proposed Sampling Location Summary
For Sites 1, 2 and 10
Figure 4 - 3

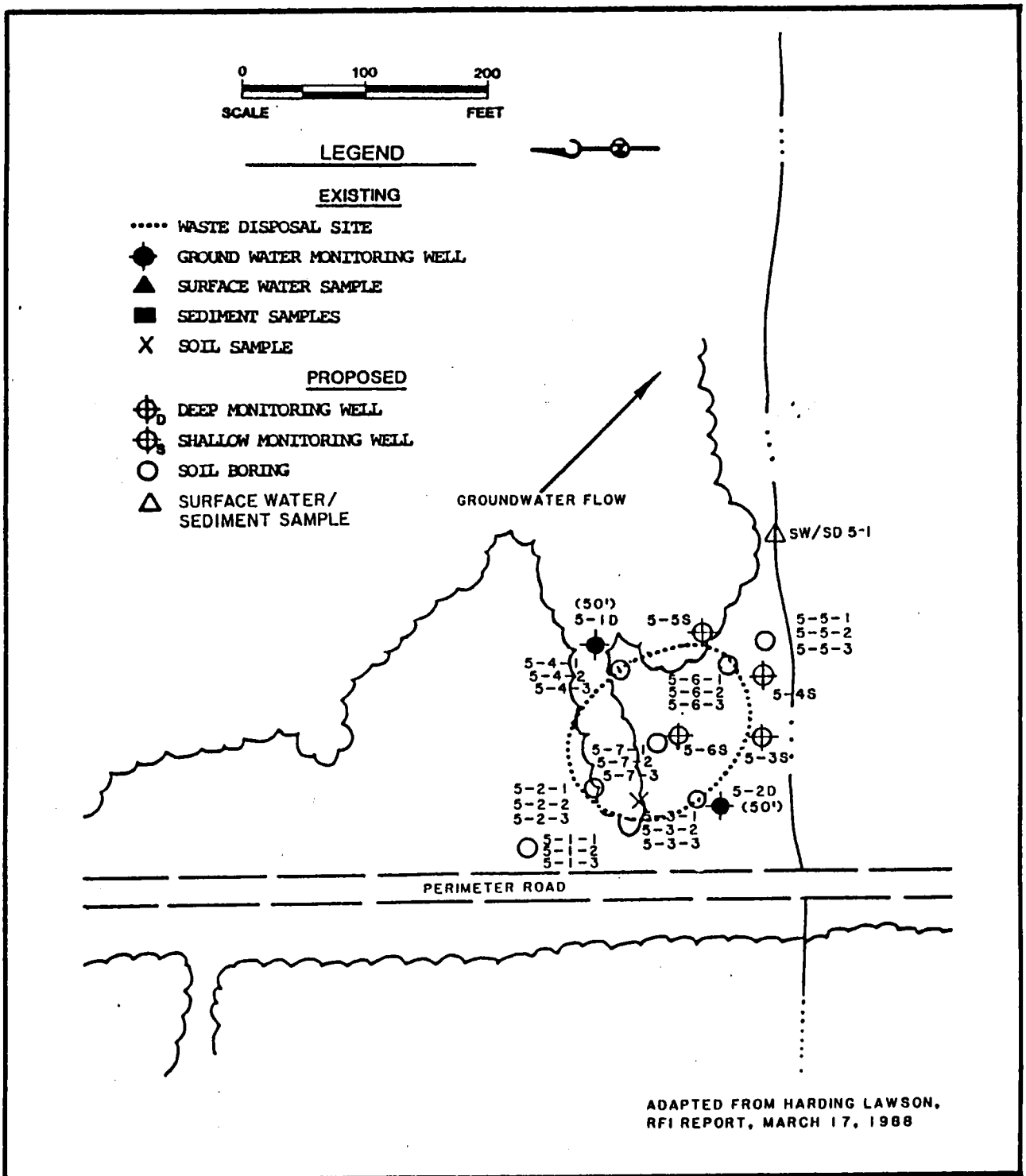
RI/FS Work Plan
NAS Cecil Field
May 1990



Site clear
easy access

Proposed Sampling Location - Site 3
Figure 4 - 4

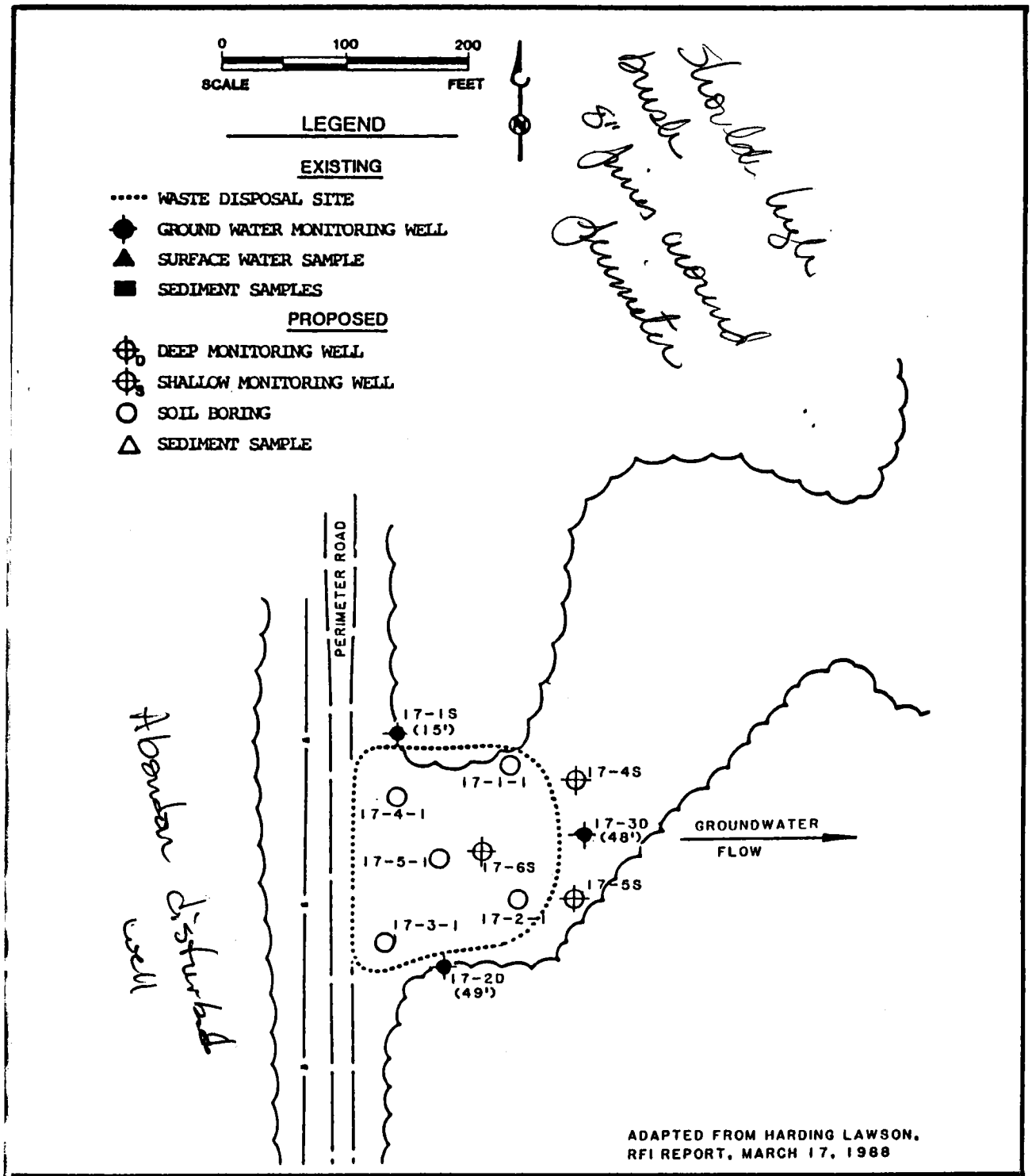
RI/PS Work Plan
NAS Cecil Field
May 1990



Proposed Sampling Location - Site 5

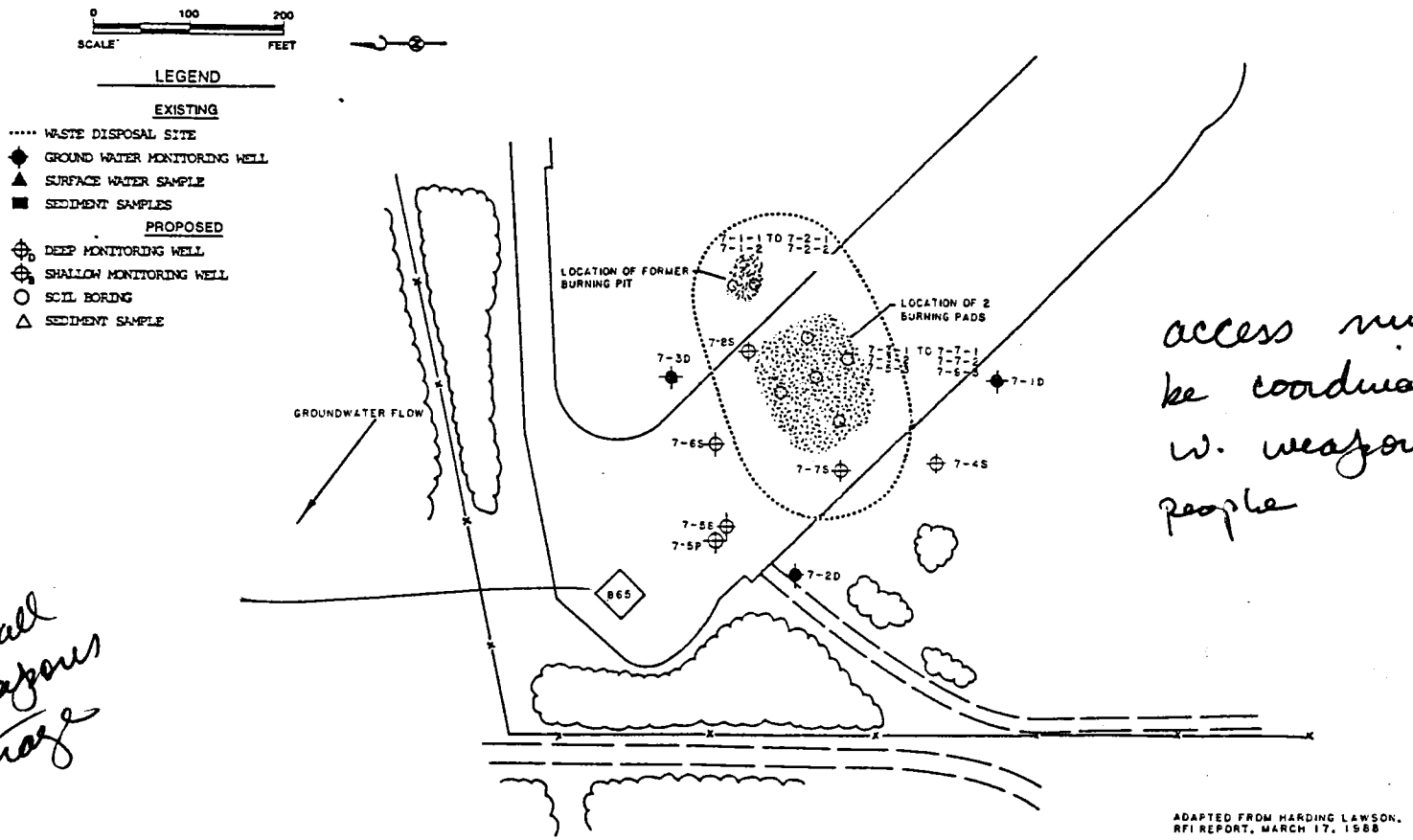
Figure 4 - 5

RI/FS Work Plan
NAS Cecil Field
May 1990



Proposed Sampling Locations - Site 17
Figure 4 - 6

RI/FS Work Plan
NAS Cecil Field
May 1990



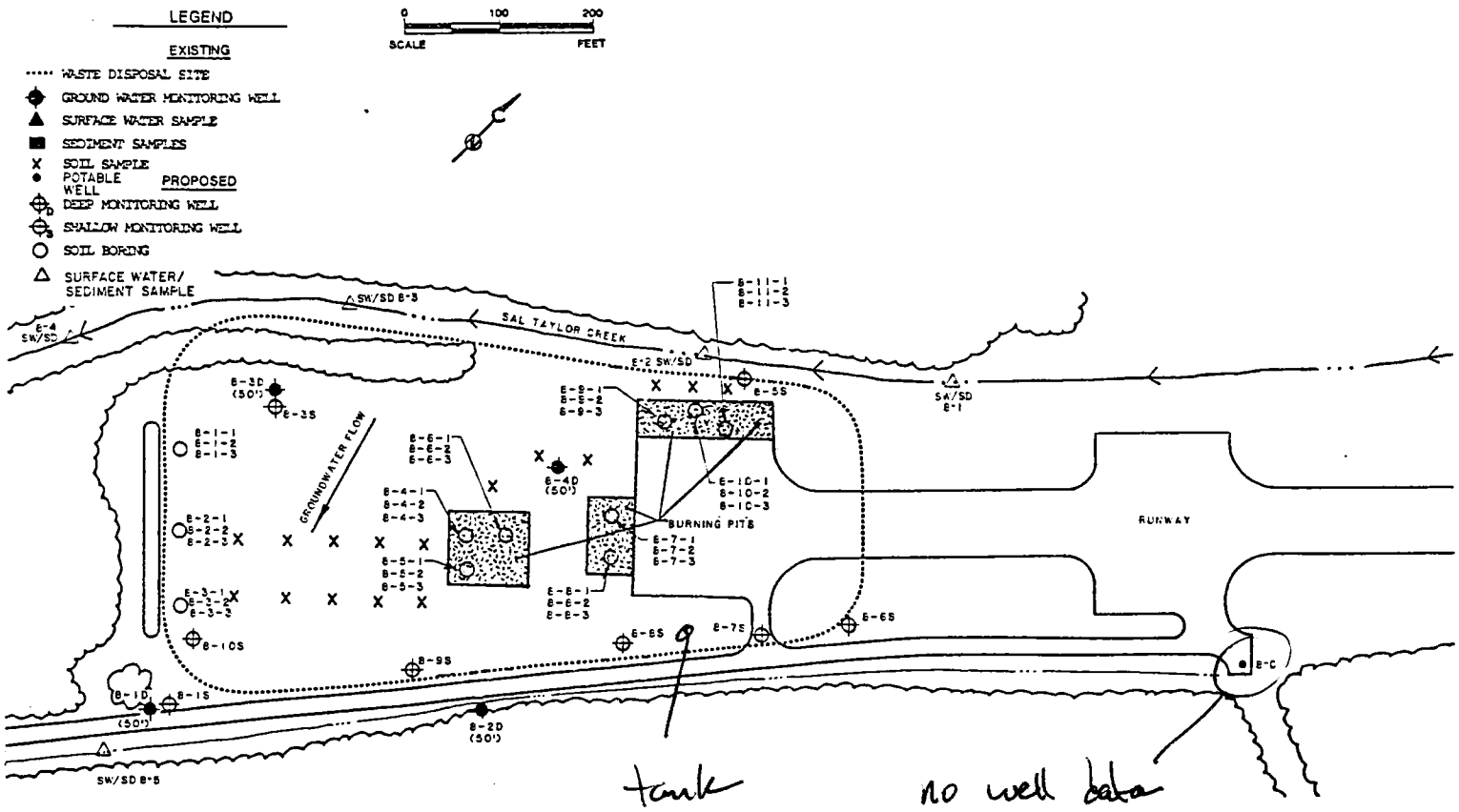
access must be coordinated w. weapons people

Small weapons storage

ADAPTED FROM HARDING LAWSON. RFI REPORT, MARCH 17, 1988

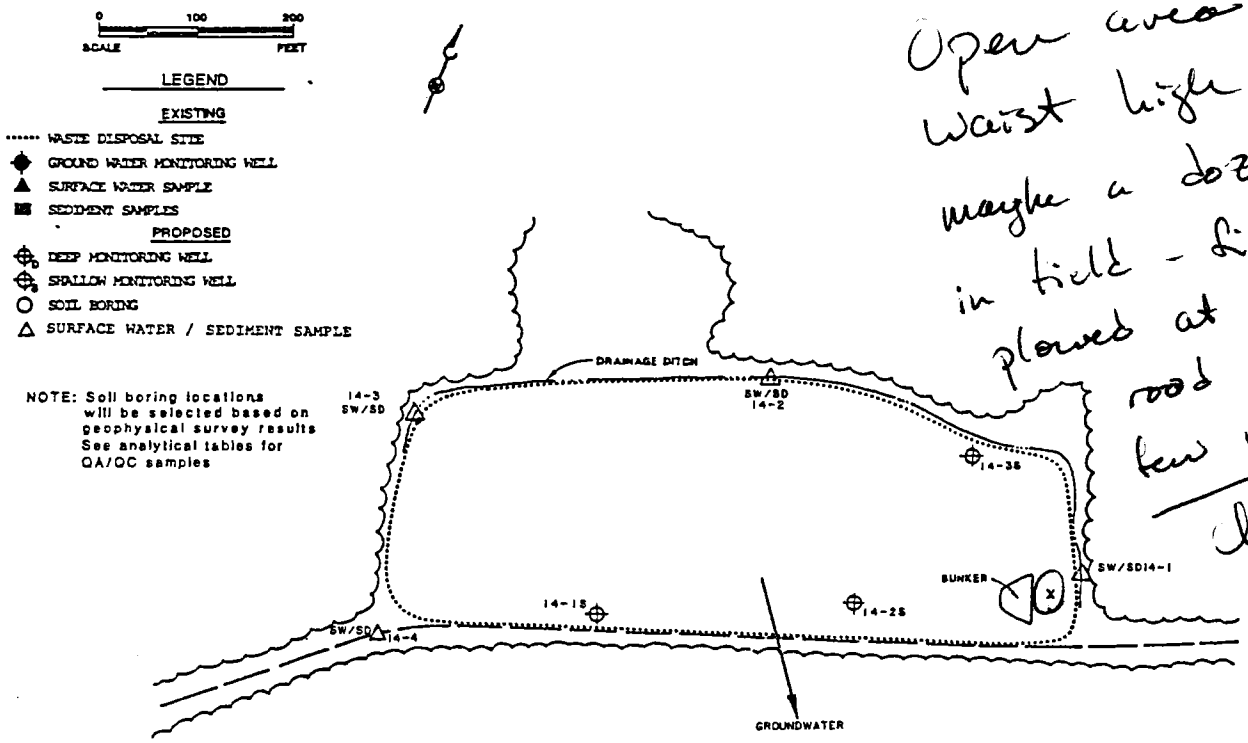
Proposed Sampling Location - Site 7
Figure 4 - 8

RI/FS Work Plan
NAS Cecil Field
May 1990



Proposed Sampling Location - Site 8
Figure 4 - 9

RI/FS Work Plan
NAS Cecil Field
May 1990



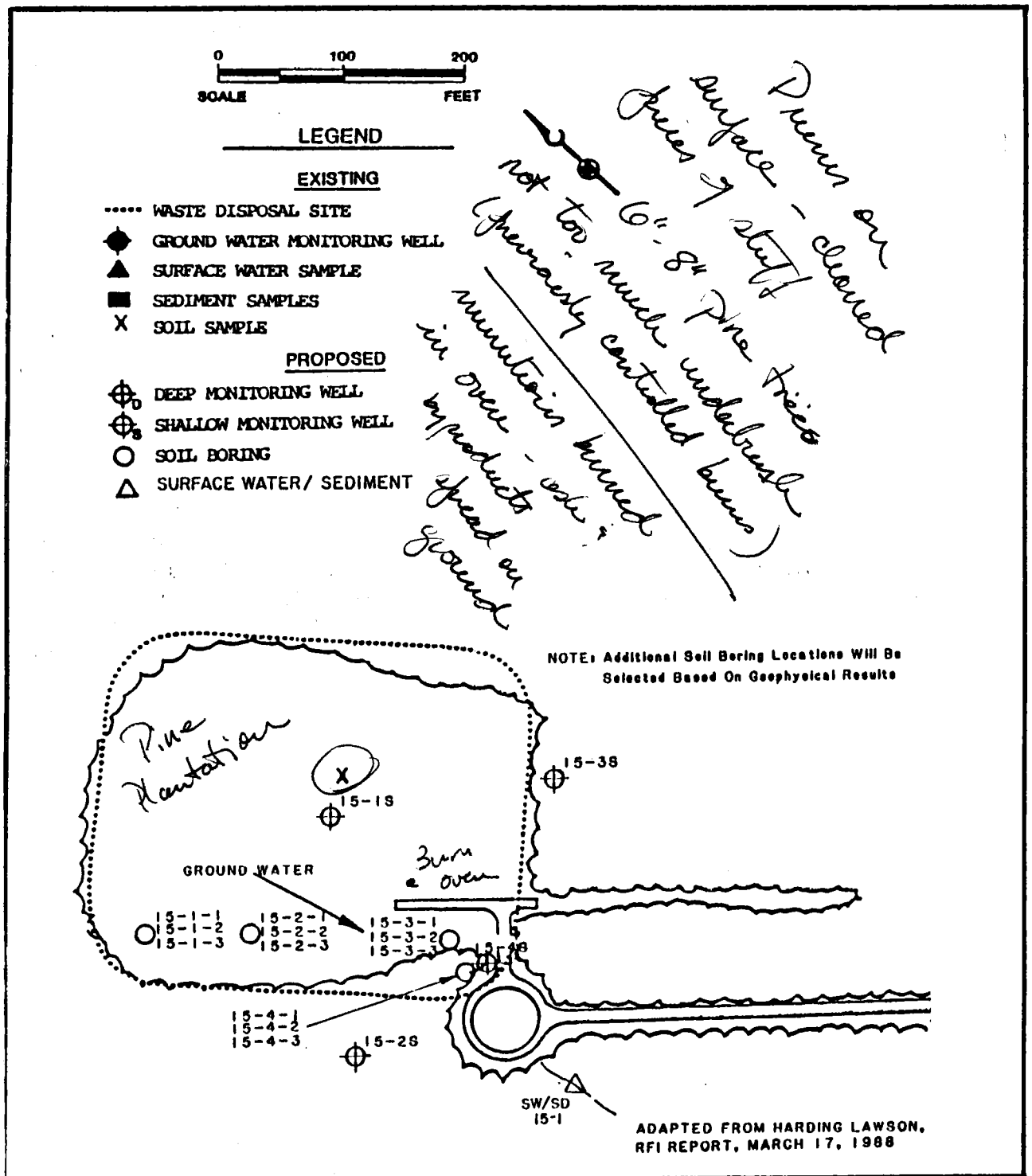
Open area
waist high grasses
maybe a dozen 4"-6" pines
in field - field has been
plowed at least along
road within last
few years

Check w. ordnance
div. prior to
site work

ADAPTED FROM HARDING LAWSON,
RFI REPORT, MARCH 17, 1988

Proposed Sampling Location - Site 14
Figure 4 - 11

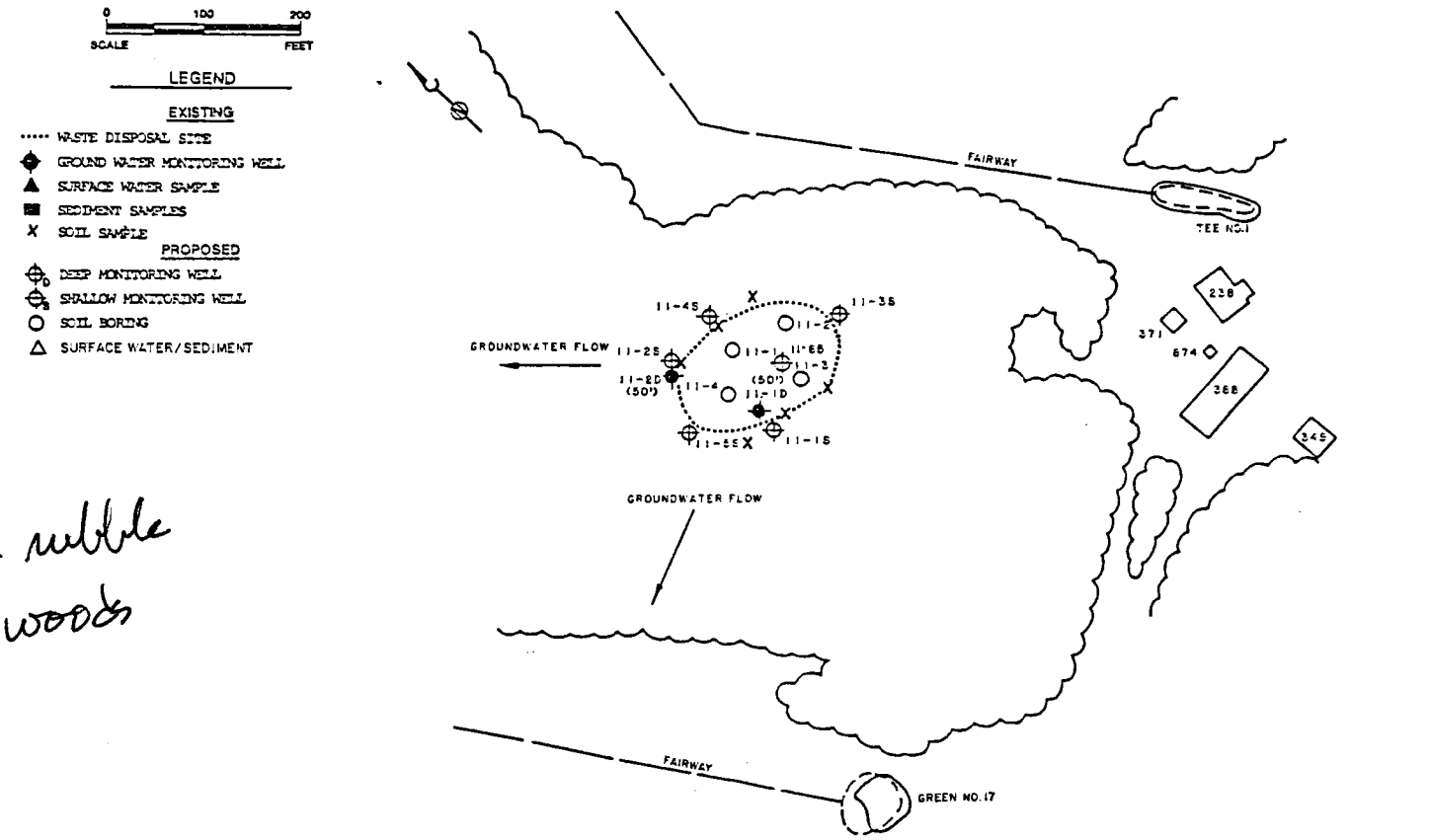
RI/FS Work Plan
NAS Cecil Field
May 1990



Proposed Sampling Location - Site 15

Figure 4 - 10

RI/FS Work Plan
NAS Cecil Field
May 1990

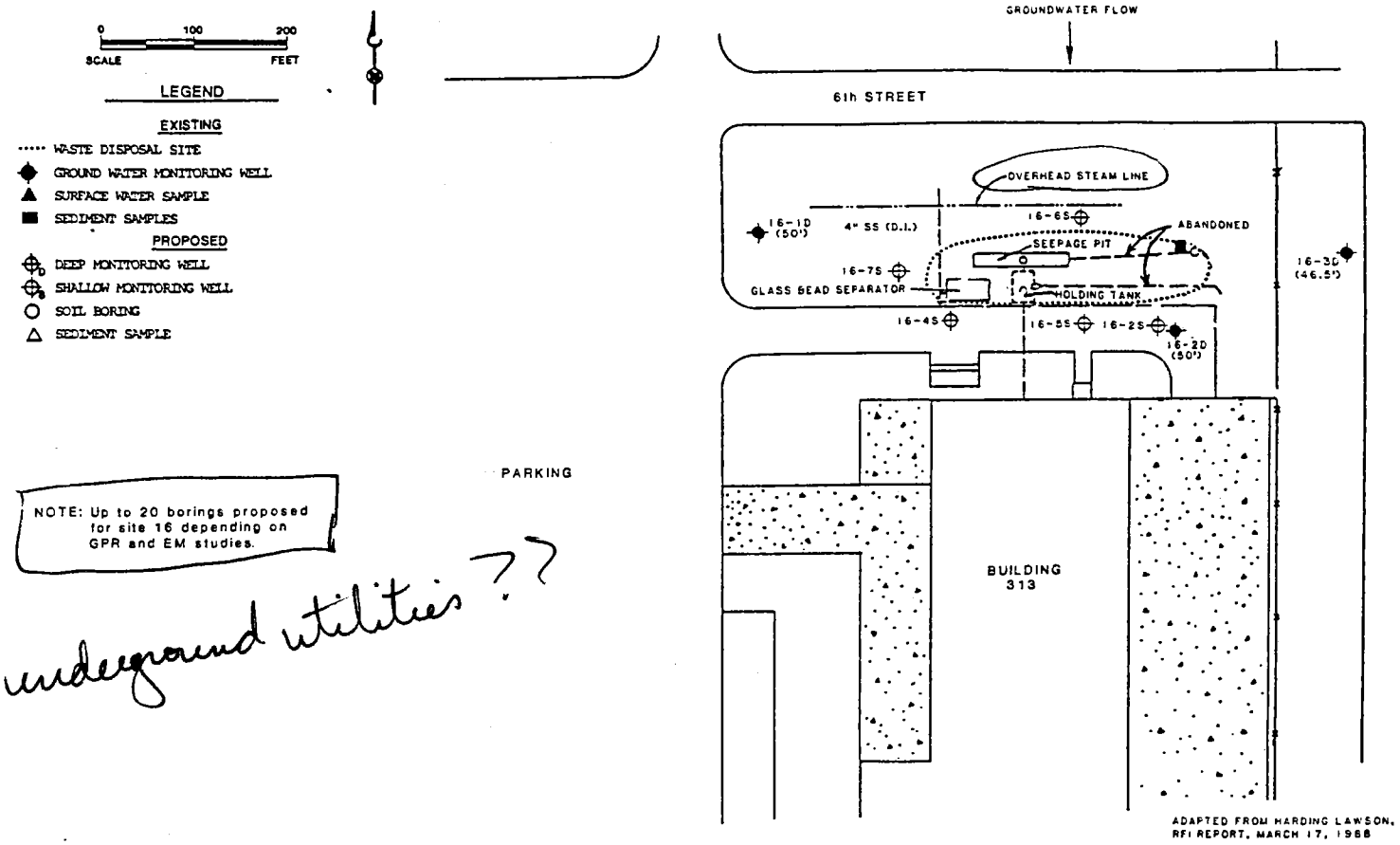


misc rubble in woods

Proposed Sampling Location - Site 11
Figure 4 - 12

RI/FS Work Plan
NAS Cecil Field
May 1990

currently undergoing RCRA closure
need to coordinate



NOTE: Up to 20 borings proposed for site 16 depending on GPR and EM studies.

underground utilities ??

Proposed Sampling Location - Site 16
Figure 4 - 13

RI/FS Work Plan
NAS Cecil Field
May 1990

Table 4 - 14 Summary of Proposed Site Investigations and Summary of Sample Analytical Requirements - Site 16 - AIMD Seepage Pit (1)

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 16-1D	Existing Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-2D	Existing Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-3D	Existing Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-2S	Proposed Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-4S	Proposed Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-5S	Proposed Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-6S	Proposed Downgradient Monitor Well	Groundwater	A,D,E,K,N
CEF 16-7S	Proposed Downgradient Monitor Well	Groundwater	A,D,E,K,N
SW 16-1	Proposed Drainage	Surface Water	A,D,E,K,N
SD 16-1	Proposed Drainage	Sediment	D,E,K,N
BOR 16-1-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-1-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-2-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-2-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-3-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-3-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-4-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-4-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-5-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-5-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-6-1	Proposed Borings (4.5 to 6.0 ft)	Soil	D,E,K,N
BOR 16-6-2	Proposed Borings (6.5 to 8.0 ft)	Soil	D,E,K,N
BOR 16-7-1	Proposed Borings (0 to 1.0 ft)	Soil	D,E,K,N
BOR 16-8-1	Proposed Borings (0 to 1.0 ft)	Soil	D,E,K,N

(1) Boring intervals and locations based on geophysical surveys.

A = Field pH, temperature, specific conductance.
D = Purgeable hydrocarbons (624/8240).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270).
K = Priority pollutant metals (EPA Series 200/6010-AS-7060; SE-7740; Hg-7470; Pb-7420).
N = Cyanide (EPA Method 335.2/9010).

Table 4-13 Summary of Proposed Site Investigations and Summary of Sample Analytical Requirements - Site 11 - Golf Course Pesticide Disposal Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 11-1D	Existing Downgradient Monitor Well	Groundwater	P
CEF 11-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 11-1S	Proposed Downgradient Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
CEF 11-2S	Proposed Downgradient Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
CEF 11-3S	Proposed Background Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
CEF 11-4S	Proposed Downgradient Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
CEF 11-5S	Proposed Downgradient Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
CEF 11-6S	Proposed Source Area Monitor Well	Groundwater	A,G,H,I,J,L,M,Q
BOR 11-1	Proposed Soil Boring at Burial Depth	Soil	G,H,I,J,L,M,Q
BOR 11-2	Proposed Soil Boring at Burial Depth	Soil	G,H,I,J,L,M,Q
BOR 11-3	Proposed Soil Boring at Burial Depth	Soil	G,H,I,J,L,M,Q
BOR 11-4	Proposed Soil Boring at Burial Depth	Soil	G,H,I,J,L,M,Q

A = Field pH, temperature, specific conductance.
G = PCBs/organochlorine pesticides (EPA Method 608/8080).
H = Organophosphorus pesticides and carbamates (EPA Method 614/8140,632).
I = Fungicides and fumigants (EPA Method 615/8150).
J = Chlorinated herbicides (EPA Method 615/8150).
Hg-7470; Pb-7420).
L = Metals subgroup - As, Cr, Zn (EPA Series 200; AS-7060).
M = Metals subgroup - Fe, Pb, Hg, Cd, Cr, Zn (EPA Series 200; Hg-7470, Pb-7420).
P = Water levels only.
Q = Extractable organics (EPA Method 625/8270)

Table 4 - 12 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 15 - Blue 10 Ordnance Disposal Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 15-1S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
CEF 15-2S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
CEF 15-3S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
CEF 15-4S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
SD 15-1	Proposed Yellow Water Creek	Sediment	B,C,F,K,Q
SW 15-1	Proposed Yellow Water Creek	Surface Water	B,C,F,K,Q
BOR 15-1-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-1-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-1-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-2-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-2-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-2-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-3-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-3-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-3-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-4-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-4-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-4-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-5-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-5-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-5-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-6-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-6-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-6-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-7-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-7-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-7-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 15-8-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 15-8-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 15-8-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
F = Nitroaromatics and isophorone (EPA Method 609/8090).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
Q = Extractable organics (EPA Method 625/8270)

Table 4 - 11 Summary of Proposed Site Investigations and Sample Analytical Requirments - Site 14 - Blue 5 Ordnance Disposal Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 14-1S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
CEF 14-2S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
CEF 14-3S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,F,K,Q
SW 14-1	Proposed Ditch/Drainage	Surface Water	A,B,C,F,K,Q
SW 14-2	Proposed Ditch/Drainage	Surface Water	A,B,C,F,K,Q
SW 14-3	Proposed Ditch/Drainage	Surface Water	A,B,C,F,K,Q
SW 14-4	Proposed Ditch/Drainage	Surface Water	A,B,C,F,K,Q
SD 14-1	Proposed Ditch/Drainage	Sediment	B,C,F,K,Q
SD 14-2	Proposed Ditch/Drainage	Sediment	B,C,F,K,Q
SD 14-3	Proposed Ditch/Drainage	Sediment	B,C,F,K,Q
SD 14-4	Proposed Ditch/Drainage	Sediment	B,C,F,K,Q
BOR 14-1-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-1-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-1-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-2-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-2-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-2-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-3-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-3-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-3-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-4-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-4-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-4-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-5-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-5-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-5-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-6-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-6-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-6-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-7-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-7-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-7-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-8-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-8-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-8-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-9-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-9-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-9-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q
BOR 14-10-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	B,C,F,K,Q
BOR 14-10-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,F,K,Q
BOR 14-10-3	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,F,K,Q

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
F = Nitroaromatics and isophorone (EPA Method 609/8090).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
Q = Extractable organics (EPA Method 625/8270)

Table 4 - 9 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 7 - Old Firefighter Training Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 7-1D	Existing Downgradient Monitor Well	Groundwater	P
CEF 7-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 7-3D	Existing Downgradient Monitor Well	Groundwater	P
CEF 7-4S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,K,O
CEF 7-5S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,K,O
CEF 7-5P	Proposed Shallow Rock Piezometer	Groundwater	P
CEF 7-6S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,K,O
CEF 7-7S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,K,O
CEF 7-8S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,K,O
BOR 7-1-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-1-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O
BOR 7-2-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-2-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O
BOR 7-3-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-3-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O
BOR 7-4-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-5-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-5-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O
BOR 7-6-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-6-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O
BOR 7-7-1	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	B,C,E,K,O
BOR 7-7-2	Proposed Soil Boring (3.0 ft to GW)	Soil	B,C,E,K,O

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270).
K = Priority pollutant metals (EPA Series 200/6010-AS-7060; SE-7740; Hg-7470; Pb-7420).
O = Total recoverable petroleum hydrocarbons (418.1).
P = Water levels only.

Table 4 - 10 Summary of Proposed Site Investigations and Summary of Sample Analytical Requirements - Site 8 - Boresite Range/Firefighter Training Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 8-1D	Existing Downgradient Monitor Well	Groundwater	P
CEF 8-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 8-3D	Existing Downgradient Monitor Well	Groundwater	P
CEF 8-4D	Existing Downgradient Monitor Well	Groundwater	P
CEF 8-C	Existing Potable Well	Groundwater	A,D,K,O,Q
CEF 8-1S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,O,Q
CEF 8-3S	Proposed Onsite Monitor Well	Groundwater	A,D,K,O,Q
CEF 8-5S	Proposed Onsite Monitor Well	Groundwater	A,D,K,O,Q
CEF 8-6S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,O,Q
CEF 8-7S	Proposed Onsite Monitor Well	Groundwater	A,D,K,O,Q
CEF 8-8S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,O,Q
SW 8-1	Proposed Drainage	Surface Water	A,D,K,O,Q
SW 8-2	Proposed Drainage	Surface Water	A,D,K,O,Q
SW 8-3	Proposed Drainage	Surface Water	A,D,K,O,Q
SW 8-4	Proposed Drainage	Surface Water	A,D,K,O,Q
SW 8-5	Proposed Drainage	Surface Water	A,D,K,O,Q
SD 8-1	Proposed Drainage	Sediment	D,K,O,Q
SD 8-2	Proposed Drainage	Sediment	D,K,O,Q
SD 8-3	Proposed Drainage	Sediment	D,K,O,Q
SD 8-4	Proposed Drainage	Sediment	D,K,O,Q
SD 8-5	Proposed Drainage	Sediment	D,K,O,Q
BOR 8-1-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-1-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-1-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-2-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-2-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-2-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-3-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-3-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-3-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-4-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-4-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-4-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-5-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-5-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-5-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-6-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-6-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-6-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-7-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-7-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-7-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-8-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-8-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-8-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-9-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-9-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-9-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-10-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-10-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-10-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q
BOR 8-11-1	Proposed Soil Boring (0 to 1.5 ft)	Soil	D,K,O,Q
BOR 8-11-2	Proposed Soil Boring (1.5 to 3.0 ft)	Soil	D,K,O,Q
BOR 8-11-3	Proposed Soil Boring (3.0 ft to GW)	Soil	D,K,O,Q

A = Field pH, temperature, specific conductance.
D = Purgeable hydrocarbons (624/8240).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
O = Total recoverable petroleum hydrocarbons (418.1).
P = Water levels only.
Q = Extractable organics (EPA Method 625/8270)

Table 4 - 8 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 10 - Rubble Disposal Area

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 10-1D	Existing Background Monitor Well	Groundwater	P
CEF 10-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 10-3D	Existing Downgradient Monitor Well	Groundwater	P
CEF 10-4D	Existing Downgradient Monitor Well	Groundwater	P
CEF 10-2S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,K
CEF 10-5S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,K
CEF 10-6S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,K
CEF 10-7S	Proposed Source Area Monitor Well	Groundwater	A,B,C,K
BOR 10-1	Proposed Soil Borings (0 to 3 ft)	Soil Composite	B,C,K
BOR 10-2	Proposed Soil Borings (0 to 3 ft)	Soil Composite	B,C,K
BOR 10-3	Proposed Soil Borings (0 to 3 ft)	Soil Composite	B,C,K

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
P = Water levels only.

Table 4 - 7 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 17 - Oil/Sludge Disposal Pit, SW

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 17-1S	Existing Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 17-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 17-3D	Existing Downgradient Monitor Well	Groundwater	P
CEF 17-4S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 17-5S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 17-6S	Proposed Source Area Monitor Well	Groundwater	A,B,C,E,M,O
BOR 17-1-1	Proposed Soil Boring to Burial Interval	Soil	B,C,E,M,O
BOR 17-2-1	Proposed Soil Boring to Burial Interval	Soil	B,C,E,M,O
BOR 17-3-1	Proposed Soil Boring to Burial Interval	Soil	B,C,E,M,O
BOR 17-4-1	Proposed Soil Boring to Burial Interval	Soil	B,C,E,M,O
BOR 17-5-1	Proposed Soil Boring to Burial Interval	Soil	B,C,E,M,O

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270).
M = Metals subgroup - Fe, Pb, Hg, Cd, Cr, Zn (EPA Series 200; Hg-7470, Pb-7420).
O = Total recoverable petroleum hydrocarbons (418.1).
P = Water levels only.

Table 4 - 6 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 5 - Oil Disposal Area, NW

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 5-1D	Existing Downgradient Monitor Well	Groundwater	P
CEF 5-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 5-3S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O,R
CEF 5-4S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O,R
CEF 5-5S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O,R
CEF 5-6S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O,R
SW 5-1	Proposed Local Drainage	Surface Water	A,B,C,E,M,O,R
SD 5-1	Proposed Local Drainage	Sediment	B,C,E,M,O,R
BOR 5-1-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-1-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-1-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-2-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-2-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-2-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-3-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-3-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-3-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-4-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-4-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-4-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-5-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-5-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-5-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-6-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-6-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-6-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R
BOR 5-7-1	Proposed Soil Borings (0 to 1.5 ft)	Soil	B,C,E,M,O,R
BOR 5-7-2	Proposed Soil Borings (1.5 to 3.0 ft)	Soil	B,C,E,M,O,R
BOR 5-7-3	Proposed Soil Borings (3.0 ft to GW)	Soil	B,C,E,M,O,R

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270).
M = Metals subgroup - Fe, Pb, Hg, Cd, Cr, Zn (EPA Series 200; Hg-7470, Pb-7420).
O = Total recoverable petroleum hydrocarbons (418.1).
P = Water levels only.
R = Tri-o-cresyl phosphate (modified EPA Method 8140)

Table 4 - 5 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 3 - Oil/Sludge Disposal Pit

Sampling location ID number	Description	Enviro-mental matrix	Type of chemical analysis
CEF 3-1D	Existing Downgradient Monitor Well	Groundwater	P
CEF 3-2D	Existing Downgradient Monitor Well	Groundwater	P
CEF 3-3S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 3-4S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 3-5S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 3-6S	Proposed Downgradient Monitor Well	Groundwater	A,B,C,E,M,O
CEF 3-7S	Proposed Background Monitor Well	Groundwater	A,B,C,E,M,O
BOR 3-1-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-1-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-2-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-2-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-3-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-3-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-4-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-4-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-5-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-5-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-6-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-6-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-7-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-7-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O
BOR 3-8-1	Proposed Soil Boring (1.5 to 4.0 ft)	Soil	B,C,E,M,O
BOR 3-8-2	Proposed Soil Boring (4.0 ft to GW)	Soil	B,C,E,M,O

A = Field pH, temperature, specific conductance.
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270).
M = Metals subgroup - Fe, Pb, Hg, Cd, Cr, Zn (EPA Series 200; Hg-7470, Pb-7420).
O = Total recoverable petroleum hydrocarbons (418.1).
P = Water levels only.

Table 4 - 4 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 2 - Recent Landfill

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 2-1S	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-2D	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-1D	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-2S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-3S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-3D	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-4S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 2-5S	Proposed Background Monitor Well	Groundwater	A,D,K,Q
SW 2-7	Proposed Rowell Creek Drainage	Surface Water	A;D,K,Q
SD 2-7	Proposed Rowell Creek Drainage	Sediment	D,K,Q

A = Field pH, temperature, specific conductance.
D = Purgeable hydrocarbons (624/8240).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
Q = Extractable organics (EPA Method 625/9270)

Table 4 - 3 Summary of Proposed Site Investigations and Sample Analytical Requirements - Site 1 - Old Landfill

Sampling location ID number	Description	Environmental matrix	Type of chemical analysis
CEF 1-1S	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-2D	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-3D	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-4S	Existing Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-1D	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-2S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-3S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-4D	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-5S	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-5D	Proposed Downgradient Monitor Well	Groundwater	A,D,K,Q
CEF 1-6S	Proposed Background Monitor Well	Groundwater	A,D,K,Q
SW 1-4	Proposed Rowell Creek Drainage	Surface Water	A,D,K,Q
SW 1-5	Proposed Rowell Creek Drainage	Surface Water	A,D,K,Q
SW 1-6	Proposed Rowell Creek Drainage (background)	Surface Water	A,D,K,Q
SW 1-7	Proposed Rowell, Sal Taylor Creek Drainage	Surface Water	A,D,Q,K
SD 1-4	Proposed Rowell Creek Drainage	Sediment	D,K,Q
SD 1-5	Proposed Rowell Creek Drainage	Sediment	D,K,Q
SD 1-6	Proposed Rowell Creek Drainage (background)	Sediment	D,K,Q
SD 1-7	Proposed Rowell, Sal Taylor Creek Drainage	Sediment	D,K,Q

A = Field pH, temperature, specific conductance.
D = Purgeable hydrocarbons (624/8240).
K = Priority pollutant metals (EPA Series 200/6010-As-7060; Se-7740; Hg-7470; Pb-7420).
Q = Extractable organics (EPA Method 625/8270)

Table 3 - 4 Site 1 (Old Landfill)-Information Summary SWMU A

Description and History: 9-acre trench and fill landfill with daily burning of wastes. Received all solid and some liquid and chemical waste from NAS Cecil Field. 1,250 feet north/south by 425 feet east/west. During its time of operation this was the only landfill operated at the facility. Wastes were in direct contact with groundwater at time of disposal (Envirodyne Engineers, 1985).

Disposal Period: Early 1950s through 1965

Suspected Wastes: 275,000 cubic yards (cy) of solid waste and up to 260,000 gallons liquid waste which include: fuels, oils, solvents [methyl ethyl ketone (MEK), Stoddard, trichloroethylene, PD-680, methyl isobutyl ketone (MIBK), toluene, naphtha, and xylene], paints, and paint thinners. Waste paints containing cadmium, chromium, and lead. Empty pesticide containers were included in the solid waste (HLA, 1988).

Findings and Identified Constituents:

Geophysics: Magnetometer data shows metal buried under most of site. VLF (very low frequency/conductivity) above background greater then 50 percent of site extend east toward Rowell Creek.

Groundwater: Portions of waste in direct contact with surficial aquifer. Groundwater moves easterly toward Rowell Creek. Well CEF 1-1 sampled for four quarters in 1984/1985.

Monitoring Wells (July 1987)	**Well Depth** (feet)	**Constituents**
CEF 1-1	15	bis(2-ethylhexyl) phthalate, lead
CEF 1-2	40	bis(2-ethylhexyl) phthalate, mercury
CEF 1-3	46	lead, chromium (flowing water)
CEF 1-4	18	lead, chromium

Table 3 - 4 Site 1 (Old Landfill) - Information Summary (continued)

SWMU A

Surface Water: South and east/north Rowell Creek ditches, which act as tributaries to Rowell Creek. Chloroethane, methylene chloride, 1,1-dichloroethane, trans-1,3-dichloropropane, manganese, mercury, zinc, and barium were detected in surface water samples. VOC detection limit in surface water, four times that of groundwater. Geraghty & Miller (G&M) collected four samples in 1984/85, 120 ug/l total organic-halides identified in one sample analyzed for this. May be a reflection of the chloride level (19,800 ug/l).

Surface Soils: Creek sediment collected in Rowell Creek, July 1987; constituents identified were methylene chloride, cadmium, and lead. Methylene chloride also appeared in QA/QC soil sample. The Base/Neutral fraction had the highest detection limit of the sediments analyzed.

Comments: The groundwater monitoring plan (G&M, 1983) indicated a permanent staff gauge would be installed in the mouth of Rowell Creek. The as-built groundwater monitoring network report (G&M, 1984) does not indicate this was done.

Table 3 - 5 Site 2 (Recent Landfill) - Information Summary

Description and History: 5-acre trench and fill landfill which received all solid and some chemical and liquid waste from NAS Cecil Field. Burning was not done intentionally at the site, although fires did periodically occur. 375 feet north/south 600 feet east/west. Portions of the waste were placed in direct contact with groundwater.

Disposal Period: 1965 through 1975

Suspected Wastes: 210,000 cy of solid waste and up to 265,000 gallons liquid waste, fuels, oils, solvents [MEK, Stoddard, trichloroethylene, PD-680, MIVK, toluene, naphtha, and xylene], paints, and paint thinners. Waste paints with cadmium, chromium, and lead. Pesticide containers. Leaded fuels.

Findings and identified Constituents:

Geophysics: Magnetometer shows buried metal under majority of cleared area. VLF readings above background at center portion of site.

Groundwater: Flow easterly to Rowell Creek. Sampled July 1987.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 2-1	22	naphthalene, chromium, lead
CEF 2-2	34	cadmium, chromium, lead

Surface Water: Drained by Rowell Creek.

Surface Soils: Fine sands interbedded with clayey to silty sands and sandy clay.

Comments: In April 1989, a site visit by BC noted a seep into the drainage ditch along the south edge of the site. Sediments in the ditch have rust-orange hue. Sparse weeds, briers, and cattails were observed in the ditch.

Table 3 - 6 Site 3 (Oil/Sludge Disposal Pit) - Information Summary

SWMU C

Description and History: A 50-to 100-foot diameter pit 3- to 5-feet deep was used to dispose of liquid wastes and sludge. Burned once every 3 months. 50- to 100-feet diameter.

Disposal Period: Mid-1950s through 1975

suspected Wastes: 210,000 to 310,000 gallons waste fuel oil and tank sludge including some water, solvents (MEK, Stoddard, trichloroethylene, PD-680, MIBK, toluene, naphtha, and xylene), paints, paint thinners, and additional fuels and oils. Paints with cadmium, chromium, and lead. Leaded fuel.

Findings and Identified Constituents:

Geophysics: VLF identified two areas. These are possible pits not located as indicated in IAS Report (HLA, 1988).

Groundwater: Moves easterly to Lake Fretwell and Rowell Creek. Wells sampled July 1987.

Monitoring Wells	Well depth (feet)	Constituents
CEF 3-1	40	None identified
CEF 3-2	42	1,1,1-trichoroethane 1,1-dichloroethane, 1,1-dichlorethylene, ethylbenzene, 4--methylphenol, bis (2-ethylhexyl) phthalate, naphthalene, 2-methylnaphthalene, benzene at detection limit, chromium, lead, toluene

Surface Water: Lake Fretwell and Rowell Creek 1,200 feet to east. One surface water sample collected in conjunction with Site 4.

Table 3 - 7 Site 5 (Oil Disposal Area Northwest) - Information Summary SWMU E

Description and History: 0.5 acre approximately 100-feet diameter.

Disposal Period: 1950s

Suspected Wastes: Petroleum wastes, fuel and oil, solvents, paints and thinners, waste paint with cadmium, chromium, and lead. Leaded fuels. Unknown quantities.

Findings and Identified constituents:

Geophysics: Some magnetometer readings - VLF above background most of site (HLA, 1988).

Groundwater: Wells sampled July 1987. Groundwater is suspected to flow to the southeast.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 5-1	50	fluorene, anthracene, acenapthene, cadmium, chromium, lead, naphthalene 2-methylnaphthalene
CEF 5-2	50	lead, chromium, bis (2-ethylhexyl) phthalate

Surface Water: Drained by ditch which empties into Lake Fretwell. Lake Fretwell is 900 feet east of the site. Surface water sample collected July 1987. No hazardous constituents identified in the sample.

Surface Soils: Sediment sample, July 1987, chromium, lead, methylene chloride; soil samples also July, 1987; ethylbenzene, methylene chloride, PCBs, lead, chromium.

Comments: Site oil-stained and void of vegetation in some areas. Petroleum odor existed in 1985. Probable oil or fuel disposal more recently than 1950s. Ponding on-site.

Table 3 - 8 Site 17 (Oil/Sludge Disposal Pit Southwest) - Information Summary SWMU M

Description and History: Unlined disposal pit about 50 feet in diameter and 3- to 5-feet deep. 2 acres 200 feet by 200 feet.

Disposal Period: Late 1960s to early 1970s

Suspected Wastes: Unknown quantity of waste oil and fuel from fuel farm and shops. Possible solvents, paint, paint thinners, and paint with cadmium, chromium, and lead.

Findings and Identified Constituents:

Geophysics: magnetometer, one anomalous reading. VLF, two readings above background.

Groundwater: Moves eastward to Rowell Creek. Sampled July 1987.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 17-1	15 (S-1)	lead, cadmium, mercury, barium, manganese, and zinc
CEF 17-2	49	None identified
CEF 17-3	48	None identified

Surface Water: Stream north/south on eastern side of site.

Surface Soils: Not sampled.

Table 3 - 9 Site 7 (Old Fire Fighter Training Area) - Information Summary SWMU F

Description and History: Two burning pads on an asphalt apron and one unlined burning pit, each 30 feet in diameter. This site is now predominantly covered by a runway.

Disposal Period: 1950s through 1975

Suspected Wastes: About 200,000 gallons of mixed liquid waste burned at the site possibly including fuels, oils, solvents (MEK, Stoddard, trichloroethylene, PD-680, MIBK, toluene, naphtha, and xylene), paints, and paint thinners. Waste paint with cadmium, chromium, and lead. Leaded fuel.

Findings and Identified Constituents:

Geophysics: Inconclusive due to surface features interference.

Groundwater: Probably moves northwesterly to Lake Fretwell (HLA, 1988). Sampled July 1987.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 7-1	50	chromium, lead
CEF 7-2	50	cadmium
CEF 7-3	50	lead, chromium, cadmium, benzene

Surface Water: Tributary streams flow to south then west to Lake Fretwell, Rowell Creek, and Sal Taylor Creek.

Surface Soils: Two soil samples collected July 1987, methylene chloride, cadmium, lead.

Table 3 - 10 Site 8 (Boresite Range Hazardous Waste Storage/Fire Fighter Training Area) - Information Summary

SWMU G

Description and History: Three unlined, bermed pits used for burning waste liquids. 50 to 100 drums of unmarked hazardous waste were stored nearby and many were riddled by gunfire during target practice session. Drum storage site moved in 1980. Pits are active burn pits (HLA, 1988).

Disposal Period: 1975 through 1984 used for waste liquids.

Suspected Wastes: 145,000 gallons, solvents, paints, paint strippers, oils from 1975 through 1984. Currently (1987) waste fuels used for practice. Drummed wastes contained waste solvents (MEK, trichloroethylene, Stoddard, PD-680, MIBK, toluene, naphtha, and xylene), paint, and paint strippers.

Findings and Identified Constituents:

Geophysics: VLF shows three areas above background. A large area which encompasses burn pits and two small areas which do not correspond to known site activities.

Groundwater: Moves southerly towards Sal Taylor Creek. Adjacent ditches tributary to Sal Taylor Creek may recharge groundwater locally.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 8-1	50	chromium, lead
CEF 8-2	50	chromium, lead
CEF 8-3	50	chromium, lead
CEF 8-4	50	lead

Surface Water: Drained by a ditch which enters Sal Taylor Creek. Flow to south. One sample collected, no hazardous constituents identified.

Table 3 - 10 Site 8 (Boresite Range Hazardous Waste Storage/Fire Fighter Training Area) - Information Summary SWMU G

Surface Soils: Seven surface soil sample composites collected July, 1987, 1,1,1-trichloroethane (in all samples), chromium (in three samples), lead (in four samples), and methylene chloride (in two samples). One sediment sample July 1987, chromium, lead, 1,1,1-trichloroethane.

Comments: Drainage ditch reported to have noticeable fuel odor in 1985.

Table 3 - 11 Site 10 (Rubble Disposal Area) - Information Summary

Description and History: 6.5 acre rubble disposal area. 2,000 feet north/south by 200 feet east/west.

Disposal Period: Early 1950s through 1960.

Suspected Wastes: Inert rubble, building demolition debris, concrete, tires, asphalt, and furniture. Quantity unknown.

Findings and Identified Constituents:

Geophysics: Magnetometer and VLF by HLA, June 1987.

Groundwater: Flows westerly towards Rowell Creek.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 10-1	115	trichloroethylene, mercury, lead, barium, bis (2-ethylhexyl) phthalate, pH 11.01, manganese, zinc
CEF 10-2	38	chromium, lead
CEF 10-3	24	chromium
CEF 10-4	30	chromium, lead

Surface Water: Flows west to Rowell Creek. Identified constituents include chloroethane, methylene chloride, 1,1-dichloroethane, trans-1, 3-dichloropropane, manganese, mercury, zinc, and barium.

Surface Soils: Sediment collected for Site 1, possible related to this site, showed methylene chloride and cadmium.

Table 3 - 12 Site 14 (Blue 5 Ordnance Disposal Area) - Information Summary SWMU J

Description and History: 4.5-acre ordnance disposal area, 300 to 450 pounds detonated at a time.

Disposal Period: 1967 through 1977

Suspected Wastes: 30,000 to 45,000 pounds detonated including fuses, 100 pound bombs, munitions, and explosives. Explosives detonated probably included trinitrotoluene (TNT), trinitrophenylmethylnitramine (tetryl), and cyclotrimethylenetrinitramine (RDX). Residuals may include metal oxides, mainly aluminum and lead based oxides.

Findings and Identified Constituents:

Geophysics: None.

Groundwater: Southeasterly flow direction suspected.

Surface Water: Not sampled.

Surface Soils: One soil sample collected July 1987; 1,1,1-trichlorethane detected.

Table 3 - 13 Site 15 (Blue 10 Ordnance Disposal Area) - Information Summary SWMU X

Description and History: 10-acre ordnance burning disposal area. Much of the ordnance was burned in a heavy metal tank. 700 feet NW/SE by 600 feet NE/SW.

Disposal Period: Mid-1960s through 1977

Suspected Wastes: 700,000 pounds burned including small arms munitions, parachute and distress flares, Mark IV signal cartridges, rocket propellants, rocket ignitors, and cartridge activated devices (CADs). Residuals may include metal oxides, mainly aluminum and lead based oxides.

Findings and Identified Constituents:

Geophysics: Magnetometer, three anomalies, apparent surface (HLA, 1988). VLF, three readings above background.

Groundwater: Suspected to flow in an easterly direction.

Surface Water: Not sampled.

Surface Soils: One soil sample collected 1987. Identified lead [599 milligrams per kilogram (mg/kg)]. Identified below detection limit of 51,900 micrograms per kilogram (ug/kg); acenaphthene, anthracene, fluorene, naphthalene. Ten polynuclear aromatic hydrocarbons were identified at concentrations ranging from 100,000 to 300,000 ug/kg each.

Table 3 - 14 Site 11 (Golf Course Pesticide Disposal Area) - Information Summary SWMU H

Description and History: 40-by-40 foot clearing in woods between fairways 11 and 17. Empty 5-gallon cans and other containers (unrinsed) were crushed and buried about 3-feet deep. May be burial of full containers also.

Disposal Period: Early 1970s through 1978

Suspected Wastes: 200 to 450 empty 5-gallon cans, two to three full 30-gallon drums of pesticide including at least one of nemagon (1, 2-dibromo-3-chloropropane), 10 to 15 full 5-gallon cans of pesticide, fungicide, and herbicide. See attached table.

Findings and Identified Constituents:

Geophysics: Magnetometer identified two anomalies, VLF at or below background.

Groundwater: Flow direction is probably westerly or northwesterly towards Rowell Creek.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 11-1	50	chromium, lead
CEF 11-2	50	chromium, lead

Surface Water: Flows southwest towards Rowell Creek.

Surface Soils: Identified constituents include methylene chloride, toluene, 1,1,1-trichloroethane, lead.

Table 3 - 15 Typical Inventories of Pest Control Materials Maintained at the Golf Course Facility*

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Pest Control Material	Normal Inventory Level
Insecticide	
Carbaryl, 80% wettable powder (WP)	150 pounds
Dursban, 23.5% emulsifiable concentrate (EC)	20 gallons
Malathion, 57% EC	10 gallons
Propoxur (Baygon) 70% WP	300 pounds
Herbicide	
Buctril (Bromoxyril), 33.8 % EC	4 gallons
Monosodium acid methanearsonate, 48% EC	90 gallons
Round-up (glyphosate), 41% EC	5 gallons
Trimec, 30% EC	10 gallons
Trimec, 43% EC	5 gallons
2, 4-D, 47.4% Amine	40 gallons
Fungicide	
Dithane (Manzate), 80% WP	200 pounds
Maneb (Tersan LSR), 80% WP	30 pounds
Maneb (Tersan), 75% WP	70 pounds
Form-A-Turf (formaldehyde), 31% EC	10 gallons
Daconil	10 gallons

* Based on interviews with pest control personnel and the 1979 Pest Management Plan.

Source: Table 8-8, IAS Report, July 1985.

Table 3 - 16 Site 16 (AIMD Seepage Pit) - Information Summary

SWMU L

Description and History: 40-feet long by 2.7-feet wide by 9.5-feet deep slotted concrete block seepage pit with a storm drainage discharge pipe to an open ditch, which eventually entered Sal Taylor Creek. Pit filled with sand and pipe disconnected in 1980. Used for disposal of liquid waste from engine maintenance shop and test lab. Adjacent to this pit is a holding tank which was used to hold wastes prior to their discharge into the seepage pit. This holding tank is being closed. If the tank fails the tank integrity test during its closure, the tank will be closed under the IR process.

Disposal Period: 1959 through 1980

Suspected Wastes: 26 million gallons of rinse water containing sodium cyanide, trichloroethylene, creosol, phenol, methylene chloride, and oil. Also, greases, rust, scale, and paint removed during jet engine parts and cleaning process.

Findings and Identified Constituents:

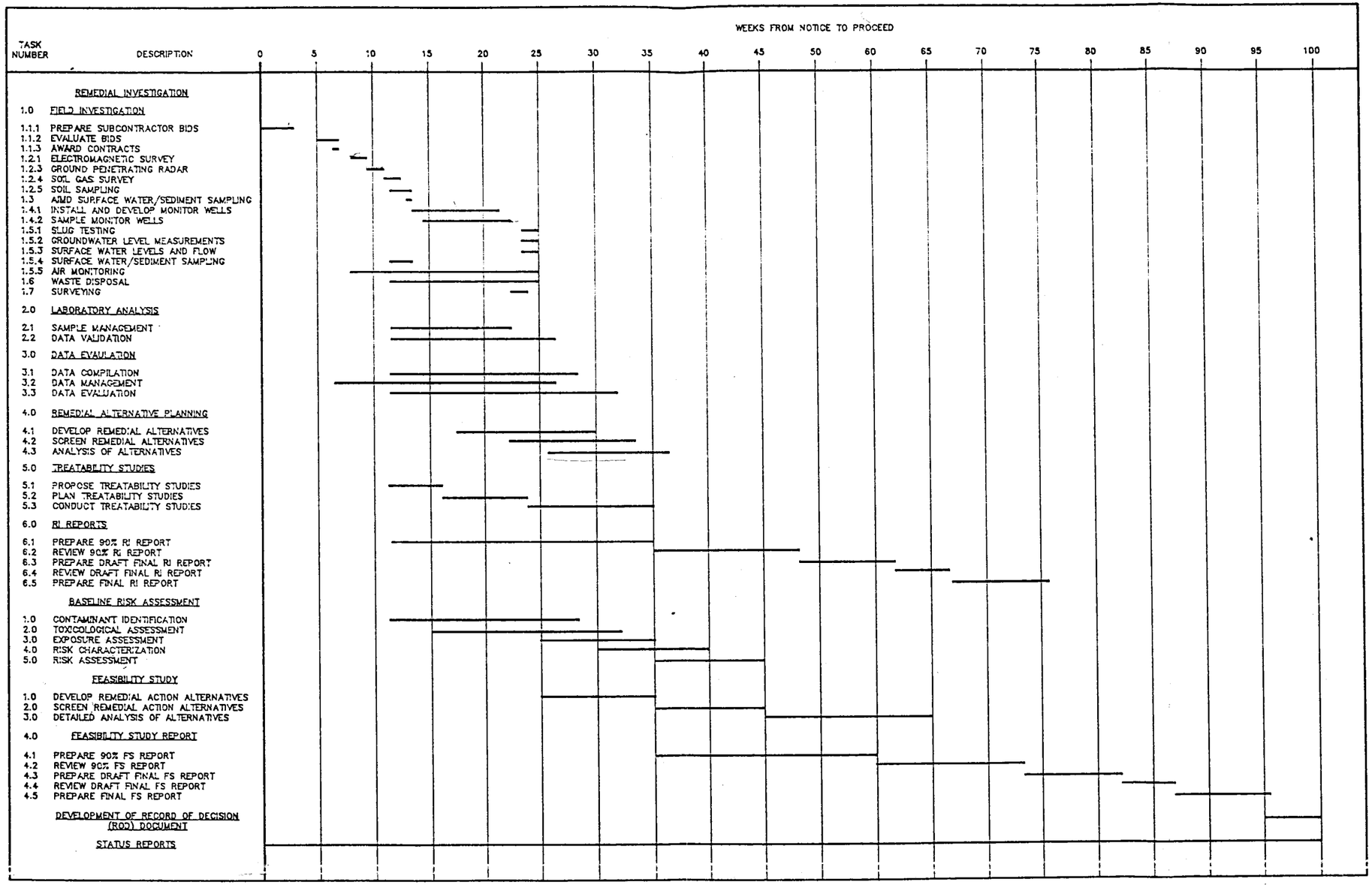
Geophysics: Magnetometer located known features. VLF anomalously high values from former location of pit.

Groundwater: Flows to the south based on data collected in July 1987.

Monitoring Wells	Well Depth (feet)	Constituents
CEF 16-1	50	chromium, lead, cadmium, mercury
CEF 16-2	50	chromium, lead, mercury, 1,2-transdichloroethylene trichloroethylene
CEF 16-3	46.5	chromium, lead, mercury

Surface Water: Overflow pipe drained into ditch, which entered Sal Taylor Creek.

Surface Soils: July 1987 - one soil sample collected. 1,1,1-trichloroethane, chromium, and lead.



Phase II Schedule
Figure 4 - 2

Project Management Plan
NAS Cecil Field
March 1990

Table 4 - 2 Summary of Phase II Data Collection Activities

Operable unit\DQOs	Data collection activities
LANDFILLS (Site 1 and 2)	
- Source volume characterization	- Ground penetrating radar shallow soil borings with organic vapor screening
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant transport potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface water elevation and flow measure, surface water/sediment sampling and analysis, ambient air monitoring
OIL/GREASE PITS (Phase II for Sites 3, 5, and 17)	
- Source volume characterization	- Ground penetrating radar
- Source contaminant characterization	- Vertical soil sampling and analysis
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant transport potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface water elevation and flow measure, surface water/sediment sampling and analysis, ambient air monitoring
RUBBLE DISPOSAL AREA (Phase II for Site 10)	
- Source volume characterization	- Ground penetrating radar
	- Vertical soil sampling and analysis
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant transport potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface water elevation and flow measure, surface water/sediment sampling and analysis
FIRE FIGHTER TRAINING AREAS (Sites 7 and 8)	
- Source volume characterization	- Soil gas survey
- Source contaminant characterization	- Vertical soil sampling and analysis
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant transport potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface water elevation and flow measure, surface water/sediment sampling and analysis, ambient air monitoring

Table 4 - 2 Summary of Phase II Data Collection Activities (Continued)

Operable unit\DQOs	Data collection activities
ORDNANCE DISPOSAL AREAS (Sites 14 and 15)	
- Source area characterization	- Electromagnetic induction survey
- Source volume and contaminant characterization	- Vertical soil sampling and analysis
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant transport potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface water elevation and flow measure, surface water/sediment sampling and analysis
- Contaminant transport potential (Site 15)	- Surface water/sediment sampling and analysis
PESTICIDE DISPOSAL AREA (Site 11)	
- Source identification	- Electromagnetic induction survey
- Source area characterization	- Vertical soil sampling and analysis
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Contaminant migration potential	- Permeability (slug) testing of monitor wells, water table elevation measurement
AIMD SEEPAGE PIT (Site 16)	
- Source identification	- Deep soil borings with organic vapor screening
- Source area characterization	- Select analysis of soil samples
- Groundwater plume characterization	- Monitor well construction, sampling, and analysis
- Surface water discharge point characterization	- Surface water/sediment sampling and analysis
- Contaminant migration potential	- Permeability (slug) testing of monitor wells, water table elevation measurement, surface flow measurement

Table 5 - 2 Summary of the Number of Sampling Locations by Site

Sampling Location	Existing[A] Wells	Proposed Wells	Total No. of Wells	Surface Water	Sediment	Borings	Intervals
Site No. 1	4	7	11	4	4	0	0
Site No. 2	2	6	8	1	1	0	0
Site No. 3	2	5	7	0	0	8	16
Site No. 5	2	4	6	1	1	7	21
Site No. 7	3	6	9	0	0	7	13
Site No. 8	5	6	11	5	5	11	33
Site No. 10	4	4	8	0	0	3	3
Site No. 11	2	6	8	0	0	4	4
Site No. 14	0	3	3	4	4	10	30
Site No. 15	0	4	4	1	1	8	24
Site No. 16	3	5	8	1	1	8	14
Site No. 17	3	3	6	0	0	5	5
Totals	30	59	89	17	17	71	163

[A] = primarily water level measurements

Table 5 - 3 Summary of the Total Number of Sample Analyses

Sample Type	Ground-Water	Surface Water	TOTAL WATER	Sediment	Borings	TOTAL SEDIMENT & BORINGS	TOTAL WATER AND SOILS
B	29	6	35	6	112	118	153
C	29	6	35	6	112	118	153
D	33	11	43	11	47	57	100
E	26	2	28	2	69	71	99
F	7	5	12	5	54	59	71
G	6	0	6	0	4	4	10
H	6	0	6	0	4	4	10
I	6	0	6	0	4	4	10
J	6	0	6	0	4	4	10
K	49	16	64	16	117	132	196
L	6	0	6	0	4	4	10
M	19	1	20	1	46	47	67
N	8	1	9	1	14	15	24
O	24	6	30	6	88	94	124
Q	38	15	52	19	91	109	161

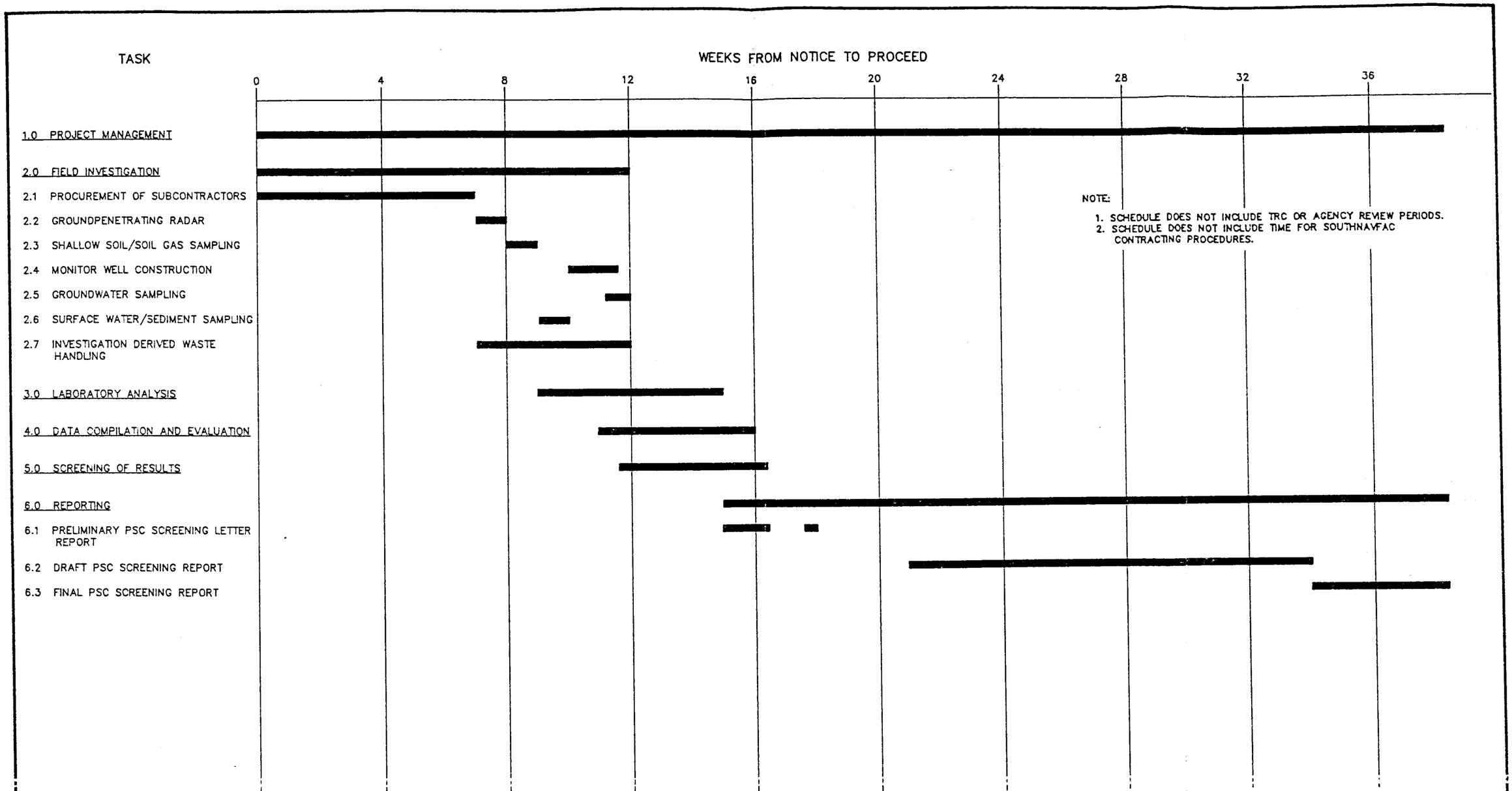
B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
D = Purgeable aromatics (624/8240).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270). (E* Includes acid extractables).
F = Nitroaromatics and isophorone (EPA Method 609/8270).
G = PCBs/organochlorine pesticides (EPA Method 608/8080).
H = Organophosphorus pesticides and carbamates (EPA Method 614/8140,632).
I = Fungicides and fumigants (EPA Method 504; Steam Distillation).
J = Chlorinated herbicides (EPA Method 615/8150).
K = Priority pollutant metals (EPA Series 200/6010; As-7060; Se-7740; Hg-7470; Pb-7420).
L = Metals subgroup - As; Cr; Zn (EPA Series 200; As-7060).
M = Metals subgroup - Fe; Pb; Hg; Cd; Cr; Zn (EPA Series 200; Hg-7470; Pb-7420).
N = Cyanide (EPA Method 335.2/9010).
O = Total recoverable petroleum hydrocarbons (418.1).
Q = Extractable organics (EPA Method 625/8270).

Table 5 - 4 Summary of the Total Estimated Number of QA/QC Sample Analyses[1]

Sample Type	Quality Assurance/Quality Control			
	Groundwater	Surface Water	Sediment	Borings
B	12	4	4	44
C	12	4	4	44
D	12	4	4	20
E	9	0	0	27
F	3	3	3	19
G	3	0	0	3
H	3	0	0	3
I	3	0	0	3
J	3	0	0	3
K	15	5	5	33
L	3	0	0	3
M	7	0	0	15
N	3	0	0	5
O	7	3	3	27
Q	13	5	5	27

[1] These totals include Additional Laboratory Volume and Reference Check Samples collected for BCL internal Quality Assurance/Quality Control purposes.

B = Purgeable halocarbons (EPA Method 601/8010).
C = Purgeable aromatics (EPA Method 602/8020).
D = Purgeable hydrocarbons (624/8240).
E = Polynuclear aromatic hydrocarbons (EPA Method 610/8270). (E* Includes acid extractables).
F = Nitroaromatics and isophorone (EPA Method 609/8270).
G = PCBs/organochlorine pesticides (EPA Method 608/8080).
H = Organophosphorus pesticides and carbamates (EPA Method 614/8140,632).
I = Fungicides and fumigants (EPA Method 504; Steam Distillation).
J = Chlorinated herbicides (EPA Method 615/8150).
K = Priority pollutant metals (EPA Series 200/6010; As-7060; Se-7740; Hg-7470; Pb-7420).
L = Metals subgroup - As; Cr; Zn (EPA Series 200; As-7060).
M = Metals subgroup - Fe; Pb; Hg; Cd; Cr; Zn (EPA Series 200; Hg-7470; Pb-7420).
N = Cyanide (EPA Method 335.2/9010).
O = Total recoverable petroleum hydrocarbons (418.1).
Q = Extractable organics (EPA Method 625/8270).



PSC Program Schedule
Figure 6 - 1

Site 4 - Old Grease Pits
Site 9 - Recruit Grease Pits
Site 6 - Lake Fretwell Rubble Disposal Area
Site 12 - Public Works " " "
Site 19 - Roswell Creek " " "
Site 18 - Ammunition Disposal Area

PSC Screening Work Plan
NAS Cecil Field
May 1990

ASEA BROWN BOVERI

7504-08

March 13, 1991

Commanding Officer
ATTN: Mr. Cliff Casey, Code 18212
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston SC 29411-0068

SUBJECT: Revisions to Community Relations Plan
NAS Cecil Field, CTO No. 0002
Navy CLEAN District I
Contract N62467-89-D-0317

Dear Cliff:

Enclosed is the revised Draft Community Relations Plan for the RI/FS at NAS Cecil Field, addressing your comments dated 28 February 1991. Two versions of the document are enclosed, one in the standard Navy document format and one in a more informal format recommended by our Community Relations Specialist, Kathy St. Peter. A memo with some comments from Kathy is also enclosed. Please call and let me know which format you prefer, and I will make the appropriate copies and distribute to you and the base.

Very truly yours,

ABB ENVIRONMENTAL SERVICES INC.

Peggy Layne

Margaret E. Layne, P.E.
Task Order Manager

ABB Environmental Services Inc.

2571 Executive Center Circle East
Suite 100
Tallahassee, Florida 32301

Telephone (904) 656-1293

Fax (904) 656-3386