

M00146.AR.000967  
MCAS CHERRY POINT  
5090.3a

**Site Management Plan**  
for  
**Marine Corps Air Station**  
Cherry Point, North Carolina



**Northern Division**  
**Naval Facilities Engineering Command**  
**Contract Number N62472-90-D-1298**  
**Contract Task Order 0187**

**SITE MANAGEMENT PLAN  
FOR  
MARINE CORPS AIR STATION  
CHERRY POINT, NORTH CAROLINA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:  
Atlantic Division  
Environmental Restoration Branch, Code 1823  
Naval Facilities Engineering Command  
1510 Gilbert Street  
Norfolk, Virginia 23511-2699**

**Submitted by:  
Halliburton NUS Corporation  
993 Old Eagle School Road, Suite 415  
Wayne, Pennsylvania 19087-1710**

**CONTRACT NUMBER N62472-90-D-1298  
CONTRACT TASK ORDER 0187**

**SUBMITTED BY:**

**APPROVED BY:**

---

**MATTHEW G. COCHRAN, P.G.  
PROJECT MANAGER  
HALLIBURTON NUS CORPORATION  
PITTSBURGH, PENNSYLVANIA**

---

**JOHN TREPANOWSKI, P.E.  
PROGRAM MANAGER  
HALLIBURTON NUS CORPORATION  
WAYNE, PENNSYLVANIA**

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>	<u>Latest Revision/Date</u>
<b>1.0 INTRODUCTION</b> .....	1	Rev. 1 / March '95
<b>2.0 MCAS CHERRY POINT BACKGROUND AND OPERABLE UNIT / SITE DESCRIPTIONS</b> .....	2-1	Rev. 1 / March '95
2.1 OVERVIEW .....	2-1	Rev. 1 / March '95
2.2 ACTIVITY HISTORY .....	2-1	Rev. 1 / March '95
2.3 REGULATORY AND INVESTIGATION HISTORY .....	2-2	Rev. 1 / March '95
2.4 OPERABLE UNIT / SITE DESCRIPTIONS .....	2-5	Rev. 1 / March '95
2.4.1 Operable Unit 1 (Figure 4-2) .....	2-7	Rev. 1 / March '95
2.4.1.1 Site 15 - Area and Ditch Behind NADEP .....	2-7	Rev. 1 / March '95
2.4.1.2 Site 16 - Landfill at Sandy Branch .....	2-7	Rev. 1 / March '95
2.4.1.3 Site 40 - NADEP Former Drum Storage Area .....	2-8	Rev. 1 / March '95
2.4.1.4 Site 42 - Industrial Wastewater Treatment Plant (IWTP) .....	2-8	Rev. 1 / March '95
2.4.1.5 Site 47 - Industrial Sewer System .....	2-8	Rev. 1 / March '95
2.4.1.6 Site 51 - Building 137 Plating Shop and Site 52 - Building 133 Plating Shop and Ditch .....	2-9	Rev. 1 / March '95
2.4.2 Operable Unit 2 (Figure 4-3) .....	2-9	Rev. 1 / March '95
2.4.2.1 Site 10 - Old Sanitary Landfill .....	2-9	Rev. 1 / March '95
2.4.2.2 Site 44A - Former Sludge Application Area .....	2-10	Rev. 1 / March '95
2.4.2.3 Site 46 - Polishing Ponds 1 and 2 .....	2-10	Rev. 1 / March '95
2.4.3 Operable Unit 3 (Figure 4-4) .....	2-10	Rev. 1 / March '95
2.4.3.1 Sites 6 and 7 - Fly Ash Ponds and Old Incinerator .....	2-11	Rev. 1 / March '95
2.4.4 Operable Unit 4 (Figure 4-5) .....	2-11	Rev. 1 / March '95
2.4.4.1 Site 4 - Borrow Pit/Landfill North of Runway 14 .....	2-11	Rev. 1 / March '95
2.4.5 Operable Unit 5 (Figure 4-6) .....	2-12	Rev. 1 / March '95
2.4.5.1 Sites 1 and 2 - Borrow Pits and Landfills .....	2-12	Rev. 1 / March '95
2.4.5.2 Site 19 - Borrow Pit/Landfill North of Runway 32 .....	2-12	Rev. 1 / March '95
2.4.6 Operable Unit 6 (Figure 4-7) .....	2-13	Rev. 1 / March '95
2.4.6.1 Site 12 - Crash Crew Training and Oil/Water Separator .....	2-13	Rev. 1 / March '95
2.4.7 Operable Unit 7 (Figure 4-8) .....	2-14	Rev. 1 / March '95
2.4.7.1 Site 55 - Third Light Anti-Aircraft Missiles (LAAM) Tank .....	2-14	Rev. 1 / March '95
2.4.8 Operable Unit 8 (Figure 4-9) .....	2-14	Rev. 1 / March '95
2.4.8.1 Site 5 - POL Storage Tanks .....	2-14	Rev. 1 / March '95
2.4.8.2 Site 17 - DRMO .....	2-15	Rev. 1 / March '95
2.4.9 Operable Unit 9 (Figure 4-10) .....	2-15	Rev. 1 / March '95
2.4.9.1 Site 36 - Headquarters and Headquarters Squadron (H&HS) Former Accumulation Area .....	2-15	Rev. 1 / March '95
2.4.9.2 Site 37 - Marine Wing Communications Squadron (MWCS) Accumulation Area .....	2-16	Rev. 1 / March '95
2.4.9.3 Sites 49A and 49B - Oil/Water Separators and Leach Fields ..	2-16	Rev. 1 / March '95
2.4.10 Operable Unit 10 (Figure 4-11) .....	2-17	Rev. 1 / March '95
2.4.10.1 Site 33 - VMGR Accumulation Area .....	2-17	Rev. 1 / March '95
2.4.10.2 Site 34 - Crash Crew Accumulation Area .....	2-17	Rev. 1 / March '95
2.4.10.3 Site 35 - Marine Aircraft Group (MAG) 14 Accumulation Area ..	2-18	Rev. 1 / March '95
2.4.11 Operable Unit 11 (Figure 4-12) .....	2-18	Rev. 1 / March '95
2.4.11.1 Site 3 - Explosive Ordnance Disposal (EOD) Range .....	2-18	Rev. 1 / March '95

TABLE OF CONTENTS (Continued)

<u>SECTION</u>	<u>PAGE</u>	<u>Latest Revision/Date</u>
2.4.11.2 Site 38 - Defense Reutilization & Marketing Office (DRMO) Hazardous Waste Storage Area	2-19	Rev. 1 / March '95
2.4.11.3 Site 39 - Facilities Maintenance/Hazardous Waste Storage Area	2-19	Rev. 1 / March '95
2.4.11.4 Site 43 - Sewage Treatment Plant	2-20	Rev. 1 / March '95
2.4.11.5 Site 45 - Current Sludge Application Area	2-20	Rev. 1 / March '95
2.4.12 Operable Unit 12 (Figure 4-13)	2-20	Rev. 1 / March '95
2.4.12.1 Site 41 - Fuel Line Leak Site	2-21	Rev. 1 / March '95
2.4.13 Operable Unit 13 (Figure 4-14)	2-21	Rev. 1 / March '95
2.4.13.1 Site 21 - Borrow Pit/Landfill	2-21	Rev. 1 / March '95
2.4.13.2 Site 44B - Former Sludge Application Area	2-22	Rev. 1 / March '95
2.4.14 PA/SI Site (Figure 4-15)	2-22	Rev. 1 / March '95
2.4.14.1 Site 50 - PCB Transformer Spill Area	2-22	Rev. 1 / March '95
<b>3.0 SCHEDULES</b>	<b>3-1</b>	Rev. 1 / March '95
<b>4.0 OPERABLE UNIT/SITE FIGURES</b>	<b>4-1</b>	Rev. 1 / March '95
<b>5.0 RESTORATION TEAM REPRESENTATIVES</b>	<b>5-1</b>	Rev. 1 / March '95
<b>6.0 ACRONYMS</b>	<b>6-1</b>	Rev. 1 / March '95

**TABLES**

<u>NUMBER</u>		<u>PAGE</u>	<u>Latest Revision/ Date</u>
2-1	RCRA and CERCLA Corrective Action Processes .....	2-4	Rev. 1 / March '95
3-1	Operable Unit Summary Schedule .....	3-2	Rev. 1 / March '95
3-2	OU-1 Schedule .....	3-3	Rev. 1 / March '95
3-3	OU-2 Schedule .....	3-4	Rev. 1 / March '95
3-4	OU-3 Schedule .....	3-5	Rev. 1 / March '95
3-5	OU-4 Schedule .....	3-6	Rev. 1 / March '95
3-6	OU-5 Schedule .....	3-7	Rev. 1 / March '95
3-7	OU-6 Schedule .....	3-8	Rev. 1 / March '95
3-8	OU-7 Schedule .....	3-9	Rev. 1 / March '95
3-9	OU-8 Schedule .....	3-10	Rev. 1 / March '95
3-10	OU-9 Schedule .....	3-11	Rev. 1 / March '95
3-11	OU-10 Schedule .....	3-12	Rev. 1 / March '95
3-12	OU-13 Schedule .....	3-13	Rev. 1 / March '95
3-13	Site 16 (Debris Pile Design) Schedule .....	3-14	Rev. 1 / March '95
3-14	CRP Schedule .....	3-15	Rev. 1 / March '95
3-15	1994 Annual Groundwater Report Schedule .....	3-16	Rev. 1 / March '95
3-16	Fiscal Year 1995 Document Submittals .....	3-17	Rev. 1 / March '95

**FIGURES**

<u>NUMBER</u>		<u>PAGE</u>	<u>Latest Revision/ Date</u>
4-1	Location Map .....	4-2	Rev. 1 / March '95
4-2	OU-1 Location Map .....	4-3	Rev. 1 / March '95
4-3	OU-2 Location Map .....	4-5	Rev. 1 / March '95
4-4	OU-3 Location Map .....	4-7	Rev. 1 / March '95
4-5	OU-4 Location Map .....	4-9	Rev. 1 / March '95
4-6	OU-5 Location Map .....	4-11	Rev. 1 / March '95
4-7	OU-6 Location Map .....	4-13	Rev. 1 / March '95
4-8	OU-7 Location Map .....	4-14	Rev. 1 / March '95
4-9	OU-8 Location Map .....	4-15	Rev. 1 / March '95
4-10	OU-9 Location Map .....	4-17	Rev. 1 / March '95
4-11	OU-10 Location Map .....	4-19	Rev. 1 / March '95
4-12	OU-11 Location Map .....	4-21	Rev. 1 / March '95
4-13	OU-12 Location Map .....	4-23	Rev. 1 / March '95
4-14	OU-13 Location Map .....	4-25	Rev. 1 / March '95
4-15	PA/SI Site 50 Location Map .....	4-27	Rev. 1 / March '95

## 1.0 INTRODUCTION

This document is a management tool for scheduling and tracking progress in the Installation Restoration (IR) Program at Marine Corps Air Station (MCAS), Cherry Point, North Carolina (MCAS, Cherry Point). Background narrative and operable unit/site descriptions are provided in Section 2, however, the focus of this document is scheduling which is included in Section 3. Operable unit/site figures are included in Section 4. A list of restoration team representatives is included in Section 5 and a list of acronyms is included in Section 6. This plan will be updated when changes warrant a revision.

This Site Management Plan does not constitute an addendum to the Resource Conservation and Recovery Act (RCRA) 3008(h) consent order binding upon MCAS Cherry Point.

## 2.0 MCAS CHERRY POINT BACKGROUND AND OPERABLE UNIT / SITE DESCRIPTIONS

### 2.1 OVERVIEW

Marine Corps Air Station (MCAS) Cherry Point is a military installation located north of the town of Havelock in southeastern Craven County, North Carolina. The air station covers approximately 11,485 acres. Its boundaries are the Neuse River to the North, Hancock Creek to the East, North Carolina Highway 101 to the south, and a boundary line approximately 3/4 mile west of Slocum Creek. The entire facility is situated on a peninsula north of Core and Bogue Sounds and south of the Neuse River (see Figure 4-1 in Section 4.0).

The mission of MCAS, Cherry Point is to maintain and operate support facilities, services and material of the 2nd Marine Aircraft Wing, or units thereof, and other activities and units as designated by the Commandant of the U.S. Marine Corps, in coordination with the Chief of Naval Operations. Occupants at MCAS, Cherry Point include the 2nd Marine Aircraft Wing (2nd MAW), the Naval Aviation Depot (NADEP), Combat Service Support Detachment 21 of the Second Force Service Support Group (2nd FSSG), the Naval Hospital, the Dental Clinic, the Naval Air Maintenance Group Detachment, and the Defense Reutilization and Marketing Office (DRMO). MCAS, Cherry Point provides facilities for training and support of the Fleet Marine Force (FMF) Atlantic aviation units. It is also designated as a primary aviation supply point.

### 2.2 ACTIVITY HISTORY

MCAS, Cherry Point was commissioned in 1942. Continuing construction in 1943 included the addition of a massive aircraft assembly and repair shop, which later became NADEP. Also in 1943, barracks and a mess hall for a women's reserve unit were constructed. Cherry Point became the clearing center for all women reserves assigned to aviation. During the 1950s and 1960s, land was acquired which increased MCAS, Cherry Point acreage to more than 11,000 acres (excluding the outlying bombing range, Marine Corps Auxiliary Landing Field (MCALF) Bogue, Marine Corps Outlying Landing Field (MCOLF) Atlantic and MCOLF Oak Grove). During the 1970s, intense commercial and residential development occurred around MCAS, particularly within the City of Havelock. In 1980, the City of Havelock annexed Cherry Point and became the largest city (by population) in Craven County.

### 2.3 REGULATORY AND INVESTIGATION HISTORY

Investigations at Cherry Point are conducted under the Department of Defense (DOD) Installation Restoration (IR) Program and the Department of Navy (DON) Assessment and Control of Installation Pollutants (NACIP) Program which were started in 1980. Funding to pay for such investigations are allocated for DOD sites under the Defense Environmental Restoration Account (DERA).

The IR/NACIP programs parallel the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), otherwise known as Superfund. Under the Superfund program, abandoned waste sites which potentially contained hazardous constituents would undergo several phases of environmental investigation that would ultimately determine the need for a remedy, and if necessary, the selection and implementation of the remedy for the site. The phases of investigation include the Preliminary Assessment/Site Inspection (PA/SI), Remedial Investigation (RI), Feasibility Study (FS), Record of Decision (ROD) and Remedial Design/Remedial Action (RD/RA). Superfund also has provisions for Interim Measures (IM) that can be implemented if a site poses an immediate threat to the environment.

The first IR objective was to collect data and evaluate historical evidence indicating the existence of hazardous constituents that may have contaminated the facility or that pose an imminent health hazard on or off the facility. The Initial Assessment Study (IAS) was performed at MCAS, Cherry Point in 1983 to meet this objective. The IAS identified 14 suspect sites as requiring further investigation.

The Superfund Amendments and Reauthorization Act of 1986 (SARA) required each facility listed on the Federal Agency Hazardous Waste Compliance Docket (MCAS, Cherry Point is included on the docket), to perform a PA. The IAS was essentially equivalent to, and served as, the PA under the Superfund Program.

The second IR objective was to determine via sampling and analyses activities whether specific constituents identified in the IAS, and possibly other contaminants, exist in concentrations considered to be hazardous. SI and RI activities were performed at several of the sites during the mid-1980s to meet this objective. SI activities are a limited data collection task to determine if contamination exists, whereas RI activities are somewhat larger tasks to determine the nature and extent of contamination.

The Resource Conservation and Recovery Act of 1976 (RCRA) established a national strategy for the management of ongoing solid and hazardous waste operations at active sites. MCAS, Cherry Point engages in the generation, treatment, storage and disposal of hazardous wastes which requires the facility to be permitted under the jurisdiction of RCRA. The Hazardous and Solid Waste Amendments (HSWA) of RCRA

were enacted in 1984 and broadened the authority of RCRA including requiring a multi-step corrective action process for releases of hazardous wastes to the environment.

In 1988, the EPA performed a RCRA Facility Assessment (RFA) at Cherry Point. The RFA identified 114 Solid Waste Management Units (SWMUs) and 2 other areas of concern (AOC), some of which were sites that were already being investigated under the IR Program. The RFA is the first step of the RCRA corrective action process and is similar to a CERCLA PA/SI. The RCRA corrective action process closely resembles the CERCLA program (see Table 2-1), and consists of the RFA (release identification step), the RCRA Facility Investigation (RFI-release extent characterization), the Corrective Measures Study (CMS-selection of corrective measure), and Corrective Measures Implementation (CMI-implementation of corrective measures). The RCRA corrective action program also includes an Interim Measures (IM) step that may be conducted in cases when short-term actions are needed to respond to immediate threats.

In 1989, the Navy entered into a RCRA Administrative Order of Consent with the Environmental Protection Agency (EPA) to agree to perform a RFI at 32 of the 114 identified SWMUs. The list included all of the sites that were previously being investigated as CERCLA sites under the IR Program. In addition, the Administrative Order of Consent designated the USEPA as the lead regulatory agency of MCAS Cherry Point.

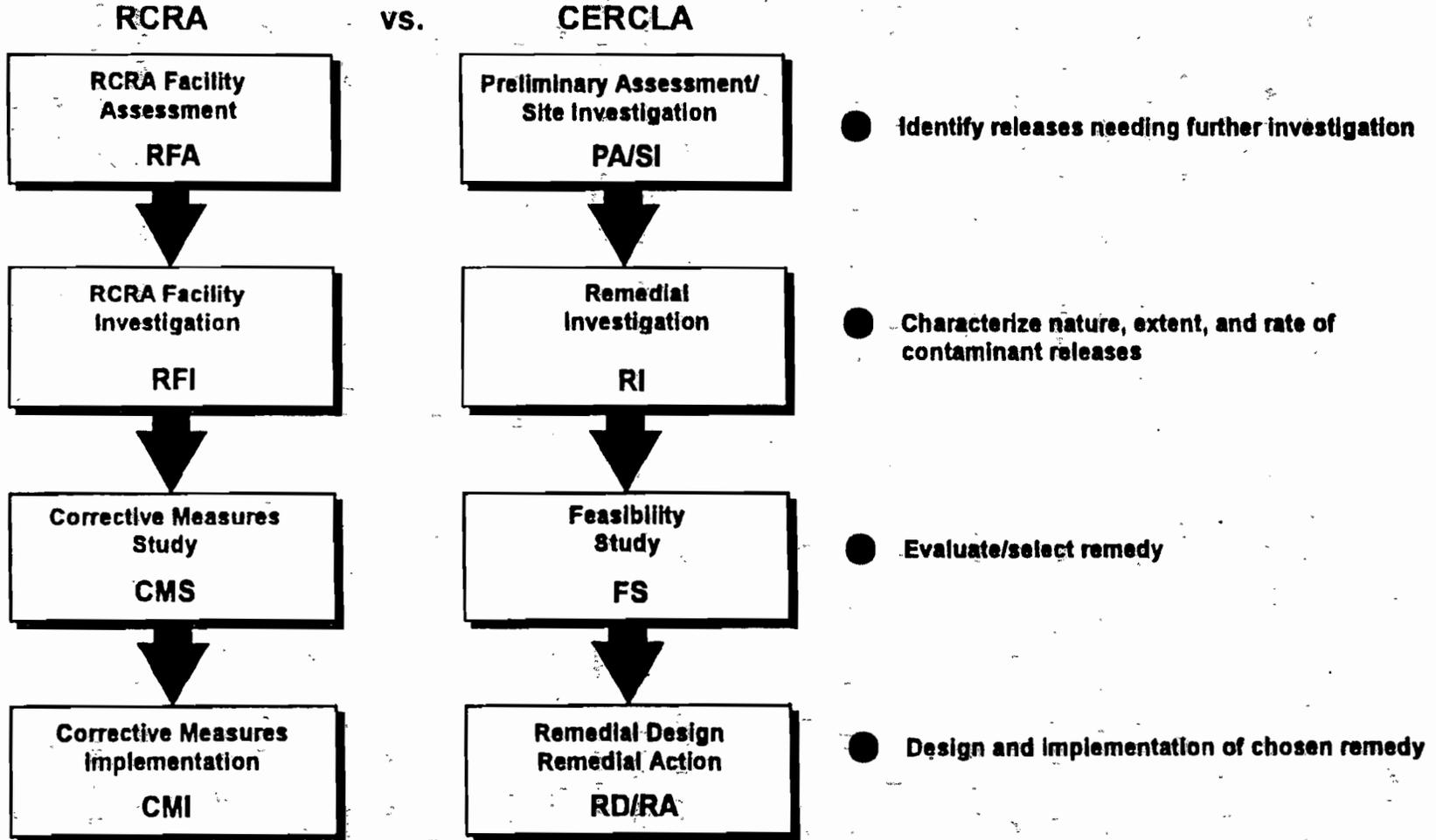
In the past year, MCAS, Cherry Point was scored and ranked by the EPA to be included on the National Priorities List (NPL) as a CERCLA Superfund site. It has been reported by the EPA that MCAS Cherry Point scored sufficiently and will be formally included as a Superfund site (personal communication, EPA and Halliburton NUS, November 1993). Therefore, based on this recent knowledge, the ongoing IR investigations at each site are being conducted to meet the requirements of both RCRA and CERCLA.

This SMP is intended to address all of the 32 SWMUs identified in the Administrative Order of Consent which are being investigated at MCAS, Cherry Point. The 32 IR sites have been combined into 12 Operable Units (OU-1 through OU-11, and OU-13) by the Navy and one PA/SI site (Site 50 - Polychlorinated Biphenyls (PCBs) Transformer Spill Area). In addition, Operable Unit 12 (Site 41-Fuel Line Leak Site), which has been deferred to the State of North Carolina Underground Storage Tank Program, is discussed in this document. Figure 4-1 (Section 4.0) shows each operable unit and site location.

In addition to the IR activities being conducted, a total of 11 sites are being investigated as part of the Navy Base Realignment and Closure (BRAC) Program. These sites are being investigated to determine if environmental contamination exists that could impact construction and long-term use activities which are planned for the sites. The BRAC sites are also shown on Figure 4-1, however, no further discussion of these sites is included in this document.

TABLE 2-1

RCRA AND CERCLA CORRECTIVE ACTION PROCESSES  
MCAS CHERRY POINT, NORTH CAROLINA



\* Interim Measures may be performed at any point in the corrective action process.

## 2.4 OPERABLE UNIT / SITE DESCRIPTIONS

A description of each operable unit and site is included in the remainder of this section and listed below.

- **Operable Unit 1**

- Site 15 - Area and Ditch Behind NADEP
- Site 16 - Landfill at Sandy Branch
- Site 40 - NADEP Former Drum Storage Area
- Site 42 - Industrial Wastewater Treatment Plant (IWTP)
- Site 47 - Industrial Sewer System
- Site 51 - Building 137 Plating Shop
- Site 52 - Building 133 Plating Shop and Ditch

- **Operable Unit 2**

- Site 10 - Old Sanitary Landfill
- Site 44a - Former Sludge Application Area
- Site 46 - Polishing Ponds No. 1 and No. 2

- **Operable Unit 3**

- Site 6 - Fly Ash Ponds
- Site 7 - Incinerator

- **Operable Unit 4**

- Site 4 - Borrow Pit/Landfill North of Runway 14

- **Operable Unit 5**

- Site 1 - Borrow Pit/Landfill
- Site 2 - Borrow Pit/Landfill
- Site 19 - Borrow Pit/Landfill North of Runway 32

- **Operable Unit 6**

- Site 12 - Crash Crew Training Area & Oil/Water Separator

- **Operable Unit 7**

- Site 55 - Third Light Anti-Aircraft Missiles (LAAM) Area

- **Operable Unit 8**

- Site 5 - Petroleum, Oil, and Lubricant (POL) Storage Tank
- Site 17 - DRMO Storage Area and Drainage Ditch

- **Operable Unit 9**

- Site 36 - Headquarters and Headquarters Squadron (H&HS) Former Accumulation Area
- Site 37 - Marine Wing Communications Squadron (MWCS) 28 Accumulation Area
- Sites 49a and 49b - Oil/Water Separators and Leach Fields

- **Operable Unit 10**

- Site 33 - Marine Aerial Refueler Transport Squadron (VMGR) 252 Accumulation Area
- Site 34 - Crash Crew Accumulation Area
- Site 35 - Marine Aircraft Group (MAG) 14 Accumulation Area

- **Operable Unit 11**

- Site 3 - Explosive Ordnance Disposal (EOD)
- Site 38 - Defense Reutilization Maintenance Organization (DRMO) Hazardous Waste Storage Area
- Site 39 - Facilities Maintenance/Hazardous Waste Storage Area
- Site 43 - Sewage Treatment Plant
- Sites 45a to 45f - Current Sludge Application Area

- **Operable Unit 12**

- Site 41 - Fuel Line Leak Site

- **Operable Unit 13**

- Site 21 - Borrow Pit/Landfill (South End of Runway 32)
- Site 44B - Former Sludge Application Area

- **PA/SI Site**

Site 50 - Polychlorinated biphenyls (PCBs) transformer spill area

A discussion of each operable unit and site is included in the remainder of this section. Figures are referenced in the beginning of each subsection.

#### **2.4.1 Operable Unit 1 (Figure 4-2)**

Operable Unit 1 consists of seven sites that are located within, and immediately downgradient of, the industrialized area of the Air Station. These sites have been grouped into one operable unit due to the close proximity to each other within the industrial area.

##### **2.4.1.1 Site 15 - Area and Ditch Behind NADEP**

The ditch and area behind NADEP were used for disposal of wastes from the NADEP. The site consists of approximately 25 acres between the NADEP and Runway 5. From the 1940s until 1975, wastes generated in the NADEP were washed down floor drains and discharged to the ditch that flows to Schoolhouse Branch, which is a tributary of Slocum Creek. This practice continued until the industrial wastewater treatment plant was completed in 1975. The wastes generated at the NADEP included POL, organic solvents, cyanides, and metals.

Both RI and RFI investigations have been completed at Site 15 since the mid-1980s, when the site was first identified in the IAS report dated 1983. The investigations included monitoring well installations and soil, groundwater, surface water, and sediment sampling. The results of those investigations concluded that low levels of contamination have been observed which present no unacceptable risks to receptors under current use conditions. No further action has been recommended for this site. However, it has been reported that historical information indicates that another ditch (located south of Building 133) is more likely to be the ditch that was originally identified in the IAS report. Since the identification of this site in 1983, an addition was constructed on the south side of Building 133 which may have covered over the ditch of concern. Further investigation of this ditch will be conducted in subsequent RFI or RI stages of investigation at Operable Unit 1.

##### **2.4.1.2 Site 16 - Landfill at Sandy Branch**

Site 16 is a landfill that was used between 1946 and 1948 for the disposal of miscellaneous wastes. The landfill is approximately 11 acres in size. RI and RFI investigations have been performed since the

mid-1980s and have included monitoring well installations and soil, surface water, sediment, groundwater, and soil gas sampling. The investigations have indicated that chlorinated volatile organics and cyanide are present in the landfill proximity. However, upgradient groundwater sources of contamination in the industrial area have been suspected that has prompted the groundwater investigation to expand into these areas. In addition, recently discovered aerial photographs and site reconnaissance have indicated that the landfill boundaries are somewhat larger than originally thought. Additional RI or RFI activities will be performed to further investigate these areas. Removal of an asbestos debris pile located at this site is planned for the future.

#### **2.4.1.3 Site 40 - NADEP Former Drum Storage Area**

From 1979 until 1986, the former drum storage area was used for the storage of hazardous wastes generated during manufacturing operations in the NADEP. Prior to 1984, the area was used to store spent organic solvents, strippers, corrosion preventative compounds, cyanide wastes and sandblast residue contaminated with heavy metals. After 1984 the area was used exclusively to store sandblast residue and wastes. Between 1992-1993, this area was remediated and closed under North Carolina State authority. No further action is recommended for this site.

#### **2.4.1.4 Site 42 - Industrial Wastewater Treatment Plant (IWTP)**

The IWTP treats waste generated by industrial sources such as metal plating, painting, aircraft maintenance and vehicle maintenance, as well as collected stormwater from throughout the base. The system is composed of various tanks and basins constructed of concrete and steel designed to treat 0.65 million gallons per day wastewater. It also serves as a pretreatment unit for wastewater ultimately discharged to the Sewage Treatment Plant. Pretreatment sludge is disposed of off site at a commercial hazardous waste facility. The IWTP is presently in the process of being upgraded. Contaminants of concern include: heavy metals, solvents, and oils. Previous RFI investigations have included groundwater and soil sampling. RFI activities are presently ongoing.

#### **2.4.1.5 Site 47 - Industrial Sewer System**

The Industrial Sewer System starts at the industrial area and conveys industrial wastes to the Industrial Wastewater Treatment Plant for pretreatment. After pretreatment, the waste is discharged to the Sewage Treatment Plant for final treatment. RFI activities have been conducted since 1991 at this site which have included an infiltration/inflow study to determine if the lines are leaking, monitoring well installations, and groundwater and soil sampling. The results of these investigations have detected groundwater and soil

contamination. In addition to leaking lines, further RFI activities will be conducted in addition to high-priority repair of the leaking lines.

#### 2.4.1.6 Site 51 - Building 137 Plating Shop and Site 52 - Building 133 Plating Shop and Ditch

Site 51 - Plating Shop 93103A which is located in Building 137 and Site 52 - Plating Shop 93103B, which is located in Building 137 were built in 1942 for plating operations such as acid rinses, chromic dips, and cadmium plating. Each shop consists of a concrete and terra cotta sump approximately two and a half feet below the floor of each building, with concrete piers spaced throughout each sump for supporting tanks and plating equipment. The sumps are covered with wooden grating to allow workers access to the tanks and plating equipment. The sumps drain to Site 47 - Industrial Sewer System lines that lead to Site 42 (IWTP) for treatment of the plating wastes. The plating shops were in operation from 1942 to 1990 when they were formally closed and plating operations were moved to a new location. The drains from the sumps to the IWTP were plugged in 1987. The plating shops are presently in the process of being demolished.

The Marine Corps decided to perform an environmental investigation in 1990 to evaluate the integrity of the sumps. RFI activities were conducted in 1991 and included borings through the sumps with soil sampling, and monitoring well installations with groundwater sampling immediately adjacent to each plating shop. The results of the investigation detected volatile organic contamination in the soil and groundwater that is believed to be derived from sources other than the plating shops. Samples were also collected during the demolishing activity. The RFI is presently ongoing.

#### 2.4.2 Operable Unit 2 (Figure 4-3)

Operable Unit 2 consists of three sites located in close proximity to the Site 10 - Old Sanitary Landfill. These sites have been grouped into one operable unit due to their close proximity to each other (i.e., Site 44a - the Former Sludge Application Area overlies portions of the Site 10 landfill and Site 46 - The Polishing Ponds No. 1 and 2 are located adjacent to the landfill). In addition, Site 44a and Site 46 both contain the same types of contamination derived from sewage treatment.

##### 2.4.2.1 Site 10 - Old Sanitary Landfill

Site 10 is located west of Roosevelt Boulevard and south of Site 43 - Sewage Treatment Plant, on the east side of Slocum Creek. The site consists of a sanitary landfill approximately 40 acres in size, which had served as the primary disposal site at MCAS Cherry Point from 1955 until the early to mid-1980s. Contaminated material and POLs were landspread, burned, stored in unlined pits, and buried at the landfill.

A sludge impoundment area is also located at this site which was closed in the mid-1980s. RI and RFI activities have been ongoing at this site since the mid-1980s and have included monitoring well installations; soil borings; and soil, surface water, sediment, and groundwater sampling. A CMS for groundwater at this site was initiated in 1993. Further RFI activities are being conducted for soils, in addition to the collection of groundwater data to support the CMS. An Interim Measures (IM) Study is presently being conducted for the sludge impoundment area to determine if additional corrective action is required.

#### 2.4.2.2 Site 44A - Former Sludge Application Area

Site 44 consists of two areas in which sludge from the sanitary waste water treatment plant was applied. Regulators have expressed concern with sludge applied up to the period of time, after the plating shop wastewater flow was shut off (August 1987), that is equivalent to the retention time of digesters at the wastewater treatment plant. Liquid sludge was pulled from the digesters for land application every 30 days. Information provided in the Current Conditions Report (NUS, May 1991b) indicates that sludge removed between September and November 1987 was applied at Sites 10 and 21. Site 44A is located on Site 10 (OU-2) and Site 44B is located on Site 21 (OU-13). The sludge contains organic material and other constituents that are not digested during the sewage treatment process.

The additional RFI data that will be collected during the investigations at OU-2 and OU-13 will be used to further evaluate this site.

#### 2.4.2.3 Site 46 - Polishing Ponds 1 and 2

This site consists of two unlined ponds that serve as aeration basins for wastewater from the STP (Site 43). The STP is presently being upgraded and will not require the use of the ponds for aeration. A Closure Plan was submitted to the state for this site in December 1988. Final approval on the Closure Plan is pending.

#### 2.4.3 Operable Unit 3 (Figure 4-4)

Operable Unit 3 consists of two sites grouped together due to their close proximity and common waste types. Site 6 - The Fly Ash Ponds are located on the east side of Slocum Creek and the south side of Luke Rows Gut and Site 7 - the Incinerator is located on the east side of Slocum Creek and the north side of Luke Rows Gut. Both sites contain fly ash as a common waste type.

#### 2.4.3.1 Sites 6 and 7 - Fly Ash Ponds and Old Incinerator

Site 6 consists of two unlined fly ash ponds located south of Slocum Road near the old power plant. The ponds cover about 2.5 acres, and are reported to be 10 to 15 feet deep. The ponds received a slurry of fly ash and cinders from the 1940s until about 1970. Since December 1980, the ponds have been used for the disposal of lime/alum sludge from the potable water treatment plant. Each of the two ponds has been dredged annually since 1980. Each event results in the removal of approximately 5,000 cubic yards of sludge from each lagoon which is disposed off site by a contractor to MCAS Cherry Point.

Unit 7 was an incinerator and open burning ground that covered approximately 5 acres. It is bounded by the STP, Luke Rowes Gut, and Slocum Creek. From 1949 until 1955, waste POL, NADEP wastes, and other wastes such as municipal refuse were burned either in the incinerator or on the ground adjacent to the site. No records were kept as to the types or quantities of waste disposed at this site. The foundation of the incinerator is the only visible feature remaining at the site.

RI and RFI activities have been performed at each of these sites since the mid-1980s and have included drilling monitoring wells and soil borings, and groundwater and soil sampling. Additional RI/RFI activities are presently being conducted to include groundwater, surface water, sediment, and soil sampling.

#### 2.4.4. Operable Unit 4 (Figure 4-5)

Operable Unit 4 consists of one site. The site is not grouped with any other sites to form an operable unit due primarily to the relatively remote location of the site.

##### 2.4.4.1 Site 4 - Borrow Pit/Landfill North of Runway 14

Site 4 consists of several borrow pits that were initially excavated in the 1940s and were used starting in the 1950s for the disposal of demolition and asbestos wastes. It is possible that other waste materials were also disposed in this facility, including NADEP wastes, however, no records were kept detailing the type and amount of material disposed. The final disposal dates are unknown. Several periods of excavation (borrow pits) are evident from aerial photographs of the Air Station. RI and RFI activities were conducted at this landfill which included monitoring well installations, soil borings, groundwater, soil, surface water, and sediment sampling. Additional RI/RFI data is presently being conducted for this site to include monitoring well installations, soil, surface water, sediment, and groundwater sampling.

A permitted landfill at this site is approximately 10 acres in size, and was built in 1982 for the disposal of construction debris. The landfill currently operates under a state Solid Waste Permit. The North Carolina Department of Environmental Health and Natural Resources recently approved the one-time disposal of POL-contaminated sorbent, provided enzymes were added to enhance microbial degradation of the organic constituents.

#### **2.4.5 Operable Unit 5 (Figure 4-6)**

Operable Unit 5 consists of three sites which are grouped together as a result of their close proximity and/or similar histories and common waste types. All three sites are former borrow pits that were backfilled with landfill materials, and Sites 1 and 2 are located in close proximity to each other.

##### **2.4.5.1 Sites 1 and 2 - Borrow Pits and Landfills**

Sites 1 and 2 are located on the west and east sides, respectively, of an access road near the Marine Air Control Squadron Unit MACS-6. Both of these areas began as borrow pits, which later served as landfills. Reports indicate that both of these 4-acre areas were used for the disposal of hazardous material beginning in the 1950s. There are no records that indicate the type and amount of material disposed in these borrow pits/landfills, nor is the final year of disposal known. During the IAS, rubble and trash were observed on the ground surface. A site inspection conducted in March 1993 identified a number of crushed 55-gallon drums and construction rubble at Site 1. Construction rubble was also observed at Site 2, both upgradient of the existing wells and several hundred feet south of the existing wells. In addition, discolored seepage was also noted entering the unnamed tributary.

RI and RFI activities conducted to date have included monitoring well installations and groundwater sampling. Additional RI/RFI activities will be conducted and will include well installations, surface water, sediment, groundwater, and soil sampling.

##### **2.4.5.2 Site 19 - Borrow Pit/Landfill North of Runway 32**

Site 19 is located on the north side of Runway 32. The former borrow pit was used as a landfill between about 1949 and the early 1960s. Based on aerial photography, the maximum extent of the landfill is about 9 acres. Fly ash from a facility steam plant may have been disposed in this area.

RI and RFI activities have included well installations and groundwater sampling. Additional RI/RFI activities will be conducted and will include additional well installations, groundwater, soil, surface water, and sediment sampling.

#### **2.4.6 Operable Unit 6 (Figure 4-7)**

Operable Unit 6 consists of one site that is used for fire training activities. The site is located relatively distant from other sites and was not well suited to be grouped with any other sites.

##### **2.4.6.1 Site 12 - Crash Crew Training and Oil/Water Separator**

This site contains three separate areas. The first is the Former Crash Crew Training Area, which was used for the training of crash fire and rescue personnel from the mid-1960s until 1985. It had an approximate diameter of 50 feet within an earthen berm. A nearby drainage ditch leads to Hancock Creek. The Former Crash Crew Training Area is the major concern at this site.

The second area that constitutes this site is the Crash Crew Burn Pit. This was constructed in 1985 on top of the former Crash Crew Training Area and is currently used to train emergency personnel and burn waste JP-5 (jet fuel). The pit consists of a concrete pad 100 feet in diameter, with a 5-inch-high curb. Runoff is directed to the Oil/Water Separator.

The third area consists of the Oil/Water Separator that operated from 1985 until 1990. It received runoff from the Crash Crew Burn Pit. The separator is constructed of steel and concrete, and is 5 feet wide, 10 feet long, and 8 feet deep. When the area was operational, water was discharged through a National Pollutant Discharge Elimination System (NPDES)-permitted outfall to Jack's Branch, which flows to Hancock Creek. However, the effluent pipe has been welded shut, and current operations require Facilities Maintenance personnel to pump all liquids from the oil/water separator after a training exercise and transport the liquid to the Industrial Wastewater Treatment plant.

RFI activities have been conducted at this site since 1991 and have included well installations, and groundwater and soil sampling. Additional RI/RFI activities will be conducted and will include additional soil and groundwater sampling.

#### **2.4.7 Operable Unit 7 (Figure 4-8)**

Operable Unit 7 consists of one site that contained an underground storage tank. The site is not grouped with any other sites due to its relatively distant location.

##### **2.4.7.1 Site 55 - Third Light Anti-Aircraft Missiles (LAAM) Tank**

Site 55 is the site of a former 500-gallon underground storage tank located within the third LAAM facilities. The area surrounding the site includes various buildings, several wash/grease racks, concrete cleaning pads, and a hazardous waste storage area, and is used to service large vehicles and machinery. In 1990 the tank which contained waste oil, was removed and contaminated soil was removed. The tank was replaced by an above-ground storage tank.

Previous activities performed at this site have included an UST investigation in 1991 when the tank was removed and RFI activities in 1993. These investigations included monitoring well installations, and groundwater and soil sampling. The results of these investigations have concluded that while the majority of contamination in soils resulting from the UST have been removed, contamination believed to be unrelated to the UST still exists, and further RI/RFI study is needed in an attempt to detect other potential contaminant sources in outlying areas.

#### **2.4.8 Operable Unit 8 (Figure 4-9)**

Operable Unit 8 consists of two sites which have been grouped together as a result of sharing common waste types (PCBs). In addition, both sites require remediation of PCB-contaminated soils which will be performed at the same time.

##### **2.4.8.1 Site 5 - POL Storage Tanks**

Site 5 is located along Slocum Creek in the northwest portion of MCAS, Cherry Point. The site previously included a 100,000-gallon storage tank (Tank 1771) that was used for the storage of waste POL which included petroleum products, PCB-contaminated oils, chlorinated solvents, phenolics, and acids generated from manufacturing and maintenance operations at the facility. An oil/water separator was connected to the tank, water separated would be discharged to Slocum Creek. The waste POL was either used in fire training exercises or transported off site. No records were kept on the quantity of POL stored in the tank.

RI/RFI activities have been conducted at this site since the mid-1980s, and have included monitoring well installations, and soil gas, soil, groundwater, surface water, and sediment sampling. The Final RFI Report for this unit was submitted in 1992 and concluded that the soil was contaminated with PCBs. A CMS was completed in 1993 for PCBs in soil. Soil containing less than 50 mg/kg PCBs will be excavated and landfilled, and soil containing more than 50 mg/kg PCBs will be excavated and incinerated. At the present time, a pre-CMI study is being conducted. The study is evaluating field screening techniques which will be used in determining the areas and amount of soil which will require removal. Removal is planned for March 1995.

#### **2.4.8.2 Site 17 - DRMO**

Site 17 is located south of Building 155 in the south-central portion of the Air Station. The site is approximately 1 acre in size and consists of the DRMO storage area and an associated drainage ditch. PCB-contaminated oils were reportedly drained into the ditch between 1961 and 1968.

RI/RFI activities have been conducted at this site and included monitoring well installations, and groundwater, soil, and sediment sampling. The Final RFI Report submitted for this site in 1992 concluded that soils containing unacceptable levels PCBs be proposed for a CMS. A Final CMS Report was submitted in 1993 for soil which recommended excavation and removal. Soil containing less than 50 mg/kg PCBs will be landfilled and soil with higher concentrations will be incinerated. A pre-CMI study to evaluate field screening techniques, is presently being conducted at this site in conjunction with the Site 5 pre-CMI study. Removal is planned for March 1995.

#### **2.4.9 Operable Unit 9 (Figure 4-10)**

Operable Unit 9 consists of three sites which have been grouped together since they share petroleum-based waste types. In addition, an Interim Measure (IM), which included soil removal, was conducted at each of these sites.

##### **2.4.9.1 Site 36 - Headquarters and Headquarters Squadron (H&HS) Former Accumulation Area**

The H&HS former accumulation area was a less-than-90-day waste container and battery storage area that was active from 1987 to 1988. This site was formerly called the Second Light Anti-aircraft Missiles (LAAM) Accumulation Area. It handled spent oil, battery acid, and batteries generated by the Second LAAM, as well as cleaning solvents and antifreeze. The area was constructed of a 10-foot-square concrete pad with a 3-inch curb and no roof. One release valve drains accumulated water from the site. In the past, rainwater

was discharged directly to the ground surface. At the current time, the area is used for the storage of barbed wire.

RFI soil samples were collected from the beneath the release valve. The results of that sampling activity indicated that contamination existed, and it was decided to proceed with an IM to include soil removal. The IM was performed in 1994, additional confirmation groundwater and soil sampling activities are pending to confirm that no residual contamination exists.

#### **2.4.9.2 Site 37 - Marine Wing Communications Squadron (MWCS) Accumulation Area**

This site is a less-than-90-day container storage area for both hazardous and nonhazardous wastes generated by MWCS 28, including aerosol paint cans, solidified paint and paint sludge, paint thinner, waste oils and solvents, used antifreeze, diesel-contaminated soil, used batteries, and used battery acid. In addition, used clay absorbent material (e.g., Speedy Dry) is stored here. Operations at this unit began in the 1970s.

The concrete storage pad is 50 feet long and 10 feet wide, and has a 6-inch curb. The area is covered by a roof. Release valves are located at either end of the pad. In the past, these valves released rainwater directly to the ground surface.

RFI soil samples were collected from the beneath the release valves. The results of that sampling activity indicated that contamination existed, and it was decided to proceed with an IM to include soil removal. The IM was performed in 1994, additional confirmation groundwater sampling activities are pending to confirm that no residual contamination exists.

#### **2.4.9.3 Sites 49A and 49B - Oil/Water Separators and Leach Fields**

This site consists of two oil/water separators and two leach fields located north of the runways on the east side of Range Road. The leach fields consist of a system of subsurface drains that distribute clarified water from the MACS-28 oil/water separator (Unit 49B), and formerly from the MACS-6 oil/water separator (Unit 49A).

Both areas are of similar construction. Water flows from the wash racks to a catch basin. From there, the water enters a grease trap, flows through a distribution box, and finally to three parallel 4-inch perforated pipes about 120 feet long. The wastewater received by the leach fields could contain residual petroleum constituents such as polynuclear aromatic hydrocarbons and metals.

RFI soil samples were collected from this site in 1991 which concluded that the site proceed to an IM. The IM was conducted in 1994. Additional confirmation groundwater sampling is pending.

#### **2.4.10 Operable Unit 10 (Figure 4-11)**

Operable Unit 10 consists of three sites which contained similar waste products that contaminated shallow soils. In addition, an Interim Measure (IM) for soils has been conducted at each of these sites.

##### **2.4.10.1 Site 33 - VMGR Accumulation Area**

The VMGR Accumulation Area is a less-than-90-day container storage area for waste hydraulic fluid, waste JP-5 fuel, leaded gasoline, oil, mild corrosives, solidified paint and paint sludge, rags, and nonchlorinated compound contaminated solvents generated by flightline operations. This area was constructed in 1986 and consists of a 40-foot by 10-foot concrete pad with an 8-inch curb. The area is covered with a roof, surrounded by a fence, and is located inside the flightline security area. In addition, there is fencing between the curb and the roof. A single release valve is located on the east side of the structure below the curbing. In the past, this valve was used to directly release rainwater that accumulated inside the curb.

RFI activities were conducted at this site in 1991 and included soil sampling. The results of those activities recommended an IM which was completed in 1993. Additional confirmation soil samples were collected at this site.

##### **2.4.10.2 Site 34 - Crash Crew Accumulation Area**

This container accumulation area is located west of Runway 19. It was constructed in 1983 for the storage of waste petroleum, oil, and lubricants (POL) and hydraulic fluid. Contaminated clay-absorbent material (e.g., Speedy Dry), engine oil, and solidified paint have also been stored at this unit. The accumulation area is constructed of a 100-foot by 15-foot concrete pad with a 6-inch curb. It is covered by a roof and has two release valves (one at both the north and south ends). In the past, accumulated rainwater was discharged directly to the soil.

RFI activities were conducted at this site in 1991 and included soil sampling. The results of those activities recommended an IM which was completed in 1993. Additional confirmation soil and groundwater samples were collected at this site.

#### 2.4.10.3 Site 35 - Marine Aircraft Group (MAG) 14 Accumulation Area

The MAG 14 Accumulation Area is a container storage area located northeast of Runway 28. It was constructed in 1983, but by 1986 was no longer used for storage of hazardous waste. The area consists of an asphalt pad divided into two compartments. The first is 30 feet by 20 feet, and the other is 15 feet by 5 feet. Empty hydraulic fluid cans and waste JP-5 fuel were stored in drums that were set on wooden pallets. No roof or curbs existed at this site.

RFI activities were conducted at this site in 1991 and included soil sampling. The results of those activities recommended an IM which was completed in 1993. Additional confirmation soil and groundwater samples were collected at this site.

#### 2.4.11 Operable Unit 11 (Figure 4-12)

Operable Unit 11 consists of five sites. These sites have been grouped together since all are permitted, active sites.

##### 2.4.11.1 Site 3 - Explosive Ordnance Disposal (EOD) Range

The explosive ordnance disposal range has been in use since 1972, and is currently active. In the past, this unit was located farther north. It consisted of a small detonation area near the trees, and a buffer zone about 300 to 500 feet in diameter. Subsequently, to provide a better buffer zone, the EOD range was moved a few hundred feet south.

The unit was used for the disposal (detonation) of unserviceable ammunition (20-mm shells) and napalm. Napalm is a granular powder mixed with gasoline to form a sticky gel that is stable from -40°C to 100°C. It may consist of aluminum soaps and fatty acids such as oleic, naphthenic, and coconut. At the current time, only conventional munitions are burned or exploded on site. The current EOD range is about 2.8 acres in size, with a total fenced area (including a buffer zone) of about 22 acres.

A revised RCRA Part B permit application was submitted for this unit by MCAS, Cherry Point on November 8, 1988. The EOD range is operated as an interim status permitted unit. Access to the unit is highly restricted. The current EOD range consists of an open detonation area which is also used for open burning. The open burn/open detonation pad is surrounded by a 500-foot-diameter cleared area. The waste ordnance is either detonated in a pit with an earthen cover or burned in a containment vessel.

Housekeeping is performed to remove metallic fragments, unexploded ordnance, and expended time fuse. There is little or no ash residue left on the ground.

Soil and groundwater samples were collected from this site in 1991 and detected minor amounts of groundwater contamination. The site is presently active and will require closure in accordance with RCRA.

#### **2.4.11.2 Site 38 - Defense Reutilization & Marketing Office (DRMO) Hazardous Waste Storage Area**

The DRMO-Hazardous Waste Storage Area is a RCRA-regulated hazardous drum storage pad that has been in operation since 1961. Wastes from all manufacturing, maintenance, and support operations from the Station and NADEP are brought here. Station operations generate spent batteries, waste POL, and contaminated sorbents. The NADEP wastes include F001 (spent halogenated solvents), F004 and F005 (spent nonhalogenated solvents), F007 (spent cyanide plating bath solutions), F008 (plating sludges), and D002 (corrosive wastes) classifications.

The concrete storage pad is 6 inches thick and covers approximately 1 acre. The older section is a triangular-shaped pad measuring approximately 205 feet by 235 feet by 286 feet. The new section is located in the southwestern corner of the pad and covers 3,600 square feet. The pad slopes toward one sump located on the south side of the pad and one sump located on the east side of the pad. Rainwater that collects in the eastern sump is sampled prior to discharge to an oil/water separator, which discharges to Schoolhouse Branch. Water that collects in the southern sump flows through a drain which also discharges to Schoolhouse Branch via a drainage swale.

This site is an active treatment, storage, and disposal (TSD) facility regulated by the MCAS Cherry Point RCRA Part B permit. Waste from this facility is transported by private contractors to licensed disposal facilities.

RFI soil samples were collected adjacent to this site in 1991, during the Site 17 investigation. The CMI activities at Site 17 will also address the ditch soils.

#### **2.4.11.3 Site 39 - Facilities Maintenance/Hazardous Waste Storage Area**

Site 39 is used for storage of PCB-contaminated transformers and solvents, waste POL, and POL-contaminated solvents generated by the facilities maintenance operations and unserviceable transformers.

The storage area consists of three separate, roofed concrete pads in a fenced area that is approximately 100 feet by 500 feet. Each pad is 6 inches thick and has a 3-inch-high curb with a sump and valve for removal of any collected rainwater. If contamination is suspected, the rainwater is analyzed prior to discharge. This RCRA-regulated unit has been in operation since 1983.

Site 39 is an active, permitted TSD facility. It is regulated by the MCAS, Cherry Point RCRA Hazardous Waste Management Permit.

RFI activities have been conducted at this site since 1991 and have included soil borings with soil sampling. The results of that investigation detected soil contamination. The site will require closure in accordance with RCRA requirements.

#### **2.4.11.4 Site 43 - Sewage Treatment Plant**

The Sewage Treatment Plant is also regulated by an NPDES permit which limits the amount of contaminants discharged to Slocum Creek and the frequency of compliance monitoring. The plant is presenting being upgraded to better meet its permit conditions.

No investigations have been conducted at this site to date. The site will be investigated in accordance with the permit requirements.

#### **2.4.11.5 Site 45 - Current Sludge Application Area**

This unit has been in operation since 1988 for the land application of sludge that originates in the drying beds at the sewage treatment plant. The unit is permitted to cover about 350 acres in various areas in the vicinity of the runways. Not all of these areas have been used for sludge application. It is regulated by a state water quality permit, number WQ0001489.

The sludge contains organic material and other constituents that are not digested during the sewage treatment process, including chromium, cadmium, lead, and mercury. The sludge is not a hazardous waste by either characteristic or listing.

#### **2.4.12 Operable Unit 12 (Figure 4-13)**

Operable Unit 12 consists of one site. This site is grouped alone since it is the only site that is an entirely underground storage tank (UST) fuel-related area that has been deferred to the state UST program.

#### 2.4.12.1 Site 41 - Fuel Line Leak Site

On May 5, 1986, facility personnel detected a pencil-size hole in an underground JP-5 transfer line. The line is pressurized only during fuel pumping, which occurs approximately once every 3 months when fuel barges are off-loaded at the Navy Boat Dock. Approximately 600 gallons of fuel leaked from the pipe and flowed across the ground surface southward toward an unnamed tributary to Hancock Creek.

According to the spill report, approximately 350 gallons of fuel were recovered either in a sump constructed in the spill area or by a vacuum truck. About 250 gallons of fuel were not recovered, and it is estimated that at least 10 gallons entered the nearby stream.

Contaminated soil was removed and the area was backfilled with sand. The area was inspected by state personnel from the Division of Environmental Management, who concurred with the action taken.

On January 22, 1993, a second leak was reported in this area. A report was submitted to the North Carolina Division of Environmental Management (DEM). DEM has since agreed to define the fuel line as an underground storage tank (UST) system.

#### 2.4.13 Operable Unit 13 (Figure 4-14)

Operable Unit 13 consists of two sites. These sites have been grouped together due to their close proximity. In addition, both sites are landfills.

##### 2.4.13.1 Site 21 - Borrow Pit/Landfill

Site 21 is a former borrow pit that was used for the disposal of NADEP wastes, ash from the steam plant, and (allegedly) asbestos from pipe insulation. The approximate size of the landfill was about 30 acres, and it was in use from 1949 until the early 1960s. At one time, reportedly, oily liquid seeped into a nearby ditch (location unknown) and fire burned on the landfill surface for about a month.

RI and RFI activities have been conducted at this site since the mid-1980s and have included monitoring well installations and groundwater sampling. The results of the investigations have detected contamination in the groundwater. Additional RFI activities are planned for this site to include groundwater sampling, surface water and sediment sampling in nearby Hancock Creek, and surface and subsurface soil sampling from soil borings.

#### **2.4.13.2 Site 44B - Former Sludge Application Area**

This site consists of a 12-acre area adjacent to Site 21 where sludge which originated from the Sewage Treatment Plant was applied. A Closure Plan was originally submitted for this site in December 1988. Revisions were negotiated but final approval has not been received.

#### **2.4.14 PA/SI Site (Figure 4-15)**

Only one site (Site 50) is in the initial stage of investigation which is a preliminary assessment/site investigation (PA/SI).

##### **2.4.14.1 Site 50 - PCB Transformer Spill Area**

Site 50 is the site of a one-time spill event that involved the release of PCB-containing transformer oil onto the soil. On April 22, 1981, a fork-lift truck dropped a transformer and the oil leaked onto the ground over an area of approximately 50 feet by 20 feet. The oil and visibly stained soil were removed and disposed of according to Toxic Substance Control Act (TSCA) regulations. MCAS, Cherry Point records indicate that the oil contained less than 50 ppm PCBs.

Soil samples were collected in 1991 to confirm that no residual contamination existed. Limited additional soil and groundwater sampling was recently performed in 1993 to support the initial findings. The results of the limited sampling activity are pending indicated the presence of low concentrations of DDT Isomers and PCBs in site soils. No TCL organic compounds were detected in site groundwater. Metals were detected in both soils and groundwater. The concentrations of contamination in both soils and groundwater were found to pose no unacceptable health risk based on the evaluated exposure routes and therefore no further investigation was recommended for this site.

### 3.0 SCHEDULES

TABLE 3-1

OPERABLE UNIT SUMMARY SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	OU1	843	602d	12/2/96	4/12/99																				
32	OU2	843	602d	3/6/95	7/22/97																				
63	OU3	843	602d	1/5/95	5/22/97																				
94	OU4	843	602d	9/5/95	1/26/98																				
125	OU5	843	602d	6/2/97	10/5/99																				
156	OU6	843	602d	8/1/97	12/3/99																				
187	OU7	843	602d	12/1/97	3/28/00																				
216	OU8	182	109d	1/12/95	6/15/95																				
226	OU9	843	602d	6/3/96	10/19/98																				
257	OU10	843	602d	11/9/92	3/1/95																				
288	OU13	843	602d	11/6/95	3/27/98																				
319	SITE 16 Debris Pile Design	177	123d	11/18/94	5/10/95																				
326	CRP	112	80d	2/13/95	6/6/95																				
333	1994 Annual Groundwater Report	112	80d	1/23/95	5/15/95																				





TABLE 3-4

OPERABLE UNIT 3 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
63	OU3	843	602d	1/5/95	5/22/97																				
64	Data Validation (Contractor)	30	23d	1/5/95	2/6/95																				
65	Data Evaluation	30	23d	2/6/95	3/9/95																				
66	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	3/9/95	5/10/95																				
67	Pre-Draft RI Review (MCAS, LANTDIV)	30	23d	5/10/95	6/12/95																				
68	Draft RI, Pre-Draft FS/ PRAP Preparation & Submittal (Contractor)	30	23d	6/12/95	7/13/95																				
69	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTDIV)	40	30d	7/13/95	8/23/95																				
70	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	8/23/95	9/6/95																				
71	Draft RI Response to Comments Review (EPA, NC)	7	5d	9/6/95	9/12/95																				
72	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	9/12/95	9/12/95																				
73	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	9/12/95	10/11/95																				
74	Draft FS/ PRAP/ROD Preparation & Submittal (Contractor)	30	22d	8/23/95	9/22/95																				
75	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	9/22/95	11/3/95																				
76	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	11/3/95	11/17/95																				
77	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	11/17/95	11/24/95																				
78	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	11/24/95	11/24/95																				
79	Final FS/ PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	11/24/95	12/26/95																				
80	Publish Announcement	TBD	0d																						
81	Public Meeting	TBD	1d																						
82	Public Comment Period	TBD	30d																						
83	Issue Responsiveness Summary (Attached to ROD)	TBD	1d																						
84	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	12/26/95	1/25/96																				
85	Draft Design Work Plan Review (MCAS, LANTDIV, EPA, NC)	40	30d	1/25/96	3/7/96																				
86	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	3/7/96	3/20/96																				
87	Draft Design Work Plan Response to Comments Review (MCAS, LANTDIV, EPA, NC)	7	5d	3/20/96	3/26/96																				
88	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	3/26/96	3/26/96																				
89	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	3/26/96	4/15/96																				
90	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	4/15/96	2/20/97																				
91	Construction Work Plan (Contractor)	60	44d																						
92	Remediation (Contractor)	TBD	0d																						
93	Closure (Contractor)	90	66d	2/20/97	5/22/97																				

TABLE 3-5

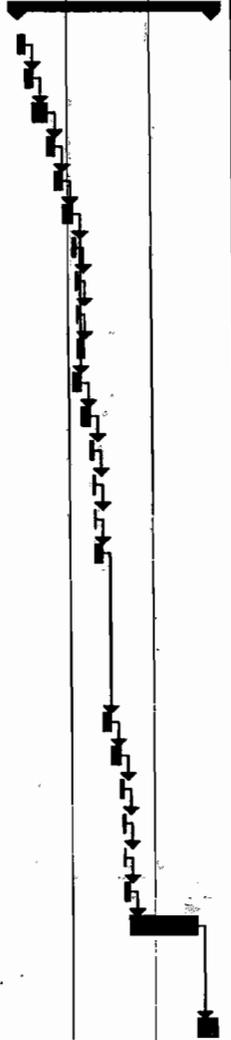
OPERABLE UNIT 4 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
94	OU4	843	602d	9/5/95	1/26/98																				
95	Data Validation (Contractor)	30	23d	9/5/95	10/5/95																				
96	Data Evaluation	30	23d	10/5/95	11/8/95																				
97	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	11/8/95	1/12/96																				
98	Pre-Draft RI Review (MCAS, LANTDIV)	30	23d	1/12/96	2/13/96																				
99	Draft RI, Pre-Draft FS/PRAP Preparation & Submittal (Contractor)	30	23d	2/13/96	3/15/96																				
100	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTDIV)	40	30d	3/15/96	4/25/96																				
101	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	4/25/96	5/8/96																				
102	Draft RI Response to Comments Review (EPA, NC)	7	5d	5/8/96	5/14/96																				
103	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	5/14/96	5/14/96																				
104	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	5/14/96	6/13/96																				
105	Draft FS/PRAP/ROD Preparation & Submittal (Contractor)	30	22d	4/25/96	5/24/96																				
106	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	5/24/96	7/8/96																				
107	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	7/8/96	7/19/96																				
108	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	7/19/96	7/25/96																				
109	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	7/25/96	7/25/96																				
110	Final FS/PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	7/25/96	8/23/96																				
111	Publish Announcement	TBD	0d	6/6/96	6/6/96																				
112	Public Meeting	TBD	1d	6/6/96	6/6/96																				
113	Public Comment Period	TBD	30d	6/6/96	7/18/96																				
114	Issue Responsiveness Summary (Attached to ROD)	TBD	1d	6/6/96	6/6/96																				
115	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	8/23/96	9/24/96																				
116	Draft Design Work Plan Review (MCAS, LANTDIV, EPA, NC)	40	30d	9/24/96	11/8/96																				
117	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	11/8/96	11/19/96																				
118	Draft Design Work Plan Response to Comments Review (MCAS, LANTDIV, EPA, NC)	7	5d	11/19/96	11/25/96																				
119	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	11/25/96	11/25/96																				
120	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	11/25/96	12/16/96																				
121	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	12/16/96	10/21/97																				
122	Construction Work Plan (Contractor)	60	44d	6/6/96	8/7/96																				
123	Remediation (Contractor)	TBD	0d	10/21/97	10/21/97																				
124	Closure (Contractor)	90	66d	10/21/97	1/26/98																				

TABLE 3-6

OPERABLE UNIT 5 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
125	<b>OU5</b>	<b>843</b>	<b>602d</b>	<b>6/2/97</b>	<b>10/5/99</b>																				
126	Data Validation (Contractor)	30	23d	6/2/97	7/2/97																				
127	Data Evaluation	30	23d	7/2/97	8/4/97																				
128	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	8/4/97	10/6/97																				
129	Pre-Draft RI Review (MCAS, LANTRDIV)	30	23d	10/6/97	11/7/97																				
130	Draft RI, Pre-Draft FS/ PRAP Preparation & Submittal (Contractor)	30	23d	11/7/97	12/10/97																				
131	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTRDIV)	40	30d	12/10/97	1/22/98																				
132	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	1/22/98	2/4/98																				
133	Draft RI Response to Comments Review (EPA, NC)	7	5d	2/4/98	2/10/98																				
134	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	2/10/98	2/10/98																				
135	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	2/10/98	3/12/98																				
136	Draft FS/ PRAP/ROD Preparation & Submittal (Contractor)	30	22d	1/22/98	2/23/98																				
137	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	2/23/98	4/3/98																				
138	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	4/3/98	4/16/98																				
139	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	4/16/98	4/22/98																				
140	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	4/22/98	4/22/98																				
141	Final FS/ PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	4/22/98	5/21/98																				
142	Publish Announcement	TBD	0d																						
143	Public Meeting	TBD	1d																						
144	Public Comment Period	TBD	30d																						
145	Issue Responsiveness Summary (Attached to ROD)	TBD	1d																						
146	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	5/21/98	6/22/98																				
147	Draft Design Work Plan Review (MCAS, LANTRDIV, EPA, NC)	40	30d	6/22/98	8/3/98																				
148	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	8/3/98	8/14/98																				
149	Draft Design Work Plan Response to Comments Review (MCAS, LANTRDIV, EPA, NC)	7	5d	8/14/98	8/20/98																				
150	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	8/20/98	8/20/98																				
151	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	8/20/98	9/9/98																				
152	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	9/9/98	7/6/99																				
153	Construction Work Plan (Contractor)	60	44d																						
154	Remediation (Contractor)	TBD	0d																						
155	Closure (Contractor)	90	66d	7/8/99	10/5/99																				



REVISION 1  
March 1995



TABLE 3-8

OPERABLE UNIT 7 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
187	<b>OU7</b>	<b>843</b>	<b>602d</b>	<b>12/1/97</b>	<b>3/28/00</b>																				
188	Data Validation (Contractor)	30	23d	12/1/97	1/2/98																				
189	Data Evaluation	30	23d	1/2/98	2/3/98																				
190	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	2/3/98	4/7/98																				
191	Pre-Draft RI Review (MCAS, LANTDIV)	30	23d	4/7/98	5/7/98																				
192	Draft RI, Pre-Draft FS/ PRAP Preparation & Submittal (Contractor)	30	23d	5/7/98	6/9/98																				
193	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTDIV)	40	30d	6/9/98	7/21/98																				
194	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	7/21/98	8/3/98																				
195	Draft RI Response to Comments Review (EPA, NC)	7	5d	8/3/98	8/7/98																				
196	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	8/7/98	8/7/98																				
197	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	8/7/98	9/7/98																				
198	Draft FS/ PRAP/ROD Preparation & Submittal (Contractor)	30	22d	7/21/98	8/19/98																				
199	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	8/19/98	9/29/98																				
200	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	9/29/98	10/12/98																				
201	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	10/12/98	10/16/98																				
202	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	10/16/98	10/16/98																				
203	Final FS/ PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	10/16/98	11/16/98																				
204	Publish Announcement	TBD	0d																						
205	Public Meeting	TBD	1d																						
206	Public Comment Period	TBD	30d																						
207	Issue Responsiveness Summary (Attached to ROD)	TBD	1d																						
208	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	11/16/98	12/15/98																				
209	Draft Design Work Plan Review (MCAS, LANTDIV, EPA, NC)	40	30d	12/15/98	1/25/99																				
210	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	1/25/99	2/5/99																				
211	Draft Design Work Plan Response to Comments Review (MCAS, LANTDIV, EPA, NC)	7	5d	2/5/99	2/11/99																				
212	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	2/11/99	2/11/99																				
213	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	2/11/99	3/3/99																				
214	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	3/3/99	12/28/99																				
215	Construction Work Plan (Contractor)	60	44d																						
216	Remediation (Contractor)	TBD	0d																						
217	Closure (Contractor)	90	66d	12/28/99	3/28/00																				

**TABLE 3-9  
OPERABLE UNIT 8 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA**

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
218	OU8	182	109d	1/12/95	6/15/95																				
219	Data Evaluation	30	23d	1/12/95	2/13/95																				
220	Draft Final RAR Preparation & Submittal (Contractor)	30	23d	2/13/95	3/16/95																				
221	Draft Final RAR Review (EPA, NC)	40	30d	3/16/95	4/26/95																				
222	Draft Final RAR Response to Comments Preparation & Submittal(Contractor)	14	10d	4/28/95	5/9/95																				
223	Draft Final RAR Response to Comments Review (EPA,NC)	7	5d	5/9/95	5/15/95																				
224	Teleconference/Meeting on Draft Final RAR Response to Comments (TEAM)	1	1d	5/15/95	5/15/95																				
225	Final RAR and Final Response to Comments Preparation and Submittal (Contractor)	30	23d	5/15/95	6/15/95																				

1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4  
1

TABLE 3-10

OPERABLE UNIT 9 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
226	OU9	843	602d	6/3/96	10/19/98																				
227	Data Validation (Contractor)	30	23d	6/3/96	7/3/96																				
228	Data Evaluation	30	23d	7/3/96	8/5/96																				
229	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	8/5/96	10/7/96																				
230	Pre-Draft RI Review (MCAS, LANTDIV)	30	23d	10/7/96	11/8/96																				
231	Draft RI, Pre-Draft FS/ PRAP Preparation & Submittal (Contractor)	30	23d	11/8/96	12/11/96																				
232	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTDIV)	40	30d	12/11/96	1/23/97																				
233	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	1/23/97	2/5/97																				
234	Draft RI Response to Comments Review (EPA, NC)	7	5d	2/5/97	2/11/97																				
235	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	2/11/97	2/11/97																				
236	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	2/11/97	3/13/97																				
237	Draft FS/ PRAP/ROD Preparation & Submittal (Contractor)	30	22d	1/23/97	2/24/97																				
238	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	2/24/97	4/4/97																				
239	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	4/4/97	4/17/97																				
240	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	4/17/97	4/23/97																				
241	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	4/23/97	4/23/97																				
242	Final FS/ PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	4/23/97	5/22/97																				
243	Publish Announcement	TBD	0d																						
244	Public Meeting	TBD	1d																						
245	Public Comment Period	TBD	30d																						
246	Issue Responsiveness Summary (Attached to ROD)	TBD	1d																						
247	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	5/22/97	6/23/97																				
248	Draft Design Work Plan Review ( MCAS, LANTDIV, EPA, NC)	40	30d	6/23/97	8/4/97																				
249	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	6/4/97	8/15/97																				
250	Draft Design Work Plan Response to Comments Review (MCAS,LANTDIV, EPA, NC)	7	5d	8/15/97	8/21/97																				
251	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	8/21/97	8/21/97																				
252	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	8/21/97	9/11/97																				
253	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	9/11/97	7/20/98																				
254	Construction Work Plan (Contractor)	60	44d																						
255	Remediation (Contractor)	TBD	0d																						
256	Closure (Contractor)	90	66d	7/20/98	10/19/98																				

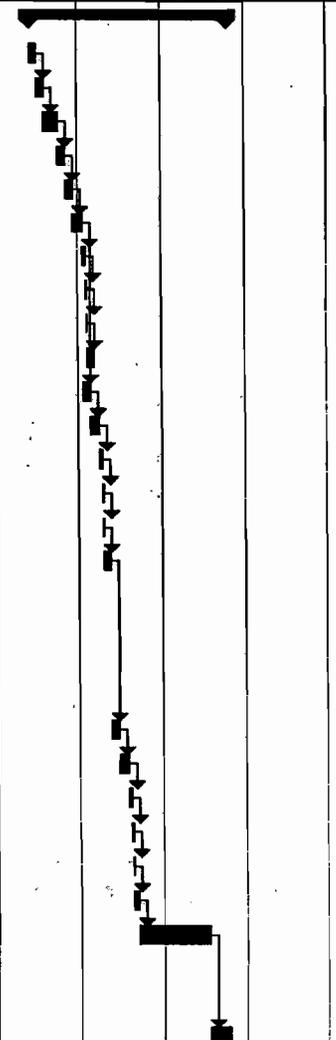




TABLE 3-12

OPERABLE UNIT 13 SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
288	<b>OU13</b>	<b>843</b>	<b>602d</b>	<b>11/6/95</b>	<b>3/27/98</b>																				
289	Data Validation (Contractor)	30	23d	11/6/95	12/8/95																				
290	Data Evaluation	30	23d	12/8/95	1/11/96																				
291	Pre-Draft RI Preparation & Submittal (Contractor)	60	45d	1/11/96	3/14/96																				
292	Pre-Draft RI Review ( MCAS, LANTDIV)	30	23d	3/14/96	4/15/96																				
293	Draft RI, Pre-Draft FS/ PRAP Preparation & Submittal (Contractor)	30	23d	4/15/96	5/15/96																				
294	Draft RI Review (EPA,NC) Pre-draft FS/PRAP Review (MCAS, LANTDIV)	40	30d	5/15/96	6/26/96																				
295	Draft RI Response to Comments Preparation & Submittal (Contractor)	14	10d	6/26/96	7/10/96																				
296	Draft RI Response to Comments Review (EPA, NC)	7	5d	7/10/96	7/16/96																				
297	Teleconference / Meeting on Draft RI Response to Comments (TEAM)	1	1d	7/16/96	7/16/96																				
298	Final RI and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	7/16/96	8/14/96																				
299	Draft FS/ PRAP/ROD Preparation & Submittal (Contractor)	30	22d	8/26/96	7/26/96																				
300	Draft FS/PRAP/ROD review (EPA, NC)	40	30d	7/26/96	9/6/96																				
301	Draft FS/PRAP/ROD Response to Comments Preparation & Submittal (Contractor)	14	10d	9/6/96	9/19/96																				
302	Draft FS/PRAP/ROD Response to Comments Review (EPA, NC)	7	5d	9/19/96	9/25/96																				
303	Teleconference / Meeting on Draft FS/PRAP/ROD Response to Comments (Team)	1	1d	9/25/96	9/25/96																				
304	Final FS/ PRAP/ROD and Final Response to Comments Preparation & Submittal (Contractor)	30	22d	9/25/96	10/25/96																				
305	Publish Announcement	TBD	0d																						
306	Public Meeting	TBD	1d																						
307	Public Comment Period	TBD	30d																						
308	Issue Responsiveness Summary (Attached to ROD)	TBD	1d																						
309	Draft Design Work Plan Preparation & Submittal (Contractor)	30	22d	10/25/96	11/26/96																				
310	Draft Design Work Plan Review ( MCAS, LANTDIV, EPA, NC)	40	30d	11/26/96	1/9/97																				
311	Draft Design Work Plan Response to Comments Preparation & Submittal (Contractor)	14	10d	1/9/97	1/22/97																				
312	Draft Design Work Plan Response to Comments Review (MCAS,LANTDIV, EPA, NC)	7	5d	1/22/97	1/28/97																				
313	Teleconference / Meeting on Draft Design Work Plan Response to Comments (Team)	1	1d	1/28/97	1/28/97																				
314	Final Design Work Plan & Final Response to Comments Preparation & Submittal (Contractor)	20	15d	1/28/97	2/18/97																				
315	Remedial Design Requirements Package Preparation & Submittal (Contractor)	300	215d	2/18/97	12/23/97																				
316	Construction Work Plan (Contractor)	60	44d																						
317	Remediation (Contractor)	TBD	0d																						
318	Closure (Contractor)	90	66d	12/23/97	3/27/98																				



**TABLE 3-14**  
**CRP SCHEDULE**  
**MCAS CHERRY POINT, NORTH CAROLINA**

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
326	<b>CRP</b>	<b>112</b>	<b>80d</b>	<b>2/13/95</b>	<b>6/6/95</b>																				
327	Draft Final CRP & Slide Show Preparation & Submittal (Contractor)	30	23d	2/13/95	3/16/95																				
328	Draft Final CRP and Slide Show Review (MCAS, LANTDIV, EPA, NC)	30	23d	3/16/95	4/17/95																				
329	Draft Final CRP & Slide Show Response to Comments Preparation & Submittal (Contractor)	14	10d	4/17/95	4/28/95																				
330	Draft Final CRP & Slide Show Response to Comments Review (MCAS, LANTDIV, EPA, NC)	7	5d	4/28/95	5/4/95																				
331	Teleconference/Meeting on Draft Final CRP & Slide Show Response to Comments (TEAM)	1	1d	6/4/95	5/4/95																				
332	Final CRP/Slide Show & Final Response to Comments Preparation & Submittal (Contractor)	30	23d	5/4/95	6/6/95																				

TABLE 3-15

1994 ANNUAL GROUNDWATER REPORT SCHEDULE  
MCAS CHERRY POINT, NORTH CAROLINA

ID	Task Name	Approx. Cal. Days	Work Days	Start	Finish	1995				1996				1997				1998				1999			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
333	1994 Annual Groundwater Report	112	80d	1/23/95	5/15/95																				
334	Final Report Preparation & Submittal (Contractor)	30	23d	1/23/95	2/23/95																				
335	Final Report Review (EPA,NC)	30	23d	2/23/95	3/27/95																				
336	Final Report Response to Comments Preparation & Submittal (Contractor)	14	10d	3/27/95	4/7/95																				
337	Final Report Response to Comments Review (EPA,NC)	7	5d	4/7/95	4/13/95																				
338	Teleconference/Meeting on Final Report Response To Comments (TEAM)	1	1d	4/13/95	4/13/95																				
339	Final Report Addendum & Response to Comments Preparation & Submittal (Contractor)	30	23d	4/13/95	5/15/95																				

**TABLE 3-16**

**FISCAL YEAR 1995 DOCUMENT SUBMITTALS  
 MCAS CHERRY POINT, NORTH CAROLINA**

	Document Name	Submittal Date
OU2	Pre-Draft RI	07/10/95
	Draft RI, Pre-Draft FS/PRAP	09/11/95
	Draft FS/PRAP/ROD	11/22/95
OU3	Pre-Draft RI	05/10/95
	Draft RI, Pre-Draft FS/PRAP	07/13/95
	Draft FS/PRAP/ROD	09/22/95
OU8	Draft Final RAR	03/16/95
	Final RAR	06/15/95
Site 16	100% Design EPR, E&S Control Plan SMP	03/15/95
	Second Draft SCR and Draft RAP	04/17/95
	Final SCR and RAP	05/08/95
	Final Design	05/10/95
CRP	Draft Final CRP and Slide Show	03/16/95
	Final CRP and Slide Show	06/06/95
1994 GW Report	Final Report Addendum (if necessary)	05/15/95

4.0 OPERABLE UNIT/SITE FIGURES

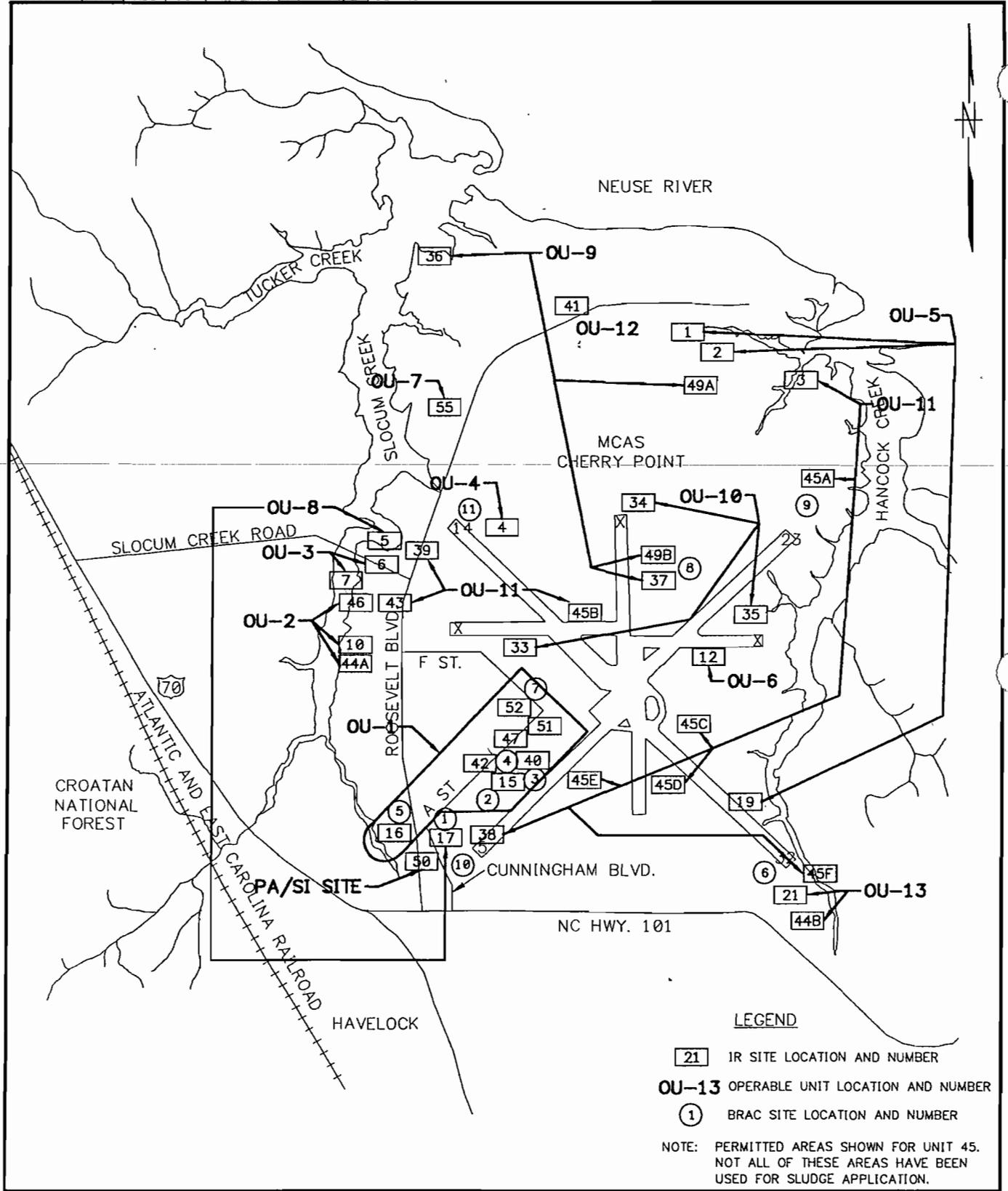
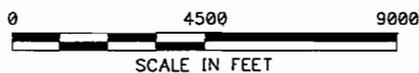


FIGURE 4-1

**LOCATION MAP**  
**MCAS - CHERRY POINT, NC**



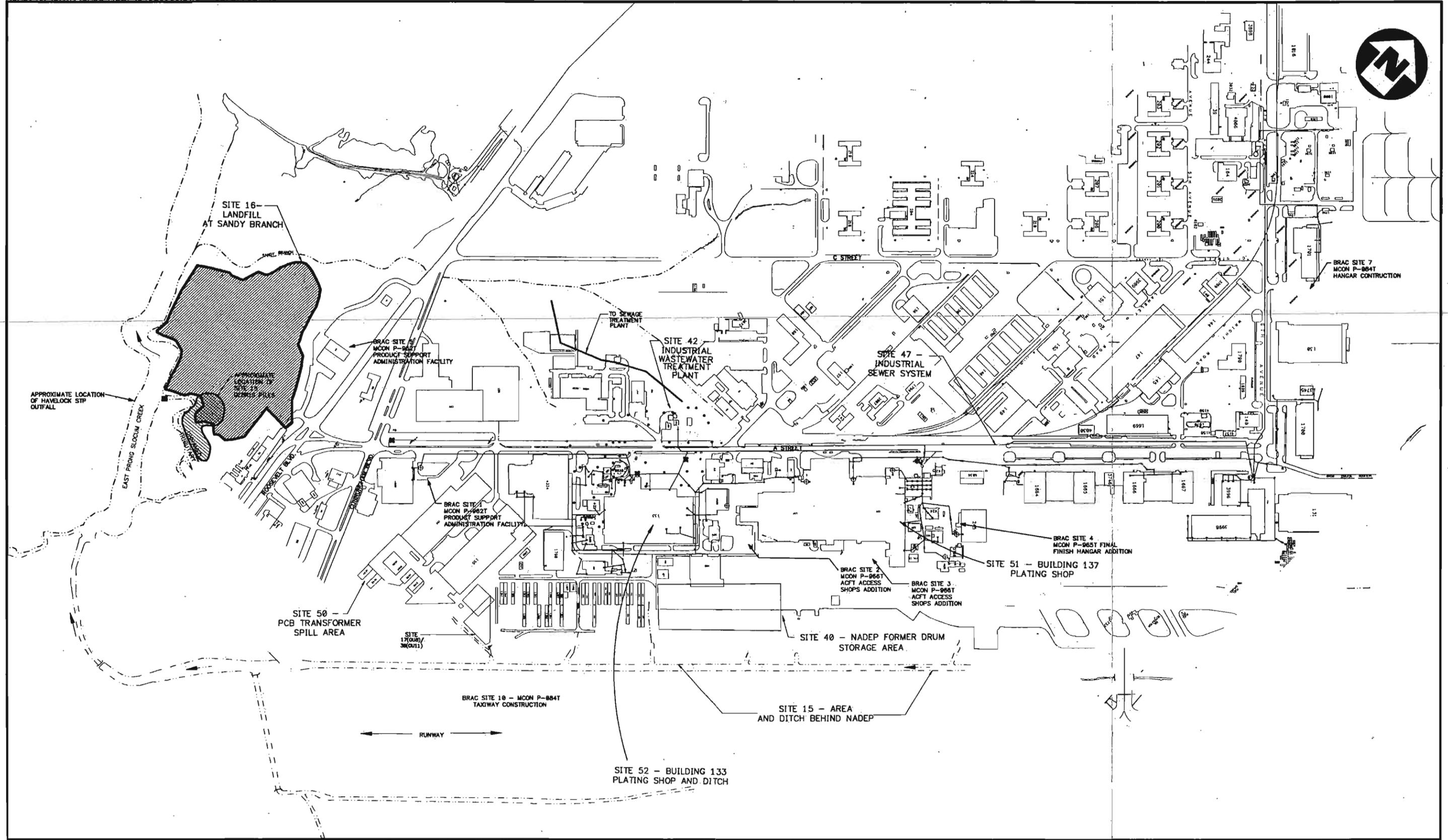
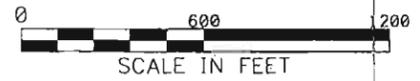
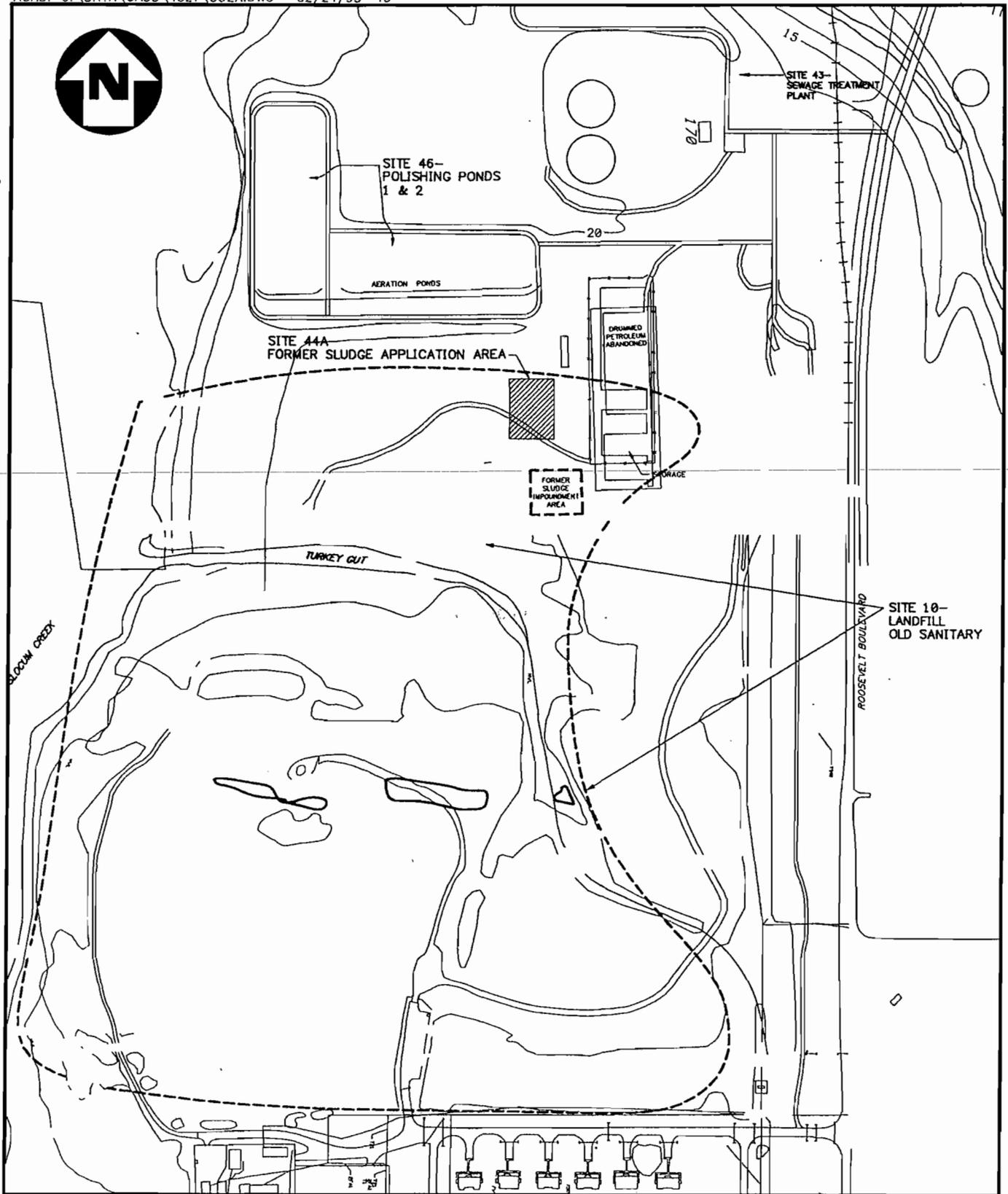


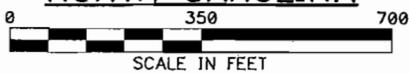
FIGURE 4-2

**OU1**  
**LOCATION MAP**  
**MCAS, CHERRY POINT, NORTH CAROLINA**





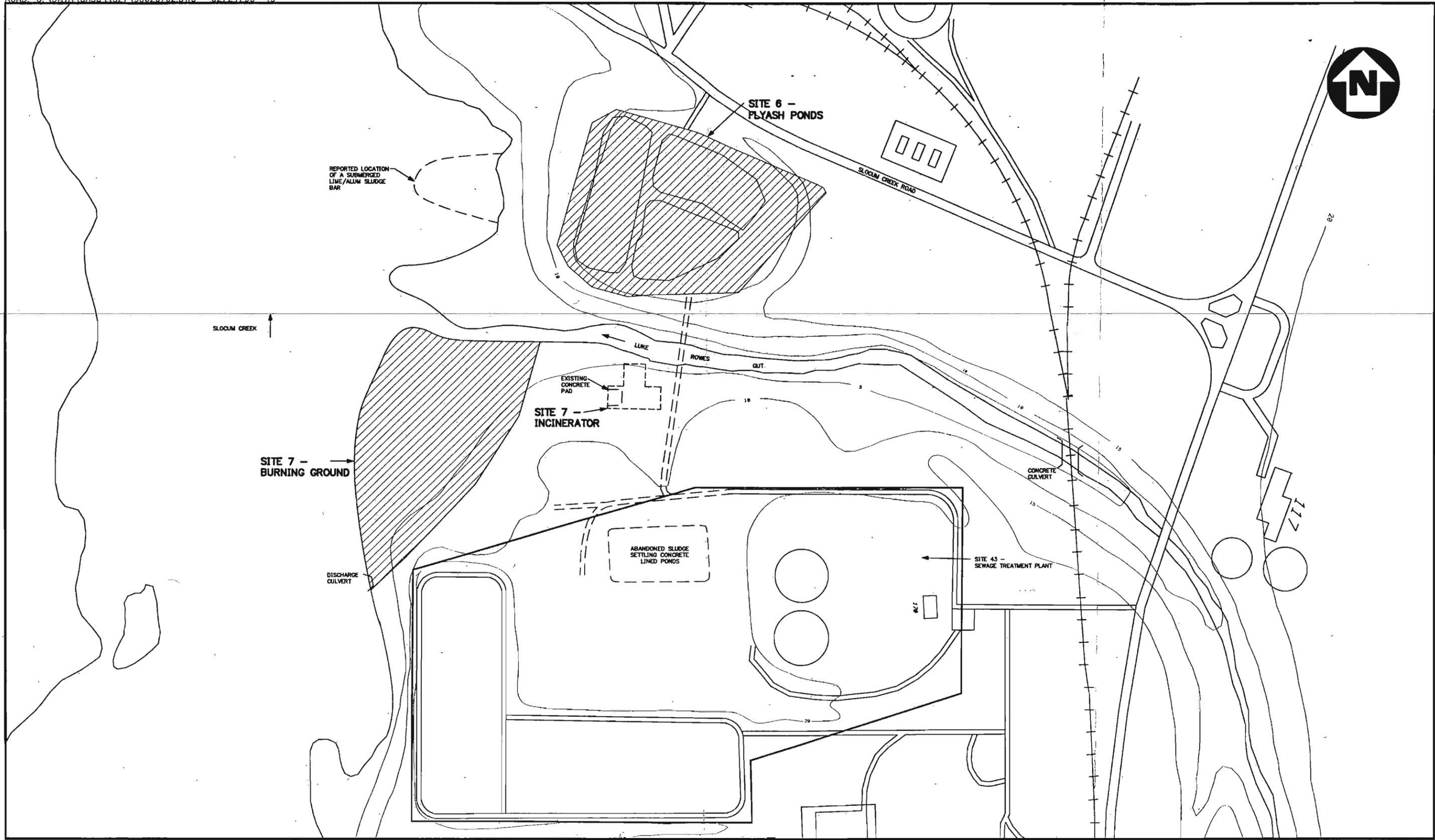
**OU2 LOCATION MAP**  
**MCAS, CHERRY POINT**  
**NORTH CAROLINA**



**FIGURE 4-3**



This Page Intentionally Left Blank



**OU3**  
**LOCATION MAP**  
**MCAS, CHERRY POINT, NORTH CAROLINA**



FIGURE 4-4



LEGEND

-  DISTURBED AREA - 1949
-  DISTURBED AREA - 1954 - 1963
-  DISTURBED AREA - 1970

OU4  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA



FIGURE 4-5

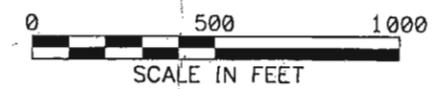
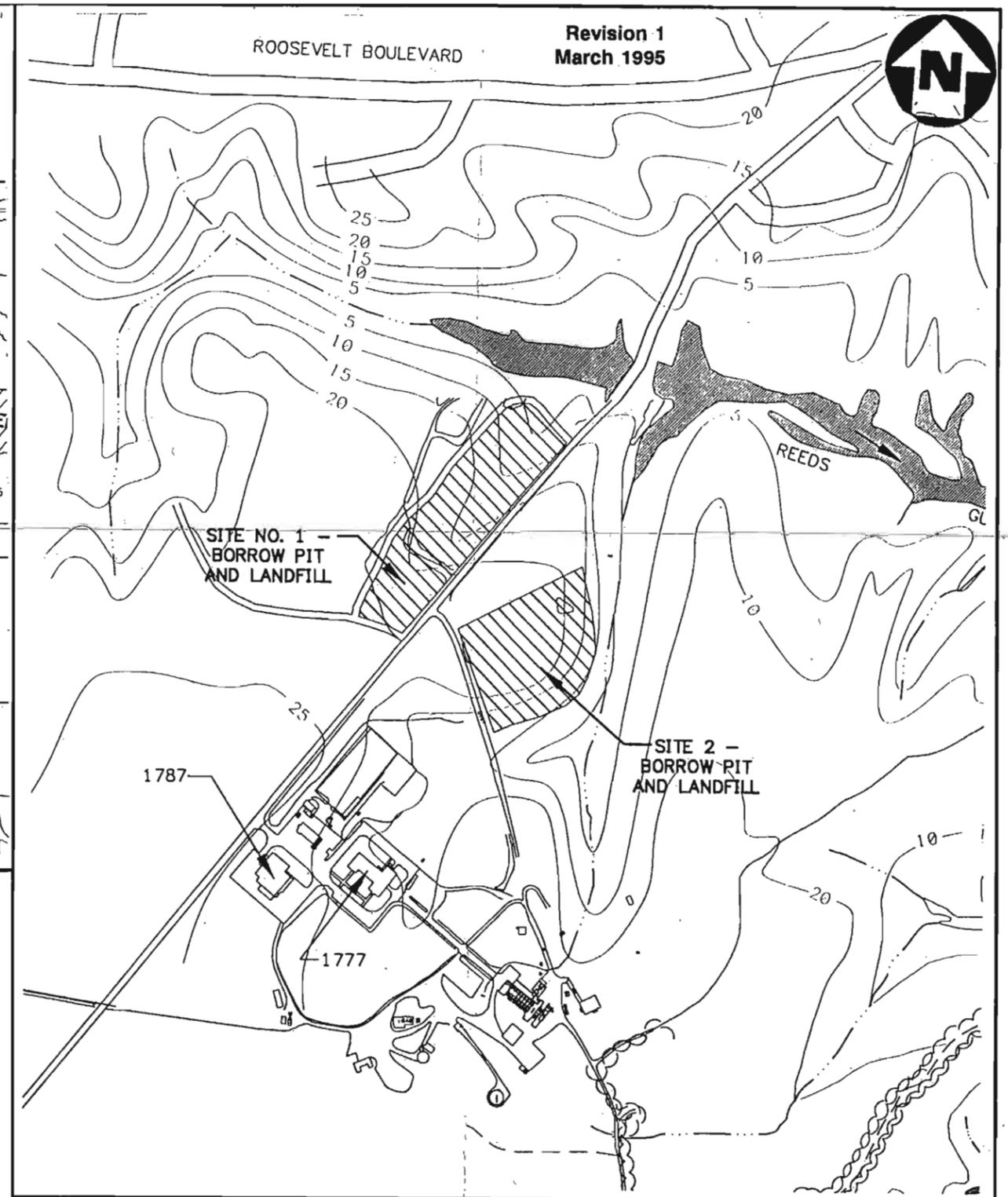
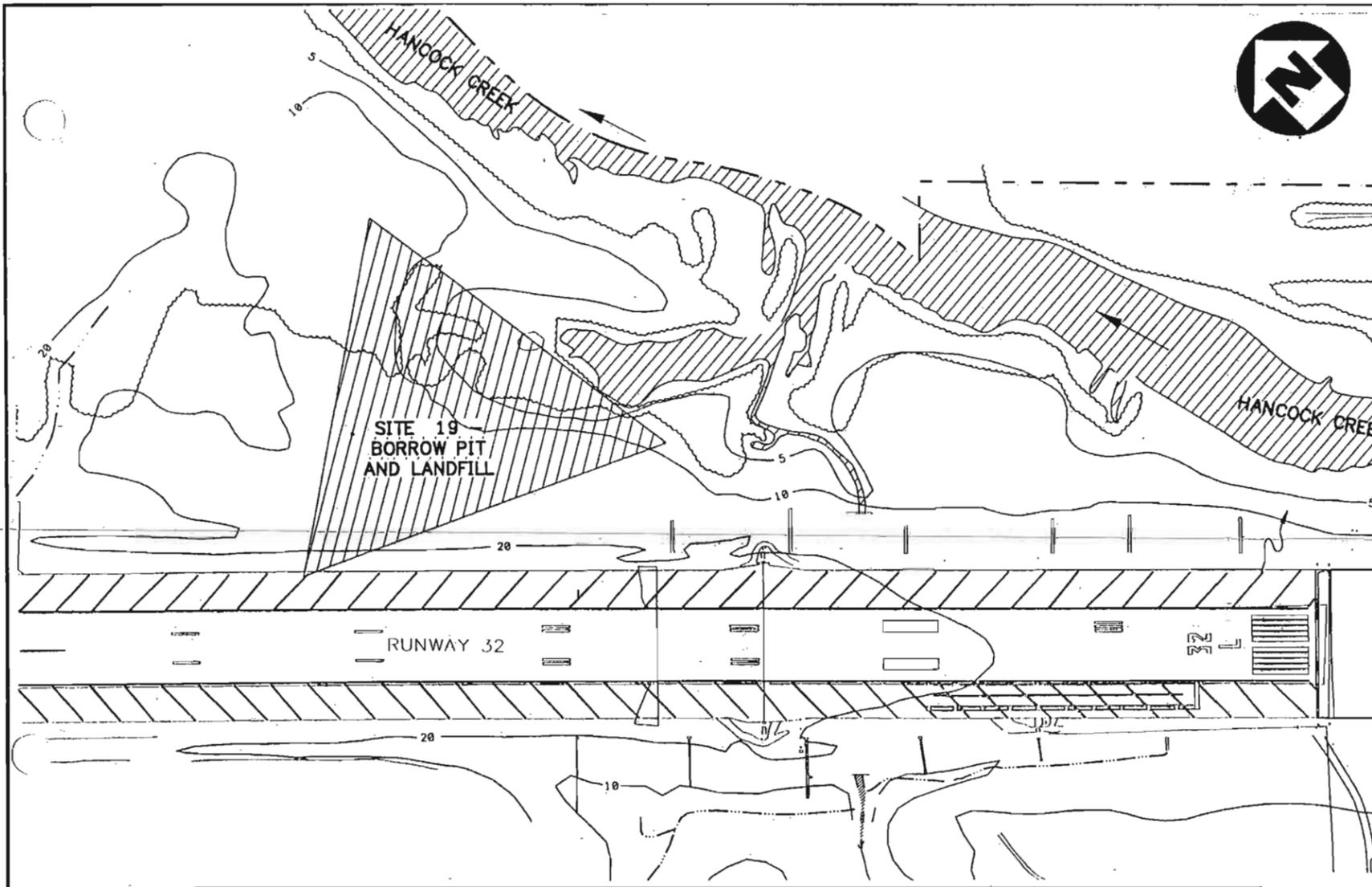
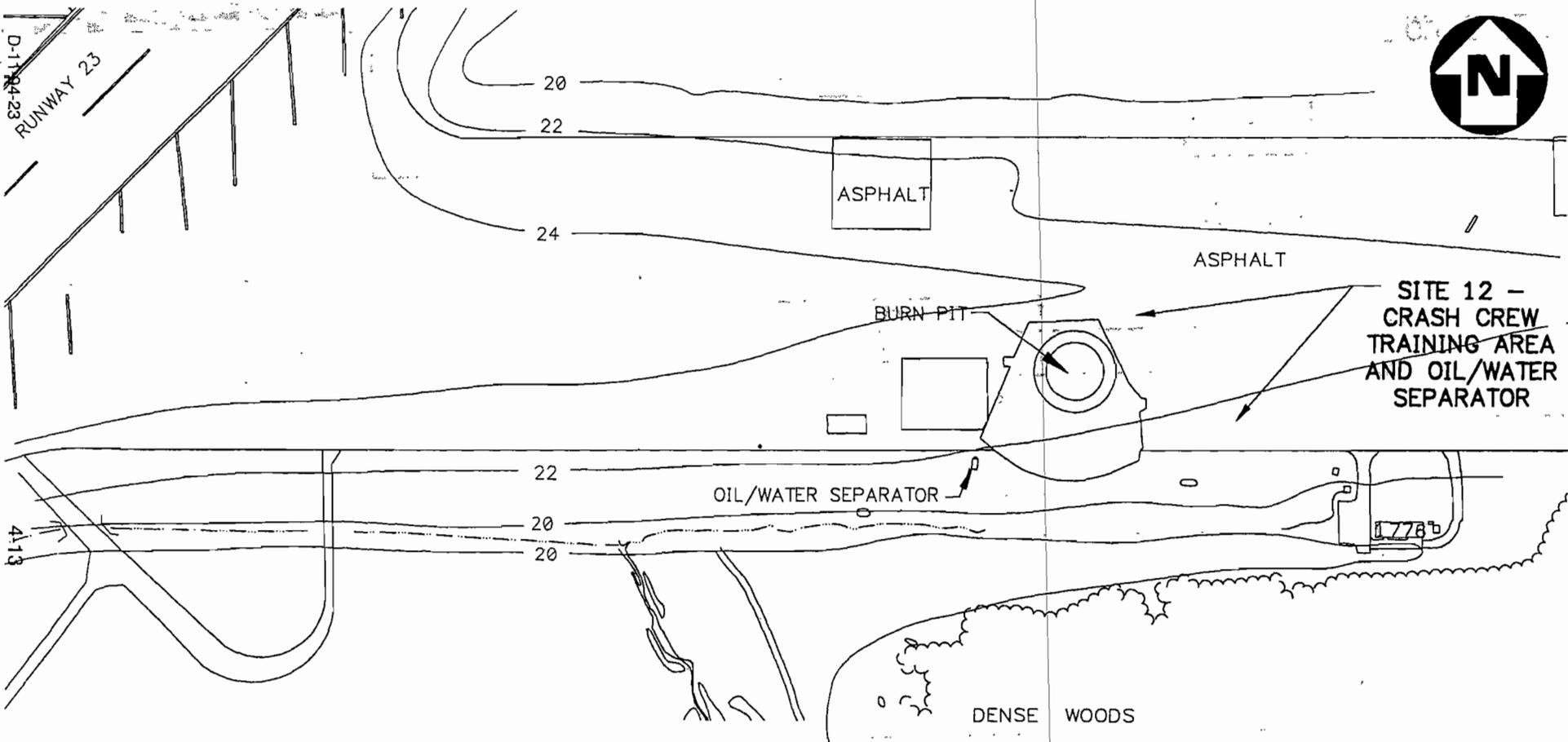


FIGURE 4-6

**OU-5  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA**





**SITE 12 -  
CRASH CREW  
TRAINING AREA  
AND OIL/WATER  
SEPARATOR**

**OU-6  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA**

**Halliburton NUS  
CORPORATION**

**FIGURE 4-7**

I:\CAO: 0:\DATA\CA00\4527\ZONE25-ADWG 02/24/95 TD (PVIEW-PLOT) (MVIEW-PLOT.DWG) 006.LAY

**Revision 1  
March 1995**

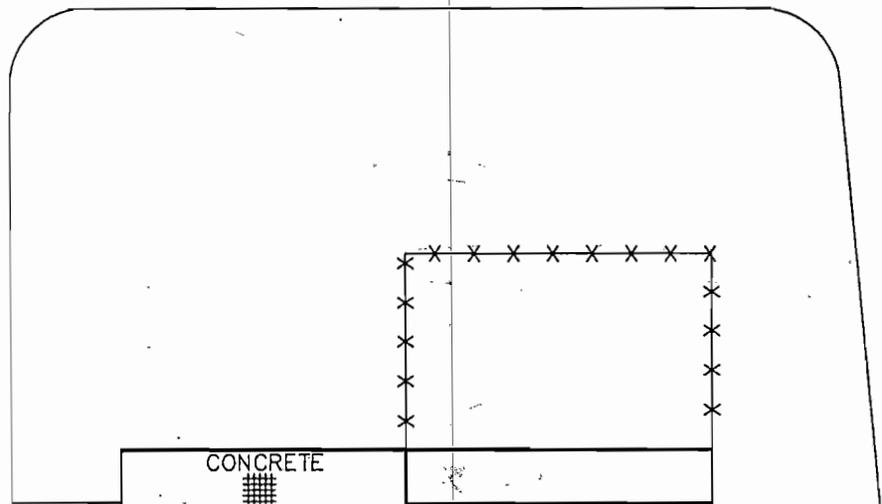
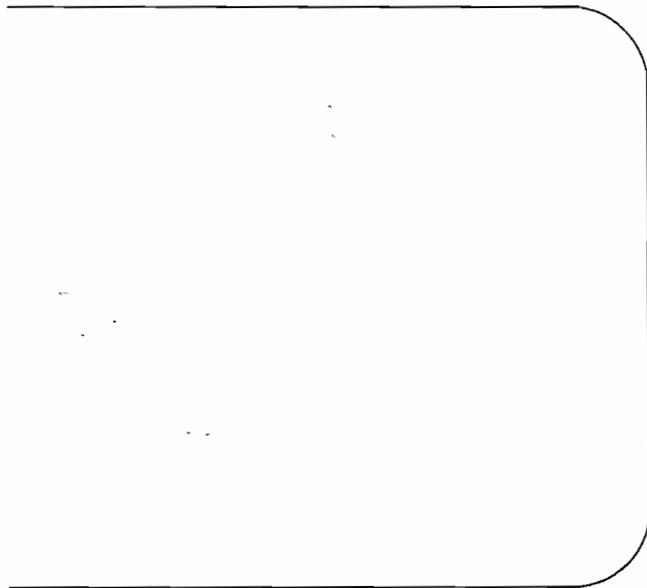
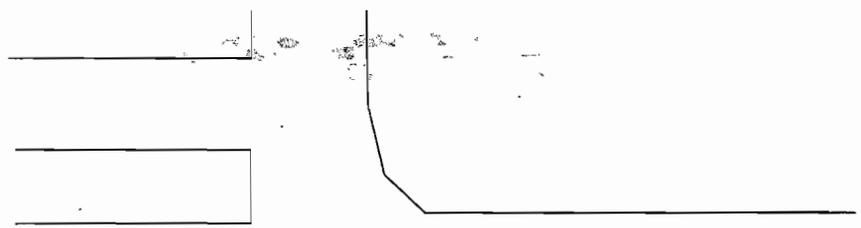
CTO 0187

D-11-94-23

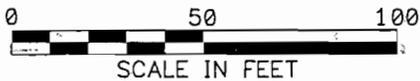
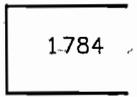
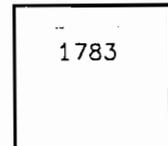
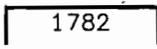
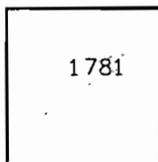


4-14

CTO 0187



SITE 55 - THIRD LAAM TANK



SCALE IN FEET

OU-7  
LOCATION MAP  
MCAS CHERRY POINT.

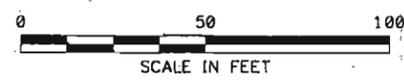
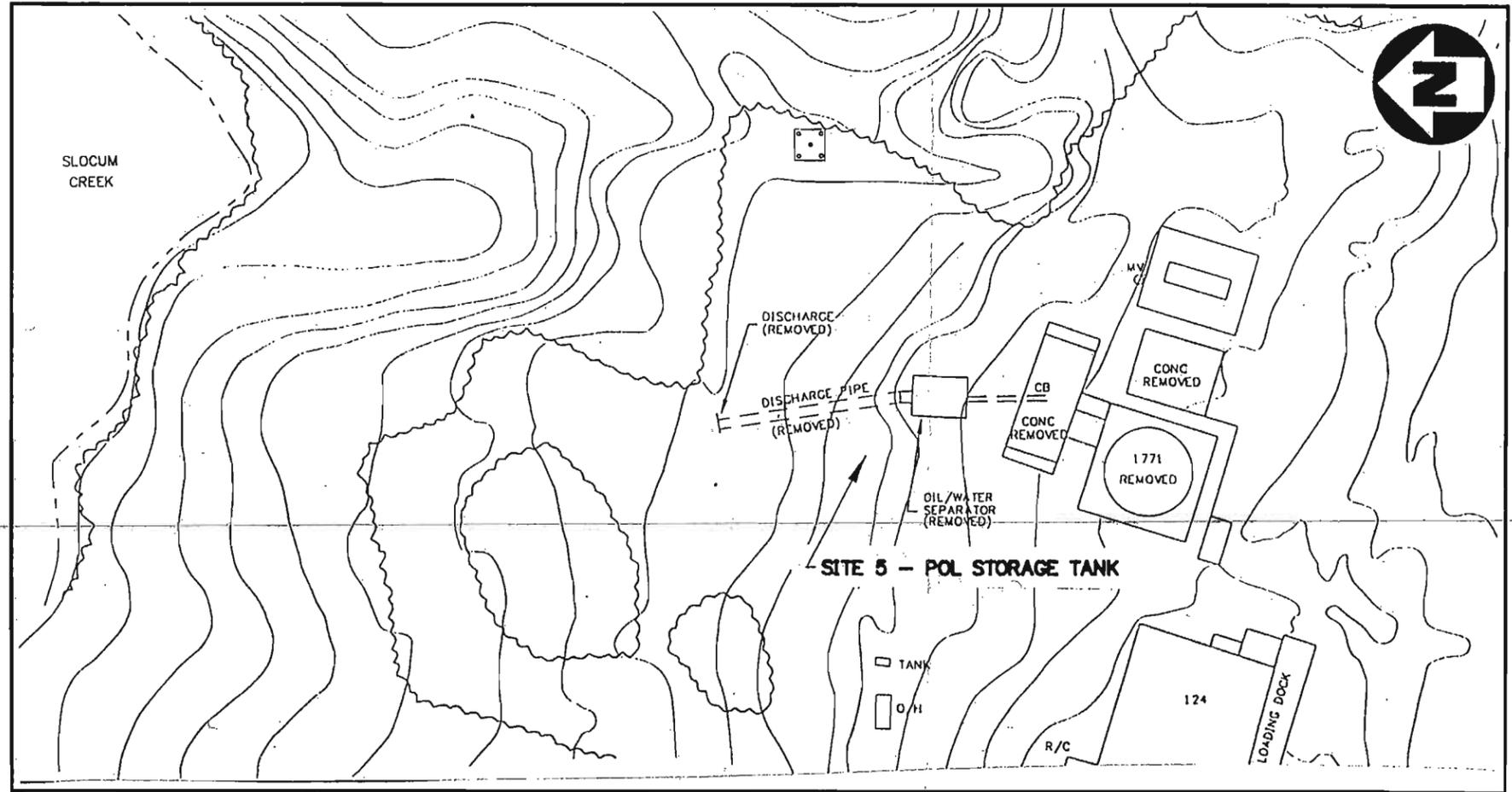
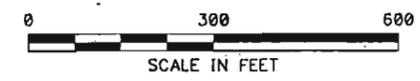
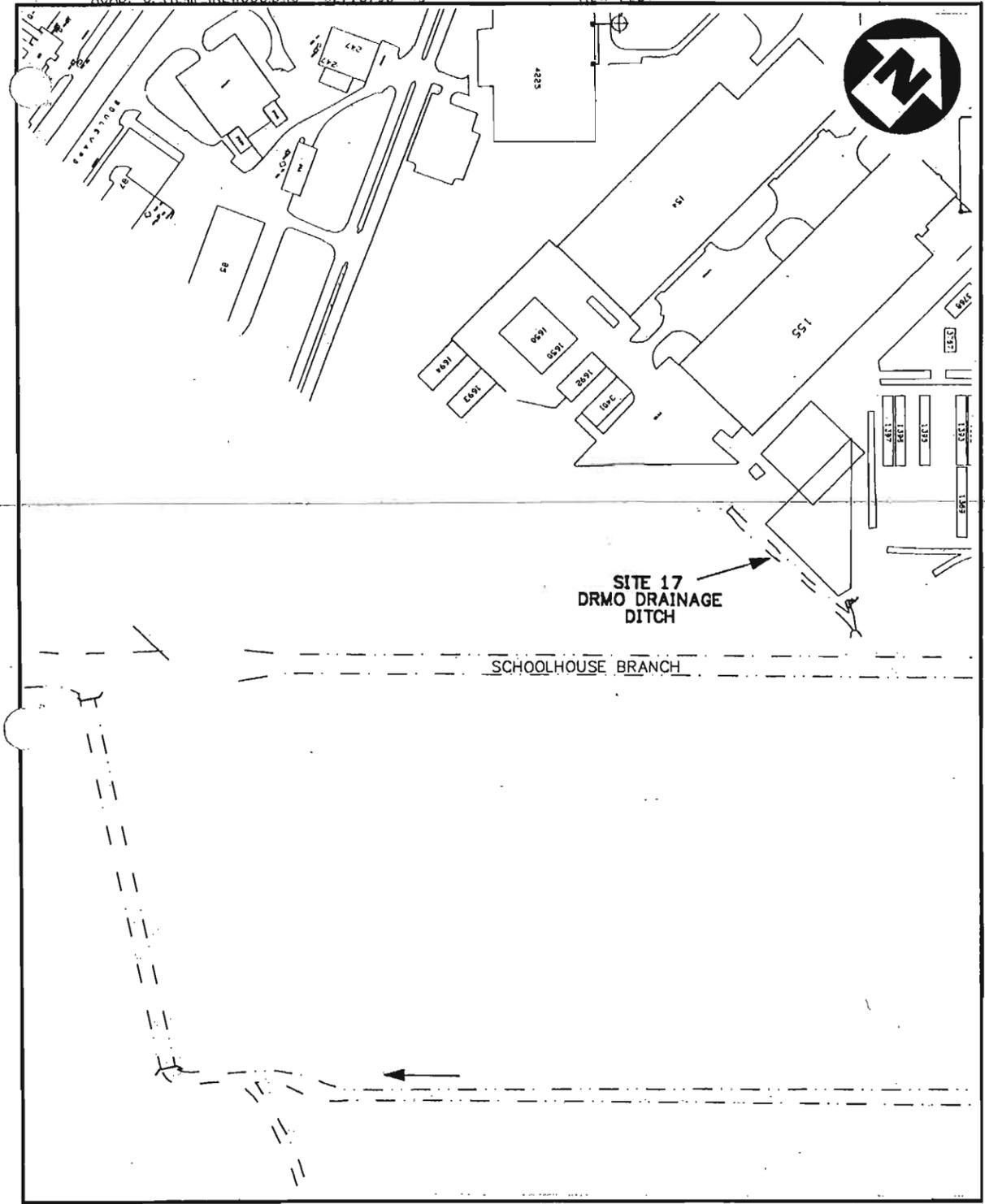
FIGURE 4-8



Revision 1  
March 1995

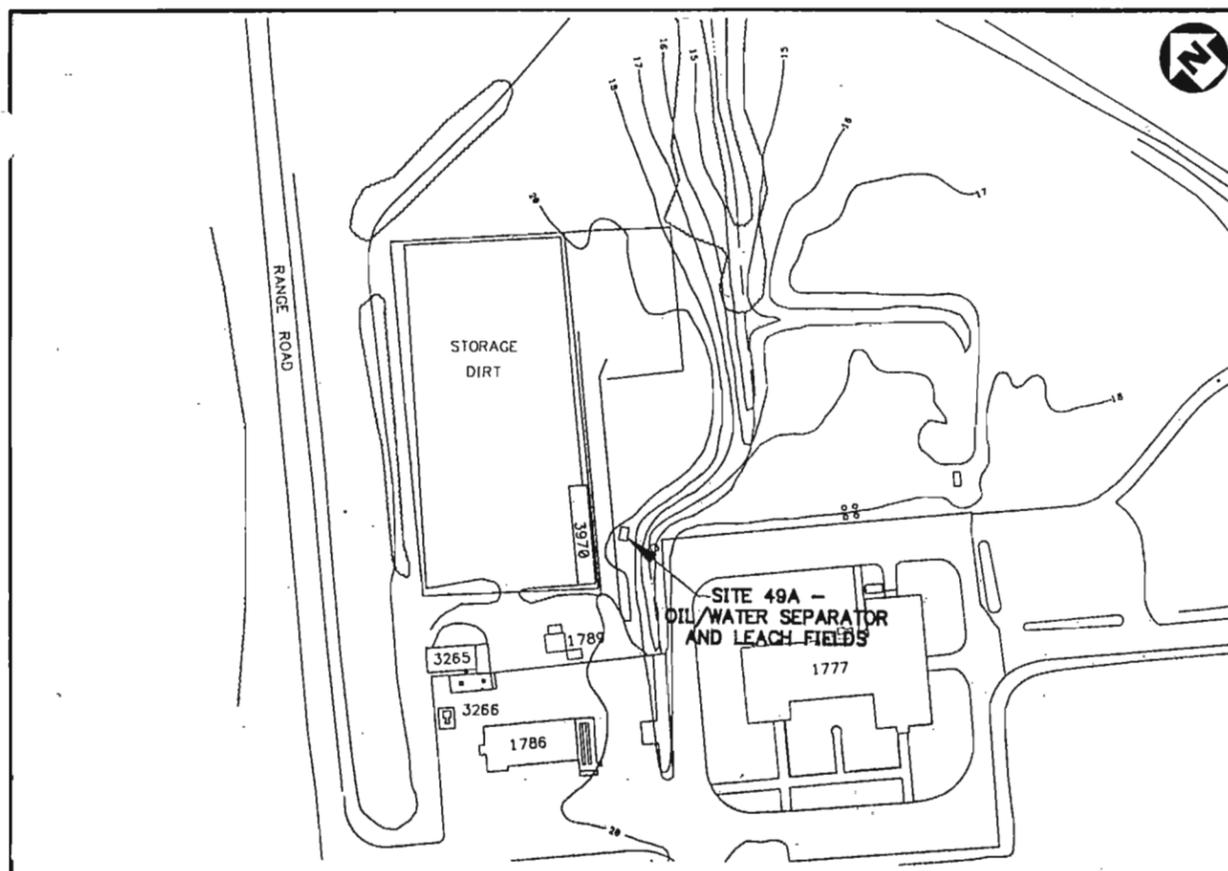
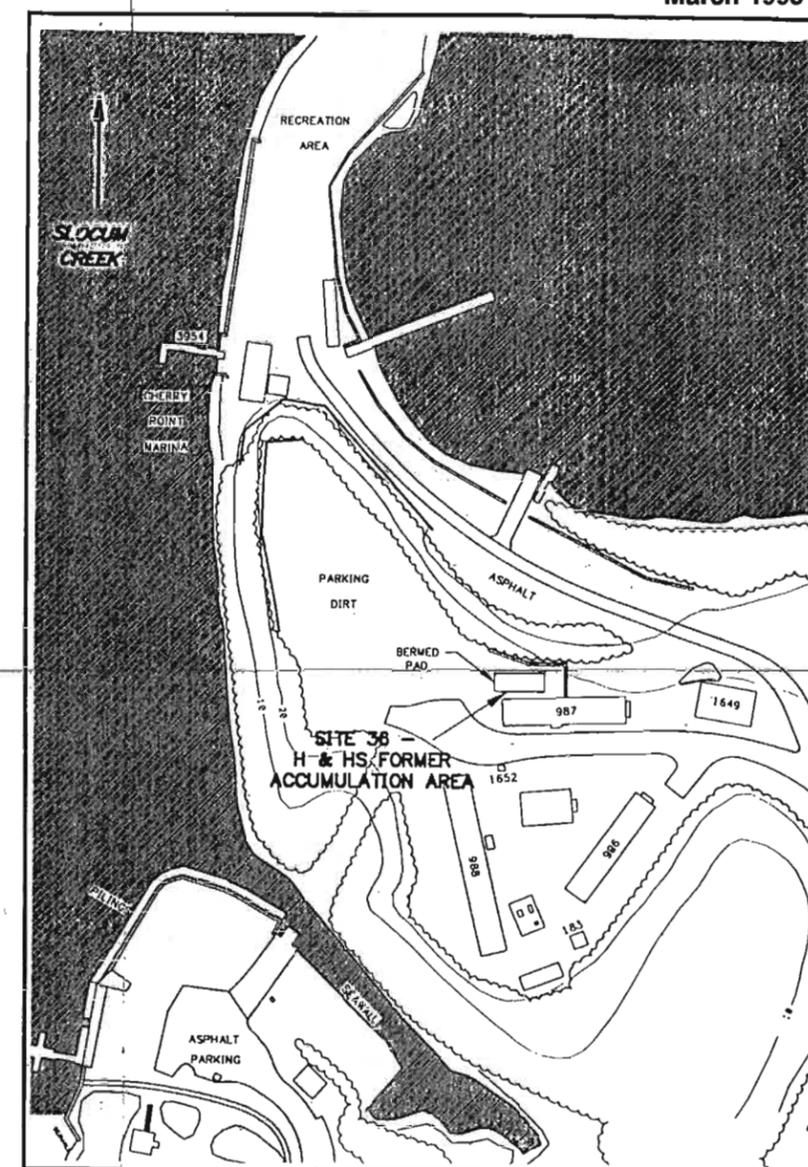
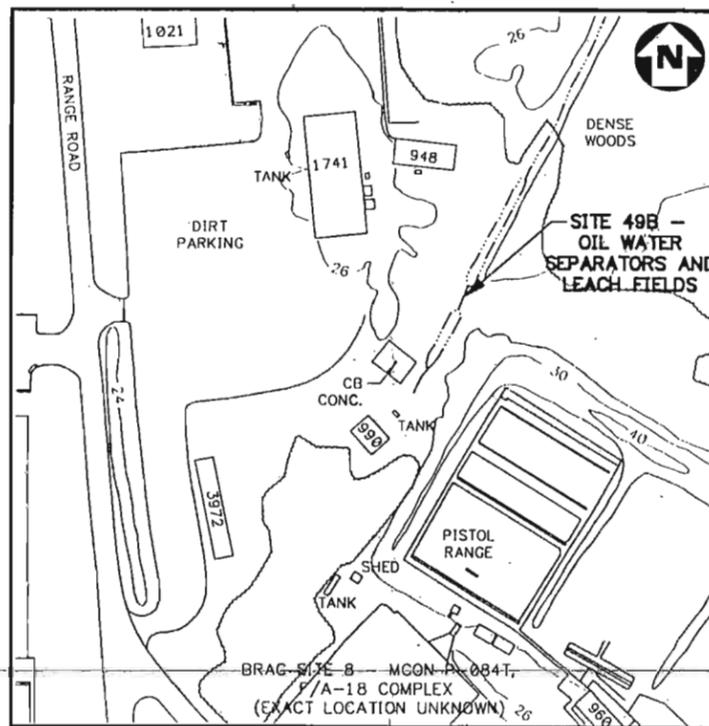
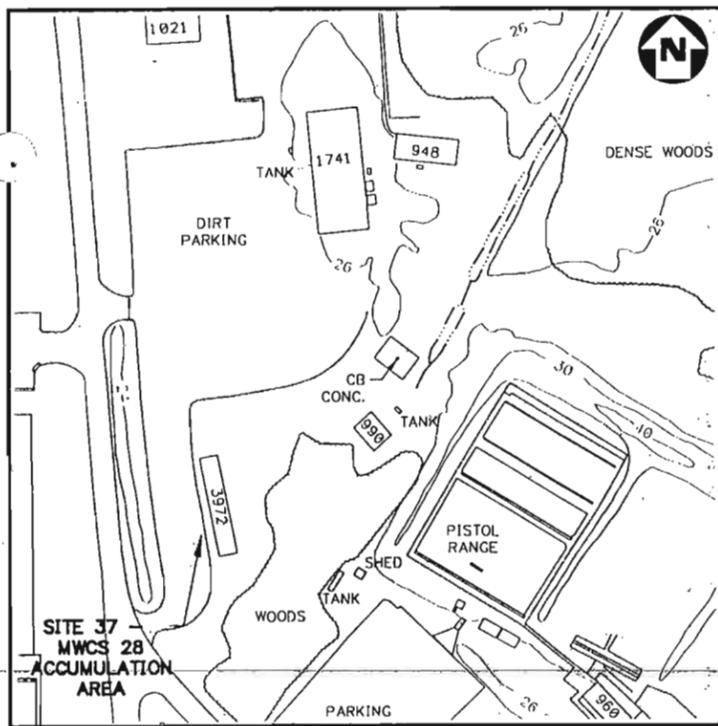
ACAD: C:\TEMP\NEW008.DWG 02/15/95 TD

VIEW=PLOT



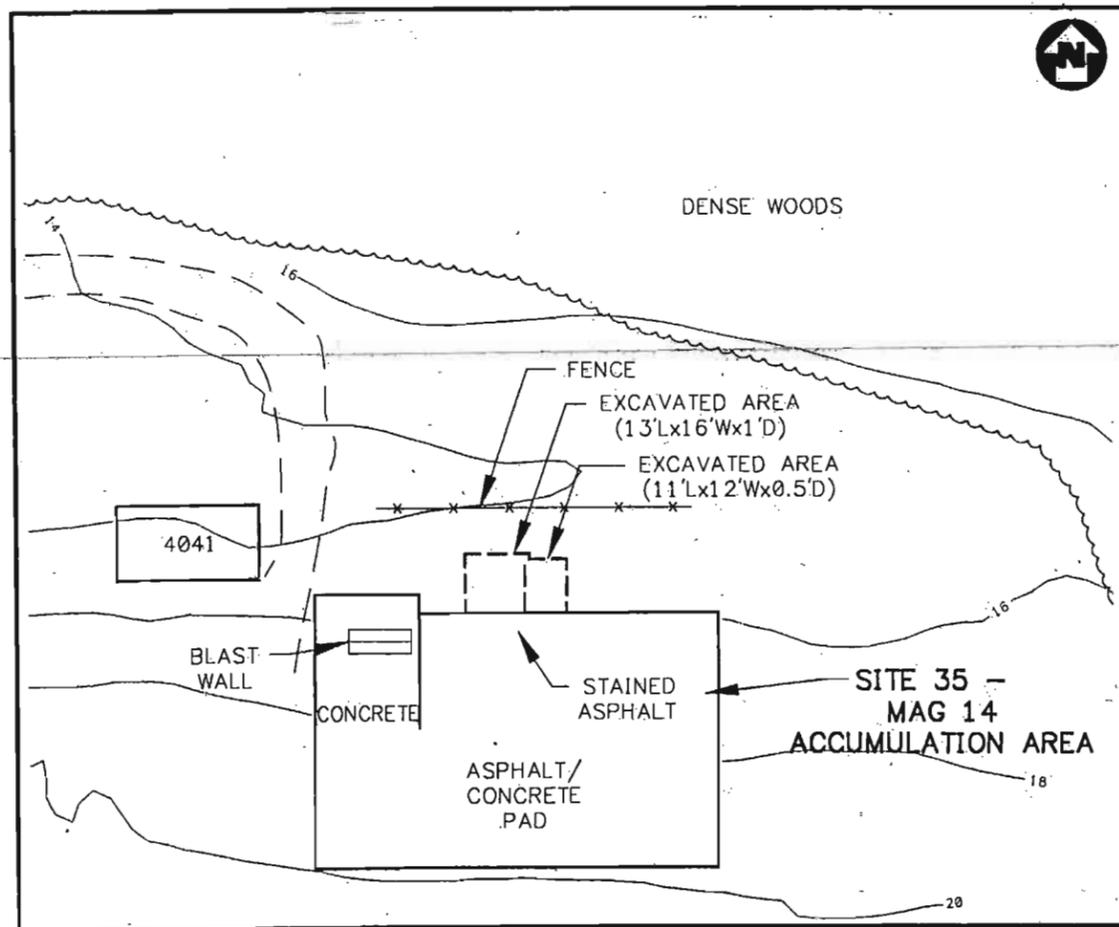
**OU-8**  
**LOCATION MAP**  
**MCAS, CHERRY POINT, NORTH CAROLINA**

**FIGURE 4-9**



OU-9  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA

FIGURE 4-10



NOT TO SCALE

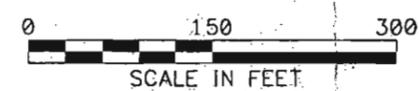
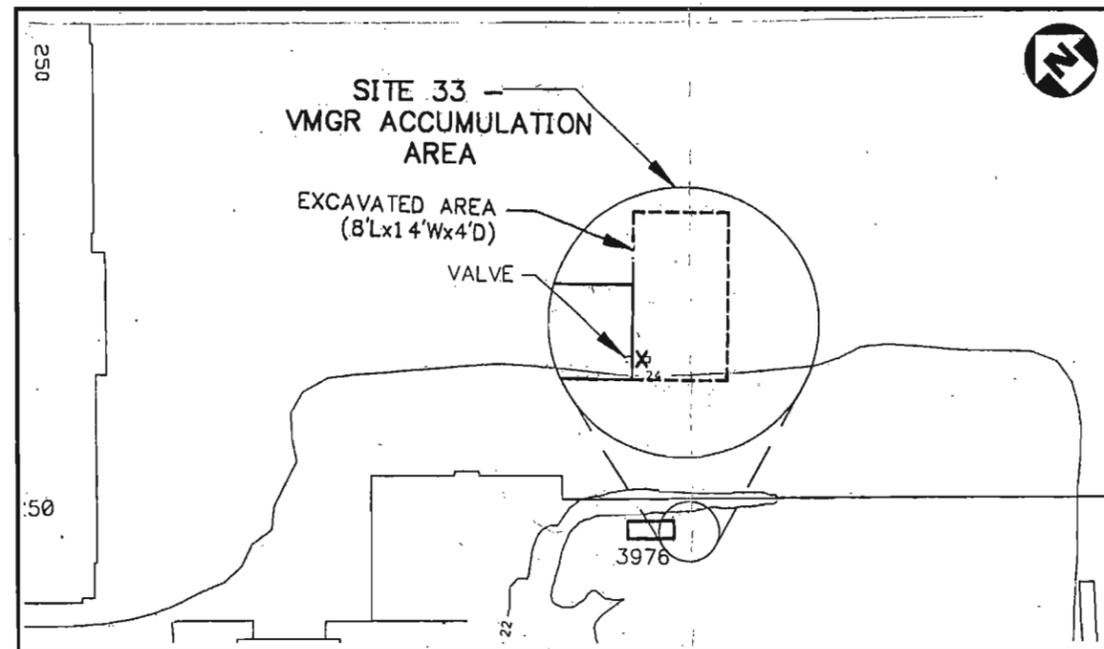
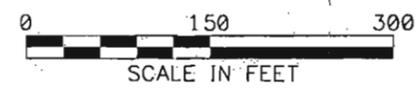
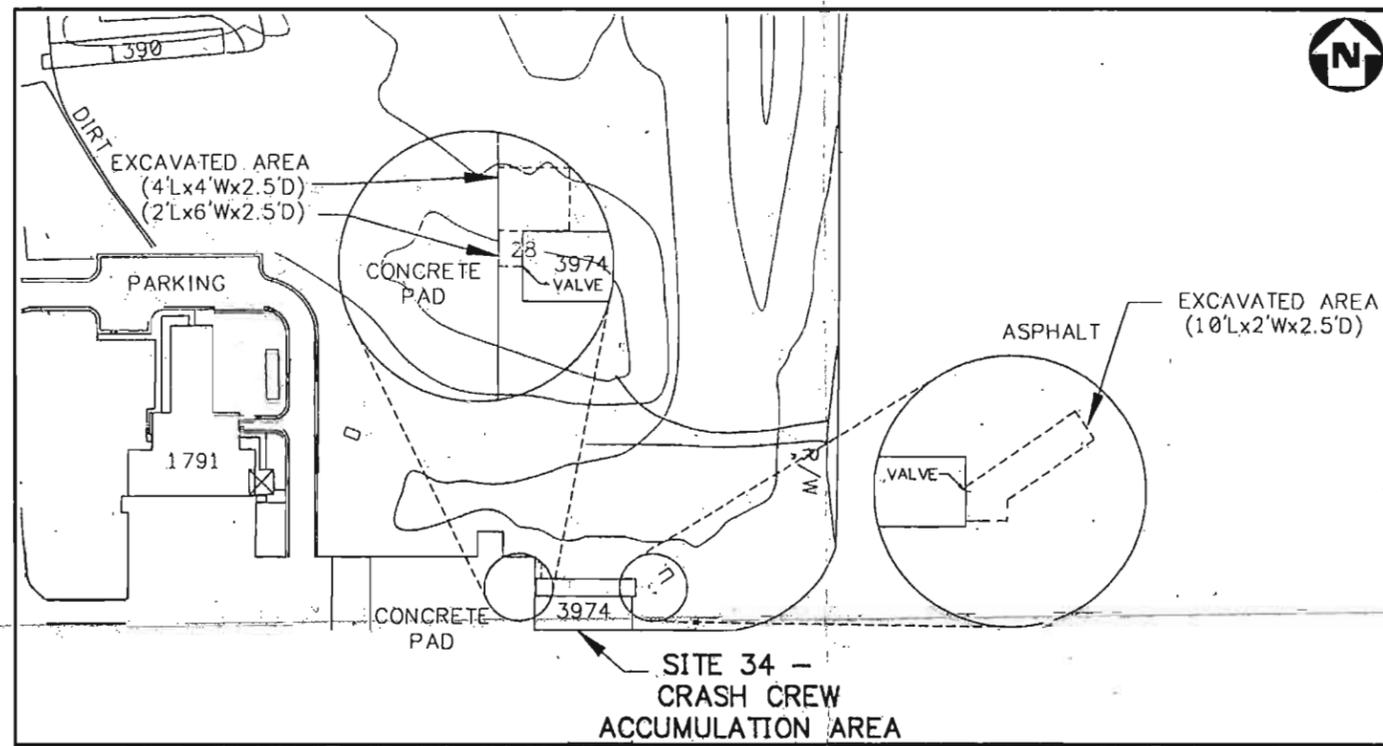
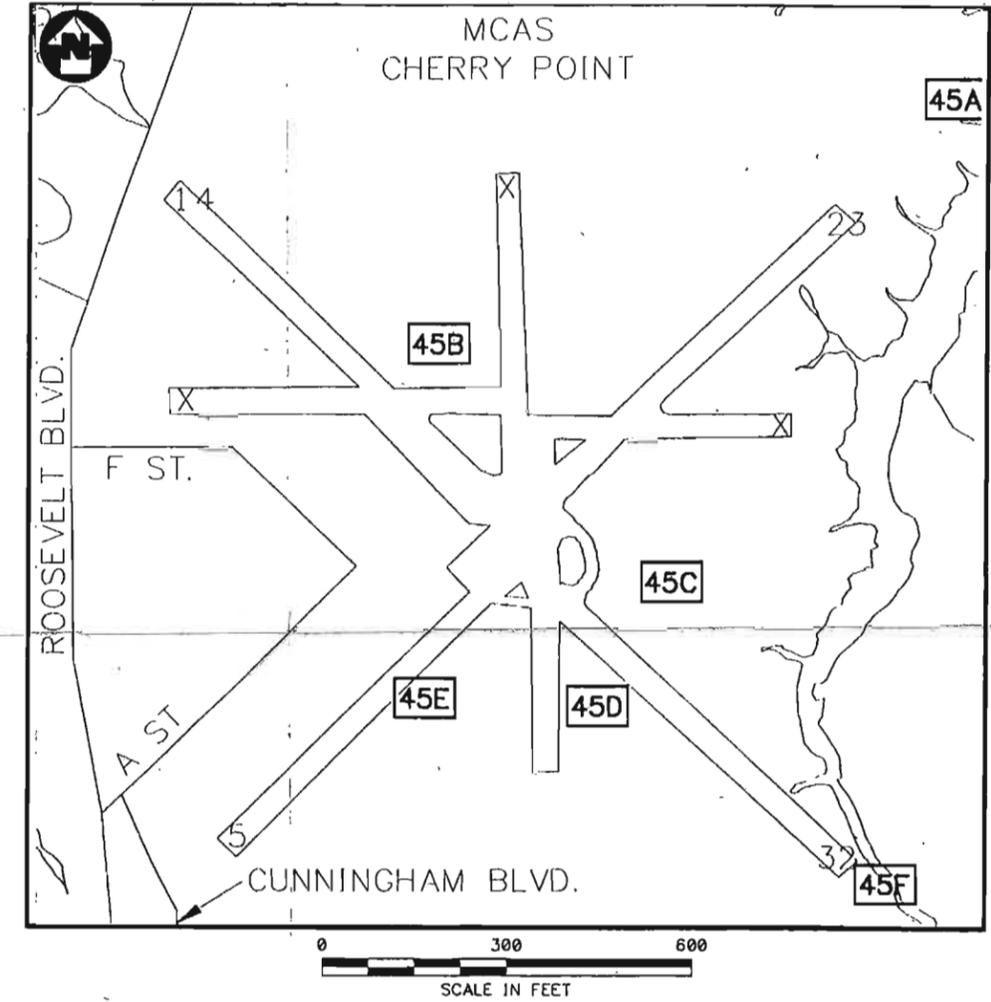
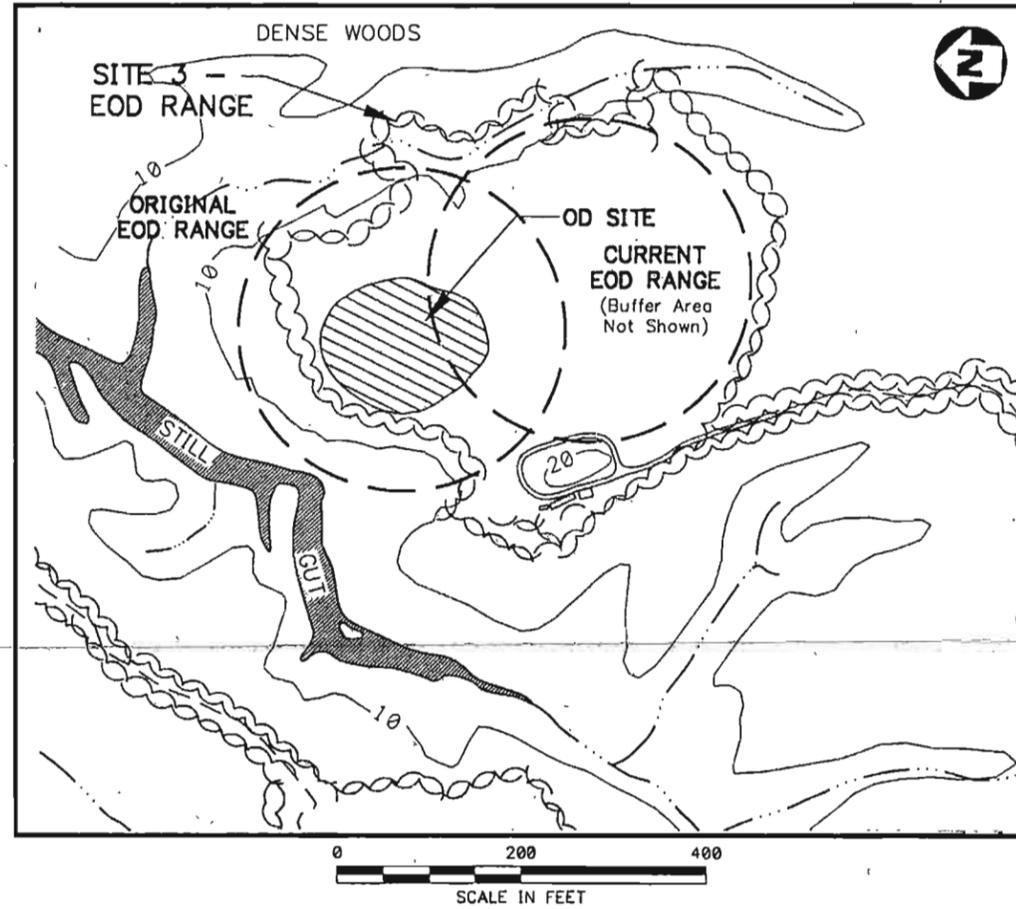
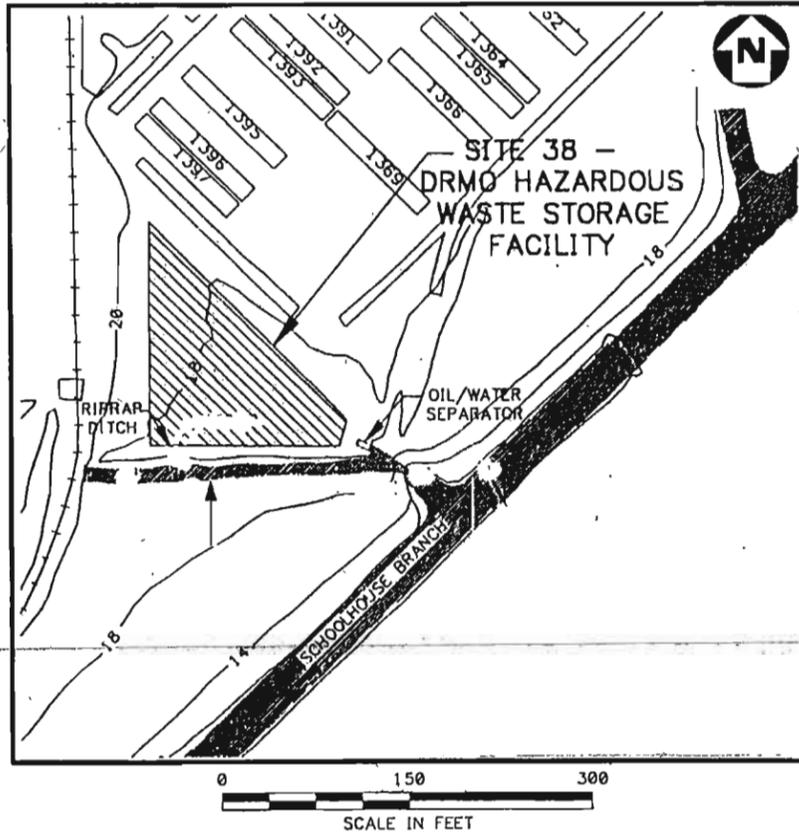
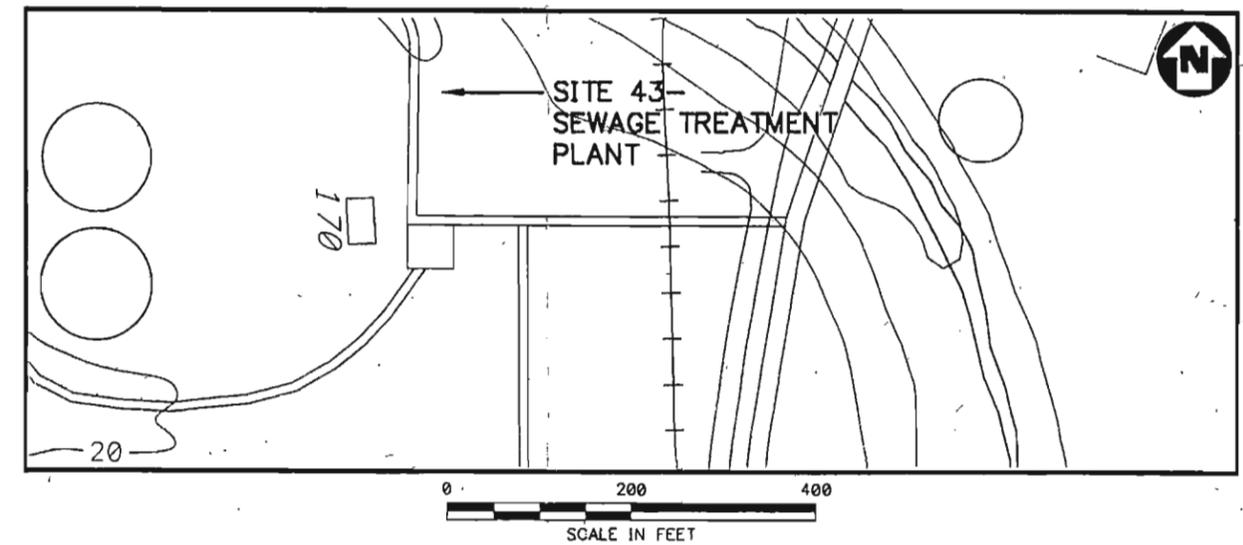
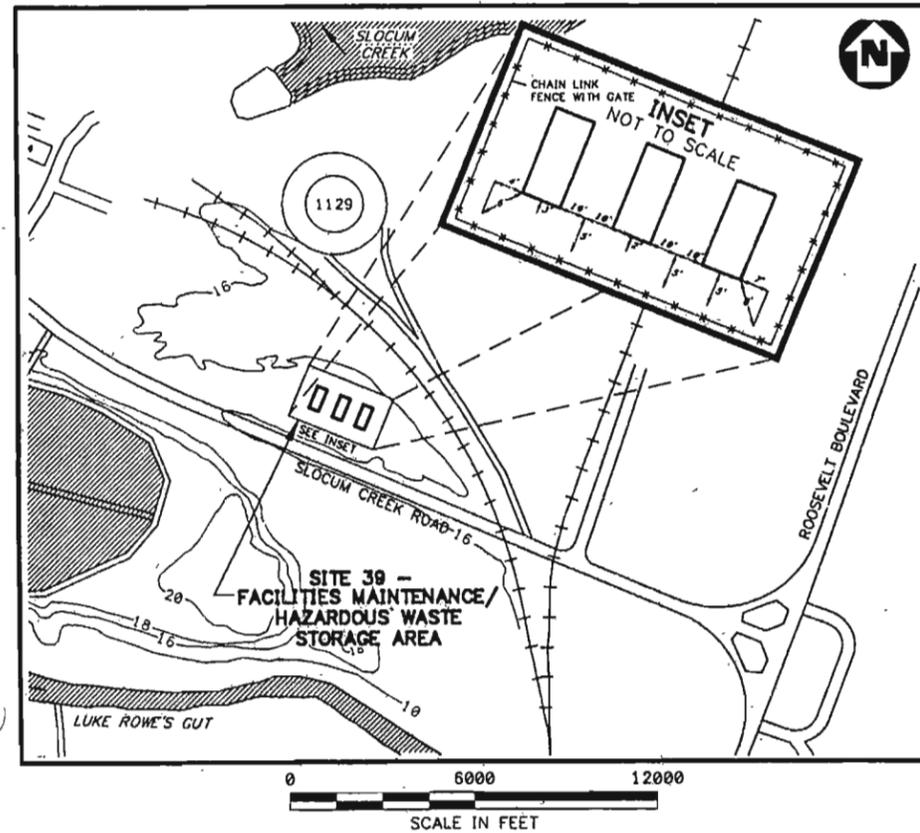


FIGURE 4-11

**OU-10  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA**

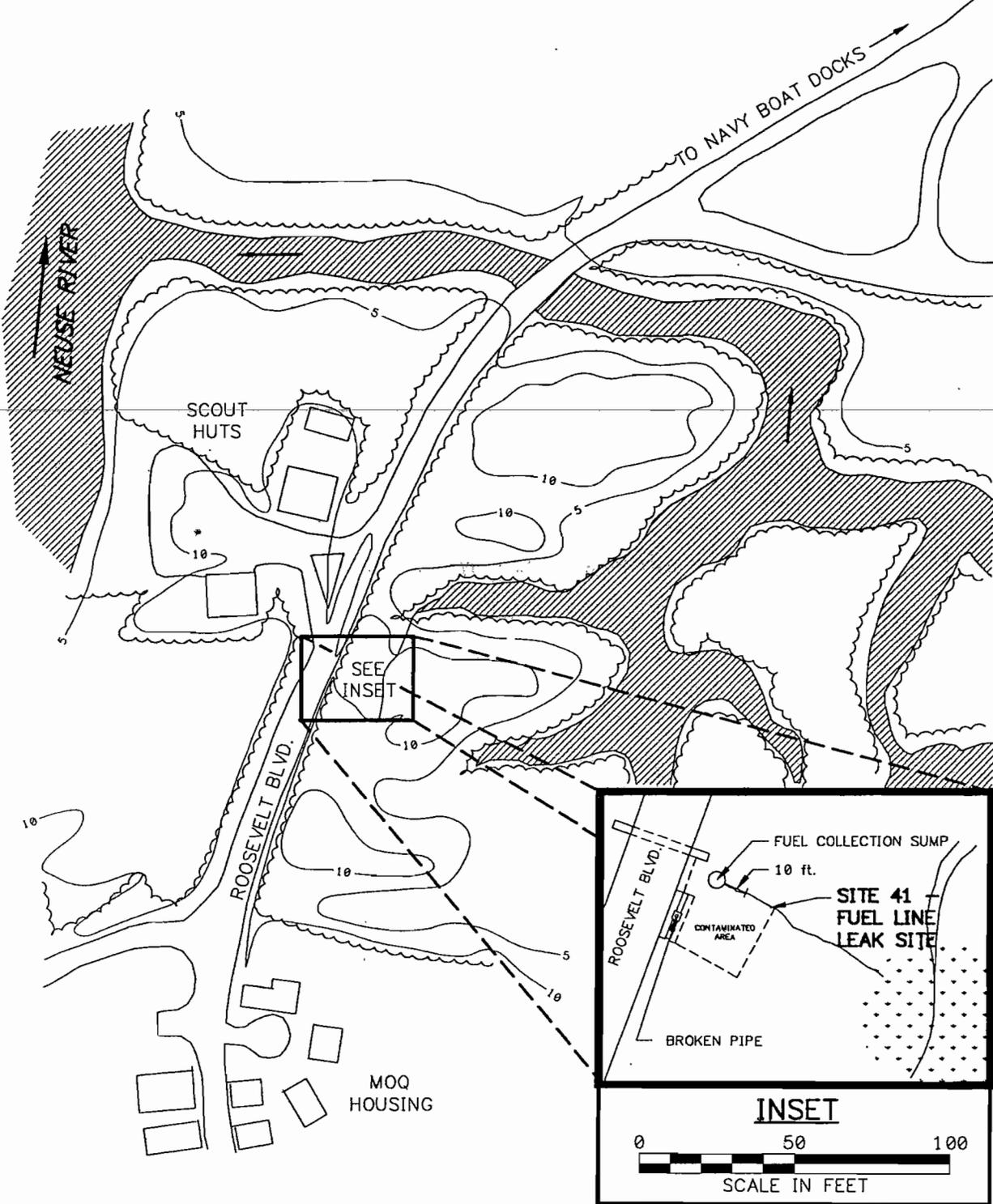


NOTE: PERMITTED AREAS SHOWN FOR UNIT 45. NOT ALL OF THESE AREAS HAVE BEEN USED FOR SLUDGE APPLICATION



**OU-11  
LOCATION MAP  
MCAS, CHERRY POINT, NORTH CAROLINA**

**FIGURE 4-12**



OU-12  
LOCATION MAP  
MCAS, CHERRY POINT, NC

FIGURE 4-13

NOT TO SCALE



This Page Intentionally Left Blank

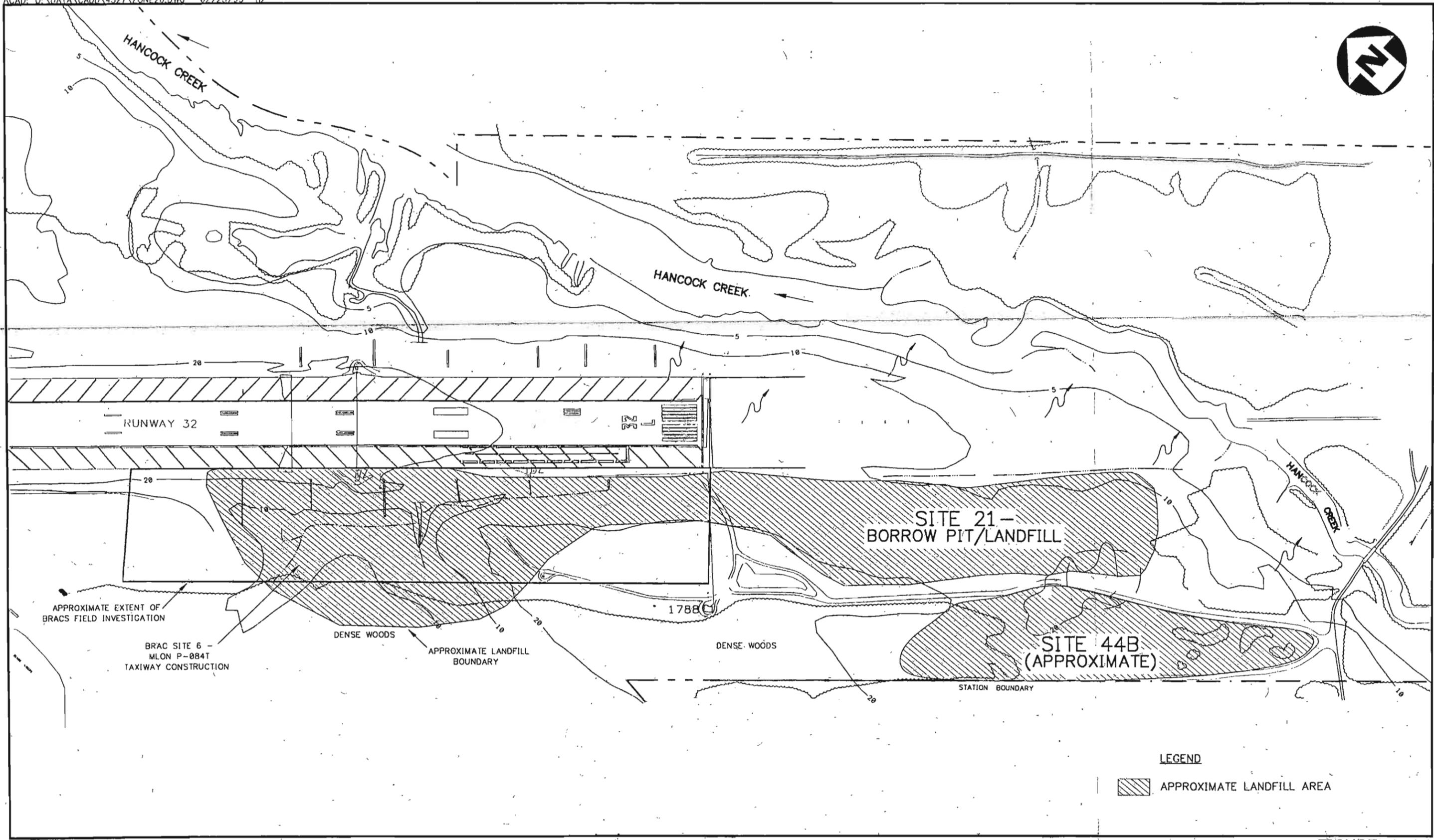


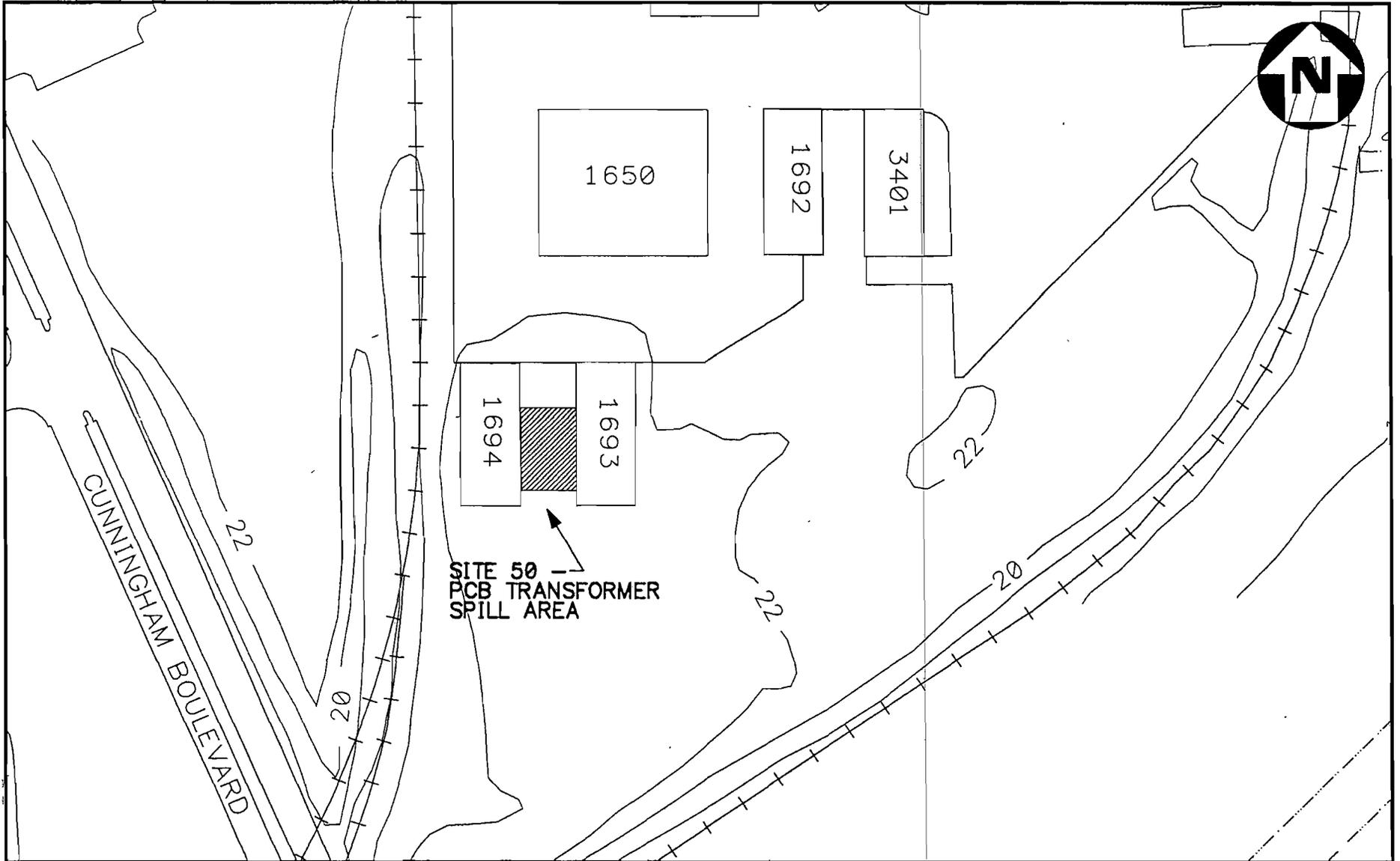
FIGURE 4-14



D-11-94-23

4-27

CTO 0187



PA/SI SITE 50  
LOCATION MAP

MCAS, CHERRY POINT, NORTH CAROLINA

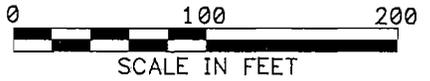


FIGURE 4-15



Revision 1  
March 1995

## 5.0 RESTORATION TEAM REPRESENTATIVES

Mr. Gary McSmith

Phone: (804) 322-4792

Fax: (804) 322-4805

MAIL:

Atlantic Division  
Naval Facilities Engineering Command  
Code 1823  
1510 Gilbert Street  
Norfolk, VA 23511-2699

FEDEX:

Atlantic Division  
Naval Facilities Engineering Command  
Code 1823  
6500 Hampton Boulevard  
Norfolk, VA 23508

Ms. Renee Henderson

Phone: (919) 466-5391

Fax: (919) 466-2000

MAIL:

Environmental Affairs Department  
Marine Corps Air Station PSC Code 8006  
Cherry Point, NC 28533-0006

FEDEX:

Environmental Affairs Department  
Building 198 Range Road  
Marine Corps Air Station Cherry Point  
Cherry Point, NC 28533-0006

Ms. Linda Raynor

Phone: (919) 733-2801

Fax: (919) 733-4811

MAIL:

NC Department of Environmental  
Health and Natural Resources  
Superfund Section  
401 Oberlin Road, Suite 150  
Raleigh, NC 27605

FEDEX:

NC Department of Environmental  
Health and Natural Resources  
Superfund Section  
401 Oberlin Road, Suite 150  
Raleigh, NC 27605

Ms. Gena Townsend

Phone: (404) 347-3555, x6459

Fax: (404) 347-5205

MAIL:

U.S. Environmental Protection Agency  
Region IV  
Waste Management Division  
345 Courtland Street  
Atlanta, GA 30365

FEDEX:

U.S. Environmental Protection Agency  
Region IV  
Waste management Division  
345 Courtland Street  
Atlanta, GA 30365

Mr. Greg Zimmerman

Phone: (412) 921-8992

Fax: (412) 921-4040

MAIL:

Halliburton NUS  
661 Anderson Drive  
Pittsburgh, PA 15220

FEDEX:

Halliburton NUS  
661 Anderson Drive  
Pittsburgh, PA 15220

Mr. Matt Cochran

Phone: (412) 921-8418

Fax: (412) 921-0400

MAIL:  
Halliburton NUS  
661 Anderson Drive  
Pittsburgh, PA 15220

FEDEX:  
Halliburton NUS  
661 Anderson Drive  
Pittsburgh, PA 15220

Mr. Dwayne Currie

Phone: (404) 453-7707

Fax: (404) 729-3905

MAIL:  
OHM Remediation Services Corporation  
5335 Triangle Parkway, Suite 450  
Norcross, GA 30092

FEDEX:  
OHM Remediation Services Corp.  
5335 Triangle Parkway, Suite 450  
Norcross, GA 30092