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OPERATIONAL PLAN FOR INTERIM MEASURES AT GROUP 3 SOLID WASTE  
MANAGEMENT UNIT 15 WITH TRANSMITTAL LETTER NS MAYPORT FL  
9/1/1997  
BECHTEL ENVIRONMENTAL

**Bechtel**

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September 18, 1997

Staff Environmental Office, 191C  
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Attn: Ms. Cheryl Mitchell

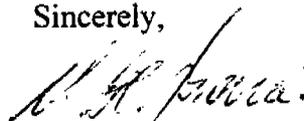
SUBJECT: Bechtel Job No. 22567  
Department of the Navy Contract No. N62467-93-D-0936  
DO 82: CERTIFICATION FOR OPERATIONAL PLAN FOR SWMU 15  
NS MAYPORT, FLORIDA  
Subject Code: 5320

Dear Ms. Mitchell:

Enclosed for your use is the Engineer's Certification page for the Operational Plan for SWMU 15, Naval Station Mayport, Florida.

If you should have any comments, please call Dale Obenauer or me at (904) 779-8900.

Sincerely,



V. Hermann Bauer  
Project Manager

VHB/tdfj

Encl.: As Stated.

cc: F. Lesesne/T. Hansen  
J. Cason  
M. Berry  
D. Driggers w/o



**Bechtel Environmental, Inc.**

OPERATIONAL PLAN  
FOR  
INTERIM MEASURES AT SWMU 15  
U.S. NAVAL STATION  
MAYPORT, FLORIDA

Prepared for  
DEPARTMENT OF THE NAVY  
SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND

Under Contract No. N62467-93-D-0936

Prepared by  
BECHTEL ENVIRONMENTAL, INC.  
OAK RIDGE, TENNESSEE

SEPTEMBER 1997

REVISION 0

Bechtel Job No 22567

Approved: Dale Obmann  
Project Engineer

9/11/97  
Date

Approved: John H. Peters FOR HERMANN BAYERS  
Project Manager

9/15/97  
Date

Approved: [Signature]  
Navy Contracting Officer

9/19/97  
Date

## ENGINEER'S CERTIFICATION

The engineering work described and professional opinions rendered in this document, *Operation Plan for Interim Measures at SWMU 15*, for U.S. Naval Station Mayport, Florida, Revision 0, September 1997, were developed or conducted using commonly accepted engineering practices and standards. This document was prepared under the supervision and responsible charge of the undersigned Florida registered professional engineer.

*J. R. Manning*  
9-10-97

John Robin Manning  
Project Engineer  
Florida PE No. 0051803  
Expires February 28, 1999

## 1.0 INTRODUCTION

A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was conducted for Group II Solid Waste Management Units (SWMUs) at Naval Station (NS) Mayport, Florida. The RFI identified the presence of pesticides at SWMU 15, Old Pesticide Handling Area, which is located adjacent to Building 48A. Pesticides were mixed at the site and, after use, the application equipment may have been washed near the building. As a result, runoff from the washing and rinsing activities may have infiltrated the ground surface. Also, small quantities of pesticides may have been disposed of in the vicinity of Building 48A.

The pesticides 4,4'-DDE, 4,4'-DDT, and chlordane were detected in surface soil samples (i.e., land surface to one foot below land surface) in concentrations that exceeded either Florida cleanup goals or U.S. EPA risk-based screening concentrations. The maximum concentrations detected for 4,4'-DDE and 4,4'-DDT were 2,800 micrograms per kilogram ( $\mu\text{g}/\text{Kg}$ ) and 790,000  $\mu\text{g}/\text{Kg}$ , respectively. The maximum concentration detected for chlordane was 9,000  $\mu\text{g}/\text{Kg}$ . Two other pesticides, heptachlor and heptachlor epoxide, were also detected in one surface soil sample at concentrations slightly higher than the U.S. EPA risk-based concentration of 72  $\mu\text{g}/\text{Kg}$ .

The human health and ecological assessment performed as part of the RFI suggests:

- a potential risk to human receptors based on dermal exposure to 4,4'-DDT and chlordane in surface soil, and
- a potential risk to ecological receptors from exposure to 4,4'-DDT in surface soil.

Following the RFI, a Corrective Measures Study (CMS) was performed to identify and recommend measures to address the potential release of contaminants identified in the RFI. The recommended alternative for corrective action at SWMU 15 as described in the CMS includes institutional controls, site preparation, capping with a geotextile and gravel, groundwater screening, a potable water well survey, and operations and maintenance activities. Only those actions necessary for the installation of the geotextile and gravel cap are described in this Operational Plan.

The work identified below will be performed in accordance with the applicable U.S. EPA and FDEP guidelines and regulations and Bechtel Navy RAC programmatic plans, procedures, and specifications. Subcontracted work will include surveying and construction debris transportation and disposal. Upon completion of the field activities, Bechtel will prepare a construction completion report.

This Operational Plan is intended to document, in summary form, the scope of the interim measure and the procedures to be used at SWMU 15. The interim measure described in this plan is based on information provided in:

- *Resource Conservation and Recovery Act Facility Investigation, Group II Solid Waste Management Units, U.S. Naval Station, Mayport, FL, ABB Environmental Services, Inc. (ABB-ES), January 1996, and*
- *Corrective Measures Study, Group II Solid Waste Management Units, U.S. Naval Station, Mayport, FL, ABB-ES, January 1996.*

## **2.0 SCOPE OF WORK**

The activities associated with the implementation of the semi-permeable cap are discussed in the following paragraphs.

### **2.1 MOBILIZATION**

Bechtel will mobilize the personnel, subcontractors, equipment, and supplies necessary to perform the onsite scope of work. The mobilization activities include related administrative preparation and site-specific training. Site cleanup and demobilization of personnel and material will take place upon satisfactory completion of the work.

Bechtel will establish all necessary safety and environmental operational controls to safely and efficiently perform the work within the site. These include, but are not limited to, site access controls, appropriate staging areas, dust controls where required, and storm water runoff control at all areas where the potential for erosion is present.

### **2.2 CAPPING**

The total surface area to be capped at SWMU 15 encompasses approximately 33,800 square feet and includes all surface soil sample locations with pesticides detected at concentrations greater than 100 µg/Kg (as described in the RFI). A geotextile fabric and gravel cover will be installed to allow adequate drainage, while providing protection to human and ecological receptors by containing pesticide-contaminated soil.

Beginning at the southeast corner of the existing asphalt parking lot, the cap will extend approximately 170 feet east and 215 feet north, as shown in Figure 1. The west perimeter of the cap will be approximately 10 feet east of Building 48A. The northwest corner of the cap will be tied into the existing crushed limestone road, and the northeast corner of the cap will be extended as close as possible to the ruins site based on existing topography.

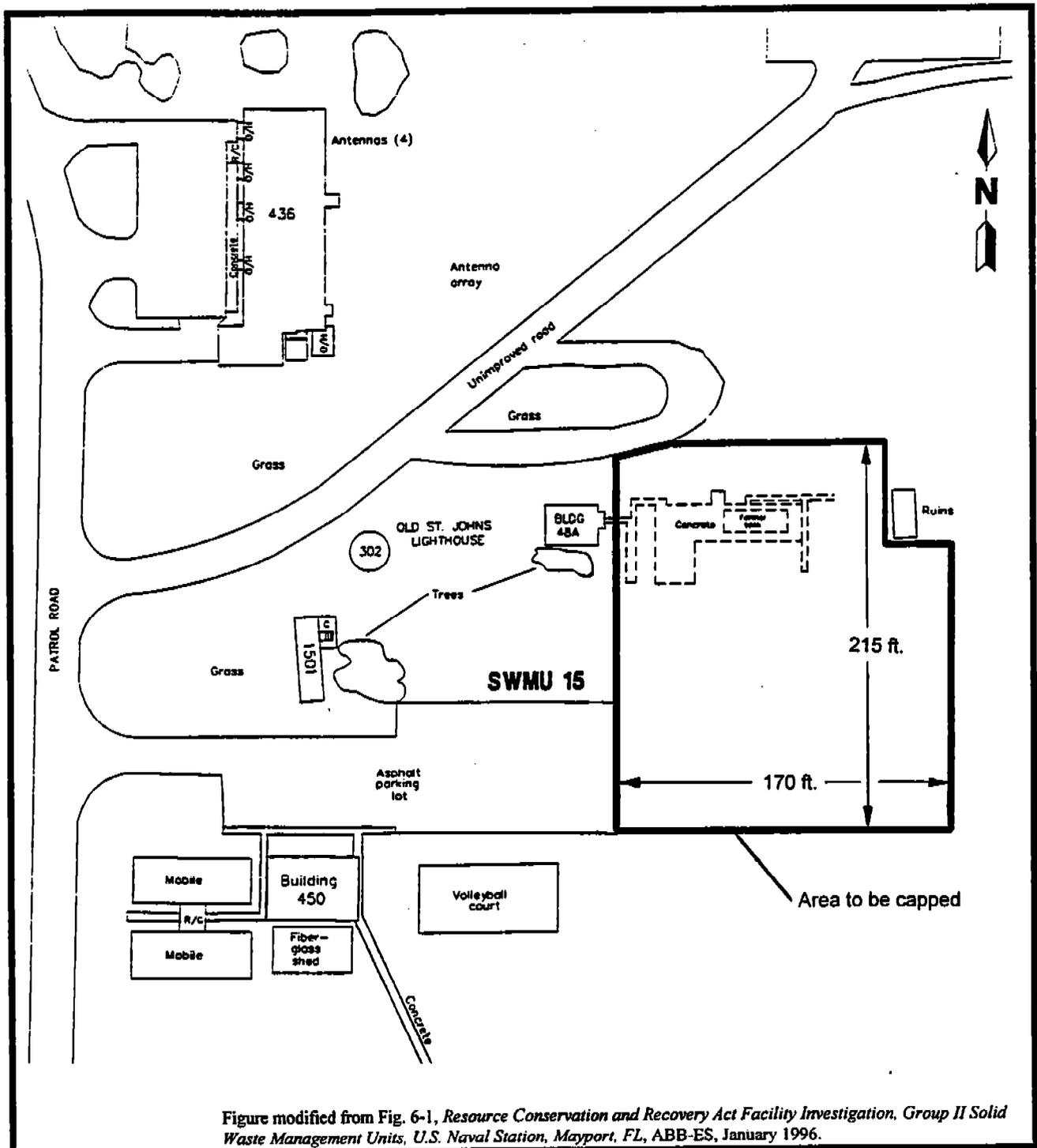


Figure modified from Fig. 6-1, *Resource Conservation and Recovery Act Facility Investigation, Group II Solid Waste Management Units, U.S. Naval Station, Mayport, FL, ABB-ES, January 1996.*



**OPERATIONAL PLAN  
NS MAYPORT SWMU 15**

**SITE LAYOUT**

**FIGURE 1**

The cap dimensions and configuration are based upon *Resource Conservation and Recovery Act Facility Investigation, Group II Solid Waste Management Units, U.S. Naval Station, Mayport, Florida*, Volume 1, dated January 1996, Figure 6-3 (page 6-5), and have been refined based on *Navy Environmental Leadership Program Technology Evaluation Report for Solid Waste Management Unit 15, U.S. Naval Station, Mayport, Florida*, dated June 1997, Figure 3-1 (page 3-18).

### 2.2.1 Clearing and Grubbing

Current site conditions at SWMU 15 do not require clearing and grubbing, and at the direction of the Navy, no clearing and grubbing will be performed. Site preparation will be limited to mowing of the area to be capped prior to placement of the geotextile fabric.

### 2.2.2 Geotextile

The purpose of the geotextile is to isolate pesticide-contaminated soil and to serve as a marker for contaminated soil. A polypropylene, needle-punched geotextile will be installed to provide sufficient transmissivity for adequate drainage. The geotextile shall meet the following requirements:

Property	Test Method	Minimum Permissible Average Roll Value
Weight, ounces per square yard	ASTM D5261	8
Puncture Resistance, pounds	ASTM D4833	100
Equivalent Opening Size, sieve size	ASTM D4751	70

At the time of installation, measures will be taken to ensure that the geotextile will lay smooth and will be free of tension, stress, folds, wrinkles, or creases. Sections will overlap a minimum width of 12 inches or will be sewn together as recommended by the manufacturer. Care will be taken to assure that stones, mud, and dirt are not entrapped in the geotextile during seaming operations. The exterior limits of the geotextile will not be buried in order to minimize exposure to potentially contaminated soil, but will be laid flat prior to installation of the cap.

### 2.2.3 Capping

The cap material to be placed over the geotextile will be clean, crushed, well-graded Number 57 limestone containing 100 percent by weight of material passing a Number 150 sieve. The material will be free of contamination, trash, debris, roots or other organic matter. The borrow source will be approved by the ROICC. The crushed limestone will be placed in one lift such that when compacted, the lift will have a minimum thickness of 4 inches. (Note: the CMS included a lift thickness of 6 inches, but FDEP approval was subsequently obtained for a minimum lift thickness of 4 inches.) Placement of the crushed limestone will begin from a work

area adjacent to the deployed geotextile and will gradually progress outward. The crushed limestone will not be dropped directly onto the geotextile, but will be pushed forward in an upward, tumbling action so as to not impact vertically onto the geotextile.

Placement of the crushed limestone will be in accordance with Standard Specification 22567-001-SP000-006, *Technical Specification for Uncontaminated Earthwork*. The lift will be compacted to 95 percent standard Proctor (dry density). Four compaction tests will be performed in accordance with ASTM D2922. Note: some soil displacement may occur within the capped area over time as a result of soil heaving or settling.

Bechtel will ensure that all monitoring wells located within the construction area at SWMU 15 are satisfactorily protected during installation of the cap.

Grassy areas which are disturbed as a result of the interim measure will be hydroseeded with Bahia grass. Subsequent to installation of the cap, a survey will be performed and as-built drawings will be submitted to the Navy in a construction completion report.

### **3.0 REGULATORY CONSIDERATIONS**

A CMS for Group II SWMUs has been completed following the requirements of RCRA. The CMS provides the justification for, and recommendation of, a corrective action for soil at SWMU 15. The actions described in this Operational Plan are necessary to implement the capping of surface soils as part of the recommended alternative presented in the CMS.

### **4.0 WASTE MANAGEMENT**

General waste management practices used by Bechtel on this project will be as defined in the *Environmental Response Action Contract Waste Management Plan* and the Navy RAC Project Procedure (PP) 6029, *Waste Tracking and Disposal*. There are several waste management activities that are anticipated during this interim measure, including disposal of:

- construction debris, and
- other non-hazardous solid wastes.

Waste materials to be disposed of during this interim measure are not anticipated to be classified as hazardous wastes.

## **4.1 WASTE MINIMIZATION**

Construction activities at this site will be controlled to minimize the amount of materials that must eventually be disposed. Waste minimization is an important goal and will be implemented during all site operations. These practices will include:

- limiting extraneous materials taken into contaminated areas,
- performing no intrusive activities in the area of pesticide-contaminated soils, and
- using consumable items that can be compacted or otherwise volume reduced prior to disposal.

## **4.2 WASTE DISPOSAL**

The following sections provide guidance for the decision process for disposal of the wastes generated at the site. The Bechtel Site Superintendent is responsible for filling in the Bechtel Navy RAC waste tracking logs (refer to PP 6029) and ensuring that they are kept up to date.

### **4.2.1 Construction Debris**

Any construction debris resulting from SWMU 15 interim measure remediation work will be decontaminated if necessary by brushing off visible soils. The material will then be disposed as construction debris at a licensed Subtitle D landfill. Quantities of materials removed from the site will be recorded. Any required manifests will be signed by an authorized Navy representative as the waste generator.

### **4.2.2 Decontamination Water**

Decontamination water is not expected to be generated as part of this interim measure. However, if any decontamination water should be generated during construction, it will be temporarily containerized until completion of site construction activities. The water will be disposed of as directed by the Navy. The actual volume of containerized water will be recorded on Bechtel Navy RAC waste tracking logs on a daily basis and forwarded to the Navy.

### **4.2.3 Hazardous Waste**

Hazardous waste is not expected to be associated with the interim measure at this site. If any hazardous wastes are identified, they will be managed in accordance with RCRA (40 Code of Federal Regulations Part 260) and related federal and state regulations. Manifesting and disposal of material determined to be hazardous waste will be coordinated with PWC Jacksonville.

## **5.0 SAMPLING AND ANALYSES**

The collection of soil or water samples during the course of the activities outlined in this Operational Plan is currently not anticipated. As described in Section 4.0, hazardous wastes are

not expected to be encountered. However, if any hazardous wastes are identified, sample collection requirements for those wastes will be determined prior to shipment for treatment and disposal.

## **6.0 QUALITY ASSURANCE**

Appropriate quality control (QC) criteria are developed and included in the site-specific addendum to the Quality Control Program Plan (QCP). This site-specific plan, which is provided under separate cover, is based on the Navy-approved QCP for the basic contract. Bechtel will implement, maintain, and comply with the QCP and the site-specific QCP addendum. This section of the Operational Plan provides the basic outline for the QCP addendum and describes the general intent of the interim measure quality assurance/control plan.

The intent of this section is to provide general guidance to the field construction crew as to the items that require inspection during installation. The following sections discuss the construction field inspection, testing requirements, and submittals.

### **6.1 CAP CONSTRUCTION**

The materials used for the construction of the cap will be as specified in Section 2.2 of this plan. Compaction tests of the final cap will be provided at a rate of one test per acre per lift, in accordance with ASTM D2922. Compaction will be required to meet 95 percent maximum dry density as measured by ASTM D698. The material will be placed in a minimum of 4-inch compacted lifts (1 lift total).

### **6.2 SITE RESTORATION**

During site restoration activities, the QA Representative will ensure seeding application. Quantities will be recorded by a Bechtel employee.

## **7.0 SAFETY AND HEALTH**

A Program Safety and Health Plan defines the policies for the Navy RAC Project. A Site Safety and Health Plan (SSHP) has been prepared for each of the Navy RAC bases. An addendum to the SSHP, which is provided under separate cover, defines task-specific requirements for the activities at SWMU 15 that are described in this Operational Plan.