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## **EQUIPMENT DECONTAMINATION PLAN**

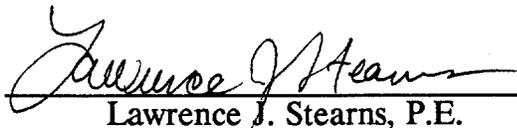
**BUILDING 121 REMEDIATION  
U.S. NAVAL STATION ROOSEVELT ROADS  
PUERTO RICO**

Prepared for:

Department of the Navy Atlantic Division  
Naval Facilities Engineering Command  
Norfolk, Virginia  
LANTDIV RAC Contract No. N62470-93-D-3032

Prepared by:

OHM Remediation Services Corp.  
1000 RIDC Plaza - Suite 600  
Pittsburgh, Pennsylvania 15238-2928  
(800)284-6462

  
Lawrence J. Stearns, P.E.

Project Manager - Delivery Order No. 004

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## 1.0 PURPOSE AND WORK DESCRIPTION

### 1.1 PURPOSE

OHM Remediation Services Corp. (OHM), a wholly owned subsidiary of OHM Corporation, is contracted by the U.S. Department of the Navy (LANTDIV) to provide remediation of Building 121 at U.S. Naval Station Roosevelt Roads, Cieba, Puerto Rico.

The purpose of this Equipment Decontamination Plan (EDP) is to present the procedures, organization, and responsibilities for the decontamination of equipment. This EDP does not address personnel decontamination which is covered in the Health and Safety Plan. This EDP is prepared in accordance with the requirements of NAVFAC Specification No. 05-93-3199 (as amended), Section 02225 - Part 3.1.3 and 3.10.

### 1.2 WORK DESCRIPTION

The scope of work for the remediation of Building 121 generally includes: preparation of various pre-construction, construction, and post-construction plans and submittals; attendance and participation at pre-construction and various other meetings; mobilization and demobilization; site preparation; cleaning the interior surfaces of Building 121; various sampling and analyses for air, soil, water, and concrete media; removing a portion of the concrete from the surface of the building floor; excavating contaminated soil outside the building; transportation and disposal of generated hazardous and non-hazardous wastes; erosion and sediment control; health and safety control; quality control; site restoration; and incidental work. Further discussion of the work and its implementation can be found in the OHM Work Plan.

## 2.0 ORGANIZATION AND RESPONSIBILITIES

### 2.1 ORGANIZATION

The project is organized as shown in Figure 1.

### 2.2 RESPONSIBILITIES

The responsibilities of the program manager, project manager, project superintendent, QC manager, certified industrial hygienist, and site health and safety officer are as provided in the Basic Contract: Section C, Part 1.3.

The project superintendent is responsible for assuring that the project equipment is properly decontaminated in accordance with this EDP.

### 3.0 DECONTAMINATION PAD FACILITY

#### 3.1 PAD CONSTRUCTION

The decon pad will be field located by the project superintendent to be readily accessible to the work site without interfering with the work progress. It will be approximately 4 feet square by 2 feet high, built of timber, and lined with a geomembrane as shown in Figure 2.

The materials and approximate quantities required to construct and operate the decon pad include the following:

- Six, 2-foot by 8-foot by 8-foot timber (sidewalls)
- Four, 2-foot by 4-foot by 8-foot timber (braces, battens)
- Two 8-foot by 8-foot pieces of 8-ounce/square yard non-woven geotextile (puncture layers)
- One 8-foot by 8-foot piece of 30-mil PVC geomembrane (liner)
- Twelve cubic feet of clean, bagged, concrete sand (subgrade)
- Four sand bags, 1/2-cubic foot each with non-metallic ties
- One roll of polyethylene Visqueen sheet (cover)
- Ten pounds of 16-p nails (fasteners)
- Four DOT 17-E drums with lids
- One wax crayon
- Two submersible pumps with adequate hose and fittings
- One 5-gallon plastic pail (detergent solution)
- One 1-gallon bucket of tri-sodium phosphate (detergent)
- One long-handled, stiff bristle brush (detergent scrubbing)
- One high-pressure washer with wand and extra tip (wash and rinse).

Clear and grub the decon pad area and remove all roots and sharp protrusions. Cut and assemble the sidewalls to the dimensions shown in Figure 2. Install two corner braces as shown. Place 8 cubic feet of sand inside the sidewalls to form a subgrade 6-inches deep. Install one piece of geotextile, then the liner, then the second piece of geotextile using 2-foot by 2-foot timber to batten the geosynthetics at the top of the sidewalls with fasteners. Fill the four sandbags with the remaining sand and place them in the center of the decon pad to form a working surface to rest the equipment upon during decontamination.

Cut and fit a piece of Visqueen sheeting to form a cover over the decon pad during periods when it is not in use. Weight down the edges of the cover with any appropriate material. Stage three drums near the decon pad, but away from the working area. Label two of these drums with a wax crayon as Decon Wash/Rinse Water, and label the third drum as Final Decon Rinse Water. Place one submersible pump inside the decon pad and connect it to the power source verifying that the connection contains a ground fault interrupter (GFI). Install pump hose of sufficient length to easily reach these three drums.

Stage the remaining drum and pressure washer in a convenient location near the decon pad. Label this drum as Clean Water. Install the second submersible pump into this drum, provide sufficient hose to reach the potable water tank on the high-pressure washer, and connect the pump (and high-pressure washer if necessary) to the power source verifying that all electrical connections contain a GRI.

### 3.2 PAD OPERATION

Maintain the cover over the decon pad when it is not in use and spill off collected rain water outside the decon pad when removing the cover. Prior to each use of the decon pad, check the drums to verify that there is sufficient capacity to store the decon liquids that will be generated and also check the GFIs to verify they work properly. Check the clean water drum and fill it if necessary from the fire hydrant identified by the site superintendent. If none is already available, mix a 5-gallon batch of strong detergent solution following the instructions provided with the tri-sodium phosphate.

Decontaminate the equipment following the procedures given in Section 4.0 below. Use the submersible pump inside the decon pad to transfer wash/rinse, and final rinse waters into the appropriate drums. It is essential that only final rinse water be placed in the Final Decon Rinse Water drum. Replace the cover over the decon pad when finished.

### 3.3 PAD DEMOLITION AND DISPOSAL

Upon completion of the remediation work, or individual tasks, the equipment will receive final decontamination and the decon pad will be dismantled for disposal. The sand bags inside the decon pad, the batten timber, the liner, and the geotextile layer above the liner will automatically be disposed of as hazardous wastes.

The liner will be carefully removed and visually inspected for tears, holes, or other leaks. If the liner has no visible leaks, the remaining construction materials of the decon pad (e.g., sidewall timber, braces, geotextile, and sand) will be disposed of as non-hazardous, solid waste. If the liner has any visible leaks, the remaining construction materials of the decon pad will be disposed of as hazardous wastes along with the tools used to dismantle the decon pad. Further details regarding transportation and disposal of various wastes are provided in the Waste Transportation and Disposal Plan.

## 4.0 EQUIPMENT DECONTAMINATION

### 4.1 DECONTAMINATION PROCEDURE

Don the appropriate personal protective equipment (PPE) according to the project Health and Safety Plan. Working over the decon pad or resting the equipment on the sand bags inside the decon pad, scrape or brush off residual soil into the decon pad. Using a stiff bristle brush, scrub the equipment with a strong detergent solution. Rinse the equipment with potable water. Repeat this process if necessary to remove all visible traces of contamination. Use the submersible pump to transfer this wash and rinse water to the Decon Wash/Rinse Water drum(s). Perform a final rinse with the high-pressure washer using potable water and transfer the final rinse water into the Final Decon Rinse Water drum using the submersible pump. Demobilize the decontaminated equipment from the site or store for later use in an uncontaminated area. Conduct all decontamination operations to minimize overspray, and to ensure overspray does not affect anyone on site who is not wearing the appropriate PPE.

### 4.2 LIST OF EQUIPMENT

In general, decontaminate all non-disposable construction equipment and hand tools before removing them from the site. In addition, certain sampling equipment may require decontamination in between sampling events as described in the Field Sampling and Analytical Plan (FSAP). Specific equipment requiring decontamination includes the following:

- Bucket of backhoe used for excavating contaminated soils
- Chisels used for chip sampling
- Soil augers used for sampling contaminated soils
- Light stands or other equipment used inside Building 121.

If a piece of equipment is such that the decontamination process will seriously damage or destroy it, it should be protected in a plastic bag and the bag then disposed of as hazardous waste, otherwise the equipment itself must be disposed of as hazardous waste.

## 5.0 COLLECTION AND DISPOSAL OF DECON LIQUIDS

### 5.1 COLLECTION

All used wash and rinse waters are to be placed into the appropriate drums. Only final rinse water is to be placed in the drum labeled Final Decon Rinse Water. All other decontamination fluids are to be placed in the drum(s) labeled Decon Wash/Rinse Water.

### 5.2 DISPOSAL

Following the decontamination of all equipment, the Final Decon Rinse Water Drum will be sampled according to the FSAP. If the analytical results exceed the action levels given in Table 1 of the FSAP, then all of the drummed decontamination fluids will be disposed of as hazardous waste. If none of the parameters in the analytical results exceeds the action levels given in Table 1 of the FSAP, then all of the decontamination fluids will be disposed of at the Forrestal Wastewater Treatment Plant on-station.

The sand bags inside the decon pad, the batten timber, the liner, and the geotextile layer above the liner will automatically be disposed of as hazardous wastes.

The liner will be carefully removed and visually inspected for tears, holes, or other leaks. If the liner has no visible leaks, the remaining construction materials of the decon pad (e.g., sidewall timber, braces, geotextile, and sand) will be disposed of as non-hazardous, solid waste. If the liner has any visible leaks, the remaining construction materials of the decon pad will be disposed of as hazardous wastes along with the tools used to dismantle the decon pad.

Further details regarding transportation and disposal of various wastes are provided in the Waste Transportation and Disposal Plan.

PLOT SCALE: 1" = 1"

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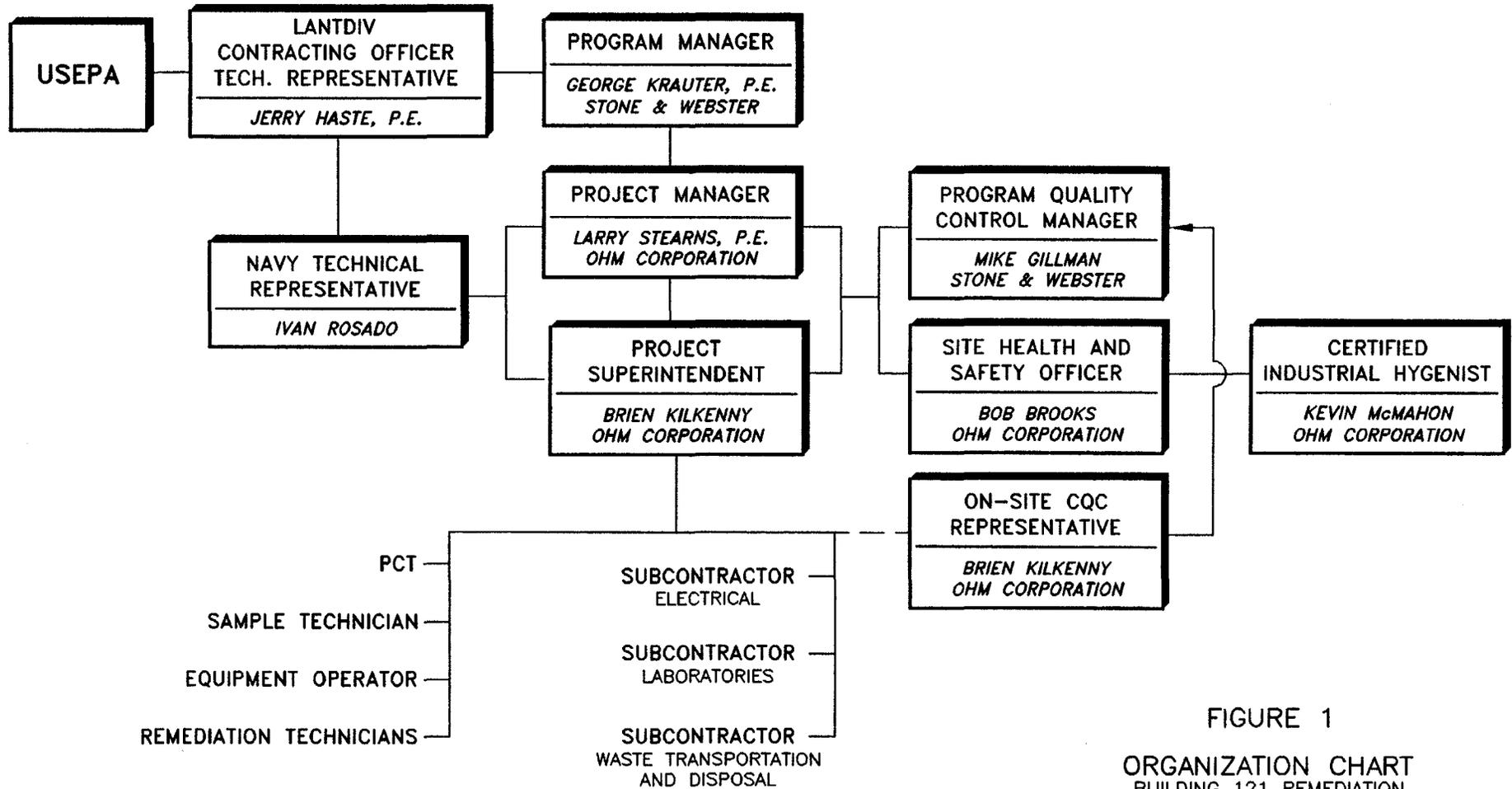


FIGURE 1

ORGANIZATION CHART  
BUILDING 121 REMEDIATION  
U.S. NAVAL STATION - ROOSEVELT ROADS

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DEPARTMENT OF THE NAVY  
ATLANTIC DIVISION - NAVFAC  
NORFOLK, VIRGINIA



PLOT SCALE: 1" = 1"

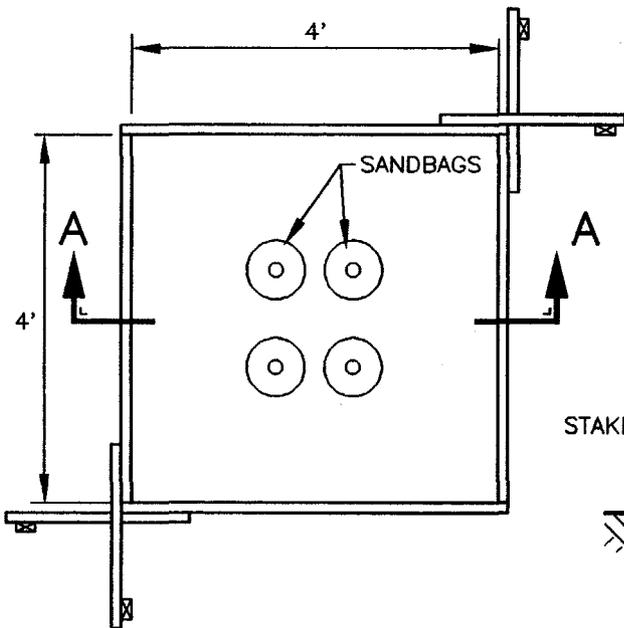
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PITTSBURGH, PA

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A.C. Smith 1-17-94

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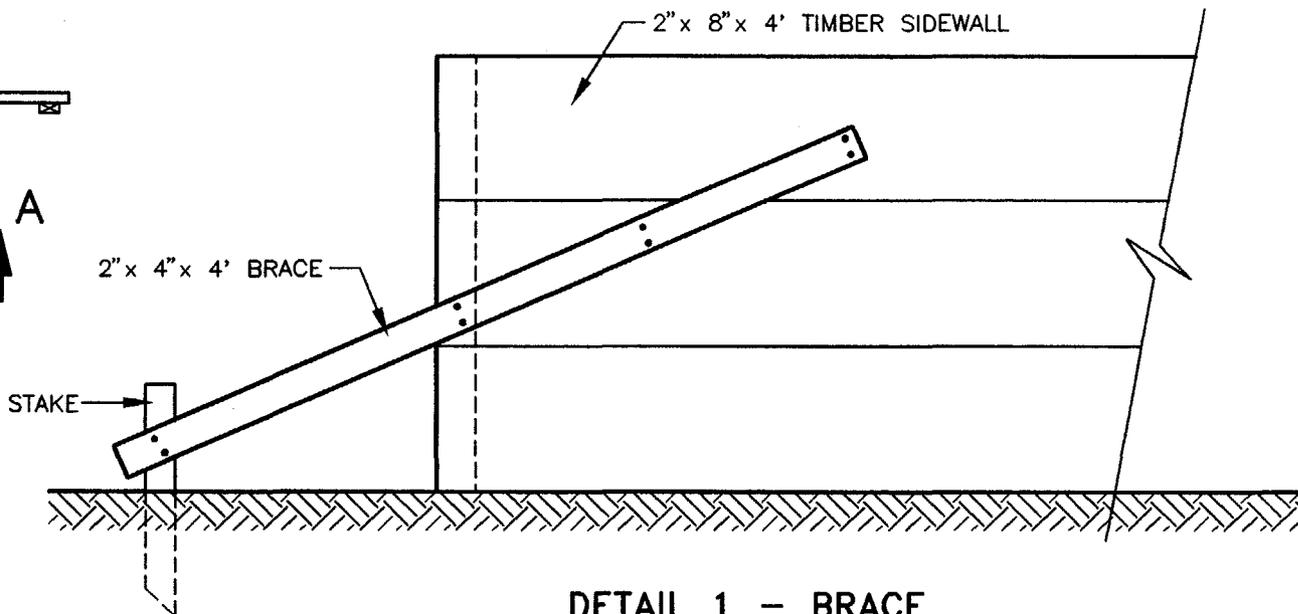
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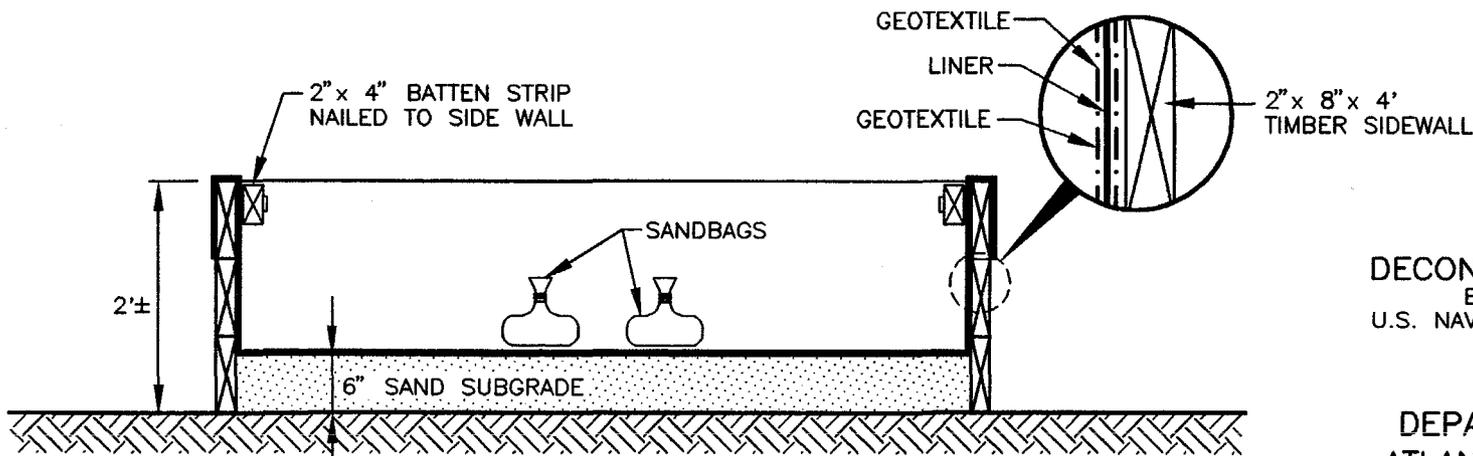
**DECON PAD - PLAN VIEW**

N. T. S.



**DETAIL 1 - BRACE**

N. T. S.



**SECTION A-A**

N. T. S.

**FIGURE 2**

**DECONTAMINATION PAD DESIGN**  
BUILDING 121 REMEDIATION  
U.S. NAVAL STATION - ROOSEVELT ROADS

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