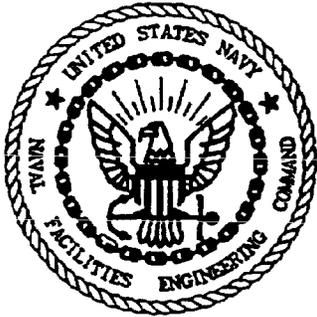


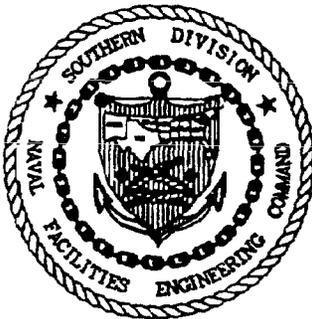
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CNC CHARLESTON
5090.3a

COMPLETION REPORT PROCESS CLOSURE FOR SOLID WASTE MANAGEMENT UNIT 83
(SWMU83) BUILDING 9 FOUNDRY WITH TRANSMITTAL CNC CHARLESTON SC
4/11/1997
U S NAVY



COMPLETION REPORT

**PROCESS CLOSURE FOR
SWMU 83 (BUILDING 9 FOUNDRY)
NAVAL BASE CHARLESTON
CHARLESTON, SC**



Prepared for:

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON S.C.**



Prepared by:

**Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106**

April 11, 1997

Ser: 498
APR 15 1997

MEMORANDUM

From: Director, Supervisor of Shipbuilding, Conversion and Repair, USN Portsmouth, Va., Environmental Detachment, Charleston, SC (SPORTENVDETCNASN)
To: Southern Division Naval Facilities Engineering Command (Code 18B - Hayes Patterson)

Subj: COMPLETION REPORT FOR PROCESS CLOSURE SWMU-83 FORMER BUILDING 9 FOUNDRY

Ref: (a) Authorization For Project C96017, Interim measures At Sites SWMU-8, SWMU-14, And SWMU-83, Charleston Naval Complex, Southern Division Memo 5090, Code 18B4(dated 29 August 1996)

Encl: Completion Report for Process Closure for SWMU-83

1. Background. SPORTENVDETCNASN was authorized per reference (a) to proceed with the execution of Process Closure (PC) for Building 9 (Former Foundry). The PC consisted of the cleanup and removal of oil/oily waste in below deck passageways and drains, poly-chlorinated biphenyl containing oils, friable asbestos, equipment power supplies, and surface dust containing lead. The objectives have been completed as outlined in the following Closure Report. Questions or comments concerning this report may be addressed to Bernard Brown at 743-4777 (ext. 148) or Jed Heames (ext. 123).

2. Action. Southern Division is requested to review the enclosed Completion Report of the Process Closure for SWMU-83. Following concurrence by Southern Division, final copies of the Completion Report will be provided to SDIV (if required).


E. R. Dearhart

Copy to (w/o encls):
File
Jed Heames (Engineering)



DEPARTMENT OF THE NAVY

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-8010

5090
Code 18B4
29 August 1996

From: Commanding Officer, Southern Division Naval Facilities Engineering Command
To: Supervisor of Shipbuilding, Conversion and Repair, Portsmouth

Subj: AUTHORIZATION FOR PROJECT C96017, INTERIM MEASURES AT SITES
SWMU-8, SWMU-14, AND SWMU-83, CHARLESTON NAVAL COMPLEX

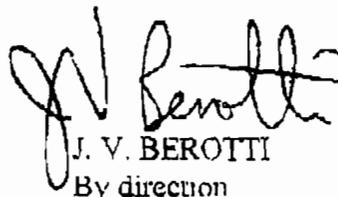
Ref: (a) SPORTENVDETCNASN PEP for SWMU 14 dated 28 June 1996 as amended by
SPORTENVDETCNASN revised cost estimate of 20 August 1996
(b) SPORTENVDETCNASN PEP for SWMU 83 dated 23 July 1996 as amended by
SPORTENVDETCNASN revised cost estimate of 8 August 1996
(c) NAVCOMPT F2275, Project Order N62467-96-POE00004 of 20 March, 1996
(d) SOUTHNAVFACENGCOM ltr of 22 May 1996, Authorization for Project C96017,
Interim Measures at SWMU-8, SWMU-14 and SWMU-83, Charleston Naval
Complex

1. The Project Execution Packages (PEPs) for interim measures at SWMU-14 and SWMU-83, references (a) and (b), have been reviewed and determined cost effective. As such, Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Environmental Detachment, Charleston (SPORTENVDETCNASN) is hereby authorized to accomplish these projects. The total project costs are \$242,443 for SWMU-14 and \$148,947 for SWMU-83. These totals include overhead costs as well as direct labor and material costs therefore, as appropriate, increase the direct labor and material job order funding for executing project C96017 in accordance with references (c) and (d).

2. The subject projects shall start during fiscal year 1996. Work is expected to begin on 30 August 1996. SPORTENVDETCNASN shall provide SOUTHNAVFACENGCOM a separate monthly project progress report and detailed cost accounting of expenditures on these projects.

3. **Release of Information.** SOUTHNAVFACENGCOM is the releasing authority for all information/documents regarding this project. Therefore, SPORTENVDETCNASN shall obtain approval before publicizing, discussing or releasing any documents or information concerning this or any other project with anyone other than government personnel associated with the project in question.

4. Inquires should be directed to Hayes Patterson, Code 18B4 at (803) 820-5658.

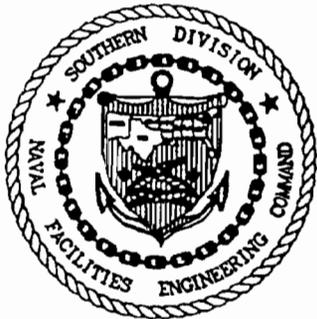

J. V. BEROTTI
By direction

Copy to:
SPORTENVDETCNASN



COMPLETION REPORT

PROCESS CLOSURE FOR
SWMU 83 (BUILDING 9 FOUNDRY)
NAVAL BASE CHARLESTON
CHARLESTON, SC



Prepared for:

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON S.C.



Prepared by:

Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston S.C.
1899 North Hobson Ave.
North Charleston, SC 29405-2106

March 25, 1997

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1. INTRODUCTION

The Southeast wing of Building 9 (the former foundry area) was designated for cleanup as a Process Closure (PC) action. Site investigation revealed the presence of equipment leaking gear oil onto concrete deck areas, oil/oily waste in below deck level covered drains/passageways, poly-chlorinated biphenyl (PCB) containing oils, friable asbestos, a power supply transformer with no PCB certification, hydraulic power supply leaking fluid onto the concrete, a glycol pump and reservoir, and lead dust in areas of the building.

2. OBJECTIVES IDENTIFIED AND ACCOMPLISHED

1. Equipment leaking gear oil: One sand mixing machine and one sand hopper was found leaking gear oil onto the deck areas.

Description of Objectives Accomplished.

1. Cleaned up oil spill produced from sand mixer and sand hopper with absorbent material.
2. Drained oil from the leaky gearbox of the sand mixer and sand hopper and tagged both machines to note that gearbox oil has been drained.
3. Placed oily waste in a 5 gallon drum and shipped to Environmental Detachment Charleston (DET) Waste Disposal Division (estimated waste - 5 gallons).

2. Oil/oily waste below deck level covered drains/passageways: Two areas of the foundry were found to have this problem. The first area located underneath metal storage racks just outside the restroom area was stained with oil. The drain catch passageways in this area contained approximately 5 cubic yards of oily waste. The second area was the hydraulic piping passageway that supplied hydraulic fluid to the Hydro Arc furnace. This piping passageway was filled with sand that was used to absorb hydraulic fluid leaks and contained approximately 1 cubic yard of sand/liquid waste.

Description of Objectives Accomplished.

1. Removed covers, removed waste, and placed in 55 gallon drums.

2. Used detergent (Gamlin) to clean concrete in oil stained areas.
3. Placed waste material in 55 gallon drums and shipped to DET Hazardous Waste Disposal Division (estimated waste - four 55 gallon drums).

3. Ajax power supply: The Resource Conservation Recovery Act (RCRA) Facility Assessment for Zone E, dated June 6, 1995, states that a capacitor exploded in the Ajax power supply on September 18, 1984. Burned Pyranol oil sprayed inside the power supply's 8' x 6' x 7' enclosure. The enclosure was subsequently sealed off and posted with PCB warning labels.

A swipe screening sample taken by the DET in June, 1995, in an oil stained area on the wooden base, was analyzed by General Engineering Laboratories (GEL) for PCB verification. The swipe results revealed PCB 1254 @ 54,800 ug/100 cm² and PCB 1260 @ 20,300 ug/100 cm². A core sample from the concrete pad taken by the DET on December 16, 1996, was analyzed by GEL for PCB verification. The core results revealed PCB 1254 @ 28.4 PPM and PCB 1260 @ 11.9 PPM

Description of Objectives Accomplished.

1. Contacted South Carolina Electric & Gas (SCE&G) to disconnect power supply from supply transformer. Disconnected wiring between power supply and motor generator. Cut wiring, cooling supply and return piping.
2. The interior of the power supply was disassembled by sections and components. Each component was swiped for PCB presence and designated as scrap or PCB waste according to the lab results. The outer shell or housing of the power supply was disassembled and disposed in the same manner.
3. The motor generator was cleaned with Gamlin. Swipe results indicated no PCB's present.
4. The wooden deck portion of the power supply was removed. The blower portion was disassembled along with the power supply enclosure. The wooden

deck, blower portion and power enclosure were disposed of as PCB hazardous waste.

5. Approximately 4" of the concrete pad's surface was removed and disposed of as PCB hazardous waste after physical cleaning with CAPSUR failed to yield satisfactory results. Six samples taken after removal of the surface revealed all PCB levels were < 1 PPM. Sample locations are shown on page 16 of this report.

4. Smoldering Pots: One induction fired smoldering pot oven had damaged friable asbestos insulation.

Description of Objectives Accomplished.

1. The friable asbestos was removed and disposed per Building 9 Asbestos Removal Site Specific Work Plan.

5. Hydro Arc Furnace Transformer: This transformer supplied the power for the Hydro Arc electric furnace. The transformer was built in 1968 and was filled with 9,150 pounds of oil. A slight amount of oil was found leaking out of the sightglass gaskets. An oil stained area was visible on the deck beneath the transformer. A swipe screening sample taken on 30 April, 1996 from below the transformer sightglass window was analyzed by GEL for PCB verification. The swipe results revealed PCB 1254 @ 15 ug/100 cm² and PCB 1260 @ 7.5 ug/100 cm².

A follow-up screening sample taken by the DET on 10 May, 1996 and analyzed by GEL establish the PCB content of the transformer oil. The sample results revealed PCB 1254 @ 25 PPM and PCB 1260 @ 10 PPM.

Description of Objectives Accomplished.

1. Oil was drained from the transformer and shipped to DET Hazardous Waste Disposal Division. The surface of the transformer was cleaned to <10 ug/100 cm² PCB.

6. Hydro Arc Hydraulic Power Supply and Reservoir: There was a liquid spill beneath the drip tray. This liquid was dipropylene glycol. The glycol pump and reservoir were located in the transformer room. Less than 55 gallons of liquid were evident in the reservoir.

Description of Objectives Accomplished.

1. Drained glycol hydraulic fluid from the reservoir. Cleaned concrete deck and drip pan.

7. Lead Containing Surface Dust: The horizontal surfaces of the building were coated with lead-containing surface dust. Wipe sample results were as follows:

Floor Samples: Eight floor samples were taken ranging from 84.5 ug/100 cm² to 831 ug/100 cm² with an average of 327 ug/100 cm².

Above the Floor Samples: Eight samples were taken at locations above the floor level ranging from 111 ug/100 cm² to 11,500 ug/100 cm² with an average of 1,920 ug/100 cm²

ATLANTIC DIVISION NAVFACENCOMINST 10360.1 limits lead dust on residential floors to 21.5 ug/100 cm² or 200 ug/ft².

Description of Objectives Accomplished.

1. Placed sandbags at the entrances to prevent any rinsate water from exiting the building.
2. Covered all electrical panels with 6 mil poly and other items that could be damaged by water.
3. Pressure washed all interior building horizontal surfaces excluding the ceiling and wooden floors. Washed down walls and other vertical surfaces. Pressure washed all molds bearing lead dust. Items that could not be pressure washed

were cleaned by High Efficiency Particulate Air (HEPA) vacuum or hand wiped with soap and water.

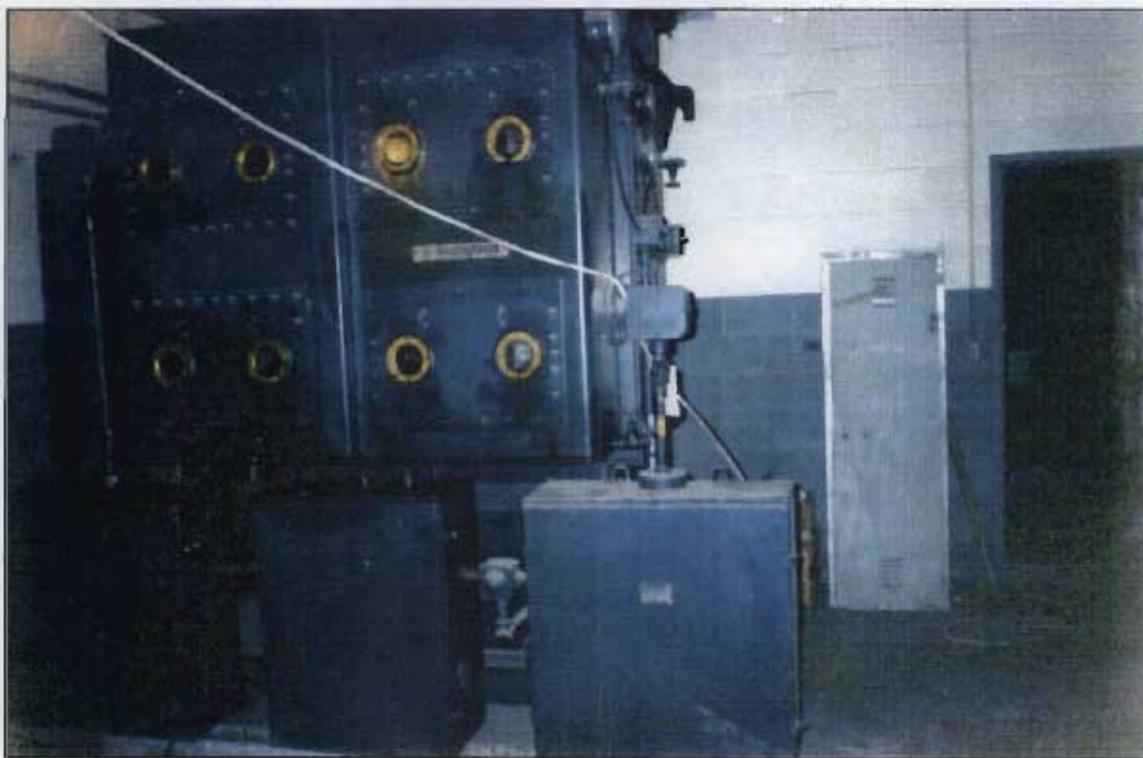
4. The Hydro Arc Furnace sump was used to collect rinsate effluent. The paint chips, which were separated from the rinsate water, were disposed of as lead waste.
5. The rinsate water from the Hydro Arc Furnace Sump was analyzed and pumped into the sanitary sewer after authorization was obtained from the North Charleston Sewer District.



Sand Hopper Leaking Gear Oil



Cleaned Below deck Passage, North Wall



Hydro Arc Transformer



Friable Asbestos Removed From Smoldering Pot Oven



Ajax Power Transformer Enclosure



Ajax Power Transformer Generator In Partially Dismantled Enclosure



Ajax Power Transformer Blower In Partially Dismantled Enclosure



Ajax Transformer Concrete Pad After "CAPSUR" Treatment



Ajax Transformer Concrete Pad After 4" Surface Removal



Cleaned Hydro Arc Furnace Sump



Wooden Molds Covered With Lead Dust



Pressure Washed Wall



Hydraulic Press Sump With Oily Waste

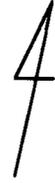


Cleaned Hydraulic Press Sump

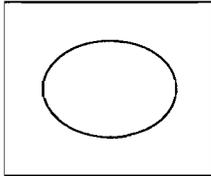


Cleaned Below Deck Passageway In Hydro Arc Transformer Room

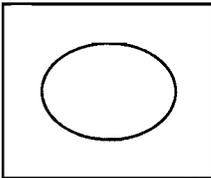
COMPLETION REPORT
PROCESS CLOSURE - BUILDING 9



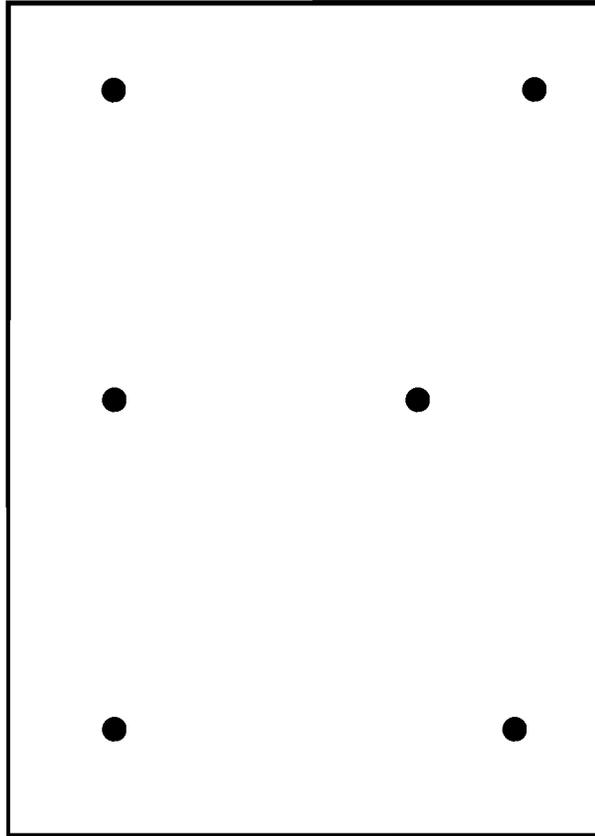
North



Melting Oven

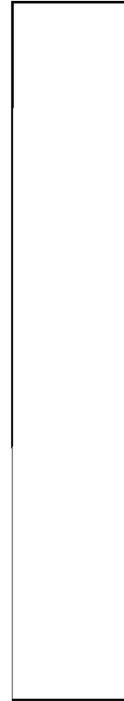


Melting Oven

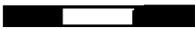


Concrete Pad

● Sample Locations



Electrical Panel



0 1 2 3
Scale: 1 in. = 3 ft.

Ajax Power Transformer Concrete Pad
Showing Final Sample Locations