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TRANSMITTAL FOR INTERIM MEASURES WORK PLAN FOR ZONE A GRID 6 CNC
CHARLESTON SC
11/12/1998
NAVFAC SOUTHERN



DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR, USN
PORTSMOUTH, VIRGINIA, ENVIRONMENTAL DETACHMENT CHARLESTON
1898 NORTH HOBSON AVENUE, BUILDING 30
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IN REPLY REFER TO:

Copy for

Ser: 957
11/12/98

Tony

Mr. Johnny Tapia
South Carolina Department of Health
and Environmental Control
Bureau of Solid and Hazardous Waste Management
8901 Farrow Road
Columbia, SC 29201

RE: Interim Measure Work Plan for Zone A, Grid 6

Dear Mr. Tapia

Enclosed is the subject Interim Measure Work Plan for South Carolina Department of Health and Environmental Control (SCDHEC) review. This Work Plan is being forwarded per the request of Naval Facilities Engineering Command, Southern Division (SDIV) to facilitate parallel reviews within the Navy, United States Environmental Protection Agency (USEPA), and SCDHEC. This Work Plan takes into account comments made by SCDHEC on previously submitted SPORTENVDETCHASN Work Plans.

Questions and/or comments concerning this draft Work Plan should be addressed to Jed Heames at 743-6306 extension 123 or Heather Hinds at extension 138.

E.R. Dearhart
E.R. DEARHART

Distribution:
USEPA (D. Spariosu)
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SCDHEC (P. Bergstrand)



**INTERIM/STABILIZATION MEASURE FOR
ZONE A - GRID 6
NAVAL BASE CHARLESTON
CHARLESTON, SC**



Prepared for:

**DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON SC**



Prepared by:

**Supervisor of Shipbuilding, Conversion and Repair,
USN, (SUPSHIP) Portsmouth Va.,
Environmental Detachment Charleston, S.C.
1899 North Hobson Ave.
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November 12, 1998

**INTERIM/STABILIZATION MEASURE
ZONE A – GRID 6**

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- B. SITE SPECIFIC HEALTH AND SAFETY PLAN

PREPARER: _____

APPROVAL (DETACHMENT): _____

**INTERIM/STABILIZATION MEASURE
ZONE A – GRID 6**

ABREVIATIONS, ACRONYMS, and SYMBOLS

DET	Supervisor of Shipbuilding, Conversion and Repair, USN Portsmouth, Va, Environmental Detachment Charleston
IM	Interim Measure
ppm	Parts Per Million
RCRA	Resource, Conservation and Recovery Act
RFI	RCRA Facility Investigation
SCDHEC	South Carolina Department of Health and Environmental Control
SDIV	Naval Facilities Engineering Command, Southern Division
SSHSP	Site Specific Health and Safety Plan
SWMU	Solid Waste Management Unit
TSDF	Treatment, Storage and Disposal Facility
USEPA	United States Environmental Protection Agency

**INTERIM/STABILIZATION MEASURE
ZONE A – GRID 6**

1. WORK PLAN OBJECTIVE

Zone A – Grid 6 is on the northwestern edge of the former Naval Base Charleston, with Zone B to the south and the Cooper River to the east. Currently it is an open space landscaped with grass. During the Zone A Resource Conservation Recovery Act (RCRA) Facility Investigation (RFI), grid based sampling was performed to characterize background conditions across Zone A. The background level for arsenic was determined to be 9.44 ppm as referenced in the Corrective Measures Study Work Plan (June 5, 1998). Two 1st interval samples collected during grid based sampling contained arsenic concentrations above the Zone A background level of 9.44 ppm. There were no 2nd interval samples with arsenic levels above 6.9 ppm detected during grid based sampling.

The objective of this IM is to excavate and dispose of arsenic impacted soils that exceed 9.44 ppm. The area to be excavated has been predetermined by field sampling in the 1st interval. See figure 1 for sample locations and results.

This IM may not necessarily be the final remedial action taken at this site. Additional actions may be required as determined by the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) process. This IM is consistent with the ultimate cleanup of the site and is not intended to circumvent the public participation process inherent within environmental cleanup under RCRA.

Appendix A contains a description of the site including information on current conditions and past investigations.

Appendix B provides the Site Specific Health and Safety Plan (SSHSP).

2. WORK PLAN GUIDANCE

This work plan will utilize and follow the guidance specified in the RFI Comprehensive Work Plan dated 20 February 1998 and the sampling and analysis guidance provided by the United States Environmental Protection Agency's June 1997 SW846 Update II.

**INTERIM/STABILIZATION MEASURE
ZONE A – GRID 6**

3. WASTE MANAGEMENT

Excavated soils and construction debris will be characterized in accordance with South Carolina Hazardous Waste Management Regulations (Section SCDHEC R.61-79.261) and disposed of in accordance with all applicable regulations and permits. Soil and debris that are characterized as non-hazardous will be sent to a Subtitle D landfill or approval for recycling will be obtained from the Waste Assessment Division of South Carolina Department of Health and Environmental Control (SCDHEC). Soil and debris that are characterized as hazardous will be sent to a permitted Treatment, Storage and Disposal Facility (TSDF) for proper disposal.

4. WORK PLAN IMPLEMENTATION

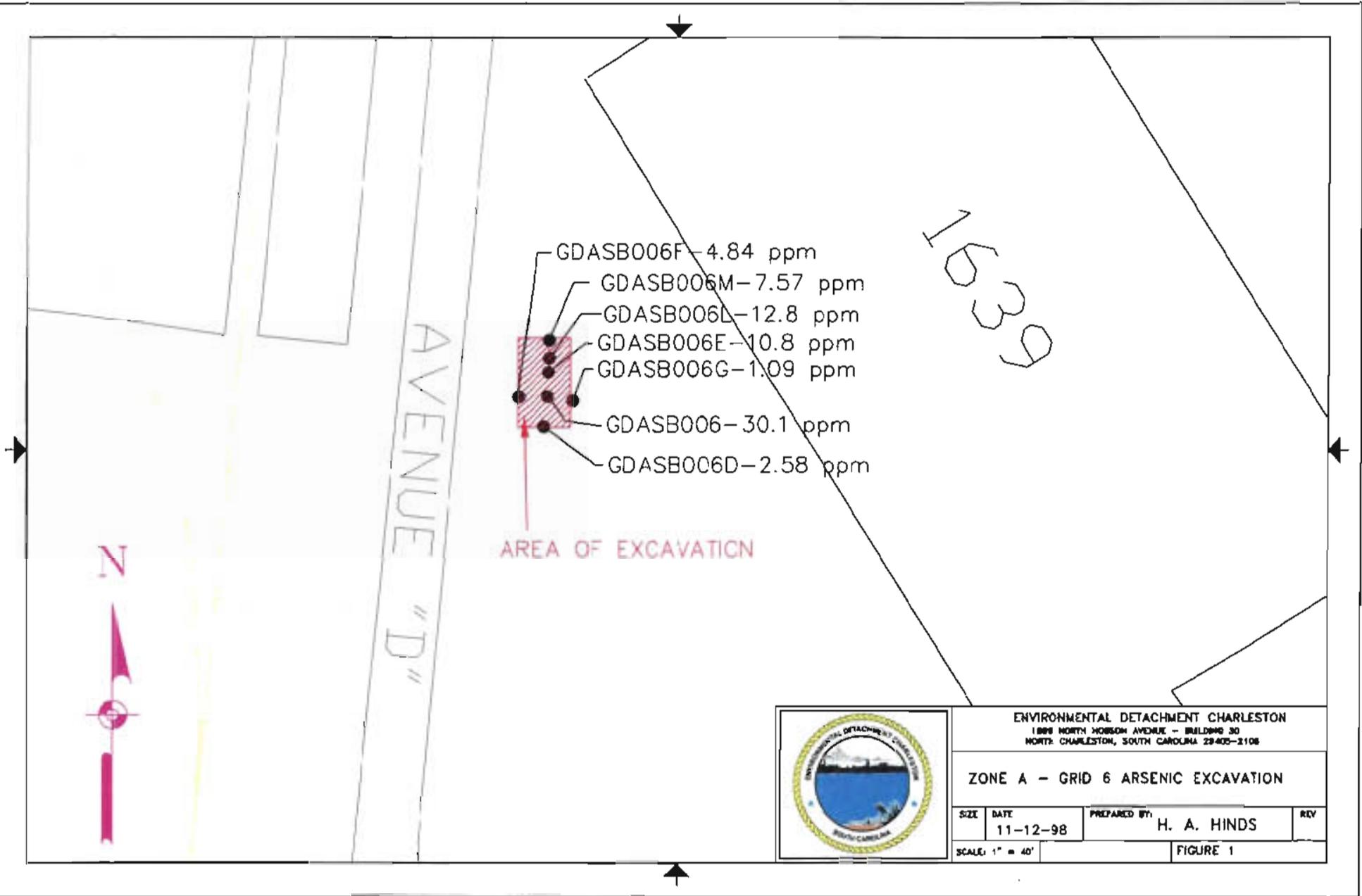
- 4.1 Mark the area to be excavated as defined by field sampling (See Figure 1).
- 4.2 Excavate approximately 55 tons of arsenic impacted soil around sample location GDASB006. The excavation area is approximately 20' X 25' and 2' in depth.
- 4.3 Backfill the area with clean fill and grade to match surrounding area.

5. SAMPLING

Sample results obtained during site delineation will be utilized as the confirmatory samples.

6. FINAL REPORT

A final report will be submitted within 90 days after Southern Division Facilities Engineering Command agrees the IM at the SWMU is complete (review of Data and Walk-through). This report will summarize actions taken and report the following: excavated volumes, nature of wastes generated, waste disposal, sampling evolutions, sample results, site photographs, problems encountered, and any other information that could be helpful in future remediation or reuse of the site.



ENVIRONMENTAL DETACHMENT CHARLESTON
 1898 NORTH HOBSON AVENUE - BUILDING 30
 NORTH CHARLESTON, SOUTH CAROLINA 29405-2108

ZONE A - GRID 6 ARSENIC EXCAVATION

SIZE	DATE	PREPARED BY:	REV
	11-12-98	H. A. HINDS	
SCALE: 1" = 40'			FIGURE 1

APPENDIX A

INTERIM/STABILIZATION MEASURE SWMU 11

1. INTRODUCTION

Zone A is on the northwestern edge of NAVBASE with Zone B to the South and the Cooper River to the east. Zone A consisted primarily of light industrial and commercial properties, including the Defense Reutilization Marketing Office (DRMO).

2. PAST INVESTIGATIONS

During the Zone A RCRA RFI, grid-based sampling was performed to characterize background conditions across Zone A. During this outlier evaluation, surface sample GDASB006 showed an arsenic concentration of 30.1 ppm. Project Team consensus agreed this warranted further consideration. Three additional surface samples were collected by the Clean Contractor within a 10 foot radius of GDASB006 for arsenic analysis. The results were 6.4, 7.2 and 15.3 ppm. This data has been incorporated into the Zone A background dataset. The background reference value for arsenic in Zone A is 9.44 ppm. No lower interval samples (12) showed concentrations of arsenic above 6.9 ppm.

To further delineate the extent of arsenic contamination and determine a perimeter for the excavation, additional samples were collected. See figure 1 for perimeter sample locations and results.

APPENDIX B

ZONE A - GRID 6

CHARLESTON DETACHMENT ENVIRONMENTAL ENGINEERING AND REMEDIATION SITE SPECIFIC HEALTH AND SAFETY PLAN

1. PURPOSE:

This plan provides supplemental site specific information, and is to be used with the Detachment Comprehensive Health and Safety Plan.

2. WORK LOCATION:

Zone A Grid 6 is on the northwestern edge of the former Charleston Naval Base, with Zone B to the south and the Cooper River to the east.

3. WORK SCOPE BRIEF (REFER TO THE WORK DOCUMENT FOR FULL DETAILS):

Remove soil to a depth of approximately two feet.

4. HAZARDS:

The primary health hazard is inhalation of dust generated by dirt removal. The site contains levels of arsenic. Dust particles created during the work may contain this chemical.

Arsenic has an OSHA PEL of 0.01 mg/m³ with routes of entry being inhalation of dust, eye and skin contact, and ingestion. The symptoms of overexposure are ulceration of the nasal septum, dermatitis, GI disturbances, and peripheral neuropathy. The target organs are the liver, kidneys, skin, lungs, and lymphatic system. Arsenic is a suspected human carcinogen.

Safety hazards include:

- Insect bites
- personal injury risks from heavy equipment operation, and traffic
- the dangers of underground and above ground electrical wiring

5. PERSONAL PROTECTIVE EQUIPMENT:

a. Soil Sampling

Tyvek clothing and gloves during sampling evolutions. If excessive dust is produced use a PAPR respirator.

b. Soil Removal

Gloves, coveralls (either tyvek or cloth), and shoe covers, boots or booties. Respirators, 3-M 6000, or equal, with HEPA filters are required if excessive dust is generated when operating excavation equipment, and are optional at other times. If splashing is possible, wear a face shield or a full face respirator. Hearing protection is required when operating noisy equipment.

6. SPECIAL PERSONNEL TRAINING QUALIFICATIONS:

Hazwoper training, and depending on the planned work: respiratory protection, fall protection, excavation standard, forklift operation, lockout/tagout. Crane and heavy equipment operators must be licensed for the equipment being operated.

7. OCCUPATIONAL SAFETY AND HEALTH PRECAUTIONS:

Clearing of vegetation and use of bug repellent is suggested.

Prior to the start of work, the area must be checked for the presence of above or below ground electrical, sewage, telephone or water lines if they will be endangered by the planned work. They must be marked and secured by lockout/tagout if they will be endangered by work operations. Inspect the overhead area for the presence of overhead power lines or poles that may be undermined by digging.

A good work practice is to stay upwind of dust produced. If dust is evident during work, use a light water mist to eliminate the dust.

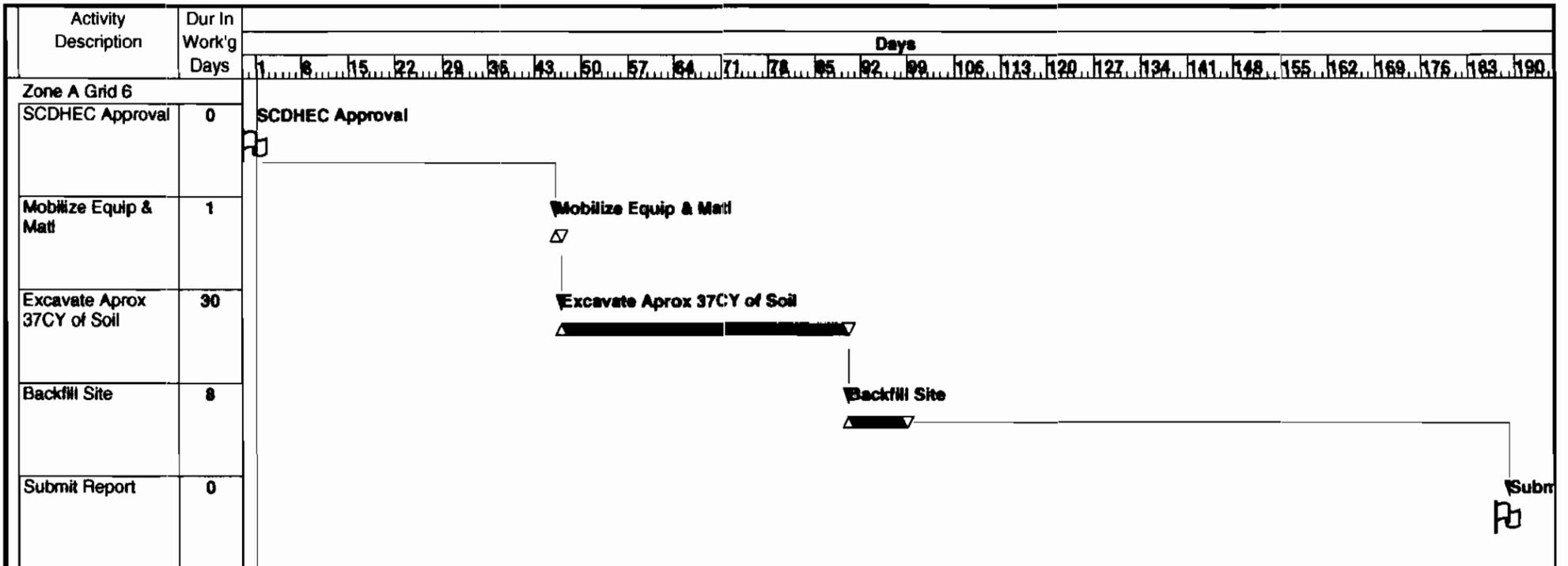
If protective clothing and equipment is not removed at the worksite for cleaning or disposal, provide a changing area with separate lockers for protective clothing/equipment and for street clothing to prevent cross contamination. Employees may not wear or carry home PPE used during the work shift.

Ensure facilities for washing face and hands are available to employees. Employees must wash their hands and face prior to eating or smoking and at the end of the work shift before going home.

Industrial Hygiene monitoring may be performed. Notify CEERD or Naval Hospital OSH personnel prior to start of work.

8. **MATERIAL SAFETY DATA SHEETS**: Attached is a MSDS for Arsenic.

9. **MEDICAL SURVEILLANCE**: Hazardous waste worker (B27, 711) and for respirator wearers (A10, 716).



The "Report" Dates Listed On This Schedule Are Considered Regulatory Dates. All Other Dates Are Provided For information Purposes.

Project Start	01-APR-00		Body Bar
Project Finish	28-SEP-00		Progress Bar
Start Date	01-APR-00		Critical Activity
Plan Date	17-NOV-00		

Zone A Grid 6
Environmental Detachment Charleston