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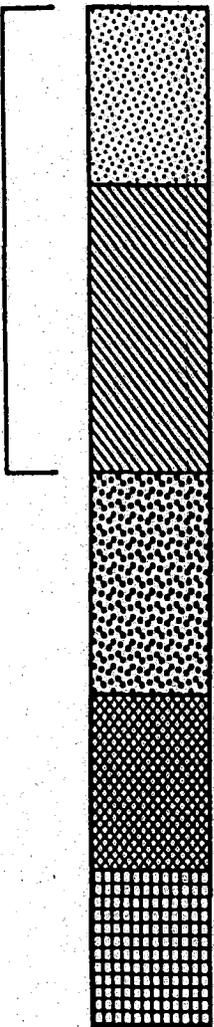
PRESENTATION AND ATTACHMENTS FOR 16 JANUARY 1996 RESTORATION ADVISORY  
BOARD MEETING NSY PORTSMOUTH ME  
1/16/1996  
PORTSMOUTH NAVAL SHIPYARD

# LANDFILL COVERS

Portsmouth Naval Shipyard  
RESTORATION ADVISORY BOARD

January 16, 1996

# LANDFILL COVER COMPONENTS

<u>Profile</u>	<u>Layer</u>	<u>Primary function(s)</u>	<u>Usual materials</u>	<u>General considerations</u>
	1. Surface layer	Promote vegetative growth (most layers); promote evapotranspiration; prevent erosion	Topsoil; geosynthetic erosion control systems	Surface layer for control of water and/or wind erosion is always required
	2. Protection layer	Store water; protect underlying layers from intrusion by plants, animals, and humans; protect barrier layer from dessication and freeze/ thaw; maintain stability	Mixed soils; cobbles	Some form of protective layer is always required; surface layer and protective layer may be combined into a single 'cover soil' layer
	3. Drainage layer	Drain away infiltrating water to minimize barrier layer contact and to dissipate seepage forces	Sands; gravels; geotextiles; geonets; geocomposites	Drainage layer is optional; necessary only where excessive water passes through protection layer or seepage forces are excessive
	4. Barrier layer	Minimize infiltration of water into waste and control escape of gas out of waste	Compacted clay liners; geomembranes; geosynthetic clay liners	Barrier layer is usually required
	5. Gas collection layer	Transmit gas to collection points for removal and/or cogeneration	Sand; geotextiles; geonets	Required if waste produces excessive quantities of gas

# DESIGN CONSIDERATIONS

## – Site Specific Factors

- Climate
- Construction materials
- Freeze-thaw phenomena
- Waste characteristics
- Potential subsidence
- Surface water, tidal influences
- Ability to support vegetation
- Other environmental factors

## – Legal Requirements

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- Scenario of youth soccer at JILF soccer field
- Specific evaluation performed by Navy
  - in coordination with MEDEP and EPA

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- Evaluation conducted using criteria more specific to youth soccer (provided by MEDEP)
- CONCLUSION:
  - Using existing data, specific methodology and the professional judgment of the risk assessors the evaluation shows that use of the field for youth soccer does not present a problem

PORTSMOUTH NAVAL SHIPYARD  
INSTALLATION RESTORATION PROGRAM

STATUS OF WORK  
(January 16, 1997)

A. FEASIBILITY STUDY

**PURPOSE** - Develop, evaluate and screen remedial alternatives.

**STATUS** -

SITES 8, 9 & 11 - The Feasibility Study for JILF, Hg Burial Vaults and Waste Oil Tanks will take into account the results of the groundwater modeling efforts to determine the need for and type of groundwater remedial actions. An Engineering Evaluation and Cost Analysis (EECA) is being prepared for the removal action at mercury burial vault I.

SITE 6 & 29 - (DRMO & Incinerator Site) A treatability study is being developed for a soil solidification and/or stabilization alternative at these sites. If appropriate this alternative would be included in the feasibility study for this area. Additionally the groundwater modeling effort is intended to determine the need for and type of groundwater remedial actions at this site. Additional field investigation has been funded for this area.

SITE 10 - (Battery Acid Tank) Additional field work is funded to determine if the extent of soil contamination is greater than previously expected.

SITE 27 - (Berth 6 Industrial Area, formerly known as Fuel Oil Spill Area) Metals contamination in the groundwater at this site is believed to be coming from a currently unknown site. Site 27 and adjacent areas are fill and have a history of industrial activity. A review of historical information will be conducted to determine what action should be taken.

GEOGRAPHIC INFORMATION SYSTEM (GIS) - To incorporate the on-shore and off-shore data into a single geographical based data management system to provide better data management and interpretation.

**NEXT ACTION** - Coordinate JILF Feasibility Study with groundwater modeling efforts. Complete workplan for treatability study. Develop workplans for additional field work.

## B. NO FURTHER ACTION DECISION DOCUMENTS

**PURPOSE** - The proposed no further action decision documents for sites 12, 13, 16, 23 and 21 (soils) will serve to document these decisions.

**STATUS** - Documents completed.

**NEXT ACTION** - Complete public notice and begin public comment period.

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## C. GROUNDWATER INVESTIGATION

**PURPOSE** - Monitoring of existing groundwater monitoring wells to provide additional data on the potential release and movement of contaminants from several of the sites. Low flow sampling techniques will be used, partially to help determine a better baseline of information for use in the groundwater modeling effort. This information will also help judge the effectiveness of any future remedial actions and provide monitoring for any current releases. A pilot study has been conducted to ensure sampling methods are able to be completed as proposed.

**STATUS** - Sampling occurred in December 1996

**NEXT ACTION** - Complete sample analyses and submit draft report.

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## D. SEEP SAMPLING

**PURPOSE** - Seeps around the Jamaica Island Landfill and in the Backchannel area will be sampled to provide information on the trends of contaminant concentrations and the fate and transport of contaminants of concern.

**STATUS** - Sampling occurred in December 1996.

**NEXT ACTION** - Complete sample analyses and submit draft report.

#### **E. OFFSHORE MIGRATION MODELING**

**PURPOSE** - To evaluate current onshore contaminant migration to the offshore environment. Results will be used to determine the need for remediation and the type of remediation required for sites with existing groundwater contamination.

**STATUS** - A proposed selection of contaminants of concern (COC) to be modeled has been submitted.

**NEXT ACTION** - Complete COC selection and perform modeling.

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#### **F. STUDY AREAS**

**STATUS** - Through historical research of PNS disposal practices at the Shipyard we have become aware of five potentially new study areas. Currently PNS has conducted additional historical research into these sites. This effort has been completed for the Galvanizing Plant (Bldg 184) and the Oil Gasification Plant (Bldg 62). Historical research is complete at the remaining sites and the reports are pending.

Preliminary field investigations have been funded and are planned for three of these sites within the coming year. A fourth site, Incinerator Site, has been combined with the DRMO and is scheduled for additional field investigation has also been funded.

**NEXT ACTION** - Historical research reports are complete except drawings. Develop workplans for field investigations.

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#### **G. ECOLOGICAL RISK ASSESSMENT (OFF-SHORE)**

**PURPOSE** - Evaluate the potential for adverse effects from contaminants that may have migrated from Shipyard IR Sites.

**STATUS** - The Draft Final ERA was submitted by the Navy on July 21, 1995. Revisions to the Draft Final document are based on regulatory comments received from a previous draft. Supplemental reports developed by the various offshore investigators (university, consultants, EPA and Navy) were sent to the EPA, MEDEP, Natural Resources Trustees and RAB August 24, 1995. Regulatory and Natural Resource Trustee comments were received; EPA & NOAA October 4, 1995, MEDEP October 6, 1995 and New Hampshire Fish & Game August 17, 1995. Conference calls and meetings have been held in efforts to resolve these comments. The EPA, NOAA, USFWS, MEDEP and the Navy have developed a weight of evidence approach to evaluate the information gathered.

**NEXT ACTION** - Revise ERA to incorporate results of comment resolution meetings.

## H. OFF-SHORE MONITORING

**PURPOSE** - Monitoring of the offshore environment surrounding PNS would provide additional data on the release and movement of contaminants from several of the sites and the distribution of contaminants in the river. This data would provide a better baseline of information to judge the effectiveness of any future remedial actions. It will also serve to provide advance warning if the level of contamination were to worsen.

**STATUS** - Brown and Root Environmental and the University of New Hampshire have been contracted to prepare the workplan. Development of the draft workplan is on hold pending resolution of the Ecological Risk Assessment to ensure monitoring is necessary at this time and that it will address the right areas.

**NEXT ACTION** - On hold pending finalization of the ERA and determination of the next appropriate action.

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## I. FEDERAL FACILITY AGREEMENT

**PURPOSE** - To establish the roles and responsibilities of the Navy, EPA and MEDEP and serve as an Interagency Agreement (IAG) for the completion of all necessary remedial actions at PNS. Includes development of a Site Management Plan to be used as the schedule for the IR Program at the Shipyard. CERCLA requires an IAG to be in place within 180 days after a Record of Decision (ROD) is signed.

**STATUS** - Development and negotiation of the Federal Facility Agreement (FFA) is delayed pending a decision on issues regarding funding of work. This issue is being addressed at EPA and Navy headquarters.

**NEXT ACTION** - Wait for headquarters resolution.

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## J. SITE MANAGEMENT PLAN

**PURPOSE** - Serves as the schedule and management plan for the PNS IR Program. A Site Screening Process (SSP) will be developed to outline the process which would be used to screen new sites for consideration to be added as areas of concern (AOC).

**STATUS** - The Navy, EPA and MEDEP have developed a generic schedule which will serve as a basis for individual site schedules. A conceptual model of the SSP has been submitted.

**NEXT ACTION** - Complete site schedules and draft Site Screening Process.

## K. HISTORICAL RADIOLOGICAL ASSESSMENT

**PURPOSE** - Conduct a review of existing information in order to prepare a Preliminary Assessment pursuant to CERCLA to determine if there have been any releases of radionuclides at PNS which should be further investigated or remediated.

**STATUS** - Preparation of the Historical Radiological Assessment (HRA) has been funded. This document will summarize the extensive body of pertinent historical information. It will be presented in two volumes: one for radioactivity associated with the Naval Nuclear Propulsion Program; and one for general radioactivity. The extensive data review and report development process has begun. The draft HRA is expected to be prepared by July of 1997.

**NEXT ACTION** - Submit the Draft HRA.

## Document Schedule

Phase I/Phase II Human Health Comparison	5/16/97
Draft Phase I/Phase II Human Health Comparison	6/30/97
Comments Due	8/14/97
Navy Response to Comments	9/13/97
Comments Due	12/12/97
Draft Final Phase I/Phase II Human Health Comparison	
DRMO/Incinerator and Site 10 Site Workplan	3/24/97
Draft Workplan	5/8/97
Comments Due	6/22/97
Navy Response to Comments	7/22/97
Comments Due	8/21/97
Draft Final Workplan	10/20/97
Final Workplan	
DRMO Treatability Workplan	
Engineering Evaluation/Cost Analysis (EE/CA) for MB 1 Removal	
Draft Comments Due	1/15/97
Navy Response to Comments	3/1/97
Final EE/CA	4/30/97
OU-3 Constructability Review	
Draft Report	3/15/97
Comments Due	4/29/97
Navy Response to Comments	6/13/97
Comments Due	7/13/97
Draft Final Report	8/12/97
Final Report	10/11/97
Action Memorandum for MB 1 Removal	
Treatability Study Report	