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PRESENTATION AND ATTACHMENTS FOR RESTORATION ADVISORY BOARD MEETING  
HELD 20 NOVEMBER 1997 NSY PORTSMOUTH ME  
11/20/1997  
PORTSMOUTH NAVAL SHIPYARD

## **RESTORATION ADVISORY BOARD AGENDA**

**Date**        **November 20, 1997**  
**Place**      **Days Inn, Kittery, ME**  
**Time**       **7 p.m.- 9 p.m.**

**Introduction**

**Status of work**

**Schedules**

**Mercury Burial Vault Removal**

**Phase I/Phase II Offshore Data Comparative Analysis  
Report**

**Other issues as required**

**PRESENTATION OF  
PHASE I/PHASE II OFFSHORE DATA COMPARATIVE ANALYSIS REPORT**

**PORTSMOUTH NAVAL SHIPYARD  
RESTORATION ADVISORY BOARD MEETING**

**20 NOVEMBER 1997**

## **PRESENTATION OVERVIEW**

- OBJECTIVE OF THE REPORT
- BACKGROUND ON OFFSHORE HUMAN HEALTH RISK ASSESSMENT
- METHODOLOGY USED IN THE DATA COMPARATIVE ANALYSIS
- CONCLUSIONS OF THE REPORT
- WHAT'S NEXT?

## OBJECTIVE OF THE REPORT

- DETERMINE WHETHER THE HUMAN HEALTH RISK ASSESSMENT REPORT FOR OFFSHORE MEDIA (McLAREN/HART, 1994) SHOULD BE FORMALLY UPDATED TO INCORPORATE PHASE II DATA
  - ⇒ GENERALLY A BASELINE RISK ASSESSMENT NOT REVISED IN THE PROCESS OF DEVELOPING REMEDIAL RESPONSE OBJECTIVES.
  - ⇒ HOWEVER PHASE II DATA COLLECTED BEFORE HUMAN HEALTH BASED OFFSHORE REMEDIAL OBJECTIVES FINALIZED

## BACKGROUND ON OFFSHORE HUMAN HEALTH RISK ASSESSMENT

- OFFSHORE HUMAN HEALTH RISK ASSESSMENT FINALIZED IN 1994
  - ⇒ USED PHASE I DATA WHICH WAS COLLECTED IN FALL 1991
  - ⇒ PART OF THE PROCESS FOR INVESTIGATING AND DEVELOPING REMEDIAL RESPONSE OBJECTIVES FOR THE OFFSHORE
  - ⇒ DEVELOPED IN ACCORDANCE WITH EPA AND MEDEP GUIDANCE
  - ⇒ SEAFOOD INGESTION IDENTIFIED AS A PATHWAY OF CONCERN
    - SPECIES EVALUATED FOR SEAFOOD INGESTION WERE LOBSTER, FLOUNDER, AND MUSSEL
  - ⇒ OFFSHORE HUMAN HEALTH CONTAMINANTS OF CONCERN INCLUDE METALS (Arsenic, Lead, Mercury, Cadmium, Copper), POLYAROMATIC HYDROCARBONS (PAHS), PESTICIDES, AND PCBS
- PHASE II DATA, COLLECTED IN SUMMER OF 1993, WAS NOT AVAILABLE FOR INCLUSION IN THE OFFSHORE HUMAN HEALTH RISK ASSESSMENT

## METHODOLOGY USED IN THE DATA COMPARATIVE ANALYSIS

- COMPARISON OF PHASE I AND PHASE II DATA CONDUCTED AND IMPACTS TO THE RISK ASSESSMENT RESULTS EVALUATED
- ANALYTES (CHEMICALS) WHICH INCREASED IN MAXIMUM AND/OR AVERAGE CONCENTRATIONS FROM PHASE I TO PHASE II WERE IDENTIFIED

⇒ CHEMICAL-SPECIFIC RISK WERE THEN CALCULATED FOR EACH OF THE IDENTIFIED ANALYTES USING THE FOLLOWING EQUATION:

$$\text{Phase II risk} = \text{Phase I risk} \times (\text{Phase II concentration} / \text{Phase I concentration})$$

⇒ ANALYTES WITH PHASE II CHEMICAL-SPECIFIC RISKS IN A DIFFERENT EPA RISK CATEGORY WERE IDENTIFIED AS POTENTIAL NEW CONTAMINANTS OF CONCERN (COCS)

CARCINOGENS: PHASE I RISK LESS THAN  $10^{-6}$  AND PHASE II RISK GREATER THAN  $10^{-6}$

NONCARCINOGENS: PHASE I RISK LESS THAN 1 AND PHASE II RISK GREATER THAN 1

## METHODOLOGY USED IN THE DATA COMPARATIVE ANALYSIS (CONTINUED)

- ANALYTES WHICH WERE NOT DETECTED OR ANALYZED IN PHASE I, CONCENTRATIONS WERE COMPARED TO EPA REGION III RISK BASED CONCENTRATION SCREENING LEVELS (RBCs)
  - ⇒ IF ANALYTE CONCENTRATION EXCEEDED THE SCREENING LEVEL, CHEMICAL-SPECIFIC RISK WERE CALCULATED USING THE SAME METHODOLOGY AS THE OFFSHORE HUMAN HEALTH RISK ASSESSMENT
  - ⇒ ANALYTES WITH PHASE II CHEMICAL-SPECIFIC RISKS GREATER THAN EPA ACCEPTABLE LEVELS WERE IDENTIFIED AS POTENTIAL NEW CONTAMINANTS OF CONCERN (COCS)

CARCINOGENS: PHASE II RISK GREATER THAN  $10^{-6}$

NONCARCINOGENS: PHASE II RISK GREATER THAN 1

## CONCLUSIONS

- MOST ANALYTES DECREASED IN CONCENTRATION FROM PHASE I TO PHASE II
- INCREASES IN PHASE II CONCENTRATIONS RESULTED IN THE IDENTIFICATION OF 3 POTENTIAL NEW HUMAN HEALTH COCS (MANGANESE, METHYL MERCURY, AND DIBENZO(A,H) ANTHRACENE)
- MUSSEL SHOWED THE MOST SIGNIFICANT INCREASE IN CONCENTRATIONS FROM PHASE I TO PHASE II
  - ⇒ MAXIMUM CONCENTRATIONS OF METALS AND POLYAROMATIC HYDROCARBON (PAH) SHOWED THE GREATEST INCREASE FROM PHASE I TO PHASE II
  - ⇒ SEVERAL PAH PHASE II MAXIMUM RISKS NOW GREATER THAN EPA RISK RANGE; HOWEVER, PHASE II AVERAGE RISKS WERE NOT GREATER

## CONCLUSIONS (CONTINUED)

- UPDATING THE OFFSHORE HUMAN HEALTH RISK ASSESSMENT WITH PHASE II DATA IS NOT NECESSARY
  - ⇒ EXCEPT FOR THE ADDITION OF THREE NEW POTENTIAL COCS, PHASE II RESULTS DO NOT CHANGE THE CONCLUSIONS OF THE PHASE I RISK ASSESSMENT
  - ⇒ PRELIMINARY REMEDIATION GOAL DEVELOPMENT WILL INCLUDE THE RESULTS OF BOTH THE DATA COMPARATIVE ANALYSIS AND THE PHASE I RISK ASSESSMENT

## WHAT'S NEXT?

- DEVELOP OFFSHORE REMEDIAL OBJECTIVES AND PRELIMINARY REMEDIATION GOALS (PRGS) FOR HUMAN AND ECOLOGICAL RECEPTORS
  - ⇒ BOTH PHASE I AND PHASE II DATA WILL BE USED IN THE DEVELOPMENT OF REMEDIAL OBJECTIVES AND PRGS
- PREPARE OFFSHORE MONITORING PLAN IN SUPPORT OF AN INTERIM RECORD OF DECISION FOR THE OFF SHORE

PORTSMOUTH NAVAL SHIPYARD  
INSTALLATION RESTORATION PROGRAM  
STATUS OF WORK  
November 20, 1997

SITE STATUS -

OU 2 (SITES 6, DRMO, & 29, Incinerator Site)

A treatability workplan 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.

Fate and transport modeling is being performed at this site to assist in making remedial decisions.

A workplan is being prepared to provide additional site characterization.

OU 3 (SITES 8, Jamaica Island Landfill, 9, Mercury Burial Vaults, & 11, Waste Oil Tanks)

Fate and transport modeling is being performed at this site to assist in making remedial actions.

Mercury Burial Vault MB I has been removed. A Removal Action Report is being prepared.

SITE 10, Battery Acid Tank.

A workplan is being prepared to provide additional site characterization.

SITE 27, Berth 6 Industrial Area (formerly Fuel Oil Spill Area)

Fate and transport modeling is being performed at this site to assist in making remedial actions.

SITES 30, Galvanizing Plant (Building 184); 31, West Timber Basin; 32, Topeka Pier.

A workplan is being prepared to perform a Site Investigation to determine if these sites should enter the CERCLA Process.

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DOCUMENT STATUS -

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 are being 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

STATUS -

The fourth round of sampling in November 1997 has been completed.

NEXT ACTIONS -

Submit data packages for July 1997 and November 1997 sampling events.

FATE AND TRANSPORT MODELING

PURPOSE - To evaluate current onshore contaminant migration to the offshore environment. Results will assist in determining the need for remediation and the type of remediation required for OU 2, OU 3, and Site 27.

STATUS -

Phase II Fate and Transport Modeling Work Plan is out for comment. MEDEP is performing independent geochemical modeling.

NEXT ACTION -

Issue minutes of July 24, 1997 Technical Meeting to U.S. EPA, MEDEP, and the RAB.

Receive comments on Phase II Fate and Transport Modeling Work Plan.

SITES 30, GALVANIZING PLANT (BUILDING 184); ;31, WEST TIMBER BASIN;  
32, TOPEKA PIER.

PURPOSE - Perform Site investigation to determine if these sites should enter the CERCLA process.

STATUS - Received comments on draft workplan for sites 30, 31, and 32.

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NEXT ACTION -

Preparing response to comments on draft workplan for sites 30, 31, and 32.

ECOLOGICAL RISK ASSESSMENT (ERA) - OFFSHORE

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

STATUS

Received comments on Revised Draft Final ERA.

NEXT ACTION -

Provide responses to comments on Revised Draft Final ERA.

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 - Funding language resolved between EPA and the Navy.

NEXT ACTION - Begin FFA negotiations in Fall, 1997

SITE SCREENING PLAN

PURPOSE - Outlines Site Investigation Process to be performed on new sites to determine if the site should enter the CERCLA Process.

STATUS

Comments received on Draft Site Screening Plan from EPA, MEDEP, and the RAB.

NEXT ACTION -

Submit Draft Final Site Screening Plan and respond to comments on Draft Final Site Screening Plan.

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PHASE I/PHASE II HUMAN HEALTH COMPARISON

PURPOSE - Compare Phase II Seafood data to Phase I Seafood data to determine if a CERCLA Risk Assessment on the Phase II data will be required.

STATUS -  
Draft Phase I/Phase II Human Health Comparison out for comment.

NEXT ACTION - Receive comments on Draft Phase I/Phase II Human Health Comparison.

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 - Received comments on Historical Radiological Assessment.

NEXT ACTION - Respond to comments on Historical Radiological Assessment.

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Document Schedule

Phase I/Phase II Human Health Comparison Comments Due Draft Phase I/II Human Health Comparison Comments	Awaiting
Navy Response to Comments Comments Due	30 days later
Draft Final Phase I/II Human Health Comparison Final Phase I/II Human Health Comparison	
DRMO/Incinerator and Site 10 Site Workplan Respond to Comments on Draft Final Workplan Final Workplan	1/5/97
DRMO Treatability Workplan Issue Final DRMO Treatability Workplan	mid Jan 98
Sites 30, 31, & 32 Workplan Issue Draft Final Workplan	mid Jan 98
Ecological Risk Assessment Respond to comments	mid Jan 98
Site Screening Plan Draft Final Site Screening Plan	12/18/97

**EPA UPDATE  
PORTSMOUTH NAVAL SHIPYARD  
RESTORATION ADVISORY BOARD MEETING  
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Historical Radiological Assessment

Comments submitted to Navy - November 14, 1997

No major concerns identified by EPA. Information consistent with results of surveys performed by EPA in 1979 and 1989. EPA also performed survey in 1997, results not yet available. The only recommendation was to do some limited screening in fresh water ponds to complete collection of data.

Phase I/II Offshore Data Comparative Analysis Report

Still undergoing review by EPA Risk Assessor. However, do not anticipate identification of any significant issues since EPA Risk Assessor recommended this comparison based on preliminary review of the Phase II data. This review appeared to indicate that the Phase II data was not significantly different from the Phase I data, and would not result in major differences in risk assessment outcomes.

Ecological Risk Assessment

EPA awaiting Navy's response to comments. However, EPA and federal trustees agree with the conclusions presented in the draft final version of the document, and believe the document is adequate to support moving to the Feasibility Study phase of work for the offshore areas.

Federal Facility Agreement

Parties to meet in December to discuss latest version of FFA which includes new model language developed by EPA and the Navy (nationally) on funding/scheduling. Negotiations anticipated to begin in January 1998.

Jamaica Island Landfill

EPA continuing discussions with Navy and DEP to identify remedial action objectives and possible interim actions.