



DEPARTMENT OF THE NAVY  
PORTSMOUTH NAVAL SHIPYARD  
PORTSMOUTH, N. H. 03804-5000

N00102.AR.000814  
NSY PORTSMOUTH  
5090.3a

IN REPLY REFER TO:

March 13, 2000

MEMORANDUM

FOR THE MEMBERS OF THE RESTORATION ADVISORY BOARD CERCLA REMEDIAL  
ACTION PROGRAM, PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE

Enclosed please find the draft minutes from the January 27, 2000 Restoration Advisory Board meeting for your review and comment.

Comments are requested by March 29, 2000. You may provide your comments to me at (207) 438-3830.

Sincerely,

Ken Plaisted  
Navy Co-Chairman  
Restoration Advisory Board

Distribution:

Doug Bogen  
Jeff Clifford  
Michele Dionne  
Eileen Foley  
Carolyn Lepage  
Mary Marshall  
Phil McCarthy  
Jack McKenna  
Mary Menconi  
Onil Roy  
Roger Wells  
Johanna Lyons  
EPA (M. Cassidy)  
NOAA (K. Finkelstein)  
MEDMR (D. Card)  
USFWS (K. Munney)  
NHF&G (C. McBane)  
MEDEP (I. McLeod)  
NORTHDIV (F. Evans)  
COMSUBGRU TWO (R. Jones)  
Tetra tech NUS (L. Klink, D. Cohen)  
PNS (Codes 106, 106.3, 106.3R, 100PAO, 105, 105.5, NRRO)

**RESTORATION ADVISORY BOARD MEETING  
PORTSMOUTH NAVAL SHIPYARD  
DAYS INN, KITTERY, MAINE  
JANUARY 27, 2000**

The meeting began at 7:10 p.m. and ended at 9:20 p.m. Community members attending were: Phil McCarthy, Doug Bogen, Onil Roy, Jack McKenna, Mary Mericoni, Johanna Lyons and Roger Wells; Navy members Ken Plaisted and Fred Evans; and regulatory member Iver McLeod (MEDEP). Others attending were Carolyn Lepage, the Seacoast Anti-Pollution League's (SAPL) technical advisor; Steve Haberman of SAPL; Jerry Solich, Marty Raymond, and Alan Robinson from the Portsmouth Naval Shipyard (PNS). Among the guests were Bill Golden, Henri Gaudette from the University of New Hampshire, Deborah Cohen from Tetra Tech NUS, Inc (TINUS), John Bleiler from ENSR, and Larry Favinger, a reporter for the Portsmouth Herald. Eileen Foley, Jeff Clifford, Don Card, and Mary Marshall and Meghan Cassidy (EPA) were absent.

**INTRODUCTION**

Ken Plaisted welcomed the Restoration Advisory Board (RAB) and introduced the primary topics of the evening; a presentation of the Draft Seep and Sediment Report and a review of proposed work for FY00 at the Shipyard. Also noted was that use of No. 6 fuel oil is being phased out to reduce emissions at the Shipyard's power plant. One boiler has already been converted to natural gas, and a second is in the process of conversion. Ken was pleased to note that comments have been received from the RAB community members on the Federal Facilities Agreement (FFA) and draft Operable Unit 3 (OU3) Feasibility Study (FS), an indication that the process for public involvement in the remediation process was working.

**STATUS OF WORK**

Fred Evans provided a handout summarizing the work status. Recent activities by the Navy have focused on responding to comments on several deliverables, including the FFA, the Operable Unit 3 (OU3) draft Feasibility Study (FS), Revised OU3 Risk Assessment, Multi-Sensor Towed Array Detection System Report, Jamaica Island Landfill (JILF) test-pitting work plan, the Interim Offshore Monitoring Plan, and the Offshore Ecological Risk Assessment.

A review of the stable isotope analysis has been completed. While these results may not be useful for current projects, they will be considered in the future to determine whether it may be useful for future projects at the Shipyard.

The Navy has distributed the draft Seep/Sediment Summary Report. Comments were due to the Navy on February 2, 2000.

A technical meeting was scheduled for February 10, 2000 to review OU3 landfill capping alternatives.

## **REGULATOR UPDATES**

**EPA** --- Meghan Cassidy was unable to attend the RAB meeting.

**MEDEP** --- Iver McLeod summarized recent activities by the state. The state has recently or is currently reviewing three reports: the draft FS for OU3, the Seep/Sediment Summary Report, and the FFA. MEDEP is currently preparing follow-up comments on the Navy's Response to Comments on the OU3 Risk Assessment/Facility Background reports.

Funding concerns (Defense/State Memorandum of Agreement) are being worked on. Two project management meetings and one technical meeting were conducted in the last month. At the technical meeting (December 15, 1999), the test pit locations at the JILF were reviewed and agreed upon.

## **SEEP/SEDIMENT SUMMARY REPORT**

Deborah Cohen of TtNUS presented the draft Seep/Sediment Summary Report to the RAB. The draft Seep/Sediment Report was forwarded to the RAB in December 1999 for review. Comments on the draft Report were due to the Navy on February 2, 2000.

The Seep/Sediment Summary Report summarizes the seep/sediment sampling activities. The results of the sampling activities and the exploratory evaluations of the data are also provided in the report.

Sampling was conducted at 14 seep locations during December 1996, and April, August, and November 1997 (Rounds 7, 8, 9, and 10, respectively). Seep, an area where groundwater naturally discharges to the surface during mid- to low tide, was collected from all 14 locations. As no sediment was present at Clark Cove station CC-1004.4, sediment was not collected at this location, but was collected from the remaining 13 locations. All seep and sediment samples were analyzed for polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals, and several miscellaneous parameters. Seep samples were analyzed for total (unfiltered sample) and dissolved (filtered sample) metals.

The seep/sediment data were originally collected to support onshore/offshore contaminant fate and transport modeling. Exploratory evaluations were considered only after data had been collected. In accordance with the September, 1999 Seep/Sediment Evaluation Proposal, evaluations were conducted, using existing data, to collect as much interpretive information from the data as possible. Since the analyses were intended to support partitioning coefficient (Kd) calculations as part of the fate and transport modeling, low detection limits (generally parts per trillion for organics) were used.

All results were compared to screening criteria. Surface water data were screened against water quality criteria or other screening values (e.g., EPA EcoTox Thresholds) using data without application of a dilution factor and with application of the 100x dilution factor, developed as part of the OU3 Risk Assessment based on Phase II modeling. Sediment data were compared to low- and mid-effects screening benchmarks. Values from the National Oceanic and Atmospheric Administration (NOAA) were used preferentially. These values are ER-L (effects range-low) and ER-M values (effects

range-median). None of the screening values used to evaluate the data are cleanup criteria.

Review of the seep data indicated that PAHs and PCB distributions are similar, with higher concentrations localized in the Back Channel and Clark Cove. Concentrations of metals were also generally higher in these areas. Pesticides were present throughout the seep locations, with localized higher concentrations at Clark Cove and Sullivan Point. Without a dilution factor, concentrations of PAHs (Jamaica Cove and Clark Cove), PCBs (Jamaica Cove, Clark Cove, and Back Channel), and pesticides and metals (all four areas) exceeded screening criteria. With the 100-fold dilution factor, 4,4'-DDD in one seep (CC-1004.5) was the only compound exceeding screening criteria.

Review of the sediment data indicated that concentrations of PAHs were highest in the Back Channel, Jamaica Cove, and Clark Cove (CC-1004.5); PCBs were highest in the Back Channel; metals concentrations were varied, but were highest in the Back Channel and Clark Cove; and pesticides were widely distributed, with localized higher concentrations in Clark Cove (CC-1004.5) and Sullivan Point (SP-1001). Concentrations of metals, PAHs, PCBs, and pesticides exceeded ER-Ls (or equivalent) in all four areas. Concentrations of PAHs (Jamaica Cove BC-1012 and Back Channel BC-1018), PCBs (Back Channel and Clark Cove CC-1004.5), metals (Back Channel, Jamaica Cove, and Clark Cove) and pesticides (all four areas) exceeded ER-Ms (or equivalent).

The objectives of the exploratory evaluations were to assess pesticides as potential Chemicals of Concern (COCs) for OU4, provide input for the interim offshore monitoring program, evaluate contaminant source, determine whether seeps represent a current pathway of chemical migration from onshore sources, and to develop an understanding of the seasonal variations, bioavailability, and distributions of chemicals.

Results of the exploratory evaluations are as follows:

- Based on observations of concentrations and distribution of chemicals in the seep sampling areas, it was determined that Interim Offshore Monitoring stations should be (and are) located in the vicinity of the seep/sediment sampling areas.
- It could not be concluded from the four sampling events that any one season would be more appropriate for sampling in the interim offshore monitoring program.
- No correlation was observed between total metal data and Acid Volatile Sulfide (AVS) and Simultaneously Extracted Metals (SEM). Therefore, elimination of selected analyses was not recommended.
- Baseline Year 1 and Year 2 AVS and SEM data should be evaluated to determine and appropriate season for the Interim Offshore Monitoring in subsequent years (Years 3 and on). The AVS and SEM data should also be evaluated with regard to total metals in sediment for any potential correlations.
- The data did not provide conclusive evidence of a connection between seep and nearby sediments. The Interim Offshore Monitoring program will be used to determine whether there are potential ongoing adverse impacts to offshore in the vicinity of the seeps, and whether further evaluation of offshore areas is required.
- Inclusion of pesticides as COCs is not warranted based on evaluation of spatial distribution of pesticides, results of contaminant fate and transport modeling, and evaluation of IRP site history. If pesticides were applied legally, there is no ground for including them as COCs under CERCLA, although the State of Maine does not distinguish between legal application and uncontrolled release.

- The Interim Offshore Monitoring program will provide a mechanism to determine whether additional source evaluation or investigation is warranted for offshore areas. Should such evaluation/investigation be required, a work plan would be developed using the Data Quality Objectives Process to assess the data available and determine the types of studies necessary to meet the Objectives.

Based on questions from the RAB on the Seep/Sediment Summary Report, several issues were addressed. Sediment and porewater samples are to be collected and tested for toxicity, using standard laboratory methods, to develop Preliminary Remedial Goals (PRGs). PRGs are risk-based values used in the CERCLA process to evaluate extents of areas potentially in need of remediation. Other remedial values include Interim Remediation Goals (IRGs), which, as outlined in the monitoring plan, are threshold that trigger action, and Remediation Goals (RGs) are final action values in the Record of Decision (ROD).

Sediment samples are to be collected from the 0 to 10 cm horizon during the interim monitoring program. The ecological risk assessment data suggest that this horizon is the bioturbation region. Therefore, regulators, natural resource trustees, and the Navy agreed to sample from 0 to 10 cm, and 0 to 2 cm for AVS and SEM.

The Navy is not aware of any other seeps on the island. Most of the remaining area of the shipyard is piers, seawalls, etc. The seeps were selected based on site reconnaissance by the Navy, EPA, and MEDEP. The Interim Offshore Monitoring Plan includes monitoring stations in the vicinity of the known seeps; however, if additional seeps are discovered during the offshore monitoring, they will be recorded.

The seeps were collected immediately following the lowest tide of the month. During high tide, the seeps are under the surface water. Based on existing data, it cannot be determined whether seep water quality is related to groundwater quality, or whether seawater is impacting seeps. There are several constituents detected in seeps, but not upgradient groundwater (e.g., 4,4'-DDD at one well). Particulate matter (total suspended solids) may be affecting seep water quality for certain organic constituents.

A question was raised as to whether the currents in the Back Channel would be conducive to sediment deposition, and contaminant concentrations would be higher as a result. The Navy indicated that a study of the currents was conducted as part of the Estuarine Ecological Risk Assessment and information on the study would be provided in the RAB meeting minutes.

Post Meeting Note: The following text was taken from Page 5-3 of the revised draft final Estuarine Ecological Risk Assessment prepared by Naval Command, Control and Ocean Surveillance Center (NCCOSC), dated April 1997 to address the RAB question:

"As described in the conceptual model (Figure 4-2) the areas of concern for exposure to contaminants are the coves and locations where the river currents are restricted and sediment materials are deposited. Current measurements made by moored current meters (Swift and Celikkol 1994), acoustic doppler profiles (Chadwick et al. 1993), and modeled by the hydrodynamic model (Chadwick 1994) all indicate reduced current flows in Clark Cove, the Back Channel, and along the northwestern side of Seavey Island (Figure 5-1, Chadwick et al. 1993)."

## NAVY FUNDING PRIORITIES

Fred Evans of the Navy presented the major priorities for funding in fiscal year 2000 at the Shipyard and asked for RAB input. The priorities for funding the Navy identified are:

- OU3 Proposed Plan/ROD,
- Building 184 Pit Investigation Work Plan/Field Work/Report,
- OU3 Former Child Development Center (CDC) soil sampling,
- Additional soil sampling under Building 238 at Site 10,
- No Further Action (NFA) Decision Document (under CERCLA) for Sites 26 and 27,
- Site 10 additional monitoring well installation,
- Building 62 Work Plan/Field Work/Report, and
- OU2 Treatability Study of possible treatment processes.

In response to questions and comments from the RAB, the following items were noted by the Navy.

- It is unclear how much money is available for these activities at the current time. Several items remain to be negotiated between the Navy and TtNUS.
- Soil sampling at the Former CDC is proposed to determine whether the high lead concentration detected previously is anomalous or represents a hot spot area for lead. The MEDEP noted that sampling at the Former CDC should be a higher priority than some of the other items.
- Solidification, considered for a treatability study for the OU2, was used at another site with a saline environment and it was found that use of cement in a saline environment was infeasible. Mining techniques (panning/skimming lead from soils) has been used at some of the west coast firing ranges. These methods will be reviewed for application at OU2.
- At Site 29, the Navy believes the teepee incinerator site has been sufficiently characterized for risks. At the ash dumping area at Site 29, the Navy assumes that an area filled to geographic features (e.g., steep rock outcrop) is the ash boundary. It is likely that filled land is smaller, not larger, than delineated, and the Navy is assuming conservative boundaries of ash. The Navy feels that the existing data are adequate for risk characterization purposes. The RAB asked the Navy to consider whether additional data for Site 29 may affect how a remedial alternative might be evaluated. For example if an alternative is more difficult to implement for the larger area, but is feasible for a smaller area, additional site characterization data would be useful. Deb Cohen, TtNUS, indicated she was not familiar with the Site 29 data would look into it.
- A recent report read by one of the RAB members indicates that isotope ratios of Pb-206 and Pb-207 in eel grass adjacent to the site and closest to the JILF seeps (in Clark Cove and Jamaica Cove) are similar to isotope ratios observed at the site. The Navy has not reviewed this study. In response to a request from the RAB, the Navy will take under advisement the possibility of a presentation of this study by the authors and will discuss the possibility at the next RAB meeting.
- In response to a request from the RAB, the Navy will consider moving the evaluation at Building 62 higher on the priorities list.

- The Navy agrees to provide more time for priorities lists in the future. The Navy will send the current funding priority list to RAB members and requests comments in 2 weeks.

### **FUTURE MEETINGS**

The next RAB meeting is scheduled for **March 30, 2000** at the Courtyard Marriott, Portsmouth, NH. The topics for the March 30, 2000 meeting are as follows:

- The OU2 Risk Assessment.
- The OU3 Feasibility Study update.

A technical meeting was scheduled for February 10, 2000. The agenda includes discussion of alternative landfill caps for OU3.

The RAB was asked whether they had additional topics they wished to discuss, and was silent.