



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

IN REPLY REFER TO:

March 21, 2000

MEMORANDUM

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

RAB members are invited to attend a technical meeting on April 4, 2000 on Operable Unit 3 which includes Site 8, the Jamaica Island Landfill, Site 9, Mercury Burial Sites I and II and Site 11, the former Waste Oil Tanks. The purpose of the meeting is to resolve major comments on the Feasibility Study for OU 3. The meeting will begin at 9:00 a.m.

If you plan to attend this meeting, please contact Mr. Alan Robinson in the Public Affairs Office no later than April 1, 2000 to make arrangements to attend and to obtain directions. He can be reached at 207-438-1140.

Sincerely,

A handwritten signature in black ink that appears to read "Ken".

Ken Plaisted
Navy Co-Chairman
Restoration Advisory Board

Distribution:

Doug Bogen
Michele Dionne
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MEDEP (Iver McLeod)
NOAA (K. Finkelstein)
MEDMR (D. Card)
NHFG (C. McBane)
USFWS (K. Munney)
North Div (F. Evans)
COMSUBGRU TWO (R. Jones)
PNS (Codes 100PAO, 105, 105.5, 106, 106.3, 106.3R, NRRO)

April 4, 2000

**Technical Meeting on Follow-up comments on the Draft OU3 Feasibility Study
Portsmouth Naval Shipyard, Kittery, Maine**

The meeting started at approximately 9:30 am and ended at approximately 2:00 pm.
Attending the meeting were:

Meghan Cassidy, EPA
George Horvat, Dynamic Corp (consultant to EPA)
Carolyn Lepage, SAPL
Denise Messier, MEDEP
Iver McLeod, MEDEP
Ken Plaisted, PNS
Marty Raymond, PNS
Fred Evans, North Div
Debbie Cohen, TtNUS
JP Kumar, TtNUS

After introductions, the meeting participants reviewed the meeting topics to select the topics to discuss first. It was decided to begin with items related to groundwater and surface water.

Groundwater as a Medium of Concern/Remedial Action Objective 4

Mr. Evans indicated that the Navy would keep groundwater as a medium of concern and the RAO for groundwater would be retained as written in the draft Operable Unit 3 (OU3) Feasibility Study (FS). There was some discussion of what constituted an RAO. The RAO needs to indicate the receptor that would be impacted by the medium. Also, the meeting participants discussed whether the Navy was ready to appropriately develop the RAO that addresses offshore impacts of groundwater or seep management. It was indicated that if the RAO cannot be developed then the FS cannot be developed and possibly groundwater remedial action would need to be separated from soil remedial action (see discussion below). Determining whether the RAO for groundwater could be identified was a question that the team needed to try to answer. (See other discussion topics related to groundwater.)

Additional Investigation/Separation of Groundwater and Soil Remedial Actions

Ms. Cassidy indicated that if additional investigation was necessary for groundwater then the EPA would want to separate soil and groundwater remedial actions. The Navy has funding to do remedial action at OU3 and the EPA does not want to risk losing this money by delaying the schedule for OU3 (FS, Proposed Remedial Action Plan [PRAP], Record of Decision [ROD]).

Based on the MEDEP follow-up comments on the draft OU3 FS, the additional work identified in the comments relates to geochemical modeling, 3-D modeling, and Whole Effluent Toxicity (WET) testing of seeps.

The meeting participants briefly discussed how the tidal effects and the understanding of tidal effects impacted the FS and the evaluation of the alternatives in the FS. It was agreed that the appropriate technical people were not at the meeting, but that it was not likely that additional investigation on tidal impacts was necessary at this point if the additional investigation would impact the schedule for making a decision on the remedy for OU3. In addition, the team did not believe that additional modeling was necessary.

Ms. Cassidy indicated that if additional investigations were required, the EPA prefers to have the monitoring and testing included under the ROD. If the ROD addressed source control (for soil) and did not include management of migration, then the ROD could include a monitoring component for groundwater to determine future action for groundwater. By including the monitoring under the ROD, the decision points that would be made based on the monitoring would be identified and the possible decisions would be identified before start of monitoring.

If soil were addressed separated from groundwater as part of a source control ROD, then the FS would need to be reissued to address only soil. The source control ROD would include groundwater monitoring as required for performance monitoring. For example if the source control ROD included capping, groundwater monitoring may be required to determine the impact of capping on groundwater migration.

RCRA C Cap

The EPA questioned why the Navy was considering a cap that would not meet RCRA Subtitle C capping requirements. The Navy explained that the FS would consider covers to meet RCRA C requirements, but to varying degrees.

Seep Management/Whole Effluent Toxicity Testing

The team briefly discussed the objectives for doing WET testing on seeps. Three media are potentially impacting biota; sediment, porewater, and contaminants dissolved in the seep water. WET testing is designed for effluent testing. The Navy indicated that as part of the offshore monitoring, the Navy is doing toxicity testing on the porewater. The MEDEP indicated that they wanted the testing on the seeps because seep water differs from the porewater.

The MEDEP talked about seep management, from a regulatory perspective, with Mr. Greg Wood from Maine Land and Water Bureau. The MEDEP originally believed that Ambient Water Quality Criteria (AWQC) should be met at the seeps, but based on discussion with Mr. Wood, the MEDEP looked at two sites in Maine that had discharges to intertidal areas. At Falmouth, which has a licensed discharge, the MEDEP required WET testing to look at intertidal zone impacts. The other site, Waldoboro, is also a licensed discharge for which WET testing was required. Mr. Wood indicated to the MEDEP that if the seep passes the WET testing, then the State could feel confident that there was no impacts to the intertidal area and that the compliance point could be the surface water (and not the seeps).

The Navy requested the MEDEP's technical basis for why the WET testing is appropriate for seep water (which is not a licensed discharge). In addition, the Navy questioned what has been required for seeps at other sites and what criteria have been used for seeps at other sites. A question was asked to whether the distinction was because the seeps are in the intertidal zone or because the seeps are exposed. The MEDEP is not aware of sites that parallel OU3, which is an uncontrolled site with seep discharges to the intertidal area. The MEDEP mentioned there were sites that had seep exceedances of human health based criteria, but they were not aware of sites that had exceedances of aquatic life criteria.

There was a question about the Applicable or Relevant and Appropriate Requirements (ARARs) and whether the ARARs related to seeps were different than what has been identified in the ARARs tables for OU3. The ARARs mentioned, Chapter 530.5 and 38MRSA420 and 464, which promulgate the Chapter, were evaluated as they relate to discharge of treated groundwater to surface water, but these were not evaluated as they relate to seeps. The EPA will need to evaluate these regulations as they relate to seeps.

There was also discussion about filtering the seep samples, since AWQCs are based on the dissolved fraction in the surface water. The seep samples were filtered for metals analysis, but were not filtered for organics analysis. Because of sampling techniques for seep, sediment particulates could be entrained in the seep water (this was noted in particular at the seep with some of the highest organic concentrations). In determining how toxicity testing could be conducted on seeps, it would be important to determine whether samples would be filtered or unfiltered. Also, in answer to what would the decision be if the seeps did not pass the WET testing, the MEDEP indicated that groundwater migration to the offshore would need to be addressed. However, it was not clear to the Navy why that would be the appropriate decision based on the WET testing.

The technical basis for sampling sediments developed in the interim offshore monitoring program was discussed. In the interim offshore monitoring program, it was determined that because sediment is the primary sink for contaminants by monitoring the sediment in the vicinity of the seeps, seep impacts would be monitored. The MEDEP indicated that they did not believe the toxicity testing of sediment would tell whether seeps are impacting the offshore. The Navy did not believe that the WET testing of seeps would tell whether the seeps were impacting the offshore.

The MEDEP would like to have Mr. Wood see the seeps to see what the actual site conditions are. The EPA indicated that the WET testing issue would not be resolved at the meeting and that a course of action would need to be identified to resolve the issue. And if testing were to be conducted, the number of tests and how the results would be used would need to be determined before conducting any tests. In addition, Ms. Cassidy needed to look into whether WET testing has been conducted at other CERCLA sites.

Ms. Messier indicated that at a site in Saco, ME, the MEDEP was looking at putting on a cap and doing intensive monitoring over a recovery period to evaluate the effect of the cap on groundwater. This type of monitoring may be applicable to OU3. A Navy site in Rhode Island, Allen Harbor, was also noted as a site that had source control and then looked at management of migration. Mr. McLeod also mentioned a site in Washington

State, Old Navy Dump (Manchester laboratory site), which addressed seeps through some decision process that may be a useful example.

Erosion Controls

The proposed erosion controls for OU3 were discussed. The Navy recently put in erosion controls at the DRMO. These included a geotextile with three layers of rock. Mr. Evans indicated that the Navy is considering the same erosion controls for OU3. The Navy was looking at the erosion controls going 4 feet below the low tide level. Because the seep was a sheet flow (flow rates of seeps at OU3 were less than 1 gallon per minute [gpm] in Clark Cove and 1 to 5 gpm in Jamaica Cove), the seeps would likely flow under the layers of rock, and then seeps would then be subsurface at Clark Cove. Because of the size of the mud flats in the intertidal area at Jamaica Cove, the erosion controls would not likely extend to 4 feet below the low tide level, so the seeps would still be exposed at the lowest tide.

There was also some discussion of whether placement of erosion controls would result in loss of habitat. The Navy is looking into wetlands construction as components of the erosion controls around OU3. The EPA and MEDEP were requested to look into whether the placement of erosion controls was a concern for the loss of habitat. Mr. Evans talked about the information on wetlands that the Navy has gathered so far. The wetlands could be constructed in the mid to high tide area, but could not be established in the low tide. The Navy envisioned possibly cutting into landfill to get appropriate slope; however, cutting into the landfill may not be feasible.

Navy is currently evaluating construction of wetlands in conjunction with rip rap. A tiered type wetlands as a sediment trap and reduction of wave action was used at Allen Harbor - Davisville. This type of wetlands is also being considered. Based on the evaluation so far, the Navy believes wetlands would be retained as part of the OU3 FS, but the implementation of wetlands would need to be further evaluated as part of the pre-design/design. The Navy will develop a description of erosion controls and how these controls would manage seeps. By covering seeps with the erosion controls, then the seeps would no longer be exposed. Because there is a concern that organisms at the surface of the sediment are exposed to the seep, if seeps are not exposed, then seeps would not be a direct pathway for exposure.

There was a brief discussion of the rise of mean seawater and the potential impact to the OU3 FS. It was mentioned that a sea water rise of 3 inches over the next 100 years has been estimated. An EPA web site also indicated that land areas where the last ice age occurred may still be rising, so although the sea water may be rising, some land areas may also be rising.

Active Remediation of Groundwater

The MEDEP clarified that they were not proposing that groundwater under the landfill be cleaned up to meet Maximum Exposure Guidelines (MEGs). The regulations indicate a three tiered approach to considering remediation of groundwater: 1) whether the aquifer should be restored; 2) whether the groundwater should be contained; and 3) whether

impacts should be mitigated. The Navy questioned what was considered the boundary of the management unit. The MEDEP indicated that they believed the edge of the landfill, and not the intertidal area, was the boundary of OU3. For the groundwater under the landfill that is not freshwater, would need to meet AWQCs when it become surface water (and not that the AWQCs would be applied to the groundwater). So, although active groundwater remediation to meet drinking water standards may not be necessary, institutional controls (e.g., restrictions on the use of contaminated groundwater at the site) would be necessary to prevent human exposure to groundwater at the site.

However, the MEDEP indicated that undiluted seeps pose a human health risk that exceeds the State of Maine guidelines (although the risks are below EPA target risk levels). The Navy is currently reviewing the input parameters for human exposure to undiluted seeps to identify more reasonable exposure factors based on the actual conditions at the site. The Navy will provide the proposed exposure factors to the regulators for review.

DNAPL Issue

The Navy response to comments on the draft OU3 FS (responses dated February 17, 2000), only considered one component of decision process for determining whether DNAPL may be a concern for the site. The Navy indicated that additional information would be provided on the rationale of why the Navy believed DNAPL not to be a concern for OU3. The MEDEP mentioned their concern that solvents were disposed of in drums in the JILF and these drums may represent a DNAPL concern. The Navy explained that the report of solvents being disposed of in the JILF originates from IAS (Weston, 1983), which was probably based on interviews with Shipyard personnel who may have referred to the tanks at Site 11 as the JILF (since these the tanks that were at Site 11 were located adjacent to the JILF). The Navy believes the various wastes and solvents were not disposed of at the JILF, but that they went to the tanks at Site 11. The Navy will clarify the text of the OU3 FS to indicate that it is unlikely that solvents in drums were disposed of at the JILF, but were more likely to have been disposed of at Site 11.

Mr. Plaisted indicated, that if solvents were disposed of at landfill, it is more likely that they would have been poured out, likely done at edge of the landfill and the tidal action of the river would likely have washed out the solvents at the time of disposal (reportedly from 1945 to 1965). In addition, the results of the test pitting (conducted in February/March, 2000) only showed one test pit location with drums (none of which contained solvents).

Dilution Factor Development

The MEDEP clarified that they would like to have the dilution factor development discussion include better document references, including references to the appropriate sections or pages of the document to assist the MEDEP in evaluating whether the dilution factors were developed using the appropriate equations/modeling. The EPA and Navy indicated that they recalled a technical meeting that was held specifically to

discuss the mixing equations for use in the model. The Navy indicated they would provide the MEDEP with the date of the meeting.

Inclusion of Test Pitting Information in the Proposed Plan

The report of the test pitting results will not be finalized until after the OU3 FS. However, the Proposed Remedial Action Plan (PRAP) for OU3 would summarize the publicly available information on test pitting as necessary to support the PRAP. The EPA indicated that anything used as a basis for the Navy's selection of an alternative for OU3 needs to be discussed in PRAP.

Modification of Alternative 3

A question was asked whether Alternative 3 would be modified or if only the title of the alternative would be changed. The Navy indicated that the alternative would be modified to meet RCRA Subtitle C capping regulations (and related EPA guidance) and Maine hazardous waste regulations, with consideration of State of Maine Solid Waste Regulations for non-secure landfills (as To-Be-Considered criteria).

Additional Comments – MEDEP General 2

MEDEP follow-up comment, MEDEP General 2, requested additional information for several comments. However, the comments that were referenced were not clear. The MEDEP clarified some of the comments and indicated that they would provide additional clarification of the comments requiring additional information later. The following are the comments and clarification discussed at the meeting

Original MEDEP Comment 100 – The follow-up comment requests additional information on the Navy's position about backfilling the JILF (related to Alternative 6). The Navy indicated that the Navy requested TtNUS to include Alternative 6 (complete excavation of the JILF) as an evaluation of a "walk away alternative" (based on Navy requirements). However, because of implementability and cost concerns, the Navy would not select Alternative 6. Therefore, the Navy will take out Alternative 6 from the FS. The OU3 FS will screen out the alternative and clarify why the alternative is being screened out. Because Alternative 6 will be screened out, further discussion about backfilling (and definition of wetlands) is not required.

Jeff Clifford's comment about Spruce Creek – The MEDEP indicated that the response was not sufficient or appropriate and requested the Navy to provide additional information/clarification of the Navy's position. During discussion of Spruce Creek, Mr. Plaisted noted that several months ago the Department of Marine Resources opened Spruce Creek to clamming.