



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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September 18, 2001

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
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re: Operable Unit 6 Data Quality Objectives Meeting for the Installation Restoration Program; Portsmouth Naval Shipyard, Kittery, ME, letter dated Sept. 4, 2001

Dear Fred:

This letter is in response to your letter referenced above regarding OU6, the management of migration of groundwater from the Jamaica Island Landfill. The Department's concern regarding the seeps stems from the fact that there were exceedances of Ambient Water Quality Criteria (AWQC) during the 1996/1997 seep/sediment sampling rounds. The first three bullets in your letter pertained to the issue of gathering data on the seeps prior to the landfill being capped.

The first bullet asked, "Why additional information is required before capping the Jamaica Island landfill and how will this information be used to support the evaluation of the effectiveness of the remedy?"

In terms of remediation of OU6, we would expect a change in the volume of water and concentrations of contaminants in the seeps after the cap installed due to reduced infiltration of rainfall and possible diversion of drainage water from the ponds. But if we don't see any change then our assumptions about groundwater flow through landfill may be incorrect. This may affect a remedy for OU6 in that we would need to understand where groundwater is coming from in order to remove/reduce any potential significant effects on biota in the intertidal zone above midtide resulting from the seeps.

In addition, this information is necessary to evaluate the effectiveness of the remedy for OU3. A major objective of the landfill cap is to minimize infiltration of precipitation in order to reduce the volume of groundwater flowing through the landfill. Minimizing groundwater volume should reduce the mass of contamination flowing out of the landfill. A reduction in groundwater volume and contaminant concentrations would be reflected in the volume of water and concentrations of contaminants flowing out of the seeps. In order to determine if groundwater volume and contaminant levels have been minimized following construction of the cap it is obviously necessary to characterize the seeps prior to cap construction. We recognize there are data from the 1996/1997 seep/sediment

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sampling rounds. However, it is important to have data that is as recent as possible due to potential changes in volume and contaminant concentrations over the past 4 years.

The second bullet asked, "Why it is necessary to test the assumption that the cover will decrease the effects of the seeps (i.e., what is the specific objective in testing this assumption)?"

The Department believes our response to the first bullet answers this question.

The third bullet asked, "What specific data are necessary to test the assumption (e.g., chemical data or physical data such as flow) and how would the data be used to test the assumption?"

As indicated in your question we believe that collecting chemical data and physical data such as flow are necessary to test the assumption. The "before" data will be compared with the "after" data to test the assumption.

The fourth bullet asked, "What data are necessary to determine an adverse impact and what timeframe for sampling is necessary to determine these impacts in a timely fashion."

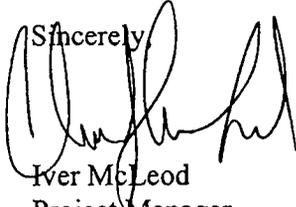
We believe that the objective of the DQO meeting in part is to answer these questions through discussions of all parties. However, the MEDEP's initial thoughts on this are that we could create some sort of decision tree. The first step would be to gather chemical and physical data of the seeps. The data should be gathered over a 1 year period to account for seasonal changes, preferably on a quarterly basis. If these data indicate that the levels of contamination and the bulk loading to the intertidal zone (above midtide) are not of concern then we see no need for further investigation. The remedy then could be nothing more than long-term monitoring.

If the chemical and physical data indicate that we should characterize potential risk more thoroughly then it would be necessary to collect information regarding benthic community structure within and immediately adjacent to the seep above midtide as well as performing some type of toxicity test.

We expect it should take no more than 6 months to complete the benthic community structure analysis and toxicity testing, especially if a work plan is already in place. However, as indicated above, details of data collection are better suited for discussion at the DQO meeting.

Please feel free to contact me at (207) 287-8010 if you have any questions.

Sincerely,



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