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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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May 22, 1997

Mr. Fred Evans  
Department of the Navy  
Northern Division  
Naval Facilities Engineering Command  
10 Industrial Highway, Mailstop 82  
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RE: Clarification of Maine Department of Environmental Protection Position, Portsmouth Naval Shipyard, Kittery, Maine

Dear Fred:

I would like to discuss the issues that concern the MEDEP regarding cleanup of the Portsmouth Naval Shipyard Site. I hope that we may discuss all these issues at the May 29 meeting to be held at the Shipyard. The Department's concerns cover three general areas:

- Adequate characterization, including appropriate modeling, of OUs
- Resolution of all comments on technical documents
- RAB meeting process

Following is a detailed discussion of these concerns:

Adequate characterization of OUs

The MEDEP believes the results from each of the following areas must be integrated to provide justification for actions taken at each Operable Unit.

1. Assessment of the on-shore monitoring program results.
2. Assessment of the off-shore monitoring program results.
3. Assessment of analytical fate and transport and geochemical modeling results.

The MEDEP understands, due to the complex nature of the systems, that a level of uncertainty will be inherent in any investigation or assessment of data associated with transport of contamination to the off-shore environment. However, given the available information, this level of uncertainty can be most effectively reduced by applying the above criteria to each OU under consideration.

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The remedial decisions applied to the operable units (OUs) at PNSY have considerable significance for the Navy and the environment. All efforts should be made to ensure that these decisions are appropriate.

The following paragraphs provide additional explanation regarding each of these criteria.

#### On-Shore Monitoring Program

The analytical fate and transport model used by the Navy to assess off-shore migration of contaminants relies on information generated as part of the RFI program. Model inputs include soil sample results to generate leachate estimates. As indicated in the MEDEP comment letter addressing the draft model report<sup>1</sup>, the MEDEP does not believe certain OU's, in particular the Jamaica Island Landfill (JILF), have adequate source characterization to provide reasonable inputs to the model. Additional characterization of soils/waste and groundwater would be required to provide more representative source concentrations for the model.

Given the MEDEP's concern regarding the analytical fate and transport model<sup>2</sup>, the MEDEP intends to reconsider the use of geochemical modeling. Further discussion regarding this is presented below. Depending on the results of the groundwater monitoring program, certain wells may require filtered samples to provide the quality of data necessary for the geochemical model:

#### Off-Shore Monitoring Program

The Navy has indicated an Off-Shore Monitoring Program will be implemented once the Off-Shore Ecological Risk Assessment (ERA) is completed. The MEDEP believes that the off-shore and intertidal zones immediately adjacent to the OU's are the most likely to be impacted by contaminant migration. These areas should be properly characterized regardless of the outcome of the ERA.

The MEDEP recognizes contaminants located in these near-shore and intertidal areas may be a result of historical activities not related to current migration of contaminants. Justification, such as historical records of activities, must be provided for sources of contamination other than active migration from the on-shore environment. It is important to document information which indicates contamination is not related to active migration from the on-shore. Based on a review of all available information, the presence of contamination may not necessitate remedial activities at an OU. However, proper characterization will provide baseline information for off-site remediation or future assessment of these areas, if required.

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<sup>1</sup> MEDEP. Comment Letter RE: On-Shore/Off-Shore Contaminant Fate and Transport Modeling, Phase I Report for Portsmouth Naval Shipyard, Kittery, Maine, February, 1997. Letter dated March 21, 1997.

<sup>2</sup> MEDEP, op. cit.

### Analytical and Geochemical Modeling Programs

The MEDEP recognized the Navy's decision not to pursue geochemical modeling during the preparation of the Fate and Transport Model Work Plan. However, after review of the Draft Fate and Transport Model Report (1), the model's assumptions do not provide the level of confidence necessary for the MEDEP to accept the conclusions and intended application of the model<sup>3</sup>.

The MEDEP is not comfortable with the lack of site-specific information used in the analytical model. Indeed, the geochemical considerations within the system have been reduced to the use of literature derived distribution coefficients (Kd). The primary literature source for Kd values used in the model is the EPA Soil Screening Guidance<sup>4</sup> which is specifically designed to assess contaminant migration through soil to a potable aquifer. The MEDEP believes consideration of the unique fresh/salt groundwater environment found at PNSY requires site-specific analysis which is only available through geochemical modeling. The advantage of geochemical modeling over the current analytical model is that it provides the most accurate prediction of the potential of a contaminant to migrate given the site-specific groundwater chemistry.

Therefore, the MEDEP intends to pursue the use of a geochemical model used in conjunction with the analytical model to assess contaminant transport and potential effects to the off-shore environment.

The following matrix provides an explanation of the integration of model results:

		Geochemical Model Results	
		<i>No Contaminant Mobility</i>	<i>Contaminant Mobility</i>
Analytical Model Results	<i>No Contaminant Mobility</i>	Agreement	Defer to Geochemical Model
	<i>Contaminant Mobility</i>	Defer to Geochemical Model	Agreement

The potential mobility of contaminants are of primary concern when considering potential impacts to the off-shore environment. The MEDEP believes a geochemical model would provide the most defensible results when considering this mobility. The MEDEP accepts the current analytical model's methods for transport and mass loading to the off-shore environment.

<sup>3</sup> MEDEP, op.cit.

<sup>4</sup> USEPA, Office of Solid Waste and Emergency Response, Soil Screening Guidance, April 1996.

### Resolution of all comments on technical documents

The MEDEP believes that all comments on technical documents must be resolved and not just responded to. Resolution of comments will aid in reaching consensus on issues and ensure that no issues are left hanging for the future.

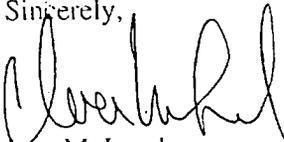
In addition, while the MEDEP has tried to comment on technical documents in a timely manner, responses to those comments have not always been received in a timely manner. Since December 1996 the MEDEP has submitted comments on documents nine different times (not including our most recent comments on the Fate and Transport Modeling Report). In many cases it has taken as long as 3 or 4 months to receive responses. In addition, the MEDEP has not received any responses to comments on the Risk Characterization Tables for the Estuarine Ecological Risk Assessment (dated 1/29/97). The MEDEP understands that responding to comments can take some time, especially if there are numerous comments. However, the Navy should provide the MEDEP with an estimate of when responses will be submitted.

### RAB Meeting Process

The MEDEP does not believe that the current structure of the RAB meetings is conducive to healthy debate or discussion of issues. At times the MEDEP has not been in agreement with the Navy on issues (such as the Fate and Transport Modeling Report) but has not felt comfortable discussing these disagreements at the RAB meetings. This may give the public the impression that the MEDEP is in complete agreement with the Navy on various issues. In addition, the physical set-up of the meeting rooms seems to inhibit discussion among all people present including the general public. In contrast, the Brunswick Naval Air Station (BNAS) RAB meetings, with a less formal "round table" set-up, allow greater discussion and debate and, therefore, a better exchange of information. The MEDEP would like the Portsmouth NSY RAB meetings to be structured more like the BNAS RAB meetings.

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

Sincerely,



Iver McLeod

Project Manager

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