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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

April 12, 2001

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Hwy., Mail Stop #82
Lester, PA 19113-2090

Re: Response to Comments on Draft Preliminary Remediation Goals
Portsmouth Naval Shipyard
Kittery, Maine

Dear Mr. Evans:

The United States Environmental Protection Agency (EPA) has reviewed the Navy's responses to comments on the draft Preliminary Remediation Goals Report for Operable Unit 4 at Portsmouth Naval Shipyard in Kittery, Maine.

In addition to reviewing the responses provided by the Navy, EPA attended a technical meeting regarding the Preliminary Remediation Goals Report, the comments made on this report, and issues related to resolution of comments. This meeting was held on April 3, 2001, and was attended by EPA, the Navy, the Maine Department of Environmental Protection (DEP), National Oceanic Atmospheric Administration (NOAA), a representative of the Seacoast Anti-Pollution League (SAPL), and Ms. Carolyn Lepage, technical advisor to SAPL.

Attachment I provides EPA's comments on the March 9, 2001 responses provided by the Navy, as well as information/discussion from the technical meeting.

If you have any questions regarding this matter, please contact me at (617)918-1387.

Sincerely,

Meghan F. Cassidy
Remedial Project Manager

Enclosure

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Carolyn Lepage/Lepage Environmental
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RAB Members

ATTACHMENT I

The following are EPA's comments on the Navy's responses to EPA's comments on the draft Preliminary Remediation Goals Report. These responses were dated March 9, 2001.

The comments below also reflect discussions held during the technical meeting regarding these responses. This meeting was held April 3, 2001.

1. EPA does not have any further comments regarding the specific responses provided by the Navy.

The following comments are related to discussions regarding issues raised during the technical meeting.

2. The Acute Chronic Ratio (ACR) should be based on chemical-specific studies using flow-through exposure with measured toxicant concentrations. The generic ACR (=8) may be used if such studies do not exist. Table 2.2-1 should be updated if chemical-specific flow-through ACR values can be obtained from the literature for DDT, aldrin, silver, and naphthalene.
3. Some of the EPA Water Quality Criteria should be updated in Table 2.2-1 based on EPA, 1999.
4. Please identify which of the proposed PRGs are based on a reference-based TEV, rather than a NOEC-based TEV. For those TEV based on a reference-based TEV, please provide tables of contaminant concentration data and the results a statistical analyses that show that the site samples are consistent with background.
5. EPA would like to see a sensitivity analysis in which PRGs are calculated under two alternate procedures: 1) sea urchin toxicity test samples are designated "Toxic" if effects are significant at any pore water concentration (e.g. those samples marked with one or more X in table 2.2-2), and 2) PRGs are calculated based only on amphipod toxicity test data.
6. Many of the PRGs are higher than Effect Range Median (ERM) concentrations of Long et al (1995). The ERM is the concentration above which adverse effects are likely, based on the results of numerous studies. As shown in the table below, the proposed PRGs for copper, nickel, anthracene, high molecular weight PAHs, PCBs, and DDT are higher than the ERM by factors of 1.2 to 2.4. The differences between the proposed PRGs and ERMs are discussed in section 3.3.1 of the report, but the text is confusing because the PRGs and the ERMs are presented in different concentration units. I recommend that the PRGs be compared with ERMs in a table similar to the table below in which all parameters have identical concentration units.

Chemical	PRG (ug/kg)	ERL (ug/kg)	ERM (ug/kg)
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Copper	546,600	34,000	270,000
Nickel	124,400	20,900	51,600
Acenaphthylene	210.1	44	640
Anthracene	1,343.9	85.3	1,100
Fluorene	536	19	540
HMW PAHs	13,057	1,700	9,600
Total PCBs	409.26	22.7	180
Trans-Nonachlor	3.24	NA	NA
p,p'-DDT	66.4	1.5	46.1

PRG = Preliminary Remedial Goal (Tetra Tech NUS, Inc. 2000)

ERL = Effects Range Low (Long et al, 1995)

ERM = Effects Range Median (Long et al, 1995)

HMW PAHs = High Molecular Weight Polynuclear Aromatic Hydrocarbons

References

EPA. 1999. *National recommended water quality criteria-correction*. EPA 822-Z-99-001.

Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. *Incidence of adverse biological effects within ranges of chemicals concentrations in marine and estuarine sediments*. Environmental Management 19(1): 81-97.

Tetra Tech NUS, Inc. 2000. *Preliminary remediation goals for operable unit 4 Portsmouth Naval Shipyard, Kittery, Maine*. November, 2000.