



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

N62661.AR 001400
NAVSTA NEWPORT RI
5090 3a

February 7, 2001

James Shafer, Remedial Project Manager
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Re: Technical Review of the Proposed Sediment PRG Development for the Old Fire Fighting Training Area

Dear Mr. Shafer:

I am writing in response to your request for EPA to review the *Proposed Sediment PRG Development (January, 2001)*. EPA reviewed these documents for technical sufficiency, applicable regulations, EPA guidance, generally accepted practice and incorporation of EPA recommendations.

The majority of the responses regarding development of PRGs for human exposures and ecological risk are appropriate and adequate. Comments requiring further clarification or action are provided in Attachment A. The numbering system used in the Response to Comments was retained to avoid confusion.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Old Fire Fighting Training Area. Please do not hesitate to contact me at (617) 918-1385 should you have any questions.

Sincerely,

Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM, Providence, RI
Melissa Griffin, NETC, Newport, RI
Cornell Rosiu, USEPA, Boston, MA
Jennifer Stump, Gannet Fleming, Harrisburg, PA

Ken Finkelstein, NOAA, Boston, MA
Mary Philcox, URI, Portsmouth, RI
David Egan, TAG recipient, East Greenwich, RI

9

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p.2, No.1	<p>The discussion in the first and second paragraphs on this page presents the rationale for disqualification of the development of sediment PRGs for human ingestion of shellfish. The Navy suggestion for disqualification is because of the considerable uncertainty associated with the risk analysis for the subsistence fisherman including the absence of subsistence fishing in the area. While it appears unlikely that no subsistence fishing occurs in the area, recreational fishing does occur and commercial lobster pots have been identified. Therefore, PRGs need to be developed based on human consumption of shellfish.</p> <p>PRGs could then be evaluated as they were at McAllister Point (Appendix D, TetraTech NUS, February 1999). At McAllister Point, PRGs for human shellfish consumers were developed and then the use of the PRGs as cleanup values was evaluated as a risk management task. Sediment PRGs were also developed based on human consumption of shellfish at Derecktor shipyard (Appendix B, TetraTech NUS, July 1999) and implementation of the PRGs as cleanup levels was evaluated on a chemical by chemical basis.</p>
p.2, No. 3	<p>The presentation clarity of the aquatic pathway PRG process has improved from that used for McAllister Point. The presentation of step 3 could be improved further by only using two bullets to identify the definitions of toxicity; the first bullet for the amphipod and the second bullet for the sea urchin.</p>
p.3, No. 8	<p>The equation presented to calculate the PRG as dry weight sediment is presented differently than the equation used for McAllister Point, but it is essentially the same equation. However, the equation would be more appropriately expressed if it specifies that the TEV is multiplied by the sediment to porewater chemical ratio. Please see third equation below.</p> <ul style="list-style-type: none">• McAllister Point equation for organic PRGs PRG = TEV x Koc x foc, where: foc = site average % TOC / 100 Koc = organic partitioning constant TEV = toxicity effects value• Navy proposed equation for OFFTA PRGs PRG = Cs x TEV / PW, where: TEV = toxicity effects value (ug/L) Cs = chemical concentration in the sediment (ug/kg) PW = pore water concentration for the chemical (ug/L)

- The Navy proposed equation would be more appropriately expressed as $PRG = TEV \times Cs / PW$, where:
 - Cs = sediment chemical concentration (ug/kg)
 - PW = porewater chemical concentration (ug/L). Directly measured for metals and calculated through equilibrium partitioning for organic chemicals.
 - TEV = toxicity effects value (ug/L).

This equation expression specifies that the TEV is multiplied by the sediment to porewater chemical ratio.