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**DIVISION OF ENVIRONMENTAL PROTECTION**

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DIRECTOR

January 16, 1998

Mrs. Dawn (Boucher) Hayes  
Atlantic Division  
NAVFACENCOM  
Code 18234  
1510 Gilbert Street  
Norfolk, VA 23511-2699

**RE: Allegany Ballistics Laboratory  
Draft Focused Feasibility Study  
Site 10 Soil and Groundwater**

Dear Mrs. Hayes:

The Office of Waste Management/ Site Investigation and Response (OWM/SIR) has reviewed the *Draft Focused Feasibility Study for Site 10 Soil and Groundwater at Allegany Ballistics Laboratory (ABL), Rocket Center, West Virginia*, received November 1996, and provides the following comments.

**General Comments:**

1. The document establishes soil cleanup levels based on documentation prioritized for regulatory review in the future. In order to expedite the groundwater remedial action, OWM/SIR recommends segregating the soil segment of the Focused Feasibility Study (FFS) from the current document and in the future address soil remediation as a separate operable unit or combine Site 1 and Site 10 soil cleanup under the same Record of Decision (ROD).
2. The alternatives presented in the FFS do not appear to meet the States Groundwater Protection Act §22-12. The State statute is specific in the requirements “. . . *Where the concentration of a certain constituent exceeds such standards due to natural conditions, the natural concentration is the standard for that constituent. Where the concentration of a certain constituent exceeds such standard due to human-induced contamination, no further contamination by that constituent is allowed, and every reasonable effort shall be made to identify, remove or mitigate the source of such contamination, and to strive where practical to reduce the level of contamination over time to support drinking water use.*” This is further

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enforced with legislative rule §46-12-3.2.”a. *Where the concentration of a certain constituent exceeds an otherwise applicable groundwater quality standard due to human-induced contamination, no further contamination by that constituent shall be allowed, and every reasonable effort shall be made to identify, remove or mitigate the source of such contamination, and to strive where practical to reduce the level of contamination over time to support drinking water use.*” The FFS identifies West Virginia’s Groundwater Protection Act as an ARAR. However, the alternatives presented in the FFS establishes the criteria for groundwater extraction and remediation within zones twenty times greater than MCL for TCE, the main driver for groundwater remediation at the Site. The criteria for groundwater remediation should restore the contaminated aquifer(s) to drinking water standards (see §22-12). Based on the limited information presented in the FFS, it appears the zone of capture will not meet State regulations. Please provide justification and the reasoning for the decision.

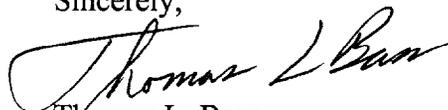
### Specific Comments:

1. Executive Summary page ES-2: Clarify the statement “the bedrock aquifer is the most likely groundwater source for the site.”
2. Executive Summary page ES-2, third paragraph: The word conclusion contains a typo.
3. Executive Summary page ES-3: Soil action levels discussion centers around a memorandum currently under regulatory evaluation. The memorandum does not satisfy the States concern for evaluating Volatile Organic Compounds (VOCs) transfer from soil to groundwater. The memorandum presents a computer solution based on input data extracted from additional computer simulations. The simulations used input from literature and subjective assumptions. The State finds this unacceptable. The State has discussed this issue in the past and presented two acceptable options:
  - a. Laboratory evaluation of Site specific soil transfer rates, i.e., a column test . . .
  - b. The soil screening levels of the transfer from soil to groundwater provided in EPA region III risk-based concentration table.
4. Executive Summary page ES-3, last paragraph: Clarify the subsurface soil chemical of potential concern (COPC) for inorganics.
5. Executive Summary page ES-4: The second paragraph should be removed. The procedure used to evaluate the fate and transport of contamination from soil to groundwater does not meet the criteria identified in specific comment three.
6. Page 1-1: Explain the significance of the footnote at the bottom of the page. The footnote adds no clarity to the document and should be included as part of the site history, not a footnote.
7. Page 1-3 first paragraph: Identify the “. . . several other VOCs.”

8. Page 1-4 first paragraph: Presents an explanation for a likely source for TCE, yet fails to provide an explanation for a source area(s) for PCE contamination. Include PCE source area(s) in the discussion.
9. Page 1-7 last paragraph: Remove the reference to "background". Background for inorganic concentrations at ABL has not been established.
10. Page 1-12 VOCs: See comment number eight.
11. Page 1-14: How was background used as a screening tool when background concentrations have not been established?
12. Page 2-4: Development of preliminary remediation goals for soil is invalid since many of the decisions are based on background concentrations currently under evaluation.
13. Page 2-5: The discussion regarding PRGs is invalid; to date fate and transport for VOCs from soil to groundwater has not been established. This discussion should be removed until such time the criteria of specific comment number three has been met.
14. Appendix A ARARs: Include the ARARs table submitted by the State for Site 10.

If there are any questions, or if you require further clarification, please contact me at (304) 558-2745.

Sincerely,



Thomas L. Bass  
Environmental Resource Specialist  
Site Investigation and Response  
Office of Waste Management

- c: Bruce Beach, EPA  
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