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Parris N. Glendening
Governor

Jane Nishida
Secretary

June 2, 1995

Mr. Jeff Kidwell
LANTDIV
Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk VA 23511-2699

RE: Draft Focused Remedial Investigation of Site 1 at Allegany Ballistics Laboratory Superfund Site, April, 1995

Dear Mr. Kidwell:

Enclosed are the Maryland Department of the Environment (MDE), Waste Management Administration's and Environmental Health Coordination's comments on the above referenced document.

If you have any questions, please feel free to contact me or Mr. John Fairbank at (410) 631-3440.

Sincerely,

Wendy True Noe
Remedial Project Manager
Federal/NPL Superfund Division

:wtn

Enclosure

cc: Mr. Tom Bass, WV DEP
Mr. Bruce Beach, EPA Region III
Mr. Dave McBride, Allegany Ballistics Laboratory
Mr. J. Greg Mott, CH2M Hill
Mr. Lou Williams, NAVSEA
Mr. Richard W. Collins
Mr. Robert A. DeMarco

MARYLAND DEPARTMENT OF THE ENVIRONMENT
WASTE MANAGEMENT ADMINISTRATION

Comments:

Draft Focused Remedial Investigation of Site 1 at Allegany Ballistics Laboratory Superfund Site, April, 1995

GENERAL COMMENTS

1. The geology at Allegany Ballistics Laboratory (ABL) is very complicated. An understanding of the geologic formations is crucial in determining the site's influence on the surrounding area. Please include any other information collected to supplement the understanding of site geology. For example, the Geologic Map of the Cresaptown Quadrangle, Allegany County, Maryland, by Paul Glaser, 1994 shows detailed geologic conditions across the Potomac River from Site 1.

2. The landfilled area that extends along the Potomac River north of the ordnance burning ground was not specifically delineated as a separate "waste disposal unit." However, it was observed to contain a number of partially exposed drums and other debris, and is noted as a possible source area. This area should be considered in the feasibility study for Site 1.

3. Please include a chapter listing complete references of all citations throughout the text.

4. Allegany County, Maryland is misspelled on some of the figures.

SPECIFIC COMMENTS

1. Page ES-7, first paragraph
   Please include the reference for the following statement: "The effluent discharge from the Upper Potomac River Commission Wastewater Treatment Plant, over 20 miles upstream, appears to be a major factor affecting fish populations in over 30 miles of the river...The effects of this discharge are far reaching."

2. Page 2-6
   Methylene chloride (MC) is listed as a primary solvent used at ABL. Soil samples were analyzed for MC on-site, although it is not clear whether methylene chloride (MC) was analyzed at the off-site laboratory.
   Page 2-6: MC is listed as being analyzed by the on-site laboratory.
   Table 2-2: MC is not listed.
   Table 2-4: MC is listed in the statistical analyses.
   Table 2-5: MC is not listed.
   Please clarify.

3. Page 2-18, "Surface Water and Sediment Contamination"
Please include a short discussion on the inorganics results.

4. Page 2-18, second full paragraph, last sentence
Please reference sample SW4.

5. Table 2-2
Please include a rationale for the differences in concentrations detected by the on-site versus the off-site laboratory.

6. Table 2-2, second page
Please clarify the sample number and/or location of sample HCSD-BG-4.

7. Table 2-11
Please include a reference for the TCLP "maximum concentrations".

8. Page 3-3, first bullet, last sentence
Please clarify which area had no VOC detections (i.e., drum storage pad, soil in vicinity of drum storage pad)? VOCs were detected in sample HCS-BG-61 (collected during the RI), which is proximal to HCS-BG-151 (collected during the focused RI).

9. Page 3-4, third bullet and Figure 3-1
Please clarify the locations of samples HCS-B1-CA and HCS-B1-CS on Figure 3-1. Although the text explains that the samples were collected from the inert burn landfill, their exact locations are not clear on Figure 3-1.

10. Page 3-5, first bullet
Please include the rationale for the background sampling locations.

11. Page 3-12, first bullet, last sentence
Please clarify if PCBs and pesticides were "not used" at Site 1 or were "not detected" at Site 1.

12. Page 4-12, second full paragraph
Please cite the location (i.e., well number) of the two localized fracture sets.

13. Page 5-4, third paragraph
The language in this paragraph describing well 1GW16 is not consistent with the language used on Page 4-9. The term "void" and "fracture set" are used interchangeably. Please clarify.

14. Page 5-8 and 5-9
The localized groundwater flow under the northern portion of Site 1 and the area across the Potomac River is summarized at

the end of this section. Portions of this section are difficult to read because a number of different scenarios are presented. A diagram depicting groundwater flow under Site 1 and north of Site 1 would help.

15. Page 6-4, first full paragraph
It is stated that no drums were observed in the area near soil sample locations HCS-BG-102S and HCS-BG-110S. However, could this area be associated with the landfilled area along the river?

16. Page 6-5 and 6-6
A map of 1,2-DCE and PCE concentrations would aid in this discussion.

17. Page 6-14, second sentence
Please enumerate the four alluvial wells and eight bedrock wells to which this sentence is referring.

18. Page 6-15, lines 3 and 4
The detection of low concentrations of cis-1,2-DCE in offsite well 1GW18 during packer testing is significant because groundwater in the vicinity is thought to be discharging toward Site 1. Additional groundwater samples should be collected from this well.

In addition, the packer zone elevation associated with the detection and the final screen elevation of 1GW18 should be noted in this paragraph.

19. Page 6-15, first full paragraph
Please modify the following sentence, "More importantly, the source of TCE contamination detected in 1GW13 during the RI is no longer contributing TCE contamination to well 1GW13," to indicate that the source <u>may</u> no longer be contributing.

Could the initial detection of TCE have been induced by drilling activities?

20. Page 6-19, fourth paragraph
Please state why wells 1GW1, 1GW3, and 1GW11 were the only Site 1 alluvial wells to be analyzed for metals.

To what can the increase in total metals concentration in 1GW3 be attributed?

21. Page 6-20
Why were wells 1GW9 and 1GW14 not analyzed for metals during the focused RI? Why was 1GW6 only analyzed for dissolved metals when other wells were analyzed for total and dissolved?

22. Page 6-21
Why weren't total metals analyzed for in wells 1GW16/17 and 1GW18/19?

23. Page 6-25, first sentence
The results of sediment sample SD-1 are not shown on Figure 6-9.

24. Page 7-4 through 7-6
A cross-sectional view of the VOC distribution in the soil would aid in this explanation.

25. Page 7-9, second full paragraph
Further work is necessary before the concentrations of cis-1,2-DCE detected in well 1GW18 during packer testing can be dismissed. Please refer to specific comment number 18.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
ENVIRONMENTAL HEALTH COORDINATION
DIVISION OF HEALTH ASSESSMENT AND SURVEILLANCE

M E M O R A N D U M

TO: **Wendy Noe, WAS**

FROM: **Peter Ashley, Division Chief**
Chad Roy, Environmental Toxicologist

DATE: **May 9, 1995**

SUBJECT: **Allegany Ballistics Laboratory Risk Assessment Comments**

Comments on the Human Health Risk Assessment

General Comments

The human health risk assessment section appears to be thorough and well written.

Specific Comments

PAGE 8-14
This seems to be a very rural area. Was consumption of homegrown vegetables even considered as a potential exposure pathway? Usually in rural areas, people tend to have gardens. Additionally, if a garden is kept by the surrounding residents, this may increase potential residential dermal exposure. Although quantitative development and characterization of this pathway may not be needed in this particular case, a qualitative discussion of it is warranted.

TABLE 8-3
An exposure duration of 1 year may not be protective of the worst case scenario construction worker, consider using a longer exposure peroid.

TABLE 8-3
Consider increasing the exposure time and frequency for adults and children with regard to the recreational scenario, considering the geographical area of the site. This is a largely rural area, where people are likely to spend more time outdoors compared to more urban populations.

PAGE 8-22
The paragraphs describing toxicity assessment should be referenced to EPA's RAGS, 1989. Both are almost word-for-word out of the guidance, but there is no reference. This should be considered throughout the document.

PAGE 8-32

The genotoxicity of tetryl should be mentioned. Its been found to be genotoxic in a number of systems and a dose response relationship has been established both in an Ames assay (±S9 activation)/TA100 strain and a DNA repair test using *E. coli*, also with and without activation. A fairly good discussion of tetryl can be found in a book called Munitions, edited by Roberts, W. and Hartley, W., Lewis Publishers.

Comments on the Ecological Risk Assessment

General Comments

Overall, the ecological risk assessment for the ABL site appears thorough and well written, with conclusions generally well supported by data.

Specific Comments

1) On page 9-13 the environmental effects ratio-low (ER-L) is defined as "the concentration of particular parameters (...) in a sample at which adverse effects (chronic or acute) may be observed 10 percent of the time." If an ER-L for a particular contaminant based on acute effects is used, it would seem reasonable to apply an uncertainty factor (e.g., 100) to it as an estimate of the chronic effect level, which would then be used to calculate the EEQ. This would be appropriate because the concern is primarily with potential effects from chronic exposure to contaminants.

2) The background station (SD-1) had the highest EEQ for both sediment and surface water samples. To address the possibility that this station is anomalous and not representative of water and sediment quality upstream of Site 1, future sampling should include additional background stations.

3) It would be useful to summarize EEQs based on one-half non-detect values in a separate table from EEQs based on measured values since there is more uncertainty associated with EEQs based on estimated as opposed to measured values.

4) Page 9-26, top paragraph: PAHs should be defined as polycyclic aromatic hydrocarbons.