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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

290 BROADWAY

NEW YORK, NEW YORK 10007-1866

2/11/2001

Mr. John Kolicius, Project Manager
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, PA 19113-2090

Re: Draft Proposed Plan for Sites 3 and 10 (Operable Unit 6)

Dear Mr. Kolicius:

Attached are EPA's comments on the above referenced document. If you have any questions, please contact me at (212) 637-3921. I look forward to meeting with you on December 14, 2000.

Sincerely,

Jessica Mollin, Remedial Project Manager
Federal Facilities Section

Attachment

cc: G. Goepfert, Naval Weapons Station Earle
B. Marcolina, NJDEP

Comments on Draft Proposed Plan - OU-6 - Bob Wing

1. Page 1, first paragraph. This paragraph should be moved to the last paragraph under the section entitled Navy Proposed Remedial Action Plan.

2. Page 1, second paragraph. This paragraph should now become the first paragraph in the section. There should be a brief discussion of sites 3 and 10 (i.e., when and what they were used for).

3. Page 2, second column, last paragraph. Explain what is meant when you state that the undeveloped portion is encumbered by ESQD. Explain what the use is restricted to. Explain where the arcs are shown or can be found, give reference(s). Also include (see definitions for more comments) after ESQD.
4. Page 3, first column, first paragraph. Briefly describe what the waterfront area consists of.
5. Page 3, paragraph under Site 3-Landfill Southwest of "F" Group. Indicate where "records" on industrial wastes are located. Have there been any closure efforts, cap, if yes, when? *Hart report, test pits*
6. Page 3, paragraph under Site 10-Scrap Metal Landfill. Explain/discuss whether there have been any closure efforts/cap, if yes, when? Give explanation.
7. Page 4, first paragraph, IAS results. Define or explain what a confirmation study is.
8. Page 4, paragraph under SI results. Was any other media besides groundwater sampled? Discuss data and conclusions for metals found in groundwater.
9. Page 4, second paragraph under Phase I RI/FS results. What are the results/data from two soil samples collected from the tests pits? Why were only two samples collected from 7 pits? Give explanation.
10. Page 4, third paragraph under Phase I RI/FS results. First sentence of this paragraph (Based on visual...) should be moved and become the first sentence of the paragraph above it.
11. Page 4, first paragraph, second column. Was arsenic found in any other wells? Was arsenic found in soil? Give explanation. It is stated that arsenic was found at an elevated level of 0.37 ppm. However, in Figure 4 and Table 5 shows that arsenic was found at a level of .015 ppm. These levels are inconsistent with each other. The last sentence of this paragraph states "the concentrations were not high enough to indicate that the landfill was generating a highly concentrated leachate". Back up this statement with some quantitative or numerical indications.
12. Page 4, last bulleted sentence under Phase II Remedial Investigation. Where is the data/results of the sampling and analysis of the one surface soil in the wetlands southeast of the landfill?
13. Page 5, first column, second paragraph. Need a "summary" discussion of the tables, range of data found, or highest hits. There is not enough detail regarding the tables in this paragraph.
14. Page 5, last paragraph under RI Addendum Investigation. Were PAHs detected in background samples. What concentration of pesticides were detected in sediments. Give range found or maximum level found.
15. Page 5, first paragraph under Site 10, IAS results. What does the following sentence mean "materials present in the landfill were inert or not leaching due to the moderate range of pH values in the environment"? Explain why this site was not selected for a confirmation study.
16. Page 6, first paragraph, first column. Besides landfill parameters, was there any distinction between downgradient wells and upgradient wells for other analytes and metals?
17. Page 6, second bulleted sentence under Phase II Remedial Investigation. Explain purpose of measurement of static-water levels in the seven existing wells.
18. Page 6, Phase II Remedial Investigation. There needs to be a better narrative summary of what was found or not found at site 10, supported by data.
19. Page 7, first paragraph under section entitled Site 3. This paragraph states "the RME cancer risks associated with future residential and future industrial (groundwater) exposure scenarios did not exceed the upper end of the conservative EPA guidance target risk range". However, the arsenic level mentioned on the top of page 4 (0.37 ppm) does exceed the EPA's guidance target risk range.

20. Page 7, second paragraph under the section entitled Site 3. What about RME estimates for surface soil and sub-surface soils? Was a risk evaluation performed? Give results or explain why not performed.
21. Page 8, first column, third paragraph. What is the point of the first sentence? What is the conclusion of this paragraph? Were excess risks presumed?
22. Page 9, first bulleted sentence under Protection of Human Health RAO for sites 3 and 10. Do these RAOs include the prevention of metals and contaminated landfill materials from leaching into the groundwater? Add RAO to prevent leaching to GW or explain why omitted.
23. Page 10, paragraph under Alternative 2:Limited Action. What type of cover would site 3 have. A soil cover will not prevent leaching of contaminants.
24. Page 16, second column, second paragraph. The skeet range needs to be discussed earlier in the proposed plan, it shouldn't be discussed for the first time at the end of the proposed plan. Is there any contamination associated with the skeet range?
25. Page 16, second column, third paragraph. Need better discussion regarding the type of cap. Is the long term periodic monitoring for groundwater only?
26. Page 17, Preferred Alternative Summary for Site 10. Need to include information about groundwater use restrictions and five year reviews.
27. Page 19, Definition for ESQD. Could use a better definition. Explain where arcs are shown or can be found, cite references. Define use restrictions with arcs. Need to cite source (DDESB?)
28. Table 5. Under Frequency of Detection, weren't there more than 4 wells? 8 are seemingly discussed on page 4. Arsenic is noted as being .015 mg/l. This is inconsistent with the text on Page 4 (see comment #11). Was arsenic only found in this one well? Clarify.

Comments on Draft Proposed Plan - OU-6 - Jessica Mollin

1. Page 4, Site 3, SI Results. Describe which metals were found in groundwater and indicate where in the proposed plan (i.e., which table) you can find this information.
2. Page 4, right column, top paragraph. Explain what landfill indicator parameters are.
3. Page 5, Site 10, SI Results. Further expand on laboratory waste possibilities, this is mentioned several times throughout the report as a possible source of organics and VOCs. However, no mention of laboratory waste is included in the description of Site 10 waste. Also, as noted in the first comment, indicate which SVOC and metal was detected in surface water samples.
4. Page 5, Phase I RI, first paragraph. This paragraph doesn't make sense. Why was only one sample from a test pit analyzed for TCL/TAL analytes and TPH? Were the wastes that were encountered in two of the four test pits the organics mentioned in the next sentence? Where were these two organics detected, in soil?
5. Page 11, Site 10 Remedial Alternatives. Why was the 2nd alternative disregarded?
6. Page 16, Site 3. What type of cover will be placed over the landfill?
7. The Proposed Plan needs further discussion of arsenic and of the human health risk for arsenic (i.e., how the remedial alternative will prevent human contact). Based on the way the discussion on arsenic is written it appears that the arsenic concern was disregarded.

**Annotated Navy Responses to
EPA Comments on the Navy's Response to NOAA and BTAG's Concerns regarding OU-5 &
OU-6 (November, 1999)**

Site 3

1. In Table 4-25 of the RI Addendum report, the Representative Sediment Threshold for fluoranthene is 90,005 ug/kg. Please give further discussion of where this level came from (in addition to the explanation given in Table 2-26).

Reply: The calculation for determining the site-specific sediment ecological toxicity threshold values (ETs) is explained in Subsection 2.6.3 on page 2-110 of the Remedial Investigation Addendum Report (January 1998). Non-polar organic contaminant ETs were calculated for this evaluation using equilibrium partitioning (EqP) methods, which take into account the sorption capacity of site sediments (total organic carbon), the organic carbon partition coefficient, and the Ambient Water Quality Criterion (AWQC).

2. In the RI Addendum, page 4-59, second paragraph from the top, it is indicated that there is a "hot spot" area which contains several inorganics and PAHs. Please explain what is going to be done with this "hot spot" area. Some type of removal action, similar to the removal action at Site 13, is necessary.

Reply: The words "hot spot" used in this sentence were misleading and were not used in a manner meant to indicate the need for a removal action for potential risks to ecological or human receptors.

The site-specific ecological risk evaluation for Site 3 concluded that the low levels of contaminants found in the drainage ditch, where similar PAH and phthalate ester compounds were found in surface soil, may be the result of runoff from the landfill. These compounds are relatively immobile and were not found to have affected the adjacent wetlands. The ecological risk assessment concluded that insignificant risks exist to ecological receptors from Site 3-related contaminants. Proposed removal of soil from the phenanthrene and pyrene "hot spot" (03SDWET3A-1 sample) appears to be unwarranted, as no substantial potential risks at the population of community level are apparent. The site-specific ecological risk assessment performed to evaluate potential impacts on the wetlands in this area concluded that these PAH compounds are not mobile and pose little threat to ecological or other receptors.

Nonetheless, a soil removal action in this area could be easily performed by the Navy RAC, or other contractor, using a simple work plan and a modified existing health and safety plan. Confirmation analysis for indicator parameters could be performed on a quick turn-around basis (e.g., using a mobile laboratory). Soils could be disposed off-site safely and relatively economically.

Site 10

3. Site 10 contains demilitarized munitions and munitions cases. Does this site have UXO? Some type of historical discussion of this would be desirable, including an estimate of how many munitions are present.

Reply: No unexploded ordinance (UXO) is known or suspected of being disposed in this former disposal area. Approximately 65,000 cubic yards of waste shell casings from the deactivation furnace (certified-inert metal waste), aluminum and steel containers, and spent grit and paint chips were reportedly interred here with soil cover materials.

There is no known evidence that any live ammunition is interred at Site 10. Only certified-inert (i.e., no energetic potential remaining) materials were reported disposed here.

Site 13

4. The Navy has acknowledged that a "hot spot" removal for PCBs is needed at Site 13. How is the Navy going to ensure that this is just a "hot spot" and that the contamination isn't extensive?

Reply: Pre-excavation screening sampling and analysis is planned to confirm the approximate area for removal. Post-excavation confirmation sampling will be used to verify conformance with clean-up levels.

5. Please explain further why sediment/soil samples can't be taken in the forested wetlands. How deep are the leaves? Is there any type of soil/sediment between the leaves and the water?

Reply: There are soils available at the fringe of the landfill where the fill material is essentially mixing with the wetland area, but within the wetland area there is a very high water table and no appreciable soil available for sampling.

There is a site visit planned with the EPA RPM on March 8, 2000. Site 13 conditions can be probed at that time. The Navy will provide a hand auger or other digging tools to demonstrate site conditions.

6. Water and soil/sediment data should be compared to the most conservative screening level criteria for ecological risk assessments. For example, groundwater samples could be compared to chronic fresh water AWQC and soil samples could be compared to the Ontario Ministry of the Environment LELs and SELs.

Reply: The approach used for evaluating ecological risks was distributed to all interested parties, including the EPA RPM and NJDEP case manager, for comment before the risk calculations were performed. Where appropriate, groundwater samples were compared to AWQC and soil/sediment samples were compared to Ontario Ministry of the Environment LELs and SELs. In addition, as was agreed by all parties at the time, site-specific sediment ecological toxicity threshold values were calculated using guidelines supplied by the EPA and others. The calculation for determining the site-specific ETs is explained in Subsection 2.6.3 on page 2-110 of the Remedial Investigation Addendum Report (January 1998). Non-polar organic contaminant ETs were calculated for this evaluation using equilibrium partitioning (EqP) methods.

At the time of preparing the ecological risk assessment there was consensus among Navy, EPA and NJDEP reviewers to ensure that the final product would be acceptable to all. For this reason, drafts of the ecological risk assessment were distributed to the team for pre-review ET selection.

It should be noted that significant time has passed since this ecological risk evaluation work was performed in 1996 and 1997 and there may be new ETs available now, or EPA guidance may have changed. Thus, methodologies used in the report do not necessarily reflect methodologies that would be used at present. The methodologies used for the ecological risk assessment were sufficient to adequately characterize potential risks.

7. As stated in the Remedial Investigation report, page 15-63, RME estimates for noncarcinogenic hazard indices associated with future industrial and future residential (groundwater) exposure scenarios exceed 1. What is the Navy's proposal for this potential human health risk? Need more discussion on this issue.

Reply: The draft Feasibility Study (FS) for Site 13 (OU-5) (December 1997) has an extensive discussion of this issue (as well as the results of groundwater modeling) in Subsection 2.6.1 - Site 13 Remedial Action Objectives. The FS should be reviewed for a complete discussion of the issues.

The results of the RI, previous investigations, and the human health and ecological risk assessments for Site 13 were evaluated in the FS to determine the remedial action objectives that may be needed to protect human health and the environment. The FS presents and evaluates a range of potential response actions to each of the site risks identified, including the human health risks from groundwater, as prescribed by the CERCLA RI/FS process. The objective is to lay the groundwork for discussions among decision-makers leading to a consensus in the Proposed Plan (yet to be prepared).

In regards to the specific question, the underlying groundwater is not used as a potable water supply, and there are no plans for base closure or realignment that would result in Site 13 being considered for future residential land use. A numerical model of groundwater contaminant transport was performed to evaluate the potential for groundwater to reach potential downgradient receptors. The model indicated that metals concentration at the nearest discharge point, a stream located approximately 500 feet downgradient of Site 13, would be well below the state GWQS (Table 1, Appendix A in the FS). These results indicate that the site contaminants (VOCs and metals) are unlikely to migrate very far from Site 13, and their concentrations would be below either GWQSs or background levels within a relatively short distance of Site 13. If source control measures are implemented, then a reduction in groundwater contaminant concentrations to below GWQS or to background levels can be expected in the long term, based on a qualitative understanding of the contaminant migration mechanisms and based on the computer modeling calculations. Source (landfill materials) control measures like landfill capping would likely result in a significant reduction of leachate generation and subsequent migration into the underlying aquifer, thus abetting reduction of contamination concentrations in groundwater in the long term.

Considering the presence of metals and organics in groundwater, the establishment of a classification exception area (CEA) according to state regulations, would need to be considered. This would include future monitoring of groundwater quality and periodic review of adequacy of the chosen remedy.

Based on the concentrations and constituents found in Site 13 groundwater, the FS concludes that active remediation is not practical or necessary now, but can be considered in the future if the modeled gradual reduction in groundwater metals concentrations does not occur.