



DEPARTMENT OF THE NAVY

NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

N60478.AR.000572
NWS EARLE
5090.3a

IN REPLY REFER TO

5090
Code 09TB/JK

07 MAR 2000

Ms. Jessica Mollin
Project Manager, Federal Facilities Section
United States Environmental Protection Agency
290 Broadway
New York, NY 10007-1866

Dear Ms. Mollin:

SUBJECT: RESPONSES TO USEPA COMMENTS OF JANUARY 13, 2000 ON THE NAVY'S RESPONSE TO NOAA AND BTAG'S CONCERNS ON DRAFT FEASIBILITY STUDIES FOR SITE 13 (OU-5) AND SITES 3 & 10 (OU-6), DECEMBER 1997, AND THE REMEDIAL INVESTIGATION ADDENDUM, JANUARY, 1998, FOR NWS EARLE, COLTS NECK, NJ

Thank you for reviewing the Navy's responses to issues raised by NOAA and the BTAG regarding the subject documents. Annotated responses to your follow-up comments are attached. I hope we can resolve any outstanding issues during the March 8 site visit so we can finalize the Feasibility Studies and proceed to the Proposed Plans for these sites.

If you have any other questions or comments please do not hesitate to contact me at (610) 595-0567 ext. 157.

Sincerely,

John P. Koliccius
Remedial Project Manager
By direction of the
Commanding Officer

Enclosure: 1. Review Comments with Navy responses

Copy to:
Mr. Robert Marcolina, NJDEP
Mr. Greg Goepfert, NWS Earle
Mr. Russ Turner, Tetra Tech NUS
Mr. Jim Root, NORTHDIV

**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?

R ply: 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.