



U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 2
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OCT 27 1998

Deborah L. Felton
BRAC Environmental Coordinator
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop, #82
Lester, Pennsylvania 19113-2090

RE: Operating and Properly Successfully Demonstration
Naval Air Warfare Center, Trenton

Dear Ms. Felton:

As requested, the Environmental Protection Agency ("EPA") has reviewed your August 27, 1998 draft "operating properly and successfully" ("OPS") demonstration for the Naval Air Warfare Center Trenton BRAC Site pursuant to Section 120(h)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). Section 120(h)(3) provides for EPA review and approval of federal agencies' demonstrations that ongoing remedial actions are operating properly and successfully, as a precondition to the deed transfer of federally-owned property.

The purpose of Section 120(h) is to ensure that properties contaminated by the federal government are environmentally restored prior to being conveyed outside the federal government. CERCLA section 120(h)(3) requires that deeds transferring property where hazardous substances have been stored, released or disposed of contain a covenant warranting that, "all remedial action necessary to protect human health and the environment with respect to any substance remaining on the property has been taken before the date of such transfer." It also provides that all necessary action may be deemed to have been taken, "if construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to the [EPA] Administrator to be operating properly and successfully." EPA interprets the phrase "operating properly and successfully" to mean that the final remedial action is functioning in such a manner that it is expected to adequately protect human health and the environment through its operation over time. Thus, submission of an OPS demonstration for EPA approval is appropriate when a federal agency has completed the construction and installation of an ongoing remedial action and desires to transfer the property prior to meeting the remedial action objectives.

The determination that a remedy is operating properly and successfully is the second step of a two-part analysis. First, construction and installation of an approved remedial design must be completed. This is relatively self-explanatory. Second, the remedy must be demonstrated to be operating both properly and successfully. A remedial action is operating "properly" if it is operating as designed. That same system is operating "successfully" when its operation indicates it can achieve the cleanup levels or performance goals delineated in the Decision Document, and the remedy is protective of human health and the environment. Thus, the term "operating properly and successfully" means that the remedial action is functioning in such a manner that it is expected to adequately protect human health and the environment through its operation over time.

EPA's approval of an OPS demonstration under Section 120(h)(3) would allow the deeded transfer of the property prior to all environmental cleanup objectives being accomplished. However, it should not be construed as an indication that all required cleanup actions have been completed. The Navy's OPS demonstration and supporting documentation, and any EPA approval letter, will become a permanent part of the administrative record for this Site together with any Finding of Suitability for Transfer ("FOST") prepared for the purpose of transferring property to third parties. This will assure that those third parties, as well as the community and other future users, have access to the information used in this process.

We have reviewed your submission in conjunction with the information presented in the March 1998 draft Focused Feasibility Study ("FFS"), the August 1998 draft Decision Document for Groundwater, and the New Jersey Department of Environmental Protection's ("NJDEP's") subsequent comment letters concerning them [dated September 4, 1998 (re: natural remediation potential), September 11, 1998 (re: FFS), and September 11, 1998 (re: draft Decision Document)]. This review was conducted in accordance with EPA's guidance reviewing OPS demonstrations, and was solely for the purpose of determining whether the OPS demonstration satisfies the CERCLA Section 120(h)(3) requirement that all necessary remedial design be completed and the remedy is demonstrated to be operating properly and successfully prior to property transfer.

Based on our review of the OPS demonstration document, EPA has determined that insufficient information has been provided to enable it to conclude that remedy is "operating properly and successfully." Please note that our review was conducted based upon the information provided to us by the Navy and without any independent EPA investigation or verification. Our specific comments on the draft OPS document are as follows:

1. To date, neither the FFS for groundwater nor its related draft Decision Document have been found to be acceptable by the NJDEP. Furthermore, the Navy has not yet completed the process of formally selecting a remedy to address the groundwater contamination, including the dense phase non-aqueous phase liquid ("DNAPL") trichloroethene ("TCE") which is believed to be present in the fractured bedrock beneath the Site, through issuance of its Decision Document. Because a remedy has not yet been selected, EPA cannot determine that the remedy has been constructed in accordance with an "approved design." Prior to submitting an OPS demonstration for formal review by EPA, a final remedy that appropriately addresses groundwater contamination, as well as the suspected presence of DNAPL TCE, must be selected and designed. A remedy that is acceptable to the NJDEP must be formally selected in a Navy Decision Document, the design must be approved by the NJDEP, and the remedy must be shown to have been fully constructed in accordance with the approved design.
2. The document indicates that the complex hydrogeology of the Site makes representation of a "capture zone" problematical. Nevertheless, it also states that computer modeling indicates that the current capture zone is adequate to prevent off-property migration of contaminated groundwater. Since the on-property groundwater pump and treat operations were expanded to utilize the multiple pumping well scenario envisioned in the draft Decision Document, only the results of a single round of quarterly monitoring/sampling have been produced. To demonstrate whether the remedy is actually preventing the off-property migration of contaminated groundwater and DNAPL TCE, and verify the modeling predictions, the results of a statistically significant number of rounds of actual groundwater monitoring need to be presented. This is particularly relevant in light of the likelihood that groundwater elevations were unusually low as a result of less than normal precipitation during 1998.
3. With respect to the objective of eliminating the flow of contaminated groundwater to Gold Run via the Parkway Avenue storm sewer, the document indicates that "some additional work is planned" to confirm that this has been accomplished. The results of this work are also needed to demonstrate whether the proposed remedy is appropriate for this area of the Site and is operating successfully.
4. The document indicates that a "Classification Exception Area" ("CEA") filed with the NJDEP will prevent human exposure to contaminated groundwater by prohibiting installation of new groundwater wells within the "plume area." The document should set forth the extent to which the CEA is in place and/or give the status of implementation of this portion of the remedy, provide a map of the areas to which it applies, and explain how it will work in actual practice and how all affected present and future landowners and users will be made aware of it. In addition, because the CEA would apply only to new wells, an explanation is needed of what protective measures (e.g., notification, monitoring, connection to public water system) will be utilized to protect users of any existing wells within the "plume area" from being exposed to contaminated groundwater and/or DNAPL TCE.

5. With respect to non-groundwater related contaminants associated with the Site, the OPS demonstration should include a comprehensive list of all ongoing and completed remedial and removal actions for the Site, as well as areas of the Site where the Navy has determined that no further actions are necessary. For both completed actions and no further action areas, the OPS demonstration should include verification that these actions have been fully completed in a manner which is acceptable to the NJDEP. If there are any such actions which have not yet been completed, please provide a schedule for any remaining tasks, together with information concerning the NJDEP's acceptance of the proposed actions.
6. At our meeting on September 22, 1998, in light of the fact that the contaminated groundwater plume and DNAPL TCE has not yet been sufficiently delineated (especially with regard to off-property contamination), the Navy indicated its position that, pursuant to CERCLA Section 120(h)(3), OPS demonstrations are only required to address ongoing remedial actions related to the actual properties proposed to be transferred rather than both on-property and off-property contamination associated with the overall Site. Thus, according to the Navy's position, contamination which has already migrated off the property would not need to be addressed in the Navy's OPS demonstration.

EPA is very concerned that although the Navy has been investigating the Site's groundwater contamination problem for a number of years, the extent of off-property groundwater contamination has not yet been sufficiently delineated nor has a remedy been selected for that off-property contamination. To help alleviate our concerns, the OPS demonstration should include a full discussion of the Navy's plan of action to address this off-property contamination (either as part of the OPS demonstration itself or in a separate state/federal enforceable action), including an accelerated schedule to design and implement any remedial actions which are found necessary. In addition, it should explain what state/federal enforcement mechanisms exist, or that the Navy would agree to, to ensure that the Navy will commit adequate resources to any necessary off-property remedial actions even after the facility has been transferred to non-federal ownership.

Further EPA consideration, and ultimate approval, of the Navy's OPS demonstration for the on-property remedy will require resolution of the issues raised in this letter and as those issues are being addressed EPA agrees to promptly evaluate any Navy Decision Document that creates an enforceable obligation for the Navy to appropriately address off-property contamination associated with the Site, which we feel is necessary.

7. We have a number of other specific concerns and information needs with respect to the technical aspects of the OPS demonstration. Specifically, we recommend that, in any resubmittal of its OPS determination, the Navy should:

- a. Provide information concerning the groundwater elevations and calculated drawdowns from each well (to include concurrent pumping rates from each groundwater extraction well) demonstrating the capture zone of the groundwater extraction system (the May 1998 quarterly monitoring report only included groundwater sampling results from monitoring wells, but did not provide water elevation data or treatment system influent/effluent data).
- b. Include data concerning the groundwater extraction and remediation system's performance: influent concentrations from each recovery well (to include concurrent pumping rates), total influent concentrations, concentrations between treatment units and effluent concentrations of at the final discharge point. During our visit to the Site on September 22, 1998, the pretreatment system was not being utilized in the treatment train. A history of metals concentrations must be provided to justify bypassing this unit of the groundwater treatment system.
- c. Develop isopleth maps which depict historical groundwater contaminant concentrations to evaluate the effectiveness of the groundwater extraction system in reducing groundwater contamination levels over time.
- e. Provide complete as-built plans of the groundwater recovery, conveyance and treatment systems as they are currently operating, including calculated maximum influent concentrations and hydraulic capacity for the current design. Describe all additional work necessary for the system to be completed as per the "approved design."
- f. Include a copy of the operation and maintenance (O&M) plan for the treatment system, and provide a discussion of past O&M performed on the system including any down time. At the time of our visit to the Site on September 22, 1998, the flow rate digital displays for some of the recovery wells were not operating properly. A plan to correct this must be provided.
- g. Provide a summary of the groundwater monitoring plan, including the monitoring wells that have been selected to evaluate the effectiveness of the system over time, the sample analysis parameters for groundwater and influent/effluent, sampling frequencies, and reporting requirements.
- h. Discuss the modifications/upgrades that need to be made to the treatment and discharge systems in order to meet the surface water standards envisioned in the proposed New Jersey Pollutant Discharge Elimination System discharge permit for effluent from the groundwater treatment plant.

In summary, additional information is necessary to demonstrate that the remedy has been fully constructed in accordance with an approved design, that a sufficient amount of performance data has been collected and analyzed, and that the data demonstrate that the remedy is operating as expected in comparison with its design criteria, permit limits, and the known characteristics of the affected groundwater. Furthermore, you will need to certify the accuracy of the data and the accompanying information.

Thank you for the opportunity to comment on your preliminary draft OPS demonstration. We look forward to reviewing your formal OPS demonstration after the groundwater remedy is selected, constructed in accordance with an approved design, and operated over a sufficient number of monitoring periods. In the interim, if we can be of further assistance, please feel free to contact William P. Lawler, P.E., of this office at (212) 637-3728.

Sincerely yours,



Robert Wing, Chief
Federal Facilities Section

cc: Donna Gaffigan, NJDEP
Barry Barclay, NAWC-BTC