



COUNTY OF BUCKS

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M.J. Jadick
Public Affairs Officer
Naval Air Warfare Center
Aircraft Division, Code 041
Warminster, Pennsylvania 18974

Subject: Comments on the Proposed Remedial Action Plan
Naval Air Warfare Center - Warminster, PA

Dear Ms. Jadick:

The Bucks County Commissioners appointed the Bucks County NAWC Economic Adjustment Committee (BCNAWCEAC) last September to respond to the planned relocation of NAWC from Warminster. The Committee includes representatives from Bucks County, Montgomery County, Warminster Township, Northampton Township, Ivyland Borough, the Commonwealth of Pennsylvania, NAWC contractors, and the business community. The mission of the Committee is to identify, assess, and recommend economic development strategies that will best utilize the resources of NAWC and its people to the greatest benefit of the surrounding community.

The Commissioners appointed an Environmental Subcommittee to assist the full NAWC Economic Adjustment Committee in March. The purpose of this subcommittee is to monitor studies of environmental conditions at NAWC; review all issues pertaining to environmental conditions and remediation; and to ensure that environmental conditions at NAWC are adequately and expeditiously remediated for site reuse.

The Environmental Subcommittee has reviewed the Proposed Plan for Remediation of Contaminated Shallow Groundwater at NAWC-Warminster. The purpose of this letter is to provide the Environmental Subcommittee's comments on this plan. It is the understanding of the Subcommittee that the proposed remedial action represents an initial step to be taken by the Navy to begin to address all contamination attributable to

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NAWC-Warminster and that proposed remedial action is intended solely as a preliminary "interim measure" focusing at this time only on Operable Unit #1 (OU-1), which has been defined by the Navy and the Environmental Protection Agency (EPA) as: "all contaminated ground water attributable to the facility (NAWC Warminster) in the overburden and shallow bedrock aquifers."

Further, it is the understanding of the Subcommittee that the proposed interim measure will be conducted concurrently with additional investigation which will be performed unconditionally by the Navy to fully determine the nature and extent of contamination of all media, both on-site and off-site, attributable to NAWC-Warminster.

The Subcommittee's analysis of each alternative proposed by the Navy based on the evaluation criteria used in the Proposed Remedial Action Plan follows. (A list of the Navy's three alternatives is on page 6.)

1) Overall Protection

As defined in the glossary of evaluation criteria of the Proposed Remedial Action Plan (the Plan), a remedy is considered protective if it "adequately eliminates, reduces or controls all current and potential site risks posed through each exposure pathway at the site." Because the proposed interim remedial action is intentionally limited solely to the minimization of the migration of NAWC-Warminster related contaminants in the overburden and the shallow bedrock aquifer only and does not contemplate remediation of other contaminated media at the site including soils and ground water within the deep bedrock aquifer, none of the alternatives by definition provide "overall protection."

However, given consideration of the stated objectives of the Plan, Alternatives 2 and 3 should enhance the protection of human health and the environment by attempting to provide some degree of limited hydraulic containment of contaminants within Area A and B of OU-1. Alternative 1 is unacceptable because it is by definition a "No Action" alternative thereby providing NO protection of human health and the environment. Because the "No Action" alternative is not protective of human health and the environment, it is not considered further in this analysis as an option now or in the future for this facility.

2) Compliance with ARAR's

Compliance with Applicable or Relevant and Appropriate Requirements (ARAR's) is a statutory requirement for remedy

selection under CERCLA. In section 5.2 (compliance with ARAR's) of the Focused Feasibility Study (FFS) dated April, 1993, the Navy states unconditionally, that "under Alternatives 2 and 3, all ARAR's for the discharge of treated water and air emissions would be met." It is the opinion of the Environmental Subcommittee that compliance with ARAR's is essential to the interest of public health and the environment.

3) Long-term Effectiveness

The degree and extent of contamination within OU-1 is undefined. Therefore, it is premature and technically infeasible to evaluate and comment on the long-term effectiveness and permanence of any of the alternatives as proposed.

The Navy is on record as stating unconditionally in Alternatives 2 and 3 that further investigations will be conducted on and off NAWC-Warminster property as necessary to fully identify the nature and extent of contamination in overburden and shallow bedrock aquifers. It is the finding of the Environmental Subcommittee that available data clearly indicate the need to address contamination related to NAWC in all media on-site and off-site to select a permanent solution that will provide overall protection to human health and the environment.

4) Reduction of Toxicity, Mobility or Volume

Alternatives 2 and 3 may reduce the volume and toxicity of contaminated ground water in Operable Unit 1 to some degree. Some further migration of ground water in the overburden and shallow bedrock aquifer (OU-1) may be contained by the extraction system. However, the ability of the proposed treatment technology to meet ARAR's is questionable, given the fact that the extent of contamination of OU-1 is undefined. Furthermore, the treatment systems, as proposed, contemplate the transfer of contaminants to other media. Because the use of neutralization and destruction technologies is not proposed, ultimately, there will be no reduction of volume and toxicity of the contaminants.

Expanding upon comments regarding the reduction of mobility of the contaminants, a major concern of the Subcommittee is the uncertainty of the effectiveness of the proposed remedies to control or have any influence whatsoever on the continued vertical migration of contaminants to the deep bedrock aquifer (the Stockton Formation). Municipal water supply wells and other wells in the area pump several hundred million gallons of ground water per year mainly from

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deeper bedrock zones of the Stockton Formation for consumption by a population potentially impacted of 116,000.

5) Cost

Since present worth cost estimates as presented in the plan for Alternatives 2 and 3 are equal¹, the cost evaluation criteria should not be a factor in the selection of the appropriate alternative.

6) Short-Term Effectiveness

Both Alternatives 2 and 3 contemplate the non-destructive cross media transfer of contaminants which will ultimately generate residual contamination requiring further treatment or disposal. Therefore, there is an inherent risk to human health and the environment associated with each of the proposed treatment alternatives.

Destructive technologies for the contaminants of concern represent the Best Available Technology (BAT) in this circumstance and have been demonstrated, are commercially available and are consistent with EPA policy and the National Contingency Plan (NCP). Therefore, it is the finding of the Subcommittee that destructive technologies should be incorporated into the treatment systems for both Alternatives 2 and 3 in order to be protective of human health and the environment.

The Environmental Subcommittee assumes that National Pollution Discharge Elimination Systems (NPDES) requirements will be applied to Alternative 2, which will be more stringent, and thereby more protective of the environment, than the requirements for the existing publicly owned treatment works (POTW).

7) Implementability

Alternative 2 is the only alternative which is technically and administratively feasible. Alternative 3 is not implementable for the following reasons:

First, in the likely event that the NAWC-Warminster Waste Water Treatment Plant ceases operations as part of the base realignment and closure, it is highly unlikely that a POTW will be willing to accept the effluent. As a practical matter, local POTW's already have limited capacity and it is anticipated that local POTW's will be extremely reluctant to handle, treat, manage or dispose of hazardous materials or wastes generated from a National Priorities List (NPL) site. To date there have

been no discussions with local POTW's regarding their acceptance of the effluent, nor have any local POTW's expressed a willingness to accept the effluent.

Second, the capability of the existing NAWC-Warminster WWTP to adequately render necessary treatment to the effluent from the proposed pretreatment facility has not been demonstrated.

Finally, it should be noted that contrary to public notice circulated by the Navy, neither the BCNAWCEAC nor its Environmental Subcommittee has provided any input to the Navy favoring Alternative 3.

Conclusion

For the reasons discussed herein, it is the finding of the Subcommittee that Alternative 2 in conjunction with the continued aggressive investigation of the degree and extent of contamination attributable to the NAWC-Warminster is the only alternative that reasonably meets the Evaluation Criteria. Therefore, it is the recommendation of the Subcommittee that Alternative 2 be implemented as proposed in a timely and efficient manner.

Support for this alternative assumes, as stated in the Navy's Proposed Plan, that all ARAR's will be met and further testing will be conducted on and off NAWC property to identify the full nature and extent of contamination in overburden and shallow bedrock aquifers.

The Environmental Subcommittee supports the implementation of Alternative 2 by the Navy as a first step; however, it must be stressed that this action is not a permanent solution. In fact, this action does not correct the problem, it only hopes to stop the contamination from spreading further in the groundwater. Further testing of all media (including the soil and deep bedrock aquifer) on-site and off-site, must be completed to determine the nature and extent of contamination before a comprehensive clean-up plan can be developed. We urge the Navy to proceed with this testing as quickly as possible.

Sincerely,

Robert S. Taylor em

Robert S. Taylor, Esq.
Chairman, Bucks County NAWCEAC

The Navy's Alternatives

1. Take no action other than groundwater monitoring. This is a required alternative at every site and is intended to establish a baseline for comparison.
2. Pump the groundwater through a treatment system and discharge the treatment water to a stream. The treatment would involve air stripping, carbon absorption and possible precipitation, filtration and ion exchange. This alternative would prevent further migration of the contaminated groundwater in the shallow aquifer beneath the affected areas. This alternative would include a lengthy groundwater monitoring program.
3. Pump the groundwater through a treatment system and discharge the treated water to sewage treatment plant. The treatment would consist of precipitation and filtration before discharge to the existing treatment plant where organic compounds would be removed. Like method 2, this alternative would prevent further migration of the contaminated groundwater and require a lengthy monitoring program.