

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Eastern Remedial Action, Room 242
50 Wolf Road, Albany, New York 12233-7010
Phone: (518) 457-3976 • FAX: (518) 457-4198
Website: www.dec.state.ny.us



June 14, 2000

Mr. James Coulter
Remedial Project Manager
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop # 82
Lester, PA 19113-2090

Re: Calverton - NWIRP Site # 152136

Dear Mr. Coulter:

The Department has received and reviewed the following documents submitted in May 2000;

- (1.) Fire Training Area Field Report: Vacuum Assisted Oil Skimming Pilot Test (January 2000),
- (2.) Fuel Depot Area Work Plan for the Natural Attenuation Evaluation (April 2000),
- (3.) Fuel Calibration Area Work Plan for Supplemental Sampling (April 2000)

DEC's comments pertaining to each document are provided below.

Fire Training Area Field Report: Vacuum Assisted Oil Skimming Pilot Test

The Navy is proposing to utilize a vacuum assisted oil skimming system on impacted soils at the Fire Training Area to enhance product recovery. The Department reiterates its statement made at the February 16 RAB meeting that it may be more beneficial as well as cost effective to excavate and remove off site the impacted soils associated with the Fire Training Area. The RFI report of January 1998 indicated approximately 25,000 cubic yards of contaminated soil in the area where air sparing/soil vapor extraction product recovery were carried out. But at the last RAB meeting, Mr. Dave Brayack estimated that the amount of impacted soils was approximately 6,000 cubic yards. We request to see data which supports this reduction of the impacted area. If there is indeed a large reduction as indicated, then this amount of material could be very easily removed and shipped off site, thereby significantly reducing the contaminant source impacting the groundwater in this area.

Fuel Depot Area Work Plan for the Natural Attenuation Evaluation

The Navy has proposed the concept of monitored natural attenuation for the Fuel Depot area.

In referring to USEPA OSWER Directive 9200.4-17 (Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tanks) the following requires consideration in evaluating MNA.



Contaminants of Concern

...In general, since engineering controls are not used to control plume migration in an MNA remedy, decision makers need to ensure that MNA is appropriate to address all contaminants that represent an actual or potential threat to human health or the environment...

...Mixtures of contaminants released into the environment often include some which may be amenable to MNA, and others which are not addressed sufficiently by natural attenuation processes to achieve remediation objectives. For example, Benzene, Toluene, Ethylbenzene and Xylene (BTEX) associated with gasoline have been shown in many circumstances to be effectively remediated by natural attenuation processes. However, a common additive to gasoline (*i.e.*, methyl tertiary-butyl ether [MTBE]) has been found to migrate large distances and threaten down gradient water supplies at the same sites where the BTEX component of a plume has either stabilized or diminished due to natural attenuation. In general, compounds that tend not to degrade readily in the subsurface (*e.g.*, MTBE and 1,4-dioxane) and that represent an actual or potential threat should be assessed when evaluating the appropriateness of MNA remedies...

Question: Have groundwater samples taken from the Fuel Depot area ever been analyzed for MTBE? Additionally, what are the expectations of chlorinated solvent and BTEX compounds degrading satisfactorily under MNA?

Petroleum-Related Contaminants

...Following degradation of a dissolved BTEX plume, a residue consisting of heavier petroleum hydrocarbons of relatively low solubility and volatility will typically be left behind in the original source (spill) area. Although this residual contamination may have relatively low potential for further migration, it still may pose a threat to human health or the environment either from direct contact with soils in the source area or by continuing to slowly leach contaminants to groundwater. For these reasons, MNA alone is generally not sufficient to remediate petroleum release sites. Implementation of source control measures in conjunction with MNA is almost always necessary. Other controls (*e.g.*, institutional controls), in accordance with applicable state and federal requirements, may also be necessary to ensure protection of human health and the environment...

Sites Where Monitored Natural Attenuation May Be Appropriate

...MNA is appropriate as a remedial approach where it can be demonstrated capable of achieving a site's remediation objectives within a time frame that is reasonable compared to that offered by other methods and where it meets the applicable remedy selection criteria (if any) for the particular OSWER program. EPA expects that MNA will be most appropriate when used in conjunction with other remediation measures (*e.g.*, source control, groundwater extraction), or as a follow-up to active remediation measures that have already been implemented...

...Of the above factors, the most important considerations regarding the suitability of MNA as a remedy include: whether the contaminants are likely to be effectively addressed by natural attenuation processes, the stability of the groundwater contaminant plume and its potential for migration, and the potential for unacceptable risks to human health or environmental resources by the contamination. MNA should not be used where such an approach would result in either plume migration or impacts to environmental resources that would be unacceptable to the overseeing regulatory authority. Therefore, sites where the contaminant plumes are no longer increasing in extent, or are shrinking, would be the most appropriate candidates for MNA remedies. An example of a situation where MNA may be appropriate is a remedy that includes source control, a pump-and-treat system to mitigate the highly-contaminated plume areas, and MNA in the lower concentration portions of the plume. In combination, these methods would maximize groundwater restored to beneficial use in a time frame consistent with future demand on the aquifer, while utilizing natural attenuation processes to reduce the reliance on active remediation methods and reduce remedy cost. If, at such a site, the plume was either expanding or threatening down gradient wells or other environmental resources, then MNA would not be an appropriate remedy...

Question: How is the MNA alternative, which depends upon plume migration, consistent with the intent of the NCP that remedial plans prevent plume migration as a condition of implementing MNA?

Considering that the MNA alternative will not achieve ground water restoration for possibly several decades, how is a MNA alternative consistent with the EPA's statement in the Federal Register and the OSWER Directive that natural attenuation should be selected only when contaminant concentration will be reduced in a time frame that is reasonable and comparable to that which could be achieved through active restoration? Also, in response to a statement made by Mr. Coulter at the 2/14/00 RAB meeting, how would the alternative of Monitored Natural Attenuation (MNA) be implemented if the Navy will not commit to long term monitoring (possibly 10 to 30 years) as may be required in a MNA situation?

Your response should recognize that the NYSDEC considers returning the contaminated groundwater to beneficial use to be a remedial objective for this project at this time. Compliance with ARARs is a threshold requirement that must be satisfied by an alternative before it can be selected, unless grounds for invoking a waiver is provided. Consider that, in general, all contaminated ground water will eventually disperse at any given site, and contaminant levels at every location will eventually return to "natural" levels without an infinite source.

Fuel Calibration Area Work Plan for Supplemental Sampling

Data presented at the 2/14/00 RAB meeting indicated that VOC contamination was found in one of the deep monitoring wells located adjacent to the Fuel Calibration Area, and that the full vertical extent of the VOC plume was not defined. It is possible that the contamination found at this well location came from a more likely up gradient source. A reinvestigation of the Paint Stripping Building (06-75) and the Aircraft Paint Hangers (168/318) may be warranted to determine if a source of contamination not identified thru previous investigations still exists.

If you have any questions, please contact me at (518) 457-3976.

Sincerely,



Jeffrey McCullough
Federal Projects Section
Division of Environmental Remediation

c: M. Chen
S. Pasko
S. Farkus (Reg. 1)
W. Gilday (NYSDOH)
S. Robbins (SCDHS)
C. Stein (USEPA)
S. Johnson (Calverton RAB)