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NIROP FRIDLEY
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LETTER DISCUSSING THE POSSIBILITY OF NEED FOR FURTHER REMEDIATION AT OPERABLE UNIT 1 (OU 1) NIROP FRIDLEY MN
8/11/2010
NAVFAC MIDWEST

5090
Ser EV/

Ms Joan Tanaka
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Ms Tanaka:

SUBJECT: U. S. EPA Letter dated August 11, 2010, Naval Industrial Reserve Ordnance Plant, Fridley Minnesota

In regards to the U.S. EPA's above referenced letter, the Navy is in agreement that the remediation of the Naval Industrial Reserve Ordnance Plant (NIROP) is at a critical stage. As described in your letter, the U.S. EPA, Navy and Minnesota Pollution Control Agency (MPCA) have been working together to determine the methods to maintain the integrity of the remedy, evaluate the remedy's effectiveness, and to develop a long-term exit strategy that is acceptable to all Parties. Although the NIROP Team has agreed upon a set of long-term goals that are based upon the Record of Decision (ROD) requirements, there is not yet agreement on the scope of the work yet to be performed. The Navy has always maintained that our primary goals are to implement the remedy as described in the ROD and the data quality objectives (DQOs) of the remedial action work plan (RAWP) and to ensure protection of human health and the environment. Secondary to those goals, the Navy is seeking a long-term exit strategy that will resolve the current technical disagreements, while at the same time ensuring a safe and secure site with appropriate maintenance and monitoring and fiscally responsible. In order to achieve such an exit strategy, the Navy has indicated its willingness to consider additional limited investigation and limited additional response actions if warranted.

There is currently disagreement within the Team regarding the need for additional source remediation. The Operable Unit

(OU) 1 ROD discusses "on-going work" and language on page 16 notes the possibility of source remediation "if necessary". At the time of the ROD, the Parties determined that Land Use Controls would be utilized in conjunction with the groundwater extraction system to control risk by eliminating exposure pathways. The Navy understands that several Team members believe that the historical information and operational data indicate that there may be source material under the building, some of it in the form of Dense Non-Aqueous Phase Liquid (DNAPL). The Navy does not disagree that this may be the case. However, the disagreement is whether it is appropriate and necessary to attempt to locate and remove/treat a potential source, especially if present as DNAPL, which appears to pose no supplemental risk beyond those risks identified in the Remedial Investigation and Baseline Risk Assessment and addressed by the ROD-defined remedy. The Navy is committed to addressing the groundwater plume and controlling exposure and does not believe that such additional work will necessarily improve remedy performance. The Navy is entrusted with ensuring that federal funds are used in an appropriate and judicial manner. While there may be an academic value to a source/DNAPL investigation with a follow-up remedial action, in reality it would not alter the Navy's responsibility to control the groundwater plume and address site risks. Any potential reduction in the operational timeframe for the groundwater extraction system would be only hypothetical, as DNAPL actions are difficult to design and implement in a predictable manner and the relative payback on the expense cannot be realistically estimated.

While the Navy is concerned about some Project Team members' assumption that the investigation and remediation of a potential source DNAPL is automatically warranted, the Navy has been open to discussing all Project Team concerns and ideas. In 2008 and 2009, the Remedial Project Managers agreed that information did indicate the possibility of source material under the building. The Navy, with the cooperation of the U.S. EPA and MPCA RPMs, outlined a task for the Project Team. As documented in the May 2009 meeting minutes:

"RPM Guidance to the Tech Team:

(1) Review of the RI (all OUs or limit) with a focus under the building
   a. Summarize findings, identify findings/shortcomings
      i. Can a possible source be identified by existing information

ii. Identify possible source areas
iii. Recommendations for identifying source (sampling)
iv. Pros/cons feasibility (investment versus return)

(2) Clean up options
a. Source areas if identified
b. groundwater
c. Combination active/risk management

(3) Recommendation for the cleanup goal
a. Source material (if identified)
b. GW
c. What can we all live with (MCL level achievement - what is realistic)."

The May 2009 meeting minutes further outline the objectives and process for evaluating potential strategies. The Minutes further state:

> "The objectives above were written on the board and wording was agreed to by the Team. The team will look at these objectives to determine if there is a way to clean up the site faster and cheaper. The Team acknowledged that the Navy was in compliance with it's [sic] ROD and that any further activity would be driven by exit strategies. In that respect, Navy wanted to ensure that going beyond ROD requirements would result in something tangible that would defend Navy funding any additional activity, such as consideration of mixing zones, alternative clean-up limits, discussions about technical impracticability, etc.
>
> [The Navy] wants to be sure we remember the landowner's rights during this process."

The Navy has been open to Project Team ideas and concerns, but is itself concerned that the Project Team process has strayed from its original intent, which is to ensure that the remedy is operated in a way that is consistent with the ROD and protects human health and the environment. Team requests for additional information are often not tied to one of the project objectives and often go beyond what is needed for system monitoring and optimization. It is because there is no clear consensus on an approach or adherence to the agreed upon objectives that the Navy has been hesitant to commit to further

investigation at the NIROP facility. The Navy is greatly concerned about having to meet our regulatory obligations and ending up having to perform an open- ended investigation or implementing an additional remedy, when the Navy has no requirement to do so.

As to the U.S. EPA's reference to a Navy email regarding the cost of executing a limited investigation; the Navy has expressed concerns over what would be an appropriate scope for a "limited" investigation and has also identified the need to define data objectives prior to initiating the development of a Quality Assurance Project Plan/Sampling Analysis Plan (ref. Office Of The Under Secretary of Defense Memorandum on Uniform Federal Policy for Quality Assurance Project Plans, 11 April 2006). The Project Team agreed to develop an outline for the limited investigation, which was never completed, and minimal relevant information has been provided to support a "limited" investigation. The email was sent from the Navy RPM to the U.S. EPA and MPCA RPMs following an RPM conference call in which the Navy was "requested" to develop a QAPP/SAP for the Team to review, without upfront input from the Team. The email stated:

> "After some internal discussion and running some estimates for performing a limited investigation under the NIROP building the Navy has determined that at this time it is cost prohibitive for the Navy to initiate the RI process without further discussion and input from the Team... The Navy recommends that the project team fully and completely outline and agree on the scope and role of the investigation prior to the Navy making a significant investment. The Navy cannot in good conscience initiate a contract to produce a SAP/RI without knowing the scope and objectives of the limited plan. Otherwise, the Navy feels we are investing in a document that is open ended and could end up in significant discussions. As we have previously proposed, the Team needs to clearly define and agree on the scope and objectives of the limited investigation and what we will do with that information once it has been evaluated."

Estimates for a limited source investigation (Quality Assurance Program Plan/Sampling Analysis Plan, field work and RI Report) ranged from $350,000 to over $600,000. These estimates

are based on the Navy's cleanup program estimating system and existing contracts for investigations.

Since the Naval Facilities Engineering Command Midwest (NAVFAC MW) took over operation control of the NIROP remediation, we have acted openly and in good faith to meet our regulatory requirements and to work in an amiable fashion with the NIROP Partners. NAVFAC MW instituted several preventative maintenance actions that permit a faster response to problems, invested in a spare parts inventory for key items and has been slowly upgrading the aging system. These actions not only improved system efficiencies, they also permitted the Team identify several, previously unknown, underlying system issues (May 22, 2009 Meeting minutes):

> "Flow rates for each well are now being presented in the monthly reports, to track pumping rate performance. The proactive maintenance program has been implemented and is having positive effects."
>
> "Because the system is functioning better because of the scheduled maintenance, the data that followed scheduled maintenance revealed other issues."(Sept. 2009 Meeting Minutes)

The July 2008 Meeting Minutes, and the Annual Monitoring Reports, outline many of the actions and consensus items the Navy has initiated to improve the reliability of the system and to better evaluate system performance. The Project Team has also noted, on several occasions, that the Navy is meeting the intent of the ROD (see May 2009 Meeting Minutes; the 2008 Approved AMR, Section 7.2 Attainment of Data Quality Objectives).

Over the years of operation, the NIROP system has greatly improved the groundwater quality at the site, as has been shown in our annual monitoring reports and presentations/discussions with the Partnering Team. The majority of the wells show decreases in the overall concentration of the groundwater plume. As shown on Table 5-5 of the 2009 Annual Monitoring Report, out of 106 monitoring wells evaluated only 6 show a statistical upward trend for TCE. The remaining 100 show a downward or stable trend. Since its installation, the system has removed approximately 36,000 pounds of volatile organic compounds. Therefore, while the groundwater extraction system has room for

improvement, to better focus removal at areas of high concentration and to more fully capture the plume, the Navy does not agree with some Team Members' assumption that a source/DNAPL investigation and follow-up remediation work are required under the scope of the ROD and are an appropriate use of federal dollars.

As previously stated, the Navy has acted as openly as possible and has provided a significant amount of information to the Project Team over and above what is required. The Navy has kept the Team highly informed as to the status of the extraction system. As documented in meeting minutes, the Navy has indicated the system is aging and several extraction wells will are showing reduced performance and may need to be replaced. On multiple occasions, the Navy has attempted to engage the Team's support in developing criteria that would help the Team decide if and when wells need to be replaced and also should the well be relocated in order to gain better efficiency in plume capture, for example:

> " Howard would like the Technical Team determine what data is needed in order to determine what decision rules we might need in order to determine if we need to replace the wells. Questions to answer: Do wells need replaced? Should they be placed in the same locations? Does placement need to be optimized? Do additional wells need added? (Action Item **0909A02,** September 22, 2009 Meeting Minutes)"

> "...added an item to the parking lot for the team to assist the Navy with the operational aspect of the extraction system (May 2008 Partnering Meeting #44 minutes"

During the May 2010 meeting the Navy presented an outline of a plan to initiate the optimization of the extractions system. It was met with mixed results. Since then, it has been expressed to the Navy that certain members of the Project Team do not agree with the approach and insist that the Navy, without Team input, develop and initiate a source investigation and cleanup.

The information outlined above clearly shows that the Navy has been acting in an open manner and in good faith in trying to work closely with our Partners to remediate the NIROP site as efficiently as possible while meeting the our regulatory requirements, the Navy has not been idle in regards to the

operation of the system and its effectiveness in meeting our requirements and lastly as the groundwork for selecting Option #1 as the Navy preferred path forward for the NIROP Site.

As stated in your letter, under Option 1, the Navy would make improvements to the groundwater extraction system, so that it meets the objectives of the OU-1 ROD. This may involve further rehabilitation and/or replacement of certain extraction wells. The Navy is working with USGS to model groundwater and plume capture under current conditions, so that places where extraction efficiency needs to be reinforced can be identified. The proposed schedule for these events would be: simulated modeling runs completed by spring 2011; significant design modifications to the extraction system completed by fall 2011; and funding requests for modifications in Fall 2011 to enable modifications in 2012.

The information given above outlines the Navy's basic strategy and schedule for implementing U.S. EPA's identified Option 1. As additional details are developed, the strategy will be updated and provided to the U.S. EPA and MPCA.

Although the Navy is selecting Option #1 at this time; we would like, in the near future, meet with the U.S. EPA and discuss possible future options for the site. As the Navy has stated, we are open to other possibility but do have several areas of concern that need to be workout prior to the Navy investing in action beyond those required in the ROD.

The Navy appreciates your assistance in this matter. Please contact me at 847.688.2600 x361 if you have any questions.

Sincerely,

Mark R. Schultz
Environmental Director

Enclosures:

1. Option 1 Strategy

Cc:
Tim Thurlow, U.S. EPA
Mary Tierney, U.S. EPA
Doug Wetzstein, Minnesota Pollution Control Agency
Deepa DeAlwis, Minnesota Pollution Control Agency
Howard Hickey, NAVFAC MW