



Minnesota Pollution Control Agency

March 12, 1998

VIA FAX AND CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Thomas Bloom, SR-6J
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE: Naval Industrial Reserve Ordnance Plant Superfund Site

Dear Mr. Bloom:

The Minnesota Pollution Control Agency (MPCA) staff has reviewed the draft "Five Year Review Report, Naval Industrial Reserve Ordnance Plant Site, Fridley Minnesota," (Review) faxed to me on March 2, 1998. The draft Review is for Operable Unit 1 of the Naval Industrial Reserve Ordnance Plant (NIROP) Superfund Site.

The MPCA staff review response is contained in Attachment I of this letter. For the reasons articulated in Attachment I, the MPCA staff cannot concur either with the type of review that you have chosen or with significant portions of the narrative. It is my understanding that we will be using the NIROP partnering process to reach consensus on the type and content of the Review. Please let me know if this is not the case.

If you have any questions regarding this letter, please contact me at (612) 296-7818.

Sincerely,

A handwritten signature in black ink that reads "David N. Douglas". The signature is written in a cursive style with a long horizontal stroke at the end.

David N. Douglas
Response Unit I
Site Response Section
Ground Water and Solid Waste Division

DND:ch

Enclosure

cc: Scott Glass, U.S. Navy

Attachment I

Comments to the Draft Document Entitled "Five Year Review Report, Naval Industrial Reserve Ordnance Plant Site, Fridley Minnesota," dated March 2, 1998

Section I. INTRODUCTION

Subsection A. Authority and Purpose

As we discussed, Part E of Office of Solid Waste and Emergency Response (OSWER) Directive 9355.7-02A, dated July 26, 1994, states that "A Type Ia review should not be used when site-specific circumstances indicate the appropriateness of a higher level of review. Examples include sites where: "...circumstances indicate that the site may no longer be protective of human health and the environment..."

As we discussed, I believe that the Operable Unit 1 (OU1) remedy can no longer be described as protective of public health and the environment as is currently indicated in Section IV of the draft "Five Year Review Report, Naval Industrial Reserve Ordnance Plant Site, Fridley Minnesota," (Review), although it is partially protective because the remedy has removed approximately 9.5 tons of trichloroethylene (TCE) from the contaminated aquifers.

Please see further discussion below regarding our response to Section V, Statement of Protectiveness. For these reasons, I believe that this review should be a Type I or higher review instead of a Type Ia.

Subsection B. Site History

Page 2, First Paragraph: The NIROP Site includes all areas where the TCE plume has migrated pursuant to Section IV, Part V of the Federal Facilities Agreement. This includes portions of the United Defense L.P. property, East River Road and adjoining easement areas, and large portions of Anoka County Riverside Park ("Park").

Page 3, First Paragraph: The following narrative should be added:

"Twenty-two detections of TCE have been found in the finished water from the MWW by the MDH from September 17, 1982 to November 15, 1996 at an average concentration for detections of 0.5 micrograms/liter ($\mu\text{g/l}$) with a range of from 0.1 to 1.3 $\mu\text{g/l}$. The MWW operates 24 hours a day and pumps in and treats an average of 70,000,000 gallons per day. The MWW supplies water to Minneapolis, Golden Valley, Crystal, New Hope, Columbia Heights, Hilltop, parts of Bloomington and Edina, and the Minneapolis/St. Paul International Airport. These service areas have a combined population of approximately 500,000. To meet Safe Drinking Water Act requirements, the MWW analyzes quarterly for VOCs in finished water. The MDH is currently increasing its sampling frequency of the intake and finished water in an effort to better understand the levels of TCE entering the intake and in the finished water."

Page 4, Second Paragraph, Sentence 4: Please change this sentence as follows:

“Review of data from downgradient monitoring wells in the Park has indicated that significantly high levels of TCE remain in ground water in the park. A surface water assessment performed by the MPCA Division of Water Quality, dated July 9, 1997, based on TCE levels observed in Park monitoring wells, concluded that the residual ground water plume in the Park discharges to the Mississippi River at levels that are at an unacceptable risk to public health and the environment.”

Page 4, Last Paragraph in this Section: While the Minnesota Pollution Control Agency (MPCA) staff acknowledges that the TCE levels found so far in the Mississippi River do not exceed 5 µg/l, this discussion ignores the technical basis for the conclusions cited in the recent MPCA staff surface water assessment (the July 9, 1997, MPCA staff memorandum identified below). TCE levels in the nearest wells to the river such as Well 27-S far exceed 5 µg/l TCE and it is reasonable to assume that TCE levels over 5 µg/l are entering the river based on ground water flux calculations based on data provided by the Navy and accepted by the MPCA staff.

Section II. DISCUSSION

Subsection A. Remedial Objectives

First Paragraph: While evaluating the exposure to humans from inhaling volatile organic compounds (VOCs) is an important pathway and was discussed in the Q1 Feasibility Study, the Record of Decision (ROD) does not identify this pathway. The ROD evaluates risks to human health under two pathways, i.e., ingestion of VOCs from contaminated ground water and ingestion of VOCs in the Minneapolis Water Works (MWW) finished water. Why is the inhalation pathway identified in the draft Review when it is not discussed in the ROD?

Subsection B. Remedial Action

Page 5, End of First Paragraph: The following narrative should be added:

“Additional monitoring wells were installed downgradient of the ground water recovery wells in the Park to monitor the effectiveness of the ground water recovery system in capturing the plume and to observe the natural dissipation of the plume downgradient of the remedy.”

Page 6, Third Paragraph, Sentence 2: This sentence should be changed to the following:

“The ground water plume maps produced from the ground water analytical model prepared by the Navy indicate that the majority of the ground water plume from the NIROP facility is contained, but a small portion is still not influenced by the ground water recovery system. The NIROP partnering team made a decision to initiate Phase II construction, even though the ground water plume was not totally contained. The Phase II treatment with its discharge of treated water to the river will result in considerable long-term cost savings to the Navy by eliminating the current POTW discharge charges.”

While OSWER Directive 9355.7-02A does not require a "Remedial Action" Section for either Type I or Ia Reviews, much more new information is available particularly about the ground water contamination in the Park and contamination of finished water in the MWW. Why is this new information about the contamination in the Park not discussed in more detail and why is the finding of TCE in the finished water not discussed? Also, it is not clear what documents were reviewed for this discussion.

OSWER Directive 9355.7-02A requires that the Review include sections entitled, "Monitoring Information" and "Areas of Noncompliance." Why are these sections missing from the draft Review? Much more monitoring information has been generated since the ROD was executed and should be discussed in the draft Review. The latter section is needed to highlight the new information about the ground water contamination in the Park. This is the section where the noncompliance issues identified in the recent surface water risk assessment should have been discussed.

Section III. RECOMMENDATIONS

It has been the MPCA staff's understanding that the NIROP partnering team would use the partnering process to establish a set of recommendations concerning OU1. To do this the partnering team has planned a four-hour brainstorming session on April 1, 1998. Because this session is only one day beyond the current deadline of March 31, 1998, the MPCA staff requests that the draft Review incorporate the recommendations from this brainstorming session.

The MPCA staff believes that a remedial action will be necessary to reduce the ground water contamination levels in the Park. As articulated in the surface water assessment (July 9, 1997, MPCA staff memorandum cited above), the amount of TCE entering the river at the present time is unacceptable.

Section IV. STATEMENT OF PROTECTIVENESS

As you are aware last summer, the MPCA Site Response Section staff requested that the MPCA Division of Water Quality staff conduct a surface water assessment of the ground water plume entering the Mississippi River. This assessment was completed and reported to me in a memorandum, dated July 9, 1997, a copy of which was previously submitted to you. The assessment, in effect, concluded that the ground water plume in ground water in the Park and entering the river created an unacceptable risk to public health and the environment.

In the surface water assessment, the MPCA Division of Water Quality staff concluded:

1. TCE concentrations in the ground water exceed both the applicable chronic and maximum standards established pursuant to Minn. R. pt. 7050.0220;
2. The magnitude of the TCE concentrations, the apparent size of the plume and flow rate of the ground water indicate a high probability of a significant loading of TCE to the Mississippi River;
3. Peak concentrations of TCE have remained high over time;

4. The Minneapolis drinking water intake is immediately downstream from the site on the same side of the Mississippi River;
5. Concentrations of TCE in the ground water plume should be reduced so that water quality standards are met and the beneficial uses of the Mississippi River are protected (Minn. R. ch. 7050); and
6. Concentrations of TCE should meet 5 µg/l in well(s) closest to the Mississippi as a 30-day average.

As we discussed, this most recent surface water assessment is significantly different from conclusions in the "Actual or Potential Risks" section of the OU1 ROD, dated September 28, 1990. In that section, the ROD concludes that "...the risk to aquatic organisms is not believed to be significant." This is because the acute and chronic Ambient Water Quality Criteria for TCE were not known to be exceeded in the river. As you are aware, these surface water standards are over three orders of magnitude higher than the current standards.

The ROD clearly articulated an expectation that when the OU1 remedy was implemented, the TCE ground water plume under the NIROP property would be prevented from migrating downgradient and the ground water contamination in the park would "dissipate by natural means."

While it is not certain how much "natural dissipation" has occurred in the Park since the ROD was written, ground water monitoring in the Park that postdates the ROD has not demonstrated that the ground water contamination is being reduced enough to protect public health and the environment and remains at unacceptably high TCE concentrations, e.g., at levels up to 37,300 µg/l in the latter part of 1997.

In summary, while the existing ground water treatment system has been effective in extracting approximately 9.5 tons of TCE contamination in the ground water under the NIROP facility, the system, even after it will be upgraded in 1998, will not reduce most ground water contamination in the Park and will not prevent the ground water contamination in much of the Park from entering the Mississippi River.

For these reasons, the existing remedy which is the subject of this draft Review can, at best, be considered only partially protective of public health and the environment.

For these reasons, the MPCA staff cannot concur with the statement of protectiveness.