



Minnesota Pollution Control Agency

March 6, 1998

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Scott A. Glass, Code 18610
Commanding Officer
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Naval Industrial Reserve Ordnance Plant Superfund Site

Dear Mr. Glass:

The Minnesota Pollution Control Agency (MPCA) staff has reviewed the letter report entitled, "Low Level Analyses for Ground Water, OU-3 Remedial Investigation, Naval Industrial Reserve Ordnance Plant, Fridley MN" (Letter Report), dated January 9, 1998. The Letter Report is for Operable Unit 3 of the Naval Industrial Reserve Ordnance Plant Superfund Site and was submitted pursuant to the Federal Facility Agreement, dated March 27, 1991, between the MPCA, the U.S. Environmental Protection Agency, and the U.S. Navy.

The MPCA staff hereby approves the Letter Report as modified pursuant to Attachment I of this letter.

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

Sincerely,

A handwritten signature in cursive script that reads "Dan N. Douglas".

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

DND:ch

Enclosure

cc: Thomas Bloom, U.S. Environmental Protection Agency

Attachment I

Modifications to the Letter Report Entitled "Low Level Analyses for Ground Water, OU-3 Remedial Investigation, Naval Industrial Reserve Ordnance Plant, Fridley MN," dated January 9, 1998

As pointed out in an e-mail message to Mark Sladic, dated February 27, 1998, while most of the CRQLs for the list of analytes in Table 1 are below their respective Health Risk Limits (HRLs), some are not, e.g., hexachlorobenzene's HRL is 0.2 and its CRQL is 2.0. In order to detect chemicals such as this one, the Minnesota Pollution Control Agency (MPCA) staff requests that the U.S. Navy drop the CRQLs to below HRLs for all analytes.

Please note that HRLs for total cPAHs and nPAHs do not exist. Instead individual HRLs have been developed for some nPAHs, but no cPAHs. In addition to HRLs, the Minnesota Department of Health (MDH) has developed health-based values (HBVs) for several chemicals. HBVs are not promulgated; therefore, they are regarded as "To Be Considereds" for federal Superfund sites.

In evaluating human risk associated with cPAHs, the MDH developed an HBV for benzo(a)pyrene of 0.05 micrograms/liter. To assess risk for other cPAHs and to determine a cumulative risk for total cPAHs, a relative potency factor is used based on the HBV for benzo(a)pyrene. The U.S. Environmental Protection Agency's "Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons" (EPA/600/R-93/089, July 1993) should be used as a reference for relative potency factors for cPAH compounds other than benzo(a)pyrene. The relative potency factors should be applied to calculate benzo(a)pyrene equivalents and the resulting equivalency concentration can then be compared to the HBV for benzo(a)pyrene. Since the cPAH relative potency factors are not media specific, it is appropriate to apply these factors to ground water as well as soil.

The MPCA staff recommends Method 8270, Selective Ion Monitoring, as one method for analysis of cPAHs whose CRQLs need to drop as explained in Attachment I. The reporting limits for the cPAHs using this method is roughly 10 nanograms/liter. The cPAHs are benzo(a)anthracene; benzo(b)fluoranthene; benzo(j)fluoranthene; benzo(k)fluoranthene; benzo(a)pyrene; indeno(1,2,3-cd)pyrene; dibenzo(a,h)anthracene; and chrysene.

Since this is an expensive method, in lieu of analyzing ground water from the well nests under the building, the MPCA staff requests that the U.S. Navy sample the combined effluent from the pump-out wells for PAHs. If PAHs are found at levels of concern in the combined effluent, then more PAH sampling may be necessary.