UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 30 1996

REPLY TO THE ATTENTION OF:

Commanding Officer
Scott Glass, Code 18610
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, P.O. Box 190010
North Charleston, SC 29419-9010

SR-6J

Re: Draft Work Plan for Operable Unit 3, Remedial Investigation/Feasibility Study, Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota, May 1996

Dear Scott:

The United States Environmental Protection Agency (U.S. EPA) has completed the review of the Draft Work Plan for Operable Unit 3, Remedial Investigation/Feasibility Study, Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota, May 1996 (OU3 Work Plan). U.S. EPA understands that the OU3 Work Plan consists of four separate documents: Work Plan (Volume I), Field Sampling Plan (Volume II), Quality Assurance Project Plan (Volume III), and Site Security and Health and Safety Plan (Volume IV). Please incorporate the following U.S. EPA review comments and resubmit.

Draft Work Plan for Operable Unit 3, Remedial Investigation/Feasibility Study Naval Industrial Reserve Ordnance Plant, Volume I of IV, May 1996.

1. Section 2.3, page 4, paragraphs 2 & 3 - Discuss further statements that refer to the correlation of groundwater plumes from the Twin Cities Army Ammunition Plant (TCAAP), Kurt Manufacturing, and Dealer's Manufacturing Superfund sites and groundwater on the Naval Industrial Reserve Ordnance Plant (NIROP).

2. Section 2.6, page 18, paragraph 2 - Correct reference to pending NPDES permit.

3. Section 3.1.2, page 6 - See review comment #1 regarding correlation of potential off-site sources.

4. Section 4.1, page 1, Decision Statement - Please revise the decision statement. If contamination exists in the unsaturated soils at unacceptable risk levels to the target receptors under an industrial land use scenario, implementing a remedy is certain. The appropriateness of the remedy will be discussed in the FS.

5. Section 4, page 2, paragraph 4 - Discuss further in this section how the U.S. EPA Region IX industrial land use preliminary remediation goals (PRGs) were modified to account for site specific conditions. Verify how the modified PRGs, that are indicated as 25 times higher than Region IX industrial land values, are protective of construction/utility workers.

6. Section 4.2, page 7, paragraph 3 - Groundwater protection criteria based on the MPCA soil-leaching model may be re-evaluated. Please consult with MPCA regarding the approach to evaluating the risk to groundwater from overlying sources, and include a discussion of the result in this section.

7. Section 5.3, page 10 - Discussions of tasks required as part of an RI Report, FS and Alternatives Report do not appear to reflect discussions of tasks required as part of an RI Report, FS, and Alternatives Array Report presented in U.S. EPA guidance documents.

8. Section 7.0, page 1 - General discussions of the U.S. EPA Remedial Project Manager/State Project Manager responsibilities are not correct. Please refer to the Federal Facilities Agreement (FFA), between U.S. EPA, MPCA, and U.S. Navy for correct descriptions of responsibilities.

9. Section 7, Figure 7-1 - Verify that the Minnesota Department of Health should not be shown on this chart. Consideration should be given to showing their role in the permitting and approval process for well installations and soil probes, particularly for soil probes that are used to collect both soil and groundwater samples for contaminant characterizations.

Draft Field Sampling Plan for Operable Unit 3, Remedial Investigation/Feasibility Study, Naval Industrial Reserve Ordnance Plant, Volume II of IV, May 1996

1. Section 2, page 5, item 5, last sentence - This sentence indicates that sample results from areas of possible product releases will be compared to sample results from areas where there are no suspected releases. Discuss further if background concentrations, mainly for inorganics in soil, will be determined and if this data will be used in the comparisons.

2. Section 2, page 7, subsection 2.3 - The first paragraph in this section indicates that soil samples from only two intervals will be collected. Verify that the human health assumptions that serve as the basis for the soil PRGs for construction/utility workers, will remain valid if high contamination levels are encountered or suspected between the proposed sample intervals, and samples are not collected at these intermediate intervals.

Verify that additional samples should not be collected between these proposed intervals if high contamination levels are suspected based on field screening of visual results.

3. Section 2, Table 2-1 - The left column in this table describes that rationale for sampling point selection. The description "not selected preagonal" is confusing and it is unclear why this description is necessary.

4. Section 7.2, page 2 - Verify that the requirements for direct push technology (DPT) drilling and Rotosonic drilling procedures comply with Minnesota Department of Health (MDH) regulations for wells and borings (Minnesota final regulations, Chapter 4725). Past experience with the MDH has required compliance with their regulations regarding permitting for wells and DPT boring (DPT boreholes used to collect water samples are considered temporary wells by MDH).

5. Section 7.3, page 4 - This section indicates that the DPT borings will be advanced to the top of the water table which is estimated to be approximately 25 feet below ground surface. Because one of the objectives of the soil sampling program is to evaluate the impact that contamination in the unsaturated zone may have on groundwater, clarify why soil samples for chemical analysis are not proposed to be collected below 12 feet. Although it was stated in the work plan that soil samples collected in support of the human health assessment would be adequate for evaluation of the impact to groundwater, consideration should be given to collecting potentially impacted soil samples below 12 feet, especially if there is a reason to suspect that there is contamination in this zone. If conclusion is to stay with the discussion be included to clarify that a potential lack of data from the unsaturated zone below 12 feet will not require additional sampling.

6. Section 7.3, page 5, paragraph 2 - The last two sentences in this paragraph describe that sealing/abandonment procedure for the DPT boreholes. Verify that the sealing procedures outlined in Chapter 4725.3850 of the Minnesota regulations are not required.

7. Section 7.5.1, page 12, top paragraph - This paragraph indicates that purging of temporary wells is not necessary. It is suggested that consideration be given to purging at least 3 volumes of water from the sampling system (tubing, pump., etc.) To ensure that any residuals in the sample equipment do not impact the sample.

Draft Quality Assurance Project Plan for Operable Unit 3, Remedial Investigation/ Feasibility Study, Naval Industrial Reserve Ordnance Plant, Volume III of IV, May 1996

Work Plan (Volume I) and Field Sampling Plan (Volume II) review comments were submitted by U.S. EPA's Technical Support Section (TSS) which relate to the following Quality Assurance Project Plan (Volume III) review comments. Please incorporate TSS review comments regarding the Work Plan (Volume I) and the Field sampling Plan (Volume II). TSS review comments are following the Quality Assurance Project Plan review comments.

Section I. TITLE/SIGNATURE PAGE

On this page delete **IDA LEVIN**, replace with **SUPERFUND**.

Section II. PROJECT DESCRIPTION

A. Section 1.1.1

1) Specify that Groundwater samples will be collected unfiltered.
2) In item (2) delete the matrix Surface Water. Surface water samples are not being collected and analyzed.

B. Section 1.4.2.1 Field Parameters
Include the determination of the parameter **Reduced Iron**. See APPENDIX A Comment **VIII.** below.

C. Section 1.4.2.2 Laboratory Parameters and TABLE 1-1
The compound **Pyridine** should be included in the list of Semivolatile Organic Compounds. See WP Section 3.1, pg 4/9, and Areas of Concern 63 & 64.

Section III. ANALYTICAL AND MEASUREMENT PROCEDURES

The Biological Laboratory selected to perform the **Methanotropic Bacteria** test should be identified, and they should provide their SOP for conducting this test.

APPENDIX A
CEIMIC CORPORATION LABORATORY STANDARD OPERATING PROCEDURES (SOPS) AND ANALYTICAL METHODS

I. TABLE OF CONTENTS
Include the following SOPs:
WC.34
WC.21
WC.02
WC.46

II. GASOLINE RANGE ORGANICS (GRO) ANALYSIS BY MODIFIED SW846 METHOD 8015B No. 8015BGRO

A. Section 1.0
Provide Retention Times (RTs) and Detection Limits (DLs) for GROs of interest in this project, and, perhaps, an example chromatogram.

B. Section 7.2
It is recommended to prepare the calibration curve with 5 standards, rather than 3 standards.

C. Section 7.5
Provide the preparation procedures for **Soil** and **Water** samples, or the purge and trap procedures.

D. Specify the components and concentration of the Matrix Spike solution. See QAPP Table 3-9.

III. TOTAL PETROLEUM HYDROCARBON RANGE (TPH) No. 8015BDRO
Section 1.0

Provide Retention Times (RTs) and Detection Limits (DLs) for DROs of interest in this project, and, perhaps, an example chromatogram.

IV. SULFATE BY EPA METHOD 375.4 No. WC.34

A. Section 12.1
Stipulate concentration of the calibration standards, and include a calibration blank.

B. Section 12.2
A calibration verification standard should be tested after every 10 samples and at the end of the analysis.

C. Section 14.4
Indicate the concentration of the Matrix Spike.

V. Hardness (EDTA Titrimetric Method) by A Method 130.2 No. WC.21

A. Section 4.0
Indicate the range of this method. The RL is **2 mg/L**.

B. Section 6.0
A Titrant Check, or LCS, should be included. Specify the frequency, such as, after every 10 samples, and at the end of the run.

C. Section 6.0
Include an MS, its concentration, QC criteria, and calculation.

VI. ALKALINITY, TOTAL (TITRIMETRIC, PH 4,5) No. WC.02
Section 13.0
Include calculations for the MS Recovery and Duplicate % RPD.

VII. Total Suspended Solids dried at 103 - 105^0 C No. WC.46
Section 6.4
An MS/MSD is not usually performed with this method.

VIII. 3500-Fe D. Phenanthroline Method
As indicated in Section 4.c. **Ferrous iron** should be determined at the sampling site immediately after sample collection, because the ferrous-ferric ratio can change in acid solution. This should be considered a field parameter, and be performed by a Chemist. Prepare a Field SOP for this method. Indicate if **Total Iron** and **Ferric Iron** are going to be project desired parameters.

IX. 9215 HETEROTROPHIC PLATE COUNT
The selected biological laboratory should provide their SOP for determining **Methanotropic Bacteria** and the project should denote some QA/QC acceptance criteria for this method.

FIELD SAMPLING PLAN (FSP)

A. TABLE 2-4

Indicate in the table that the Analysis of **Reduced Iron** will be done in the field.

B. Section 4.1, 1st paragraph, last sentence

Delete last sentence. Filtered samples are not being collected.

C. TABLE 4-1, pg 2/3

For the Parameter **Reduced Iron (Fe^{2+})** the Maximum Holding Time of **48 hours** is in disparity with Section 4.c. of the method. Please resolve.

D. Section 5.2

Designate how samples collected for MS/MSD will be identified.

E. Section 6.4

The sample containers should meet the requirements given in, *Specifications and Guidance for Contaminant-Free Sample Containers*, EPA 540/R-93/051.

F. Section 7.5.1

1) Delete references to dissolved metals and filtration.
2) Bailers are allowed, but not recommended, for sample collection.
3) Amend typo, pg 13/16, Table 2-5, should be Table 2-4.
4) Pg 12/16, 3rd paragraph
   If nonaqueous-phase liquids (**DNAPL** or **LNAPL**) are detected, samples should be collected for chemical analysis.

G. Section 9.3

The SOP **SA-2.2 (Air and Gas Sampling Methods)** was not included in Appendix B. Please provide.

H. **SOP ME-15**, Section 5.2

Denote the concentration of the calibration gas.

I. **SOP SA-1.1**

1) Section 5.1
Bailers are allowed, but not recommended, for sampling.
2) Section 5.6.2, items 12 & 14
The SOP **SA-6.2** was not included. If this SOP is relevant to the project, it should be attached to Appendix B.

J. **SOP SA-1.3**, Section 5.6, item 5., pg 8/20

Clarify the reference to Section 5.3.3. The SOP does not have this section.

K. **SOP SA-6.1**, Section 5.3, pg 6/23

This section on Field Filtration can be deleted.

WORK PLAN (WP)

A. TABLE 2-1, pg 12/23, typo

For the Date **May 1995**, 1,1,1-tetrachloroethane, should be, **1,1,1-trichloroethane**.

B. Section 3.1.1, pg 5/9, 1st bullet, typo

The group (6) plating, should be, (7) plating.

C. Section 5.2.5, pgs 3/12 and 8/12

Clarify the references to RMT Figure 1 and RMT Figure 2. These figures are not included in the WP.

D. FIGURE 7-1, pg 2/7

In the box **U.S.EPA Region V**, delete I. Levine, QA Manager, and replace with **Superfund QA Reviewer**.

E. Section 7.3 U.S. EPA Region V Quality Assurance Manager

1) In the subtitle delete Quality Assurance Manager, replace with **Superfund Quality Assurance Reviewer**.
2) In the text delete Quality Assurance Manager, Ida Levine, replace with **Superfund Quality Assurance Reviewer**.

Draft Site Security and Health and Safety Plan for Operable Unit 3, Remedial Investigation/ Feasibility Study, Naval Industrial Reserve Ordnance Plant, Volume IV, May 1996

1. Section 1.1, page 1 - Add a statement explaining who has the authority to stop site operations for Health and Safety reasons.

If you have any questions regarding U.S. EPA's review of the OU3 Work Plan, please contact me at (312) 886-1967.

Sincerely,

Thomas Bloom

Remedial Project Manager

cc: Dave Douglas, MPCA