**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 5**
**230 SOUTH DEARBORN ST.**
**CHICAGO, ILLINOIS 60604**

REPLY TO THE ATTENTION OF:
5HE-12

DEC 2 9 1987



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Russell Cerk
Freeman Chemical Corporation
217 Freeman Drive
Port Washington, Wisconsin 53074

Re: Freeman Chemical Corporation
Corrective Action Order
Task 1 Comments

Dear Mr. Cerk:

Representatives of the United States Environmental Protection Agency (U.S. EPA) and the Wisconsin Department of Natural Resources (WDNR) have reviewed the report and addendum titled "Corrective Measure Activities, Task 1, Description of Past and Current Conditions, Site Construction Documentation Report". The report is dated June 1, 1987, and the addendum is dated November 20, 1987. Both were submitted to meet the requirements of Task 1 of the Scope of Work for the Corrective Action Order regarding Freeman Chemical Corporation's Saukville facility.

The U.S. EPA and WDNR have discussed the submittal and have assembled the comments listed in the attachment which follows. Please incorporate the comments into the Task 1 report and/or respond to the comments within thirty (30) days of receipt of this letter. If you have any questions or would like to discuss the comments, contact Laura Lodisio of my staff at (312) 886-7090 or Mark Tusler of the WDNR at (608) 266-5798.

Sincerely yours,

Wm. E. Muno

William E. Muno, Chief
RCRA Enforcement Section

Attachment

cc w/attachment: Craig Boswick, Freeman Chemical Corporation
Roger Hatcher, Hatcher, Inc.
William C. Kreye, Hatcher, Inc.
Franklin Schultz, WDNR
Mark Tusler, WDNR (2 copies)

Attachment

SECTION

A. Facility Background

1. e. and f. - Maps of current and past hazardous and solid waste treatment storage, and disposal areas are not included. Although some of this information may be contained in Figure 2-1, Potential Sources of Groundwater Pollution, Figure 2-1 does not present the information specified.

1. g. - A map or maps shall be included which show all past and present product and waste underground storage tanks and piping.

2. Little information is presented on past solid and hazardous waste treatment, storage, and disposal facilities. The submittal shall include a narrative describing the areas identified in 1. e. and 1. f. including time period of waste handling, and type and quantity of waste handled in each area. Include, but do not limit the narrative to the caustic tank discussed in Section 3.11 of the report.

B. Nature and Extent of Contamination

1. The quantity of raw materials and solid and hazardous wastes associated with the sources of contamination shown in Figure 2-1 needs to be addressed in the submittal.

2. The spill history is inadequate. The submittal shall include a chronological spill history providing the date of each spill, type and quantity of material spilled, location, clean-up activities, date of clean-up, and contaminant levels left in place. Include, but do not limit the history to the church property, the property near the railroad right-of-way, and the southwestern corner of the facility property.

3. The information submitted on the degree and extent of contamination is inadequate. Figures 2-2 and 2-3 do not delineate areas with less than 100 ppb total VOC's. This implies that levels less than 100 ppb are not of concern. Resubmit the figures with a 10 ppb contour and a no-detect contour.

Develop and submit contoured maps of the concentration of total chlorinated VOCs for the glacial layer and shallow dolomite. The maps should assist in determining the source of chlorinated VOC contamination.

Summarize the data contained in Appendix 3 regarding soil excavation with respect to soil contamination left in place. Present the data on two plan sheets, one showing contaminant levels determined by the 9.5 ev HNU meter, and one showing levels determined by laboratory analysis.

Section 3.1.2 describes how the extent of soil contamination was determined using a photoionization detector on soil borings, and then confirmed using laboratory analyses. Identify where this information has been submitted, if it has been. If not previously submitted, please submit it. Also, prepare cross sections utilizing this information.

A description of degree and extent of contamination for surface water and sediments is required. The Milwaukee River is of interest because of Freeman's past and current discharges. Any known information on the river and sediments should be submitted. If none is available, this should be stated. Also, submit information on the WPDES outfall including permissible levels of specified constituents and required monitoring procedures. Reference the position papers regarding discharge to Saukville's wastewater treatment plant.

Any information on air monitoring conducted at or near the facility should be included in this section.

C. Behavior and Characteristics of Contaminants

1. and 2. Expand Table 2-1 to include the compounds identified in Table C-2 of the Part B submittal ("Possible Appendix VIII Constituents"), and any other Appendix VIII constituents generated at Freeman. Also include for each constituent vapor pressure, Henry's Law coefficient, ionization potential, and a description of biodegradation. The description shall be based on rate of biodegradation under aerobic and anaerobic conditions, and breakdown products.

3. No information was submitted on rate and direction of contaminant movement. Include a discussion on direction of contaminant movement based on groundwater flow maps and influences of the groundwater remediation system. Include a discussion and calculations on rate of contaminant movement based on hydraulic gradients, permeability, retardation, and other known information from monitoring results.

D. Investigation of Off-Site Property

1. Submit the results of previously conducted off-site investigations including groundwater monitoring data from off-site wells (including private wells), a summary of odor data, and a summary of HNU measurements and analytical work from soil excavations on the church property. The discussion on soil excavations should address concentration of contamination left in place.

E. Village of Saukville Water Supply

1. Discuss, and on a map show, the location of private water supply wells in Saukville. Include sampling results, and whether the well is still in use, abandoned, or sealed.

2. The flow diagrams assume municipal wells 1 and 2 will be in service, although some provisions are made in the discussion for well 2 not being in service. In order for Freeman to successfully conduct groundwater remediations, well 2 could only be utilized for emergency purposes. The ability of well 1 to serve as a continuous source of clean water without affecting remediation activities is not known. Provisions should be made in the flow chart to accurately reflect the use of wells 1 and 2.

Projections should be extended from 5 years to 10 years in order to assist the city in planning for possible future well construction. Future demands should include or be based on the required fire flow, if they are not already.

Potential decrease in well capacity should be discussed and taken into account in the flow diagrams if necessary.

3. The submittal indicates that the source of odor is probably from esters. Discuss which esters have been identified and their characteristic odor.

F. Construction Documentation of Corrective Measures

3. Dry Well Remediation - Include documentation on the level and volume of contaminants that were hauled by tank wagon, removed from the spoils area, and left in place. Where was the tank wagon material disposed?

Caustic Tank Remediation - Before this tank was filled with concrete, was any testing conducted to determine if it leaked? Was any testing done to determine the level of residual contamination or the level of contamination of the sediment?

Styrene Tank Remediation - Describe what level of contamination was left in place.

4. Include pictures of the caustic tank remediation, if available.

APPENDICES

1A - Is the Appendix VIII analysis for reaction water or the resin waste stream? Include any other available Appendix VIII (IX) analyses of waste streams or contaminated materials.

6A - What is the history of discharge well 36?

OTHER ITEMS

Soils Handling Plan

The approved soils handling plan states that PID sampling would be conducted in a glass jar, while the field monitoring procedures (Section 3.1.1) state that a polyethylene bottle was used. Given the tendency for organics to absorb onto plastic, how did using a plastic bottle affect the PID readings?

The approved soils handling plan states that if VOCs were present, the bottle would be washed before reusing and that the clean bottle would be checked to ensure that no VOCs were present. Section 3.1.1 states that reusing or washing the bottle would depend on the degree of contamination. How did using "clean" bottles with detectable levels of VOCs affect the results?

The soils handling plan states that the HNU meter was allowed to stabilize before a reading was taken. What sort of time frame was required for this stabilization?

Section 3.1.3 states that excavation work was monitored by an HNU meter and that the soil would be treated as a hazardous waste if the concentration exceeded 10,000 ppm. Given that the HNU's response is nonlinear over 500 ppm and the

maximum scale reading is 2,000 ppm, how was it determined whether the soil exceeded 10,000 ppm?

Groundwater Monitoring

Groundwater monitoring currently being conducted at the facility is based on an October 21, 1986, letter to Russell Cerk from WDNR and a May 14, 1987, letter to Marian Barnes from Hatcher, Inc. which specifies the wells which are being monitored. The Task 2 schedule which Freeman submitted indicates that quarterly monitoring for VOCs will continue one year under the order following the specifications of the above letters. After one year, an evaluation of the monitoring results will be made.

The following modifications should be made to the groundwater monitoring program:

1. Piezometer 20 has shown increasing levels of contamination in previous monitoring. Therefore, it should be monitored quarterly instead of annually.

2. The Appendix VIII (IX) analysis of the reaction water indicates that phenol is present in substantial quantities. The Part B submittal indicates that Freeman uses substantial quantities of Freon 12. Include phenolics and Freon 12 in the groundwater monitoring program and in the Task I Section B and C discussions. The method detection limit for these compounds should be less than or equal to 5 ug/l.

3. The Part B submittal indicates that Freon 11 may have been used at the facility. Indicate any other forms of Freon which have been used and the quantities used. Include Freon 11 and any other types of Freon which may have been used in the groundwater monitoring program.

Groundwater Computer Model

The groundwater model and pump test should be incorporated into the work conducted under the Order because it addresses regulatory concerns regarding the Village of Saukville water supply. In reviewing information regarding the proposed pump test, it is apparent that additional monitoring in the vicinity of the river is necessary in order to determine the behavior of the river and groundwater in the vicinity of the river with pumping. Propose the locations of a sufficient number of piezometers to be installed to achieve this.