



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

REPLY TO THE ATTENTION OF:

JUN 26 1989

5H-12

CERTIFIED MAIL P 611 589 515  
RETURN RECEIPT REQUESTED

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

Re: Freeman Chemical Corporation  
Saukville, Wisconsin  
WID 980 615 439

Dear Mr. Cerk:

Enclosed is a copy of the Federal portion of the Resource Conservation and Recovery Act (RCRA) Permit for the above-referenced facility. The RCRA Permit contains both Federal permit conditions (contained herein) and State ~~permit~~ conditions, which were issued separately by the State of Wisconsin RCRA program authorized under 40 Code of Federal Regulations (CFR) Part 271. When both this Permit and the State License are effective, Freeman Chemical Corporation has an effective RCRA Permit authorizing only those hazardous waste management activities specified in the RCRA Permit.

JUN 26 1989  
This permit is effective \_\_\_\_\_ . The permit will remain valid until May 31, 1999, unless the permit is modified, revoked and reissued, or terminated pursuant to 40 CFR § 270.40 - 270.43. Failure by your company to comply with any conditions of the permit may result in civil and/or criminal penalties.

Sincerely,  
ORIGINAL SIGNED BY  
B.G. CONSTANTELOS

Basil G. Constantelos, Director  
Waste Management Division

Enclosure

cc: Paul Didier  
Wisconsin Department of Natural Resources

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

Name of Permittee: Freeman Chemical Corporation

Facility Location: Railroad Street, Saukville, Wisconsin

EPA Identification Number: WID 980 615 439

Effective Date: June 26, 1989

Expiration Date: May 31, 1999

Authorized Activities:

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, (42 USC 6901 et seq.), and regulations promulgated thereunder by the United States Environmental Protection Agency (U.S. EPA) (codified in Title 40 of the Code of Federal Regulations) Federal permit conditions (hereinafter called the permit) of the RCRA Permit are issued to Freeman Chemical Corporation, (hereinafter called the Permittee) located in Saukville, Wisconsin.

The RCRA Permit contains both the Federal permit conditions (contained herein) and State permit conditions issued by the State of Wisconsin's RCRA program authorized under 40 CFR Part 271 (hereinafter called the State License). When both this permit and the State License are effective, the Permittee has an effective RCRA Permit which authorizes the Permittee to conduct hazardous waste management activities as specified in the RCRA permit.

Permit Approval

On January 30, 1986, the State of Wisconsin received final authorization pursuant to Section 3006 of RCRA and 40 CFR Part 271, to administer the pre-HSWA RCRA hazardous waste program. Since the State of Wisconsin has not yet received authorization to administer the new hazardous waste program requirements of HSWA, additional permit conditions must be issued by the U.S. EPA, to address these new requirements.

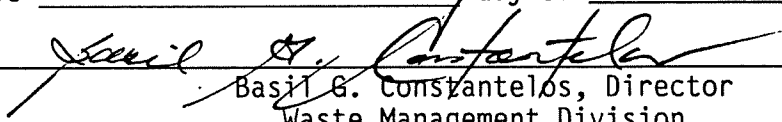
These additional conditions are contained in this permit. The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 260, 261, 264, 266, 268, 270 and 124, and applicable provisions in HSWA. Applicable regulations are those which are in effect on the date of issuance of this permit in accordance with 40 CFR 270.32(c).

This permit is based on the assumption that the information submitted by the Permittee concerning solid waste management units at this facility on June 20, 1985, together with any subsequent submittals is accurate. Any inaccuracies found in this information may be grounds for the termination or modification of this permit (see 40 CFR 270.41, 270.42, 270.43) and potential enforcement action. The Permittee must inform U.S. EPA of any deviation from or changes in the information in the application or in the Permittee's knowledge of solid waste management units or release which may affect the Permittee's ability to comply with the applicable regulations or permit conditions.

The RCRA Permit is effective when both this permit and the State License are effective. This permit is effective as of June 26, 1989, and shall remain in effect until May 31, 1999, unless revoked and reissued, or terminated (40 CFR 270.41 and 270.42 and 270.43) or continued in accordance with 40 CFR 270.51.

Issued this 26th day of June 1989.

by: \_\_\_\_\_

  
Basil G. Constantelos, Director  
Waste Management Division

I. STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store and incinerate hazardous waste in accordance with the conditions of this permit. Any storage, incineration or treatment of hazardous waste not authorized in this permit, RCRA or the RCRA regulations is prohibited. Compliance with this permit constitutes compliance, for purposes of enforcement, with 40 CFR Part 264 and 40 CFR Part 270 regulations promulgated pursuant to HSWA. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of RCRA, Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9606(a), commonly known as CERCLA), or any other law providing for protection of public health or the environment.

B. PERMIT ACTIONS

This permit may be modified, revoked, and reissued, or terminated for cause as specified in 40 CFR 270.41, 270.42, and 270.43. This permit may also be reviewed and modified at any time by the U.S. EPA with consideration of improvements in the state of control and measurement technology and to include any terms and conditions determined necessary to protect human health and the environment pursuant to HSWA 3005(c)(3). The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or if the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. DUTIES AND REQUIREMENTS

1. Duty to Comply. The Permittee shall comply with all conditions of this permit and the conditions applicable to all permits as set forth in 40 CFR 270.03, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of HSWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, denial of a permit renewal application, or other appropriate action.
2. Duty to Reapply. The Permittee shall submit a complete application for a new permit at least 180 days before this permit expires unless:  
a) the Permittee no longer wishes to operate a hazardous waste management facility, or b) the Permittee is no longer required to have a RCRA permit.
3. Permit Expiration. This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 40 CFR 270.13, 270.14) and through no fault of the Permittee the Regional Administrator has not issued a new permit as set forth in 40 CFR 270.51.
4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
5. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding and adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of the permit.

7. Duty to Provide Information. The Permittee shall furnish to the Regional Administrator, within the time designated by the Regional Administrator, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.
8. Inspection and Entry. The Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
  - a. Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.
9. Recordkeeping. The Permittee shall retain all reports, records or other documents required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the report, record or application. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
10. Reporting Planned Changes. The Permittee shall give notice to the Regional Administrator of any planned physical alterations or additions to the permitted facility.
11. Anticipated Noncompliance. The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Such notice does not constitute a waiver of the Permittee's duty to comply with permit requirements.

12. Transfer of Permits. This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR §270.41(b)(2) or §270.42(a). Before transferring ownership or operation of the facility during its operation life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270, and all applicable corrective action requirements.
  
13. Twenty-four Hour Reporting. The Permittee shall report to the Regional Administrator any noncompliance with the permit which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:
  - a. Information concerning the release of any hazardous waste which may endanger public drinking water supplies.
  
  - b. Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:
    - (1) Name, address, and telephone number of the owner or operator;
    - (2) Name, address, and telephone of the facility;
    - (3) Date, time and type of incident;
    - (4) Name and quantity of materials involved;
    - (5) The extent of injuries, if any;
    - (6) An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and
    - (7) Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); steps taken to minimize impact on the environment; whether the noncompliance has been corrected; and if not, the anticipated time it is expected to

continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee need not comply with the five-day written notice requirement if the Regional Administrator waives the requirement and the Permittee submits a written report within fifteen days of the time the Permittee becomes aware of the circumstances.

14. Other Noncompliance. The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, within fifteen days of when the Permittee becomes aware of the noncompliance.
15. Other Information. Whenever the Permittee becomes aware that he failed to submit any relevant facts or submitted incorrect information to the Regional Administrator, the Permittee shall promptly submit such facts or information.
16. Submittal of Reports or Other Information. All reports or other information required to be submitted by the terms of this permit shall be sent to:

Bureau of Solid & Hazardous Waste Management  
Hazardous Waste Management Section  
Wisconsin Department of Natural Resources  
101 South Webster  
Madison, WI 53707

and

U.S. Environmental Protection Agency  
Region V-RCRA Permitting Branch  
Wisconsin/Minnesota Section-5HR/13  
230 South Dearborn  
Chicago, IL 60604

E. SIGNATORY REQUIREMENT

All reports or other information requested by the Regional Administrator shall be signed and certified as required by 40 CFR 270.11.

F. CONFIDENTIAL INFORMATION

In accordance with 40 CFR 270.12 and 40 CFR Part 2, Subpart B, and ss. NR 181.07 and NR 219, Wis. Adm. Code, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions, or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is



made at the time of submissions, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2.

G. WASTE MINIMIZATION

The Permittee shall certify at least annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment in accordance with 40 CFR 264.73(b)(9).

II. LAND DISPOSAL RESTRICTIONS

A. General Waste Restrictions

1. Waste Mixtures A mixture of any restricted waste with nonrestricted waste(s) is a restricted waste under 40 CFR Part 268.
2. General Dilution Prohibition The Permittee shall not in any way dilute a restricted waste or the residue from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with 40 CFR Part 268, Subpart D, to circumvent the effective date of a prohibition or otherwise avoid a prohibition in 40 CFR 268, Subpart C, or to circumvent a land disposal prohibition imposed by RCRA Section 3004.

B. Testing Requirements

The Permittee shall test the waste burned in the incinerator or an extract of the waste, or residue resulting from treatment, using the test method described in Appendix I of 40 CFR Part 268, or using any methods required by generators under 40 CFR § 268.32, to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR § 268.32 or RCRA Section 3004(d).

C. Storage Restrictions

1. General Restrictions on Accumulation The Permittee shall not store any hazardous waste restricted under 40 CFR Part 268 except for the purpose of accumulating such quantities of hazardous waste as necessary to facilitate proper treatment or disposal. Each container of restricted hazardous waste shall be clearly marked to identify its contents and the date accumulation began. The Permittee may store such wastes for a period not longer than one year, unless otherwise directed by the Regional Administrator.
2. Petitions for Exemption Condition II.C.1. does not apply to wastes which are subject of an approved petition under 40 CFR § 268.6, a nationwide variance contained in 40 CFR Part 268, Subpart C, or an approved extension under § 268.5
3. Treated Waste(s) Exemption Condition II.C.1. does not apply to wastes which meet the treatment standards specified under 40 CFR § 268.41, §268.42, or § 268.43, or to wastes which meet the applicable requirements in 40 CFR § 268.32 or RCRA Section 3004 for exemption from land disposal prohibition.
4. PCB Storage Restriction The Permittee shall not store any liquid hazardous waste containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm unless the waste is stored in a storage facility that meets the requirements of 40 CFR 761.65(b). This waste must be removed from storage and treated or disposed as required by 40 CFR Part 268 within one year of the date when such wastes are first put into storage.
5. For the purpose of calculating storage time in tanks under Condition II.C.1, the Permittee may divide the total tank volume by the total tank throughput.
6. The Permittee shall enter into the operating record for the facility, for each tank which stores wastes which are restricted or otherwise prohibited, the following information:
  - a. Description of contents;
  - b. Quantity of each restricted waste; and
  - c. Date each period of accumulation begins, or equivalent information demonstrating compliance with Condition II.C of this permit.

III. METALS AND HYDROGEN CHLORIDE EMISSIONS

Within six (6) months of the issuance of this Permit, the Permittee shall submit to the Regional Administrator a written implementation plan for control of toxic metals and hydrogen chloride emission from the incinerator. The implementation plan shall include all necessary steps the Permittee will take to comply with the March 2, 1989, emission limits specified in the U.S. EPA "Guidance on Metals and Hydrogen Chloride Controls for Hazardous Waste Incinerators," within one year from the issuance of this permit.

The Regional Administrator will review the plan and determine its adequacy to protect the public health and the environment within 30 days from the submittal. The implementation plan, when approved by the Regional Administrator, shall become an integral part of this Permit.

Nothing herein shall be construed to release the permittee from any liabilities under § 7003 of RCRA or the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 U.S.C. § 9601 et seq.

IV. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS (SWMUs)

Freeman Chemical Corporation shall continue to perform corrective action in accordance with the Administrative Order on Consent (Consent Order) entered on July 14, 1987. The Permittee shall also perform the work described in Attachment I, "Scope of Work for Continuing Corrective Measure Activities at Freeman Chemical Corporation", which is incorporated herein as part of this permit.

## ATTACHMENT I

Scope of Workfor Continuing Corrective Measure Activitiesat Freeman Chemical CorporationPURPOSE

The purpose of this Scope of Work (SOW) for continuing corrective measure activities at Respondent's facility is to document investigations and corrective measures which have been conducted, to conduct investigations, and to continue to operate corrective measures to remedy the releases of and effects of releases of hazardous waste and hazardous waste constituents to the environment from Respondent's facility.

SCOPE

The corrective measures work consists of the following tasks:

- Task 1 - Description of Past and Current Conditions
- Task 2 - Schedules
- Task 3 - Support Plans
- Task 4 - Work to be Performed
- Task 5 - Evaluation of Groundwater Collection System
- Task 6 - Reports

TASK 1 - DESCRIPTION OF PAST AND CURRENT CONDITIONS

Submit a Completion Report (Site Construction Documentation Report) including the items listed below. The report will describe past and current conditions at the facility, and include information pertinent to the contamination at the facility. The report will also describe corrective measures which have been or are being conducted at the facility. Work that has previously been conducted by the Respondent which meets any requirement of Task 1 may be submitted or referenced (if previously submitted) by the Respondent to satisfy that requirement.

A. Facility Background

Summarize the location, facility physiography, and hydrogeology. Describe the history of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities that have occurred and are occurring at the facility. This summary shall at a minimum include:

1. Map(s) depicting the items outlined below. All maps shall be of sufficient detail and accuracy to locate and report all current and future work performed at the site.

- a. General geographic location;
  - b. Property lines, with the owners and land use of all adjacent property clearly indicated;
  - c. Topography, waterways, wetlands, floodplains, water features, and drainage patterns;
  - d. All tanks, buildings, paved areas, and wells;
  - e. All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
  - f. All known past solid waste or hazardous waste treatment, storage and disposal areas regardless of whether they were active on November 19, 1980; and
  - g. All known past and present product and waste underground tanks or piping.
2. A history of solid and hazardous waste treatment, storage, and disposal activities at the facility.
  3. A description of current production operations at the site.

B. Nature and Extent of Contamination

Summarize existing information on the nature and extent of contamination, including the following:

1. The sources of contamination, including the location of each source, and the quantity of raw materials, and solid and hazardous waste;
2. Details on known past product and waste spills including date, volume, nature, location and clean-up activities; and
3. A description of the degree and extent of contamination at the facility and in the vicinity of the facility, in the air, soil, sediments, surface water, and groundwater.

C. Behavior and Characteristics of Contaminants

Document the behavior of contaminants in the subsurface. Include the following factors for the odor, and the specific aromatic and chlorinated compounds:

1. Density and solubility of the contaminants in groundwater;
2. The transformation of contaminants with time and/or mixing with other contaminants and the geological media; and
3. Rate and direction of contaminant movement.

D. Investigation of Off-Site Property

1. Document the known nature and extent of contamination that exists and/or existed on adjacent property, including the Laubenstein property, church property, and public and private property. Document corrective measures that have been taken to eliminate the contamination in these areas.
2. Document efforts that have been made to reach an agreement with Water Instruments and other parties to investigate the nature and extent of contamination on the Laubenstein property.

E. Village of Saukville Water Supply

1. Document efforts that have been made to ensure that contamination from the facility is not affecting the quality or quantity of the public water supply for the Village of Saukville, and for any private wells being utilized for drinking water within the village limits.
2. Draw two or more flow charts designating the existing and projected future source and treatment of all groundwater and surface water used by the facility and by the Village of Saukville. Also diagram how the water used by the facility is disposed.
3. Describe the chemical source of the odor in the water from the dolomite wells. Document efforts that have been made to analytically determine the source of the odor.

F. Construction Documentation Corrective Measures

Document corrective measures which have been undertaken and are being undertaken at the facility to remedy the release of and effects of releases of hazardous waste and hazardous waste constituents to the environment from the facility. Verify and document all aspects of the installation of the equipment used for the corrective measures in accordance with the details of the May 12, 1986, letter from Richard O'Hara, WDNR to Russell Cerk, Freeman Chemical Corporation, outlined below.

1. A plan sheet or sheets, documenting the location of the Ranney collector trenches and manholes, groundwater monitoring wells, spot elevations of the base of the trenches, and location of pipes interconnecting the withdrawal systems. The plan sheet(s) should be based on a 1-inch to 100 foot scale (or less) topographic map with maximum 2-foot contour intervals and indicate property boundaries, survey grid and north arrow, homes, buildings, water supply wells, utility lines, man-made features, soil-borings and observation well locations, and other pertinent information.

2. A comprehensive narrative explaining how construction of the groundwater collection system was accomplished along with an analysis of data obtained from testing the collection system. This report should include an appendix containing all of the raw data from field and laboratory testing work.
3. Documentation of the corrective measures taken to eliminate potential sources of contamination, including: removal of unused/buried tanks, exhumation of the "dry well", reconstruction of floor sumps, removal and reconstruction of the tank farm, surface water control measures, construction of the enclosed tank unloading facility, and location and removal of the old farm well.
4. A series of 35 mm slides or color prints documenting all major aspects of the corrective measures program.

#### G. Objectives and Evaluation of Corrective Measures

Describe the objectives for the corrective measures. Also evaluate each of the corrective measures that are being implemented at the facility in the following areas:

1. Useful life. Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Corrective measures shall be evaluated in terms of the projected service lives of its component technologies.
2. Reliability. Reliability is the way of measuring the risk and effect of failure. Evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies has been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measures have the flexibility to deal with uncontrollable changes at the facility.
3. Safety. This evaluation shall include threats to the safety of the nearby community and environment as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

#### TASK 2 - SCHEDULES

Develop a project schedule which identifies the initiation and completion times of corrective measures being performed at the facility. Also, develop a schedule for the submittal of work to be conducted under Task 4 of this SOW.

#### TASK 3 - SUPPORT PLANS

Develop and submit the following plans for investigations and for conducting corrective measures at the facility.

A. Sampling Plan

Prepare a sampling plan for the investigation of contamination in the environment and for evaluating the effectiveness of the groundwater collection system. The plan shall include the objectives of sampling and other items stated below. The plan shall include sampling the groundwater for the hazardous waste constituents listed in the proposed Appendix IX of 40 CFR 262.

1. The objectives of the sampling plan is to:
  - a. Provide specific guidance for all field work;
  - b. Provide a mechanism for planning and approving sampling activities;
  - c. Ensure that sampling activities are limited to those that are necessary and sufficient;
  - d. Provide a common point of reference for all parties to ensure comparability and compatibility between sampling activities performed; and
  - e. Provide information on work limitations, list authorized personnel, safety precautions, and detail decontamination procedures and emergency information.
2. The sampling plan should include the following additional items:
  - a. Investigation and evaluation objectives;
  - b. Parameters to be sampled for;
  - c. Sampling locations;
  - d. Justification for sample type and location;
  - e. Collection methods;
  - f. Sample number and frequencies;
  - g. Analytical procedures, including methods verification and standard operating procedures;
  - h. Quality assurance/quality control;
  - i. Operational plan and schedule;
  - j. Monitoring well and piezometer construction materials and techniques; and
  - k. Safety requirements.

B. Data Management Plan



Develop and initiate a data management plan to document and track investigation data and results. This plan should identify and set up laboratory and data documentation materials and procedures, and project-related progress and documents. Also identify the State and Federal bureaus that must be notified of the designated activities that will be occurring on-site. The data management plan shall address the following:

1. The data record shall include:
  - a. Unique sample or field measurement code;
  - b. Sampling or field measurement location and sample or measurement type;
  - c. Sampling or field measurement raw data;
  - d. Laboratory analysis ID number;
  - e. Property or components measured; and
  - f. Result of analyses (e.g., concentration).
2. The following data shall be presented in tabular displays:
  - a. Unsorted (raw) data;
  - b. Sampling results for each medium;
  - c. Data reduction for statistical analysis;
  - d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
  - e. Summary data.
3. The following data shall be presented in graphical formats:
  - a. Sampling location and sampling grid;
  - b. Boundaries of sampling area, and areas where more data are required;
  - c. Levels of contamination at each sampling location;
  - d. Geographical extent of contamination;
  - e. Contamination levels, averages, and maxima;
  - f. Changes in concentration in relation to distance from the source, time, depth or other parameters;
  - g. Features affecting intramedia transport; and
  - h. Potential receptors.

C. Community Relations Plan

Prepare a plan, based on on-site discussions, for the dissemination of information to the public regarding investigation and corrective measures work, including but not limited to, groundwater sampling results. Opportunities for comment and input by citizens, Village of Saukville officials, and community groups must also be identified and incorporated into the plan.

D. Operation and Maintenance Plan for Corrective Measures

Prepare an Operation and Maintenance Plan to cover both implementation and long term maintenance of the corrective measures. The plan shall be composed of the following elements:

1. Description of normal operation and maintenance (O & M)
  - a. Description of tasks for operation;
  - b. Description of tasks for maintenance, including but not limited to maintenance of surface pavement for soil protection;
  - c. Description of prescribed treatment or operation conditions; and
  - d. Schedule showing frequency of each O & M task.
2. Description of potential operating problems
  - a. Description and analysis of potential operation problems;
  - b. Sources of information regarding problems; and
  - c. Common and/or anticipated remedies.
3. Description of alternate O & M
  - a. Should system fail, alternate procedures to prevent undue hazardous must be available. In particular, discuss how cooling water and municipal drinking water supplies will be protected in the event of any system failure.
  - b. Analysis of vulnerability and additional resource requirements
4. Safety plan
  - a. Description of precautions for site personnel; and
  - b. Safety required in event of system failure.
5. Description of equipment
  - a. Equipment identification;
  - b. Maintenance of site equipment; and

- c. replacement schedule for equipment and installed components.
6. Records and reporting mechanisms required
    - a. Daily operating logs;
    - b. Laboratory records;
    - c. Records for operating costs;
    - d. Mechanism for reporting emergencies;
    - e. Personnel and maintenance records; and
    - f. Quarterly reporting.

#### TASK 4 - WORK TO BE PERFORMED

Work to be performed shall follow the schedule established in Task 2 and the support plans established in Task 3.

##### A. Village of Saukville Water Supply

Develop and implement (with U.S. EPA and WDNR approval), a plan to protect the quantity and quality of potable water available to the Village of Saukville in the future if contamination from the facility limits the quantity and quality of available potable water. Also, develop and implement, if possible and economically feasible, a plan to eliminate the odor in the water from dolomite wells.

##### B. Exposure Information (Potential Receptors)

Submit a report, including the information identified below, describing the hazards associated with contamination at the facility and the human and environmental systems that are potential receptors of the contamination.

1. Provide a list of contaminants from the facility determined to be present in the environment. Document the following toxicological properties for each contaminant:
  - a. Metabolism;
  - b. Acute, subacute, chronic toxicity;
  - c. Carcinogenicity;
  - d. Mutagenicity;
  - e. Teratogenicity/reproductive effects;
  - f. Epidemiological evidence; and
  - g. Other health effects, and aquatic species toxicity.

2. Provide data on the type and extent of human contact with contaminated media, including:
  - a. Recreational, industrial, or agricultural uses of surface water draining the site;
  - b. Location and type of groundwater users;
  - c. A description of the ecology overlying and adjacent to the facility; and
  - d. A description of any endangered or threatened species on or near the facility.

C. Groundwater Protection Standards

Prepare and provide information to support the U.S. EPA's and WDNR's selection of groundwater protection standards (acceptable "clean" level of contaminants in the groundwater) for all of the Appendix IX constituents found in the groundwater. The groundwater protection standards will consist of one of the following:

1. The respective value (MCL) given in Table 1 of 40 CFR 264.94, if the background level of the constituent is below that given in Table 1;
2. The background level of that constituent in the groundwater;
3. A U.S. EPA approved Alternate Concentration Limit (ACL); or
4. The value given in Wisconsin Administrative Rule NR 140.

D. Soil Protection Standards

Excavated soil from the site is subject to treatment and restricted use as specified in an August 8, 1986, and June 10, 1987, letter to Russell Cerk, Freeman Chemical Corporation from Richard O'Hara, WDNR.

TASK 5 - EVALUATION OF GROUNDWATER COLLECTION SYSTEM

Evaluate the effectiveness of the groundwater collection system to perform its intended function by conducting groundwater monitoring for volatile organic compounds.

A. Groundwater Monitoring

Until such time as the groundwater monitoring system submitted under Task 3 is approved, groundwater monitoring will be consistent with an October 21, 1986, letter to Russell Cerk, Freeman Chemical Corporation, from Richard O'Hara, WDNR, and include any subsequent approved changes.

B. Annual Evaluation

evaluation shall be submitted in the form of an annual report, including source and volume of groundwater collected and treated during the year, and a summary of water quality from monitoring wells; collection devices, and the treatment system.

#### TASK 6 - REPORT

Listed below is a schedule for the submittal of reports and information required by the SOW and Section VIII of the Consent Order.

<u>Submission</u>	<u>Time</u>
Completion Report (Task 1)	30 days after the effective date of the Consent Order
Schedules (Task 2)	30 days after the effective date of the Consent Order
Support Plans (Task 3)	60 days after the effective date of the Consent Order
Work conducted pursuant to Task 4	as determined in Task 2
Groundwater Monitoring Data (Task 5A) and Progress Reports	quarterly
Evaluation of Corrective Measures (Task 5B)	annually

All reports required to be submitted by this SOW shall be submitted to the addresses specified in Paragraph D.16 of the Federal Permit.