

1.0 INTRODUCTION

1.1 Report Objective

The objective of this report is to communicate to Metachem Products, LLC (Metachem) and the Delaware Department of Natural Resources and Environmental Control (DNREC) the results of an environmental compliance audit conducted of the Metachem Products facility, located at 745 Governor Lea Road, New Castle, New Castle county Delaware. This environmental compliance audit was conducted pursuant to Item 1 of Exhibit A of Stipulation of Final Judgement, C.A. No. 00C-10-140-HLA, executed February 1, 2001 and in accordance with the Environmental Compliance Audit Workplan (Audit Workplan) prepared by ENSR and submitted to DNREC on 7 April 2001. The on-site inspection portions of the audit were conducted by the ENSR Audit Team during 11-22 June 2001; 27-29 June 2001; 3 August 2001; 6 September 2001; and, January 14, 2002.

This audit report has been prepared consistent with Item 1.c of Exhibit A and includes:

- A description of the audit scope and a listing of the environmental regulations used as criteria for this audit;
- The approach and methodology used by the ENSR Audit Team to conduct the environmental compliance audit and a description of the limitations of that approach;
- A summary of the facility operations and activities evaluated by the ENSR Audit Team, along with a summary description of the applicability of federal and state environmental statutes and regulations to those operations and activities, and an index of facility permits, records, reports and documents reviewed by the ENSR Audit Team (Table 2 and narrative text overviews provided throughout Section 5.0);
- Brief discussion and illustration of current manufacturing operations conducted at the facility (Section 2 and narrative text overviews provided throughout Section 5.0);
- A summary of the status of environmental permits held by the facility (Table 4);
- An inventory of raw materials and feedstocks used in the manufacturing processes (Table 6);
- An inventory of wastes generated, stored, emitted or discharged at the facility (Table 7);
- An evaluation of the facility's current tetrachlorobenzene inventory tracking procedures and a summary of current inventory in storage (Section 2.0);
- An inventory of storage tanks in use at the time of this audit, an assessment of the secondary containment systems provided for these tanks, and a review of the facility tank inspection program (Table 3);

- An assessment of the current facility groundwater recovery and treatment system as compared to the design and operating specifications stated in Civil Action No. 88-11 JLL, dated December 14, 1987 and EPA's Record of Decision dated March 14, 1995 (Section 4.0);
- Specific exceptions, or non-compliances, to federal, state and local environmental regulations identified during a review of applicable requirements (Section 5.0); and,
- The audit team's recommendations for further environmental sampling or investigation (Section 6.0).

ENSR submitted an initial audit report to DNREC and EPA for review and comment in October 2001. Comments and requests for additional review and clarification were provided to ENSR in December 2001. These comments and requests have been incorporated in this report.

1.2 Audit Scope

The ENSR Audit Team evaluated the Metachem facility's compliance with the federal and state environmental regulations and statutes listed in Table 1.

In addition, the ENSR Audit Team evaluated the facility's applicability to and compliance with the following chapters of the Code of New Castle County, Delaware:

- Chapter 6, Buildings and Property Regulations
- Chapter 12, Drainage
- Chapter 38, Utilities

The ENSR Audit Team attempted to review plant performance against regulatory standards promulgated under the above federal and state statutes and regulations, and local environmental codes, for the period December 1998 to September 2001.

To ensure a consistent and complete level of review, the ENSR Audit Team utilized a series of commercially available federal environmental audit protocols and state regulatory reviews. In addition, the audit team obtained copies of the federal and state environmental statutes and regulations referenced in Table 1 and the local environmental codes and rules listed above for review and evaluation during the on-site portion of the facility audit. Copies of these regulatory standards were obtained through a current regulatory subscription service maintained by ENSR, or as available for download from EPA and DNREC agency websites.

1.3 Audit Approach

To evaluate Metachem's compliance with applicable environmental regulatory standards and facility permit requirements, the audit consisted of the following elements:

- Physical examination of the process areas, waste and product storage and accumulation areas, tank locations, and other storage areas;
- Review of current environmental permits, or permit applications as appropriate, and associated operational or equipment monitoring records;
- Review of all administrative and operating records made available for the 1998-2001 period pertaining to environmental issues;
- Interviews and discussions with the facility environmental engineering staff and waste management personnel; and
- A review of relevant documents provided by DNREC and EPA pursuant to a Freedom of Information Act (FOIA) request submitted by ENSR.

1.3.1 On-Site Audit Activities

ENSR conducted the on-site portion of this audit in June 2001. Additional inspections were conducted in August and September 2001, and January 2002 in order to complete the storage tanks assessment and the groundwater recovery system evaluation, and obtain further information related to facility emissions sources and waste management practices. Table 2 provides a summary overview of the facility operations and activities reviewed by the ENSR Audit Team during the on-site portion of the Metachem Products environmental compliance audit. As appropriate, a summary of the current applicability of these operations and activities to those relevant federal and state environmental statutes and regulations evaluated during this audit is also provided. Table 2 also lists those environmental permits, permit monitoring records, and compliance program documents reviewed by the ENSR Audit Team during the Metachem environmental compliance audit.

Narrative details of the regulatory applicability summaries in Table 2 are provided in Section 5.0 of this report. These narratives are presented by environmental media (e.g., air quality, water quality, solid and hazardous waste, etc.) and are intended to identify the facility process units, operations and activities considered for their potential applicability and compliance with relevant federal and state regulatory standards listed in Table 1. Metachem process units, operations, activities and associated environmental programs that were determined to be compliant with these standards are briefly identified in the "Overview" portions of these media reviews. Exceptions to compliance are detailed in the "Non-compliance" portions of these media reviews.

Regulatory non-compliances noted in Section 5.0 of this report are based upon an evaluation of a limited sample of activities and procedures, and reflect the professional opinion of the ENSR Audit Team. This opinion is not intended to be a legal judgment relative to actual violation, or degree of violation, with federal or state environmental statutes and regulations.

1.3.2 FOIA Research of Agency Files

In August 2001, ENSR submitted requests pursuant to the Freedom of Information Act (FOIA) to both DNREC and EPA (both Region III and Headquarters offices). The purpose of the request was to allow ENSR an opportunity to review and research documents pertaining to Metachem that may not have been on file at Metachem's facility. ENSR's objective in conducting this research was to ensure that the auditors had access to all relevant and current environmental information.

ENSR auditors reviewed records at EPA Region III offices on August 21, 2001 and at DNREC offices on August 22 and 29, 2001. ENSR was unable to access documents relating to Metachem's TSCA and FIFRA programs as these documents were maintained at EPA Headquarters, which did not respond to ENSR's FOIA request.

1.3.3 Limitations

Pursuant to Item 1.c.iii, the issues limited ENSR's review and evaluation of Metachem during the course of the audit.

1. Current process flow diagrams detailing all aspects of manufacturing operations conducted at the facility were not provided to the ENSR Audit Team. Metachem is currently updating its process flow and equipment layout diagrams. Metachem did provide general process flow for facility manufacturing operations and the wastewater treatment facility. These are provided as Figures 2 and 3. Preliminary versions of the process description diagrams prepared as part of Metachem's revised Title V operating permit application, to be submitted for DNREC review on March 1, 2002, are provided as Attachment A of this Audit Report. These diagrams are cross-referenced within the Air Quality portion of Section 5.0.
2. Material balances for manufacturing operations were also not available for inclusion and reference within this Audit Report. Section 2.0 of this report includes a basic description of manufacturing operations at Metachem and a summary raw material and product inventory. As noted in correspondence from DNREC, dated December 21, 2001, Metachem will provide the agencies with detailed material balances as a separate document. Since these were not available for review, they have not been evaluated by ENSR as part of this audit.

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3. The Groundwater Recovery system at the Metachem facility was not running ENSR's initial site visit. As requested by DNREC during a December 4, 2001 meeting, ENSR conducted a second site visit on January 14, 2001 in order to conduct an evaluation of the system while in operation.
 4. Metachem did not have histories of their aboveground storage tanks, including installation dates, dates tanks were emptied and removed from service, or removal dates.
 5. Metachem was not able to provide complete inventories of all raw materials, products, or wastes that are stored in all aboveground tanks.
 6. Metachem's drum storage inspection logs did not differentiate between drums of waste and those containing off-spec products that are awaiting rework. Therefore, the waste inventory quantities included in this report are estimates.
 7. The ENSR auditor responsible for reviewing Metachem's compliance with federal requirements of 40 CFR Part 761, Polychlorinated Biphenyls, conducted the on-site inspection portion of the audit in June 2001. At that time, there were no PCB-waste drums observed being stored in the designated PCB drum storage area of the facility warehouse. Therefore, the auditor could not verify that Metachem complied with drum marking and labeling requirements for drums containing PCB wastes.