

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

ADVANCED HEAT TREAT CORPORATION

2825 Midport Boulevard
Waterloo, Iowa 50703
319-232-5221

EPA ID Number: IAR000006916

On

August 12, 2024

By

TOEROEK ASSOCIATES, INC.

For

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 7

Enforcement and Compliance Assurance Division

INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, Toeroek Associates, Inc., and its subcontractor CLAENE Group (Toeroek team) conducted a hazardous waste compliance evaluation inspection (CEI) at Advanced Heat Treat Corporation (AHT) at 2825 Midport Boulevard in Waterloo, Iowa. The CEI was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended. The CEI covered hazardous waste generator requirements, used oil management, and universal waste requirements, as applicable. This report and its attachments present the results of the CEI.

PARTICIPANTS

AHT:

Matt Thilges, Maintenance Manager
Kody Kottke, Plant Manager
Joel Robinson, Human Resources Manager

Toeroek Team:

Clifford Nelles, Inspector, 816-213-5192

INSPECTION PROCEDURES

Prior to the CEI at AHT on August 12, 2024, I conducted a drive-by visual inspection. I did not observe any areas of concern during the drive-by. At approximately 8:00 a.m., I entered the main office and explained to the receptionist that I was there to conduct a CEI. I asked to speak with Mr. Bill Cowell, who was listed as the RCRA site contact on the Notification Acknowledgment/Verification Report (Verification Report) provided by EPA prior to the inspection (Attachment 1). The receptionist explained that Mr. Cowell had retired. The receptionist then contacted Mr. Thilges and informed him of my arrival. Messrs. Thilges and Kottke arrived at the reception area approximately five minutes later. I introduced myself to Messrs. Thilges and Kottke and explained the purpose and scope of the CEI. Messrs. Thilges and Kottke escorted me to a conference room where we were joined by Mr. Robinson. I proceeded to conduct an entry briefing with Messrs. Thilges, Kottke, and Robinson.

During the entry briefing, I presented my business card and EPA credentials to Messrs. Thilges, Kottke, and Robinson. I explained the scope and procedures for the CEI. I explained the facility's right to make confidentiality claims for any or all the information obtained and provided a Notice Regarding Proprietary/Confidential Business Information. I stated that at the conclusion of the CEI, Mr. Kottke would be presented with a Confidentiality Notice (Notice) with which he could make or not make a claim of confidentiality for the facility. I also provided Messrs. Thilges, Kottke and Robinson a copy of U.S. Federal Codes 1001 and 1002, concerning communication of false statements and documents to federal inspectors, and RCRA Section 3007, explaining EPA's inspection authority, both of which they read.

Copies of the following documents were left with Mr. Thilges during the inspection:

- RCRA Facility Access Information Sheet
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- Notice Regarding Proprietary/Confidential Business Information

The following documents were sent electronically to Messrs. Thilges, Kottke and Robinson.

- E-Manifest Fact Sheet: Generators
- Managing your Hazardous Waste: A Guide for Small Businesses
- U.S. EPA Small Business Resources Information Sheet
- Solvent-Contaminated Wipes Final Rule Summary Chart
- IDNR Excluded Solvent-Contaminated Wipes Rule: Management Practices for Wipes, Rags, and Shop Towels
- Recycling Electronics: A Guide for Businesses
- Lead-Based Paint Activities: Handling and Disposal
- Battery Recycling/Disposal
- Management of Fluorescent Lamps for Businesses
- Incompatible Chemicals
- Universal Wastes – Including Aerosol Cans
- TCLP – Toxicity Characteristic Leaching Procedure
- Part 279 Requirements: Used Oil Management Standards

- EPA Region 7 Emergency Response Program
- Chemical Facility Anti-Terrorism Standards
- Iowa Environmental Guide for Businesses

I reviewed the Verification Report (Attachment 1) with Messrs. Thilges, Kottke, and Robinson during the CEI. Based on this review, I changed the facility's hazardous waste generator status from small quantity generator (SQG) to very small quantity generator (VSQG). I also changed the site contact information to reflect Mr. Thilges as the site contact. I made no other changes to the Verification Report.

I conducted a visual inspection of the facility, accompanied by Messrs. Thilges, Kottke, and Robinson. After the visual inspection, I reviewed safety data sheets (SDSs) for chemicals used at the facility. I prepared and completed a site-specific inspection checklist to document my observations.

At the conclusion of the CEI, I conducted an exit briefing with Messrs. Thilges, Kottke, and Robinson. During the exit briefing, I provided a Receipt for Documents and Samples, which Mr. Kottke signed, acknowledging receipt (Attachment 2). I provided Mr. Kottke the Notice, which he signed indicating no confidential business information had been provided (Attachment 3). I made no preliminary findings during the inspection so a Notice of Preliminary Findings (NOPF) was not left with the facility at the conclusion of the CEI. However, I explained to Messrs. Thilges, Kottke, and Robinson that findings might be added by EPA after review of the inspection report.

A site map obtained during the CEI is included as Attachment 4 and a Google Earth aerial photograph of the facility is included as Attachment 5. The nine photographs taken during the CEI are in Attachment 6, all of which are described in this report.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

AHT began operating in 1998 and employs 75 people who primarily work one of three shifts ranging from eight to ten hours per day, Monday through Friday. The facility performs heat treating of metal parts (primarily steel and titanium) for a variety of customers, such as agricultural equipment and aerospace manufacturers. The major raw materials used are nitrogen, hydrogen, ammonia, methanol, acetone, AeroTron-100, TECTYL 848DHF, and carbon dioxide. Copies of the SDSs for ammonia, methanol, acetone, AeroTron-100, and TECTYL 848DHF are included as Attachments 7 through 11.

According to Mr. Kottke, the heat treating process involves placement of metal parts to be hardened into a chamber. The chamber is evacuated of air and a mixture of hydrogen and nitrogen gas is pumped in. The parts are exposed to an electrical current and the nitrogen diffuses into the metal, hardening it. This process is known as ion nitriding. Wastes generated during the heat treating process include waste rags and gloves, and waste paint related material (WPRM). Waste rags and gloves are generated during wipe cleaning of parts prior to the heat treating process. Parts are wipe cleaned with acetone or methanol, and rags are reused until soiled. Waste

rag and gloves are inherently dry when discarded, and are considered by the facility to be nonhazardous waste. WPRM consists of waste methanol and acetone used for parts cleaning, and is considered by the facility to be hazardous waste. Vapor degreasing of parts is also performed at the facility using AeroTron-100. However, waste AeroTron-100 has not yet been generated at the facility and according to the SDS, it would not be hazardous.

Equipment and facility maintenance generate used oil, used batteries, and general trash. The facility manages used oil from equipment maintenance according to provisions of Title 40 *Code of Federal Regulations* (40 CFR) Part 279. The facility manages used batteries as universal waste according to provisions of 40 CFR Part 273. Universal waste lamps are not generated since the facility converted all lighting to light emitting diode (LED) fixtures in 2022, and no other universal wastes are generated. General trash consists of office and packaging wastes and is considered by the facility to be nonhazardous waste.

AHT is located in an industrial park near the airport on the west side of Waterloo, Iowa. The facility consists of one building with approximately 5,000 square feet of office space and approximately 45,000 square feet of operations space (including shipping/receiving and production areas). AHT was last inspected by an EPA contractor on August 29, 2019, with no preliminary findings.

2. RCRA Status

The Verification Report (Attachment 1) indicates that AHT is registered with EPA, under EPA ID IAR000006916, as a SQG of hazardous waste (generating more than 100 kilograms [kg] but less than 1,000 kg of hazardous waste per calendar month). During the CEI, I determined that AHT is currently operating as a VSQG of hazardous waste (generating less than 100 kg of hazardous waste per calendar month).

Copies of the facility's uniform hazardous waste manifests from March 15, 2021, to January 8, 2024, are included in Attachment 12. Based on these manifests, I calculated a generation rate of approximately 42 pounds of hazardous WPRM per month. Hazardous waste trichloroethene (D040, F002) was also generated in 2021 and 2022; however, the facility currently uses nonhazardous AeroTron-100 for vapor degreasing. Based on the manifests, WPRM was the only hazardous waste generated over the last two years at AHT. Therefore, I inspected AHT as a VSQG of hazardous waste. I also inspected AHT as a small quantity handler (SQH) of universal waste (accumulating less than 5,000 kg of universal waste at any time) and a used oil generator.

3. Waste Streams

This section of the CEI report describes the waste streams generated by the facility, including the facility's waste determination, generation and management processes, and ultimate disposition. The following discussion of waste streams is based on conversations with facility representatives and the visual inspection.

Waste rags and gloves are generated during the wipe down and cleaning of parts with methanol and acetone. Rags are reused until soiled and are inherently dry when discarded. The facility considers waste rags and gloves to be nonhazardous based on product and process knowledge.

Since the rags and gloves are dry, they are not considered D001 ignitable waste and therefore do not carry the F003 listing. Based on shipping records, I estimated the facility generates approximately 2,600 pounds of waste rags and gloves per year. The waste is accumulated in 55-gallon containers. Waste rags and gloves are collected by Barton Solvents and shipped to WRR Environmental Services in Eau Claire, Wisconsin, for disposal. A copy of the bill of lading for the last shipment of waste rags and gloves, dated July 22, 2024, is included as Attachment 13.

During the CEI, I observed four 55-gallon containers used for accumulation of nonhazardous waste rags and gloves at the south end and west side of the facility. The containers were structurally sound and labeled with the words “nonhazardous waste” and “waste acetone rags/gloves only” (Attachment 6, Photographs 1, 2, 6, and 7). I did not observe any free liquids in the waste rags and gloves containers, or damp/wet rags and gloves from which liquid could be extracted.

WPRM consists of waste methanol and acetone used for parts cleaning that is too contaminated for effective use. The facility considers WPRM to be hazardous waste (D001, F003) based on product and process knowledge. Based on manifest records, the facility generates approximately 42 pounds of WPRM per month. Copies of the uniform hazardous waste manifests from March 15, 2021, to January 8, 2024, are in Attachment 12. The waste is accumulated in 55-gallon containers. WPRM is collected by Barton Solvents and shipped to WRR Environmental Services in Eau Claire, Wisconsin, for solvent recovery.

During the CEI, I observed a 55-gallon container of WPRM in the hazardous waste container accumulation area in the north end of facility. The container was structurally sound, closed, labeled with the words “hazardous waste” and an indication of the nature of the hazard, and held approximately 10 gallons of WPRM (Attachment 6, Photographs 8 and 9). The container was dated July 8, 2024.

Used oil is generated during maintenance of the facility’s vacuum pumps. AHT generates approximately 25 gallons of used oil per month. The facility manages used oil according to provisions of 40 CFR Part 279. Used oil is accumulated in 55-gallon containers and is collected by Cedar Falls Oil Company in Cedar Falls, Iowa, for recycling.

During the CEI, I observed four 55-gallon used oil containers in the maintenance shop (Attachment 6, Photographs 4 and 5). The used oil containers appeared to be structurally sound with no leaks or damage, were labeled with the words “used oil,” and held between 20 and 50 gallons of used oil each.

Used batteries are generated by maintenance replacing spent batteries in equipment. The facility generates approximately 2 gallons of used batteries per year. AHT manages used batteries as universal waste according to provisions of 40 CFR Part 273. Used batteries are accumulated in a 5-gallon container in the maintenance shop. Used batteries are collected by Barton Solvents and shipped to WRR Environmental Services in Eau Claire, Wisconsin, for recycling.

During the CEI, I observed a 5-gallon used batteries container in the maintenance shop (Attachment 6, Photograph 3). The 5-gallon container was structurally sound, labeled with the words “used batteries,” and dated September 18, 2023.

General trash is generated during facility maintenance and includes, but is not limited to, floor sweepings, paper, and cardboard packaging. The facility has determined that general trash is nonhazardous waste based on product and process knowledge. General trash is accumulated in several containers throughout the facility and is collected by Waste Management for disposal at the Black Hawk County Landfill. During the CEI, I observed accumulation of general trash and noted no deficiencies.

4. Summary of Preliminary Findings

In summary, as part of the CEI, I made no preliminary findings. However, further review by EPA may change or add to my findings.

Clifford A.
Nelles

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Clifford A. Nelles, Inspector
CLAENE Group

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Amber Whisnant, Section Chief
ECAD/CB/RCRA, EPA Region 7

Attachments:

1. Notification Acknowledgement/Verification Report (2 pages)
2. Receipt for Documents and Samples (1 page)
3. Confidentiality Notice (1 page)
4. Site Map (1 page)
5. Google Earth Photograph of Facility (1 page)
6. Photographic Documentation (Photolog and 9 Photographs) (6 pages)
7. Copy of SDS for Ammonia (12 pages)
8. Copy of SDS for Methanol (13 pages)
9. Copy of SDS for Acetone (12 pages)
10. Copy of SDS for AeroTron-100 (6 pages)
11. Copy of SDS for TECTYL 848DHF (11 pages)
12. Copies of Manifests Dated March 15, 2021, Through January 8, 2024 (8 pages)
13. Copy of Bill of Lading for Rags and Gloves Dated July 22, 2024 (1 page)