

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

TPI IOWA LLC.
2300 N 33rd Avenue E
Newton, Iowa 50208
(641) 275-8608

EPA ID Number: IAR000510156

On

March 8, 2022

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 Tetra Tech Inc. (Toeroek team) conducted a hazardous waste compliance evaluation inspection (CEI) at TPI Iowa LLC (TPI), at 2300 N. 33rd Avenue E in Newton, 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 findings of the CEI.

PARTICIPANTS

TPI:

Aaron Hudgins, Safety Coordinator
Rich Myers, Inventory Supervisor
Tyler Harter, Senior Operations Manager

Toeroek Team:

Heather K. Wood, Inspector, 816-412-1768

INSPECTION PROCEDURES

Prior to the CEI at TPI on March 8, 2022, I conducted a drive-by inspection. I did not observe any areas of concern during the drive-by, although I did observe that there were many fewer cars in the parking lot than expected. Upon my arrival at 8:55 a.m., I entered the visitor's entrance and explained the purpose of the CEI to the reception attendant. The reception attendant contacted Mr. Hudgins, who met me at the entrance. I introduced myself to Mr. Hudgins and explained the purpose of the CEI to him. Mr. Hudgins escorted me to his desk, where I conducted an entry briefing with him.

During the entry briefing, I presented my business card and EPA credentials to Mr. Hudgins. I explained the scope of the CEI and the data gathering procedures that would be employed (for example, interviews, visual inspection, records review, and digital photography). I then informed Mr. Hudgins of the facility's right to make confidentiality claims for any or all of the information obtained. I stated that at the conclusion of the CEI, he 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 Mr. Hudgins 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 he read. At that time, Mr. Hudgins told me that the factory had stopped operations in December 2021 and that the factory had been mothballed in anticipation of potentially re-starting operations in June or July.

A copy of each of the following documents was left with the facility during the inspection:

- RCRA Facility Access Information Sheet
- Mr. Trevor Urban's business card
- RCRA Section 3007
- U.S. Federal Codes 1001 and 1002
- Instructions for Responding to a Notice of Preliminary Findings
- Notice Regarding Proprietary/Confidential Business Information
- Managing your Hazardous Waste: A Guide for Small Businesses
- U.S. EPA Small Business Resources Information Sheet

I reviewed the Hazardous Waste Site Info Verification Report (Verification Report) with Mr. Hudgins (Attachment 1). Based on this review and observations during the CEI, I updated

the facility's contact information to identify Mr. Hudgins as the point of contact. I changed the facility's generator status to non-generator of hazardous waste, removed the hazardous waste codes, and added small quantity handler (SQH) of universal waste and used oil generator to the Type(s) of Regulated Activity section of the report.

I conducted the visual inspection of the facility, accompanied by Mr. Hudgins. I reviewed available facility records, including manifests with land disposal restriction (LDR) notifications, emergency procedures documentation, and other documentation related to waste generation and management. Facility information gathered during the CEI is documented on the Data Gathering Worksheets and Checklists (Attachment 2).

At the conclusion of the CEI, I conducted an exit briefing with Messrs. Hudgins, Myers, and Harter. During the exit briefing, I provided a Receipt for Documents and Samples, which Mr. Hudgins signed, acknowledging receipt (Attachment 3). I provided Mr. Hudgins the Notice, which he signed indicating no confidential business information had been provided (Attachment 4). After the inspection, I saw that Mr. Hudgins mistakenly signed in both sections of the confidential business information form. I contacted him and confirmed that he did not want to make a claim of confidentiality and lined through the erroneous signature. I provided Mr. Hudgins a Notice of Preliminary Findings (NOPF), which he signed to acknowledge receipt (Attachment 5).

A facility map obtained during the CEI is included in the Contingency Plan collected during the inspection (Attachment 6, Page 4). An aerial photograph of the facility was downloaded after the CEI and is included in Attachment 7. The 18 photographs taken during the CEI are included in Attachment 8.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

TPI manufactures wind turbine blades for energy production. As stated above, the facility suspended operations in December 2021 when it lost its contract with General Electric (GE), its sole customer. Turbine blades were manufactured with fiberglass, foam, balsa wood, epoxy resins and hardeners, and adhesives. After forming the blades, various components were added, such as components for structural support, balance, and connection. Assembled blades were then trimmed, sanded, and painted. Finished turbine blades were staged in an outdoor lay-down yard for customer pickup (visible in the aerial photograph from March 2015).

TPI has been operating at its current location since 2007. The facility consists of a single building with approximately 335,000 square feet under roof on an approximately 7-acre lot. TPI currently employs approximately 20 personnel who are maintaining the building and equipment and performing administrative tasks. According to Mr. Hudgins, some of the administrative employees are on hybrid work schedules and work at home at least part-time.

Manufacturing operations at the facility included molding (Molding), assembly (Components), and trimming and painting (Finishing). In Molding, fiberglass laminate was layered into molds. After all layers have been assembled, the two halves of the blade were sealed then joined and

sealed together, creating a single turbine blade. After the blade was formed, it was moved to the Components area for final assembly. Activities performed in the Components area included cutting and drilling the necessary connection ports, and installation of ancillary hardware such as connection bolts or counterbalance weights. From the Components area, the blades were moved to the Finishing area where they were trimmed and painted by hand with rollers. Hazardous wastes generated in the manufacturing processes included waste acetone, waste adhesives, waste cleaning solvent with adhesives, and waste paint-related materials (WPRM). The facility also generated solvent-contaminated wipes that are exempt from the definition of solid waste but would otherwise be hazardous waste.

Used oil is still generated at the facility from equipment maintenance (such as compressor maintenance), although at a much lower generation rate than when the facility was operating. Waste batteries generated through facility and equipment maintenance are managed as universal wastes. According to Mr. Hudgins, almost all of the facility's lighting has been retrofitted with nonhazardous light-emitting diode (LED) lamps. He said that some fluorescent fixtures remain in the maintenance area, but no waste fluorescent lamps have been generated since he has been working at the facility (approximately 10 months). General trash is considered nonhazardous and is accumulated in roll-off containers outside the facility until collected for landfill disposal.

In March 2017, an EPA contractor conducted a CEI at TPI, when it was operating as large quantity generator (LQG). During the CEI, the inspector made the following preliminary findings:

1. Failure to maintain adequate aisle space in a hazardous waste container accumulation area (HWCAA)
2. Failure to mark accumulation start dates on two hazardous waste accumulation containers (HWACs)
3. Failure to label a container of universal waste batteries with the words "universal waste-batteries" or "waste batteries" or "used batteries"
4. Failure to mark the accumulation start date on a universal waste accumulation container or otherwise indicate the accumulation start date for universal waste batteries
5. Failure to label a used oil storage container with the words "used oil"
6. Failure to update the RCRA Contingency Plan when a name of an Emergency Coordinator changes

Of the violations listed above, NOPF No. 5 was repeated during this inspection.

2. RCRA Status

TPI was identified as an LQG of hazardous waste, generating more than 1,000 kilograms (kg) of hazardous waste per calendar month on the Verification Report provided by EPA (Attachment 1). During the CEI, I reviewed manifests for outgoing hazardous waste shipments (Attachment 9) to confirm the facility's hazardous waste generator status. I also reviewed the facility's e-manifest reports from RCRAInfo for 2021 and 2022 after the on-site inspection.

Based on my observations and Mr. Hudgins's statements, the facility is not currently generating hazardous waste. However, when the facility was operating in 2021, it was generating approximately 1,350 kg of WPRM, 1,800 kg of waste acetone, and 1,200 kg of waste cleaning solvent with adhesives per month, for a total of approximately 4,350 kg of hazardous waste per month. The facility remained a LQG until January 2022, when the last waste generated as a LQG was sent for disposal.

The facility is still a used oil generator and a SQH of universal waste (accumulating less than 5,000 kg of universal waste at any time). I confirmed each of these activities during the CEI.

3. Waste Streams

This section of the CEI report describes waste streams generated by the facility, including the facility's waste determination and waste codes, generation process and rate, management at the facility, and ultimate disposition. I have only described the significant hazardous waste streams previously generated by the facility and the wastes currently generated during the suspended operations. The facility also generated nonhazardous industrial waste, such as waste polyurethane. The following discussion of waste streams is based on my interviews with Mr. Hudgins, the visual inspection, and my review of available documentation.

The visual inspection included the primary and secondary waste enclosures (Attachment 8, Photographs 1 through 9), the paint kitchen (Attachment 8, Photographs 10 through 12), warehouse areas where materials for polymer recycling were staged (Attachment 8, Photograph 13), the raw materials storage enclosure (Attachment 8, Photograph 14), and maintenance areas (Attachment 8, Photographs 15 through 18). I did not observe any hazardous waste during the inspection. Mr. Hudgins accompanied me throughout the visual inspection.

WPRM consisted of spent solvent and paint generated in the Finishing area Paint Room. Turbine blades were painted manually with paint rollers. The paint rollers are cleaned with a solvent blend (Barton A 4212) at a paint roller cleaning station in the paint kitchen. The facility considers WPRM hazardous waste (D001, D035, F003, and F005) based on product and process knowledge. Barton A-4212 solvent blend is a mixture of F005-listed solvents (toluene and methyl ethyl ketone) and F003-listed solvents (acetone, xylene, methanol, and ethylbenzene). Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 1,350 kg of WPRM per month in 2021. It was transported to Clean Harbors in El Dorado, Arkansas, for incineration and was last sent for disposal on January 31, 2022. I did not identify any deficiencies related to WPRM during the inspection.

Waste acetone consisted of spent acetone generated in the Molding and Components areas, as well as inadvertently contaminated acetone or acetone blend. Acetone was the primary solvent used for cleaning and wiping blades and tools in the Molding and Components areas, as well as general cleaning throughout the facility. The facility considers waste acetone hazardous waste (D001, F003) based on product knowledge (Attachment 6, Page 3). Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 1,800 kg of waste acetone per month in 2021.

While reviewing the manifests maintained at the facility, I observed that TPI had changed the waste contractor for waste acetone from Barton Solvents to Safety-Kleen Systems (SKS) in mid-April 2021. Manifests and LDR notifications generated for Barton Solvents had both the D001 and F003 waste codes (Attachment 9, Page 2). However, manifests generated for SKS had only the D001 waste code (Attachment 9, Pages 3 and 9 for examples). Because the material was spent acetone, it should bear the F003 listing. Because it was still ignitable D001 waste, it should have still carried the F003 listing. I reviewed the manifests during the inspection and the e-manifest reports after the inspection and identified 19 manifests and LDR notifications that did not have the F003 waste code. These manifests were dated April 15, April 30, May 14, May 27, June 10, June 25, July 9, July 23, August 6, August 19, September 2, September 17, September 30, October 15, November 2, November 18, and December 3, 2021, and January 14 and January 31, 2022. I did not collect copies of all erroneous manifests, but a full manifest report showing the incorrect codes is available from the RCRAInfo e-manifest database.

Because the facility had previously assigned the F003 code and because the contingency plan associated the F003 code with the waste, I concluded that the facility had made an adequate waste determination. However, I concluded that, while an LQG, the facility had failed to include correct waste codes for waste acetone on manifests, as required by Title 40 *Code of Federal Regulations* (40 CFR) 262.20(a), and failed to include correct waste codes for waste acetone on LDR notifications, as required by 40 CFR 262.17(a)(9) referencing 268.7(a)(2) (**NOF Nos. 1 and 2**). I provided compliance assistance regarding manifesting and LDR requirements.

Solvent-contaminated wipes consist of soiled rags from cleaning and wiping with acetone and acetone blend. The facility managed the wipes to receive the exemption from the definition of solid waste, as described in 40 CFR 261.4(a)(26). The facility had determined that these wipes would otherwise be hazardous waste (D001 and F003) based on product and process knowledge (Attachment 6, Page 3). I did not determine the generation rate for wipes, but I did observe an empty container that was previously used to accumulate wipes (Attachment 8, Photograph 15).

Waste adhesives consisted of production waste such as scrap or contaminated adhesives, as well as adhesives drained from punctured aerosol cans in the Maintenance area. The facility considers waste adhesives hazardous waste (D001) based on product knowledge. Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 110 gallons of waste adhesives in 2021. The waste was transported to WRR Environmental Services in Eau Claire, Wisconsin, for storage and transfer to another disposal facility. It was last sent for disposal on January 28, 2021. I did not identify any deficiencies related to waste adhesives during the inspection.

Waste cleaning solvent with adhesives consisted of spent nonhazardous petroleum hydrocarbon solvent (limonene) contaminated with adhesives generated during equipment cleaning. The facility considers waste solvent with adhesives hazardous waste (D001) based on product and process knowledge (Attachment 6, Page 3). Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 1,200 kg of waste cleaning solvent with adhesives per month in 2021. It was transported to Clean Harbors in Kimball, Nebraska, for incineration and was last sent for disposal on December 3, 2021. I did not identify any deficiencies related to waste cleaning solvent with adhesives during the inspection.

Used oil is generated from maintenance of equipment, which is ongoing even during suspension of operations. Used oil is managed by the facility according to requirements of 40 CFR Part 279. Used oil is stored in a 55-gallon used oil storage container in the maintenance area. Used oil is collected for recycling by SKS and transported to Smithfield, Kentucky, for fuel blending. Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 440 gallons of used oil in 2021. It was last sent for recycling on November 2, 2021.

During the CEI, I observed the 55-gallon used oil storage container in the maintenance area (Attachment 8, Photographs 17 and 18). The used oil storage container was structurally sound and in good condition but was unlabeled. It held approximately 20 gallons of used oil. I concluded that the facility had failed to label the container as "used oil," as required by 40 CFR 279.22(c)(1) (**NOPF No. 3**). I provided compliance assistance regarding labeling of used oil. This finding was repeated from the previous inspection.

Used batteries are generated during maintenance of equipment. The facility manages used batteries as universal waste according to requirements of 40 CFR Part 273. The waste is collected by SKS and transported to Clean Harbors in Kimball, Nebraska, for recycling. Based on my review of the facility's manifests and e-manifest reports (Attachments 9 through 11), the facility generated approximately 55 gallons of used batteries in 2021. I did not observe any used batteries during the inspection.

General trash consists of office- and packaging-type refuse generated at the facility. The facility determined that general trash is nonhazardous waste based on product and process knowledge. The waste is collected for landfill disposal at the Newton Sanitary Landfill in Newton, Iowa. During the CEI, I observed the rolloff containers for trash. I did not observe any deficiencies related to general trash during the inspection.

4. Required Response Equipment and Hazard Management

TPI is not currently operating as an LQG, and is therefore not required to maintain emergency response equipment. During the inspection, I observed a spill kit (Attachment 8, Photographs 8 and 9) and fire suppression equipment in the area of the waste enclosures and in the paint kitchen.

5. HWCAAs

TPI is not currently operating as an LQG, but the facility continues to maintain two waste enclosures for its HWCAA. No containers of hazardous waste were present during the inspection. The secondary enclosure held a 55-gallon container of nonhazardous polyurethane waste (Attachment 8, Photograph 1). The primary waste enclosure held containers of raw materials held for the facility's possible re-start in June or July (Attachment 8, Photograph 6). All containers of raw materials were labeled and in good condition.

6. Manifests and Biennial Report

Hazardous wastes were collected approximately biweekly at the facility while it was operating as an LQG. During the CEI, I reviewed approximately 60 of the 180 manifests and LDR notifications generated over the 3 years preceding the inspection. I reviewed all 2021 manifests and spot checked earlier manifests. I leafed through all from 2019 and 2020 to verify that the facility had 3 years of manifests available for review. I also reviewed the facility's e-manifest reports for 2021 and 2022, available from the RCRAInfo e-manifest database. I did observe deficiencies related to waste codes used on manifests generated for waste acetone, as described in Section 3, above. I concluded that the facility had failed to include correct waste codes for waste acetone on manifests, as required by 40 CFR 262.20(a), and failed to include correct waste codes for waste acetone on LDR notifications, as required by 40 CFR 262.17(a)(9) referencing 268.7(a)(2) (**NOF Nos. 1 and 2**). I provided compliance assistance regarding manifesting and LDR requirements.

7. Preparedness and Prevention, and Contingency Plan

TPI is not currently operating as an LQG, but the facility does have a Contingency Plan (Attachment 6). During the CEI, I reviewed the plan (Attachment 6). During my review, I observed that the Contingency Plan met the requirements outlined in 40 CFR 262 Subpart M, including a Quick Reference Guide (QRG).

8. Personnel Training Requirements

TPI is not currently operating as an LQG, but the facility does have a hazardous waste training program, as described in the Contingency Plan (Attachment 6, Page 20 through 22 and Page 41). I did not review the facility's training documentation, other than the description of the training program in the Contingency Plan.

9. Air Emissions: 40 CFR Part 265 Subparts AA, BB, CC

TPI is not currently operating as an LQG, but did operate as an LQG through December 2021 and will potentially resume operations as an LQG in June or July 2022. LQG requirements would have applied until January 2022, when the last hazardous waste generated as an LQG was sent for disposal.

EPA regulations in 40 CFR Part 265, Subparts AA, BB, and CC apply to LQGs. If an LQG manages hazardous waste with an organic concentration greater than 10 parts per million by weight (ppmw), the standards found in Subpart AA apply to hazardous waste air emissions from certain process vents. A process vent used in distillation, fractionation, solvent extraction, thin-film evaporation, air stripping, or steam stripping is regulated by Subpart AA. When operating as an LQG, TPI would not be subject to the Subpart AA regulations because the facility does not manage hazardous waste in equipment with the process vents listed above.

If an LQG has equipment that contains or contacts hazardous waste composed of 10 percent or greater organics by weight, the facility is subject to Subpart BB standards for inspection and monitoring of the equipment. When operating as an LQG, TPI would not be subject to the

Subpart BB regulations because it does not have equipment that contains or comes in contact with hazardous waste.

The standards found in Subpart CC apply to LQGs that manage hazardous waste in containers with volatile organic compounds (VOC) concentration that exceeds 500 ppmw. When operating as an LQG, the Subpart CC standards would be applicable at TPI because the facility accumulates hazardous waste that contains VOCs in containers larger than 26 gallons in capacity. According to Mr. Hudgins, the facility complies with the Subpart CC requirements for 55-gallon containers by using Container Level 1 controls (containers smaller than 122 gallons that are U.S. Department of Transportation [DOT]-approved).

10. Summary of Preliminary Findings

In summary, as part of the CEI, I made the following preliminary findings:

1. Failure to include correct waste codes for waste acetone on manifests, as required by 40 CFR 262.20(a) (**NOPF No. 1**).
2. Failure to include correct waste codes for waste acetone on LDR notifications, as required by 40 CFR 262.17(a)(9) referencing 268.7(a)(2) (**NOPF No. 2**).
3. Failure to label a used oil storage container with the words “used oil,” as required by 40 CFR 279.22(c)(1) (**NOPF No. 3**).

Of these findings, NOPF No. 3 was repeated from the previous inspection. Other than items specifically noted in the narrative, I observed no additional issues. However, further review by EPA may change or add to my findings.



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Date: _____

Heather K. Wood
Inspector, Tetra Tech Inc.

AMBER WHISNANT

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Amber Whisnant
Section Chief, ECAD/CB/RCRA

Attachments:

1. Hazardous Waste Site Info Verification Report (1 Page)
2. Data Gathering Worksheets and Checklists (17 Pages)
3. Receipt for Documents and Samples (1 Page)
4. Confidentiality Notice (1 Page)
5. Notice of Preliminary Findings (1 Page)
6. Contingency Plan (47 Pages)
7. Aerial Image of the Facility (1 Page)
8. Photographic Documentation (Photolog and 18 Images) (11 Pages)
9. Manifests (14 Pages)

NOTICE OF PRELIMINARY FINDINGS

FACILITY NAME: TPI IOWA LLC
ADDRESS: 2300 N 33RD AVE E
NEWTON IA 50208
EPA ID NUMBER: IA2000510156 DATE: 3/8/22

NOTICE: I am not an employee of the Environmental Protection Agency ("EPA"). I am a contractor for EPA retained to conduct compliance evaluation inspections. The following is a list of observations/recommendations found during this inspection which will be reported back to EPA. This is not to be construed as a complete list of observations/recommendations. The EPA will be evaluating the report prepared as a result of this inspection and making the determinations as to what violations may have occurred at your facility.

1. FAILURE TO INCLUDE ALL WASTE CODES ON MANIFEST
FOR WASTE ACETONE (40 CFR 262.20(a))
2. FAILURE TO INCLUDE CORRECT WASTE CODES ON LDR
NOTIFICATION FOR WASTE ACETONE (40 CFR 262.17(a)(4) → 265.7(a)(2))
3. FAILURE TO LABEL CONTAINER OF USED OIL AS
"USED OIL" (40 CFR 279.22(c)(1))
4. _____
5. _____
6. _____
7. _____

If you have any questions regarding these findings please contact TREVOR URBAN, EPA REGION 7

The undersigned person hereby acknowledges receipt of a copy of this document and has read the same.

PRINTED NAME: Aaron Hudgins TITLE: Safety Coordinator
SIGNATURE: Aaron Hudgins

This document was prepared by HEATHER K WOOD