

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

VALMONT COATINGS-SIOUXLAND GALVANIZING

2301 Bridgeport Drive
Sioux City, Iowa 51111

EPA ID Number: IAD981504780

On

April 27, 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 Valmont Coatings-Siouxland Galvanizing (VCSG) at 2301 Bridgeport Drive in Sioux City, 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

VCSG:

Robert Paulsen, General Manager
Jason Hansen, Operations Manager
Dale Eberly, Shipping and Receiving Manager
Paul Treetop, Safety Coordinator

Toeroek Team:

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

INSPECTION PROCEDURES

Prior to the CEI at VCSG on April 27, 2022, I conducted a drive-by inspection. I did not observe any areas of concern during the drive-by. Upon my arrival at 8:30 a.m., I entered the visitor's entrance and explained the purpose of the CEI to the office manager. She contacted Mr. Paulsen, who met me at the entrance. I introduced myself to Mr. Paulsen and explained the purpose of the CEI to him. Mr. Paulsen escorted me to an office trailer just outside the building, where we were joined by Mr. Eberly and Mr. Hansen. I conducted an entry briefing there.

During the entry briefing, I presented my business card and EPA credentials to the group. 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 them 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, they would be presented with a Confidentiality Notice (Notice) with which the facility could make or not make a claim of confidentiality for the facility. I also provided them 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.

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
- Industry Sector Notebooks
- Environmental Compliance Assistance Centers
- RCRA Online: A Quick Reference Guide
- EPA Region 7 Emergency Response Program
- Security Awareness
- Chemical Facility Anti-Terrorism Standards

I reviewed the Hazardous Waste Site Info Verification Report (Verification Report) with Mr. Paulsen (Attachment 1). Based on this review and observations during the CEI, I updated the facility and operator name; added used oil generator to the Type(s) of Regulated Activity section of the report; and added the D001 and D035 hazardous waste codes. I reviewed the facility's 2021 Biennial Report during the inspection.

I conducted the visual inspection of the facility, accompanied by Mr. Paulsen, Mr. Eberly, and Mr. Hansen. I reviewed available facility records, including manifests with land disposal restriction (LDR) notifications, waste profile and analytical testing records, safety data sheets (SDS), inspection records, 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 Mr. Paulsen, Mr. Eberly, and Mr. Hansen. During the exit briefing, I provided a Receipt for Documents and Samples, which Mr. Paulsen signed, acknowledging receipt (Attachment 3). I provided Mr. Paulsen the Notice, which he signed indicating no confidential business information had been provided (Attachment 4). I provided Mr. Paulsen 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 RCRA contingency plan (Attachment 6, Page 3). An aerial photograph of the facility was downloaded after the CEI and is included in Attachment 7. The 15 photographs taken during the CEI are included in Attachment 8.

FINDINGS AND OBSERVATIONS

1. Facility Description and General Information

VCSG coats steel parts (for example, wire, pipes, hardware, and structural assemblies) using a hot-dip galvanizing process. Major raw materials used by the facility include hydrochloric acid, zinc ammonium chloride flux, zinc, and steel.

The facility began operations at this location in 1981. Mr. Paulsen stated that the facility runs one manufacturing shift, Monday through Friday, from 7:00 a.m. to 3:30 p.m. VCSG currently has approximately 20 employees. Based on my review of aerial photographs, the VCSG facility consists of a single, approximately 9,000-square-foot building on an approximately 5-acre lot.

Galvanizing of steel is a multi-step process (Attachment 8, Photographs 1-3 and 12). First, the steel surface is prepared by acid pickling and fluxing. Scale and rust are removed from the steel surface by pickling in hydrochloric acid. The steel then goes through a rinse bath to remove excess acid. The next step is fluxing, which removes oxides and prevents further formation of oxides on the surface of the steel prior to galvanizing. The flux also promotes bonding of zinc to steel. VCSG applies a dry flux method of “prefluxing” or dipping the metal in an aqueous solution of zinc ammonium chloride, and then allowing it to dry. After this step, the steel is completely immersed in the zinc “kettle,” a bath of molten zinc kept at temperature of 850°F. After reaching bath temperature, the fabricated items are slowly removed from the bath. Excess zinc is allowed to drain back into the zinc bath, and the galvanized items are air-cooled.

Solid zinc skimmed off the molten zinc is reclaimed at the facility in the metallic zinc recovery unit (MZR) (Attachment 8, Photographs 4 and 5), which generates dry skimmings. Dross from the zinc kettle is removed and accumulated onsite. Both the dross and the dry skimmings are by-products that are then sent for reclamation by secondary zinc recovery. As a result, the facility considers these materials to be exempt from the definition of solid waste per Title 40 *Code of Federal Regulations* (40 CFR) 261.2(c)(3).

Pickling acid and rinse water is changed out approximately every 6 weeks, and the spent acid mixture is pumped directly into a tanker truck for transportation to a disposal or recycling facility. Approximately every 6 months, the pickling and flux tanks are drained, and solids are removed. The tank bottoms are accumulated in 55 gallon containers before transportation for disposal or recycling. The facility also generates a smaller amount of solids and other contaminated debris from general cleanup around the tanks, and this material is consolidated with the tank bottoms. The facility considers both the spent acid and tank bottoms as hazardous waste. According to Mr. Paulsen, VCSG is a zero discharge facility, and the only wastewater discharge is sanitary sewage. Manufacturing operations also generate scrap metal, which is recycled.

Facility and equipment maintenance activities generate scrap metal, as well as used oil managed according to 40 CFR 279. The facility also generates hazardous waste aerosol can residue from puncturing and draining aerosol cans that primarily held paint and lubricants. Mr. Paulsen said that VCSG had replaced all lamps with nonhazardous light-emitting diode (LED) lamps. These are managed by the facility's electrical contractor and are not discussed further in this report. General trash is considered nonhazardous waste by the facility.

On May 9, 2017, an EPA contractor conducted a CEI at VCSG. During the CEI, the inspector did not make any preliminary findings.

2. RCRA Status

Siouxland is identified as a large quantity generator (LQG) on the RCRA Info Data Verification Handler Report provided by EPA (Attachment 1), generating more than 1,000 kilograms (kg) of hazardous waste per month. Based on my review of manifests, the facility's 2021 Biennial Report, and information provided by Mr. Paulsen, Mr. Eberly, and Mr. Hansen, I concluded that the facility generates approximately one 4,200-gallon tanker truck load of spent acid every 6 weeks. This corresponds to a range of approximately 14,000 kg per event to approximately 16,000 kg per event. I inspected the facility as a LQG. VCSG is also a used oil generator.

The facility operates one less-than-90-day hazardous waste container accumulation area (CAA). I observed one satellite accumulation area (SAA) during the inspection.

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. The following discussion of waste streams is based on my interviews with Mr. Paulsen, Mr. Eberly, and Mr. Hansen; the visual inspection; and my review of available documentation.

The visual inspection included the plating line, the MZR area, maintenance areas, and a storage trailer outside the building. I observed one SAA during the visual inspection and did not observe accumulation of more than 55 gallons of hazardous waste in the SAA. Mr. Paulsen, Mr. Eberly, and Mr. Hansen accompanied me throughout the visual inspection. I also spoke with Mr. Treetop during inspection of the MZR area

Spent acid is a liquid waste generated when the facility changes out the pickling and rinse tanks. The facility considers spent acid to be hazardous waste (D002, D006, D007, D008) based on process and product knowledge and analysis. Mr. Paulsen said that the metals are derived from trace metals in the raw materials. Because the facility is not in the iron and steel industry (Standard Industrial Classification Codes 331 and 332), the K062 listing for spent pickle liquor does not apply.

Based on my review of manifests, the facility generates approximately one 4,200-gallon tanker truck load of spent acid every 6 weeks. This corresponds to a range of approximately 14,000 kg per event to approximately 16,000 kg per event, assuming 8 pounds per gallon of waste. The waste is pumped directly from the tanks into tanker trucks and transported to Vickery Environmental in Vickery, Ohio, for disposal by underground injection. It was most recently collected on February 11, 2022 (Attachment 9, Page 3). No spent acid was in accumulation at the time of the inspection. I did not identify any deficiencies related to the spent acid.

Tank bottoms are generated from a regular tank maintenance event that happens approximately every 6 months to a year and from cleanup around the tanks during operation. The facility considers this hazardous waste (D002, D007, D008, D010) based on process and product knowledge and analysis. Based on my review of manifests, the facility generates approximately 2,000 pounds of tank bottoms per cleanout event, or approximately 900 kg. The waste is transported to Tradebe Treatment and Recycling in East Chicago, Indiana, for bulking. It was most recently collected on March 11, 2021 (Attachment 9, Page 2).

I observed four full 55-gallon hazardous waste accumulation containers (HWAC) of tank bottoms in the HWCAA in the MZR area. The containers were in good condition and closed. They were labeled as “hazardous waste” and as corrosive waste (Attachment 8, Photograph 8). All four containers were marked with an accumulation start date of February 28, 2022.

I did not identify any deficiencies related to tank bottoms.

Scrap metal consists of scrap steel from manufacturing, as well as scrap steel from facility and equipment maintenance and empty aerosol cans. Scrap metal is accumulated in a 20-cubic-yard, roll-off container outside the building. I did not determine the generation rate for scrap metal during the inspection. Scrap metal is considered exempt from the definition of solid waste per 40 CFR 261.1(c)(9) and 261.4(a)(13), and is collected by Compressed Steel of Sioux City, Iowa, for recycling. I did not identify any deficiencies related to scrap metal.

Dry skimmings are the residue generated during the MZR process. Although this by-product might be characteristic hazardous waste, the facility considers it exempt from the definition of solid waste per 40 CFR 261.2(c)(3). The dry skimmings are sent for reclamation by secondary zinc recovery to U.S. Zinc in Houston, Texas. A SDS for the material is included as Attachment 10. Mr. Paulsen estimated that the facility filled approximately five 55-gallon containers (drums) with dry skimmings every 2 months. During the inspection, I observed seven full and one half-full drums of dry skimmings in the MZR area (Attachment 8, Photographs 6, 7 and 9). I did not identify any deficiencies related to dry skimmings.

Dross is collected from the surface of the molten zinc and from the bottom of the zinc kettle. Although this by-product might be characteristic hazardous waste, the facility considers it exempt from the definition of solid waste per 40 CFR 261.2(c)(3). The dross is formed into blocks at the facility, then sent for reclamation by secondary zinc recovery to U.S. Zinc in Houston, Texas. A SDS for the material is included as Attachment 11. Mr. Paulsen estimated that the facility generates approximately 3,000 to 4,000 pounds of dross per month. During the inspection, I observed five blocks of dross, each marked with its weight (Attachment 8, Photograph 10). I did not identify any deficiencies related to dross.

Used oil is generated from maintenance of facility equipment. Used oil is managed according to the requirements of 40 CFR 279. Mr. Paulsen estimated that the facility generates less than 55 gallons of used oil per year. It is collected by Jebro Inc., of Sioux City, Iowa, for recycling or taken to Jebro by VCSG in quantities of less than 55 gallons. Jebro is across S. Patton Street and adjacent to the VCSG facility. Mr. Paulsen was unable to find a recent bill of lading or receipt from Jebro.

I observed a 55-gallon used oil storage container in a storage container outside the building (Attachment 8, Photograph 11). The container was in good condition and labeled as “used oil.” I did not determine how full the container was during the inspection.

I did not identify any deficiencies related to used oil.

Aerosol can residue is generated from puncturing and draining aerosol cans that hold primarily paint and lubricant. The facility considers this waste to be characteristically hazardous (D001, D035) based on product and process knowledge. Mr. Paulsen estimated that the facility generates less than 55 gallons of this waste every 2 years. It is transported to Clean Harbors in El Dorado, Arkansas, for incineration, and it was last collected on January 16, 2020 (Attachment 9, Page 1).

During the inspection, I observed a half-full 55-gallon SAA for aerosol can residue (Attachment 8, Photographs 13-15). The container had an attached can punch. It was closed and in good condition. The container was labeled as “hazardous waste” and as Class 3 flammable liquid.

I did not identify any deficiencies related to aerosol can residue.

General trash is generated during facility maintenance and manufacturing. The facility has determined that general trash is nonhazardous, based on product and process knowledge. Mr. Paulsen said that waste is collected by Lindblom Services. Mr. Paulsen presumed its destination as the Sioux City Transfer Station in Sioux City, Iowa.

4. Required Response Equipment and Hazard Management

Per 40 CFR 262.15(a)(8) and 262.17(a)(6), a LQG must operate to minimize the possibility of a fire, explosion, or spill, and must maintain emergency response equipment. During the visual inspection of the HWCAA and SAA, I observed telephones for summoning emergency assistance if needed. I observed emergency response materials and spill kit adjacent to the picking lines and brooms in the MZR area. A fire extinguisher was adjacent to the exit door from

the MZR area. I did not observe any deficiencies related to emergency response equipment during the inspection.

5. HWCAA

The facility maintains a central HWCAA in the MZR area. During the inspection, I observed four full 55-gallon HWACs of tank bottoms. The container were closed, dated (all February 28, 2022), in good condition, and appropriately labeled.

According to Mr. Paulsen, the HWCAA is inspected weekly by Mr. Eberly or Mr. Treetop. I reviewed the weekly inspection logs for the previous year and did not observe any gaps of longer than 1 week.

I did not observe any deficiencies in the HWCAA.

6. Manifests and Biennial Report

During the CEI, I reviewed the approximately 40 manifests and LDR notifications generated in the previous three years. Copies of a selection of manifests are included in Attachment 9. The Hazardous Waste Biennial Report for 2021 was submitted in February 2022, and a copy is maintained at the facility. I did not observe any deficiencies related to manifests or the Biennial Report during the inspection.

7. Preparedness and Prevention and Contingency Plan

LQG facilities are required by 40 CFR 262.17(a)(6) to meet the emergency preparedness, prevention, and procedures requirements outlined in 40 CFR 262 Subpart M, including preparation of a RCRA contingency plan and documented arrangements with response agencies. During the CEI, I reviewed the facility's emergency action plan, which is the RCRA contingency plan (Attachment 6).

Based on the RCRA contingency plan, the facility has designated a primary emergency coordinator (EC), with alternates assuming responsibility in a predetermined order (Attachment 6, Page 2). According to Mr. Paulsen, these ECs and their contact information is up to date.

During my review, I observed that the plan had most recently been updated in January 2021. According to Mr. Paulsen, the first three pages of the contingency plan constitute the quick reference guide (QRG). Based on my review, only the map with the location of the hazardous wastes and the list of ECs were included. The remaining QRG elements were not included. I concluded that the facility had failed to include all elements of the QRG in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.262(b)(1-3, 5-7) (**NOPF No. 1**). I provided compliance assistance regarding the QRG.

During my review, I observed that the contingency plan included a map showing the location of the emergency response equipment (Attachment 6, Page 3), but not a description of the equipment capabilities. I concluded that the facility had failed to describe the capabilities of the

response equipment in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.261(e) (**NOPF No. 2**). I also observed that the contingency plan did not include a description of the specific procedures to respond to explosions. I concluded that the facility had failed to include description of response to explosions in the contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.261(a) (**NOPF No. 3**). I provided compliance assistance regarding contingency plan contents.

I did not observe any other deficiencies regarding the facility's RCRA contingency plan or preparedness and prevention program.

8. Personnel Training Requirements

Personnel training is required by LQG regulations specified in 40 CFR 262.17(a)(7) to ensure that employees are thoroughly familiar with proper waste handling procedures relevant to their responsibilities. VCSG provides training covering hazardous waste awareness, management, and labeling to all employees who manage hazardous waste. These trainings are provided as part of an employee's initial training and annually thereafter. The job descriptions provided by Mr. Paulsen and included in the training plan included a description of duties, education, skills, and qualifications and a description of the required training (Attachments 12 and 13, respectively).

According to Mr. Paulsen, the training is provided by representatives from Valmont Coatings corporate offices, and the trainer also receives annual RCRA refresher training. I reviewed the training documentation, but I did not see that Mr. Paulsen was included on training logs for 2021 (Attachment 14). Mr. Paulsen said he split his time 50-50 with the Valmont Coatings facility in West Point, Nebraska. He said that he thought that he had completed the training 2021, but that it might have been in Nebraska. He attempted to locate a record of the training at the VCSG facility, but he could not. I concluded that the facility had failed to maintain training records at the facility, as required by 40 CFR 262.17(a)(7)(iv)(D) (**NOPF No. 4**). I provided compliance assistance regarding training documentation.

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

EPA regulations in 40 CFR Part 265, Subparts AA, BB, and CC apply to LQGs. If a 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. VCSG is not subject to the Subpart AA regulations.

If a 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. VCSG is not 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 (aerosol can

residue). The Subpart CC standards are applicable at VCSG because the facility accumulates hazardous waste that contains VOCs in containers larger than 26 gallons in capacity (aerosol can residue). During the CEI, I determined that 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). I did not observe any deficiencies related to the Subpart CC air emissions requirements during the inspection.

10. Summary of Preliminary Findings

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

1. Failure to include all elements of the QRG in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.262(b)(1-3, 5-7) (**NOPF No. 1**).
2. Failure to describe the capabilities of the response equipment in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.261(e) (**NOPF No. 2**).
3. Failure to include description of response to explosions in the RCRA contingency plan, as required by 40 CFR 262.17(a)(6) referencing 262.261(a) (**NOPF No. 3**).
4. Failure to maintain training records at the facility, as required by 40 CFR 262.17(a)(7)(iv)(D) (**NOPF No. 4**).

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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Date: _____

Amber Whisnant
Section Chief, ECAD/CB/RCRA

Attachments:

1. Hazardous Waste Site Info Verification Report (1 Page)
2. Data Gathering Worksheets and Checklists (25 Pages)
3. Receipt for Documents and Samples (1 Page)
4. Confidentiality Notice (1 Page)
5. Notice of Preliminary Findings (1 Page)
6. Emergency Plan and Response Emails (17 Pages)
7. Aerial Image of the Facility (1 Page)
8. Photographic Documentation (Photolog and 15 Images) (10 Pages)
9. Manifests (3 Pages)
10. SDS for Dry Skimmings (6 Pages)
11. SDS for Dross (6 Pages)
12. Training Plan (2 Pages)
13. Job Description (4 Pages)
14. Training Log (3 Pages)

NOTICE OF PRELIMINARY FINDINGS

FACILITY NAME: VALMONT COATINGS - SIOUXLAND GALVANIZING
ADDRESS: 2301 BRIDGEPORT DR
SIOUX CITY IA 51111
EPA ID NUMBER: 1AD981504780 DATE: 4/27/22

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 ELEMENTS OF QUICK REFERENCE GUIDE (40 CFR 262.17(a)(6) → 262.262(b)(1-3, 5-7))
2. FAILURE TO DESCRIBE CAPABILITIES OF RESPONSE EQUIPMENT IN CONTINGENCY PLAN (40 CFR 262.17(a)(6) → 262.261(e))
3. FAILURE TO DESCRIBE RESPONSE TO EXPLOSIONS IN CONTINGENCY PLAN (40 CFR 262.17(a)(6) → 262.261(a))
4. HW FAILURE TO MAINTAIN TRAINING RECORDS AT FACILITY (40 CFR 262.17(a)(7)(iv)(D))
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: ROBERT L. PAULSEN TITLE: GM

SIGNATURE: Robert L. Paulsen

This document was prepared by HEATHER K. WOOD