

RCRA Inspection Report

1) Inspector and Author of Report

William Kappler
Physical Scientist
RCRA Enforcement Section
Phone: (404) 562-8498
kappler.william@epa.gov

U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

2) Facility Information

Signal Plating, Inc. TND063778377
1608 Camden Street
Chattanooga, Hamilton County, Tennessee 37406

3) Responsible Official

Scott Nowell (423) 624-0558
Owner snowell@signalplating.com

4) Inspection Participants

Cullen Nowell, Signal Plating, Inc.
Robert Barnes, Signal Plating, Inc.
Jim Metz, Signal Plating, Inc.
Lisa Hutchings, Tennessee Department of Environment and Conservation
Harry McCann, Tennessee Department of Environment and Conservation
William Kappler, U. S. Environmental Protection Agency, Region 4

5) Date of Inspection

May 23, 2023

6) Applicable Regulations¹

RCRA Sections 3005 and 3007; 40 Code of Federal Regulations (C.F.R.) Parts 260-266, 268, 270, 273, and 279; Tennessee Hazardous Waste Management Act (THWMA), Tennessee Code Annotated (T.C.A.) 68-212 part 1 & 3 and the Used Oil Collection Act of 1993, T.C.A. 68-21; the Tennessee Hazardous Waste Management Regulations, Tennessee Rule Chapter 0400-12-01.

¹ As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.01(2)(a) [40 C.F.R. § 262.10], a very small quantity generator (VSQG) is a generator who generates less than or equal to the following amounts in a calendar month:

- (1) 100 kilograms (220 lbs) of non-acute hazardous waste; and
- (2) 1 kilogram (2.2 lbs) of acute hazardous waste listed in § 261.31 or § 261.33(e) of this chapter; and
- (3) 100 kilograms (220 lbs) of any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste listed in § 261.31 or § 261.33(e) of this chapter.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.01(2)(a) [40 C.F.R. § 262.10], a large quantity generator (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2200 lbs) of non-acute hazardous waste in a calendar month.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h) [40 C.F.R. § 262.17], a LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 68-212-108 of the THWMA, Tenn. Code Ann. § 68-212-108 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Rule 0400-12-01-.03(1)(h) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1. [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by Section 68-212-108 of the THWMA, Tenn. Code Ann. § 68-212-108 [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Rule 0400-12-01-.03(1)(g)2. or (h)1. [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in Rule 0400-12-01-.03(1)(f)1.(vii and viii) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area (SAA) conditions listed in Rule 0400-12-01-.03(1)(f)1. [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(1)(i) [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) is a universal waste handler who accumulates less than 5,000 kilograms total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of this inspection was for the U.S. Environmental Protection Agency, Region 4, and the Tennessee Department of Environment and Conservation to conduct a joint unannounced compliance evaluation inspection (CEI) at Signal Plating, Inc., (hereinafter, “Signal” or the “facility”) to determine compliance with the applicable requirements of the Resource Conservation and Recovery Act (RCRA) and the corresponding Tennessee Department of Environment and Conservation (TDEC) regulations. This was an EPA lead inspection.

8) **Facility Description**

Signal is located at 1608 Camden Street, Chattanooga, Hamilton County, Tennessee, Latitude 35.057572, and Longitude -85.267227. The facility has been at its present location since 1974 and consists of approximately 2.5 acres of property. The facility employs approximately 25 people and operates Monday through Friday from 6:00 a.m. to 2:30 p.m. The facility consists of one building with approximately 90,000 square feet under roof. The City of Chattanooga provides potable water and sanitary sewer services. Signal Plating utilizes two production wells to provide water for the plating operation at the facility. The primary NAICS code for the facility is 332813, Electroplating, Plating, Polishing, Anodizing and Coloring.

Lookout Plating, Inc., (TND990652398) which operated a zinc plating line and a shot blast cabinet (aluminum oxide shot blast) in a separate area of the building merged with Signal in 2013.

Signal performs polishing and electroplating of metal furniture parts and stove parts. Signal primarily conducts nickel/chromium rack plating and zinc barrel and zinc rack plating on carbon steel. Signal does not process stainless steel and aluminum parts. The main plating line is primarily for nickel and chromium (trivalent chromium) rack plating. Hexavalent chrome is no longer used as a bright dip in the plating line. Process filters are used on the nickel/chromium rack line and on the zinc rack line to remove solids. Spent cleaning bath solutions and spent acid bath solutions from the nickel/chromium rack line and rinse water from the zinc barrel line are treated prior to discharging to the publicly owned treatment works (POTW). Rinse water generated from the nickel/chromium rack line and zinc rack line is discharged directly to the POTW. Signal indicated to inspectors that nickel is the primary metal in the nickel/chromium rack line.

The nickel/chromium and zinc plating lines generate F009 wastewater that is treated in two separate wastewater treatment systems (WWT). The wastewater in each WWT is pH adjusted and/or coagulated, mixed, flocculated, settled or blended, clarified and pH adjusted, prior to its discharge via a permitted discharge point to the City of Chattanooga POTW. Solids removed from the clarifiers are accumulated in separate holding tanks and filtered in a separate plate and frame press. The press filtrate is returned to the WWT process. The nickel/chromium filter press solid and process filter solid (rack line) are shipped as nonhazardous waste to World Resources Company (WRC) in Pottsville, Pennsylvania for metal recovery as a nickel concentrate for the smelting industry.

The zinc filter press solid (barrel line) and process filter solid (rack line) are shipped as nonhazardous waste for solidification.

The facility generates hazardous waste and nonhazardous waste that is accumulated in containers at the point of generation for shipment to a designated facility.

On or about March 2022 Signal decommissioned the brass rack and bronze rack plating tanks generating approximately 18,289 pounds of waste cyanide solutions (D003, F007) and 915 pounds of off-specification and out-of-date cyanide or metal cyanide solids (D003, F007, P029, P074, P106, P121). Signal shipped the hazardous waste on March 14, 2022.

On March 28, 2022 Signal shipped approximately 14,016 pounds of waste cyanide solutions (D003, F007) and 16,789 pounds of waste cyanide inorganic solids (D003, F007) generated from the decommissioned brass and bronze rack plating lines.

Waste nickel/chromium filter press and process filter solid are transported by Freehold Cartage (NJD084126164) to WRC (PAD981038227). Waste zinc filter press and process filter solid are transported by Mount Pleasant Transfer, Inc., to American Environmental Services, LLC (AES) facility in Chatsworth, GA. Universal waste lamps are shipped to Electrical Technology Recycling.

Signal's most recent hazardous waste site identification form (EPA Form 8700-12) dated February 23, 2021, characterized the facility as a VSQG of hazardous waste and a wastewater generator.

The City of Chattanooga Department of Public Works issued Signal a wastewater discharge permit (Permit No. 0264), classified by SIC No. 3471 (40 CFR Part 413.14 PSES) as an existing indirect job shop for the discharge of greater than 10,000 gallons per day of electroplating process wastewater. The permit became effective on June 10, 2022 and it expires on June 10, 2025.

The brass and bronze plating lines are no longer operated. Signal no longer operates the aqueous lacquer dip tank and the lacquer spray booth. The facility is in the process of decommissioning the lacquer process units.

9) Previous Inspection History

Signal was last inspected by TDEC and the EPA on February 3, 1998 for compliance with the RCRA regulations.

The inspectors did not observe any issues at the time of the inspection but provided comments and recommendation related to; containers accumulating used oil should be labeled "used oil", the chromium filter cake waste should occasionally be analyzed for hexavalent chromium, to adequately document that the filter press solids (solids) meet the three (3) factors for the trivalent chromium exclusion cited in Rule 1200-1-1 l-.02(l)(d)2.(v) [40 C.F.R. 261.4(b)6)(I)(A-C)], the lacquer spray booth filters should have special waste approval if the facility chooses to dispose of the paint booth filters at the landfill. Also, a copy of the handbook titled "Understanding the Hazardous Waste Rules" and a "Pollution Prevention" brochure was provided to the facility.

10) Opening Conference

On May 23, 2023, the EPA inspector William Kappler, accompanied by TDEC inspectors Lisa Hutchings and Harry McCann, arrived at Signal at approximately 8:50 a.m. The inspectors were received by Cullen Nowell, Engineering, Quoting and Robert Barnes, Plant Manager (Signal representatives). The inspectors were escorted to a conference room for an opening conference. The inspectors introduced themselves, showed their credentials and explained the purpose of the visit.

The inspectors described the anticipated use of a digital camera during the inspection and provided a written list of the records needed for review. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>. The EPA inspector also discussed the company's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information provided to the EPA. Signal did not assert a business confidentiality claim.

Signal provided an overview of the facility's history and current operations during the opening conference. The inspection participants also discussed health and safety protocols and required personal protective equipment before Signal representatives escorted the inspectors on a tour of the facility operations.

11) Inspection Observations

Warehouse Area

Signal stores chemicals received from chemical manufacturers.

Polishing Area

The polishing operation is conducted in a separate area adjacent to the warehouse area. Metal parts are polished prior to plating or prior to shipment to the customer. Polishing is conducted using a stationary granulated grinder in a vented collection hood and with hand-held grinders. Metal dust is captured in the collection system and accumulated in a container under an exhaust chute (Photograph 1). The inspectors observed two 5-gallon containers accumulating metal dust. Metal pieces are accumulated in a container. Signal representatives indicated the metal dust and metal pieces are disposed as municipal trash. A waste determination was not available for review at the time of the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Ramp Area

The inspectors observed an open cardboard container in this area accumulating packing material and two four-foot fluorescent lamps. The container was not closed, not marked or labeled with the words "universal waste" and not marked with a date (Photograph 2).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(d)4.(i) [40 C.F.R. § 273.13(d)(1)], a SQHUW must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(e)5. [40 C.F.R. § 273.14(e)], a SQHUW must label or mark each lamp or container of lamps clearly with one of the following phrases: “Universal Waste-Lamp(s),” or “Waste Lamp(s),” or “Used Lamps.”

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(f)1. [40 C.F.R. § 273.15(a) and (c)], a SQHUW may accumulate universal waste no longer than one year and must be able to demonstrate the length of time that the universal waste has accumulated from the date that it became a waste or was received. The handler may make this demonstration by following F.A.C. Chapter 62-730.185(1) [40 C.F.R. § 273.15(c)(1-6).

Racking Area

The metal part is secured on a metal rack for plating.

Blast Cabinet Area

Aluminum oxide blast media is used on the metal parts inside the blast cabinet. The cabinet's baghouse behind the cabinet is shaken when full and the blast media is accumulated in a container. The inspectors observed an open 5-gallon container under the blast cabinet and a 55-gallon container behind the blast cabinet accumulating spent blast media. The inspectors observed blast media on the floor surrounding the blast cabinet (Photographs 3 and 4). A waste determination was not available for review at the time of the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Nickel/Chromium Plating Line

Process tanks for this plating line range from 200-gallons to 4,000-gallons. The metal part is secured on a rack and dipped in concentrated baths of sealant, soap solution, various cleaners, acid solution, chromium solution, and nickel solution to plate the metal part. Single and double rinse baths are used after each chemical application. The concentrated chemical baths are switched from latest concentrated bath to earliest concentrated bath and replenished with new water and chemical on a rotating cycle. The nickel/chromium chemical baths are each filtered through five process filters using a chemical to precipitate the solids in the filter. Waste process filter solid is generated from the process filters approximately one time per month and accumulated with the wastewater treatment filter press solid. The inspectors explained that a representative sample of the filter press solid and process filter solid should be laboratory tested. Signal representatives indicated the rinse baths are discharged directly to the POTW. Chemical spill and residue accumulated under the process baths in the secondary containment is pumped to the wastewater treatment line. Chemical solid accumulated on the process bath is reused in the plating line. A waste determination on the process filter solid generated in the nickel/chromium rack line was not available for review at the time of the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2],

must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Nickel/Chromium Wastewater Treatment System

The treatment system consists of several treatment and holding tanks to process the wastewater. The rinse water generated from the rinse bath is discharged directly to the POTW. The cleaners and acid solutions are discharged to a holding sump and pumped to a tank for pH adjustment and coagulation. The wastewater is next mixed in a tank, flocculated, settled in a tank, and pumped to a clarifier. Solids accumulated in the bottom of the clarifier are pumped to the settling tank. The clarified wastewater is then discharged to a holding tank for pH adjustment and then discharged to the POTW. Waste solids are pumped from the settling tank to a plate and frame filter press. Press filtrate is returned to the treatment system for treatment. The inspectors observed filter press solid was accumulating in a container under the filter press. The inspectors observed the container was not closed and not marked or labeled (Photograph 5). The filter press solid is shipped quarterly. Signal representatives indicated the nickel/chromium filter press solid is nonhazardous waste.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Zinc Rack Plating Line

Process tanks in this plating line range from 500-gallons to 4,000-gallons. The metal part is secured on a rack and dipped in concentrated baths of chromate solution, zinc solution, acid solution and various cleaners to plate the metal part. Single and double rinse baths are used after each chemical application. The concentrated chemical baths are replenished with new water and chemical on a rotating cycle. The zinc chemical bath for the rack line is separately processed through a process filter to remove the solids. Waste process filter solid is generated from the rack line process filter approximately one time per month and accumulated with the zinc barrel line filter press solid. The inspectors explained that a representative sample of the filter press solid and process filter solid should be laboratory tested. Chemical spill and residue accumulated under the process baths in the secondary containment is pumped to the wastewater treatment line. Chemical solid accumulated on the process bath is reused in the plating line. A waste determination on the process filter solid generated in the zinc rack line was not available for review at the time of the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Zinc Barrel Plating Line: The process for zinc barrel plating is the same as the zinc rack plating except that barrel plating is a bulk process used for small parts. The zinc barrel plating line also

includes a separate wastewater treatment.

Zinc Wastewater Treatment System

The treatment system consists of several treatment and holding tanks to process the wastewater from the barrel line rinse baths. The rinse water generated from the zinc rack line rinse bath is discharge directly to the POTW. The wastewater from the barrel line is discharged to a holding sump and then pumped to a tank for pH adjustment. The wastewater is next flocculated, mixed in a tank and then discharged to a clarifier. The clarified wastewater is then discharged to the POTW. Waste solids accumulated in the bottom of the clarifier are pumped to a plate and frame filter press. Press filtrate is returned to the treatment system for treatment. The filter press solid is accumulated in a container. The inspectors observed filter press solid was accumulating in a container under the filter press. The inspectors observed the container was not closed, not in good condition and not marked or labeled. The inspectors observed filter press solid on the floor under the container (Photographs 6 and 7). The filter press solid is shipped quarterly. Signal representatives indicated the zinc filter press solid generated from treating barrel line wastewater is nonhazardous waste.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in TN Rule 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must use the steps articulated in TN Rule 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

The inspectors observed one closed container accumulating four-foot fluorescent lamps in this area. The container was not marked or labeled with the words “universal waste” and not marked with a date. Signal subsequently consolidated the two lamps observed in the ramp area with lamps in this container. Signal representatives marked the container with the words “universal waste lamps” and marked the container with the date December 19, 2022 (Photographs 8 and 9).

Laboratory

The laboratory conducts percent concentration of chemical solutions in the plating baths, specific gravity and chemical titrations. Acids and caustics are used in the test methods. Process tank samples and corrosive waste is recycled back to the plating baths. The inspectors observed several containers of acid and caustic laboratory chemical products stored in cabinets. Signal representatives indicated they are preparing to determine shelf life and out of specification chemicals for possible reuse and for shipment to a designated facility.

Basement Area

The permitted discharge point to the City of Chattanooga POTW is in the basement. The inspectors observed the wastewater is discharged over a weir into a concrete basin that is connected to the POTW (Photograph 10).

Maintenance Shop

The maintenance shop is in the basement. The inspectors observed a 5-gallon container accumulating used oil. The container was not closed and not marked or labeled with the words “used oil”. Signal closed the container and marked it with the words “used oil” (Photograph 15).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.11(3)(i) [40 C.F.R. § 279.22(c)(1)], containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words “Used Oil.”

The inspectors observed several four-foot fluorescent lamps accumulating in five containers. The containers were not closed, not marked, or labeled with the words “universal waste” and not marked with a date (Photographs 11 and 12).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(d)4(i)(I) [40 C.F.R. § 273.13(d)(1)], a SQHUW must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(e)5 [40 C.F.R. § 273.14(e)], a SQHUW must label or mark each lamp or container of lamps clearly with one of the following phrases: “Universal Waste-Lamp(s),” or “Waste Lamp(s),” or “Used Lamps.”

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(f)1. [40 C.F.R. § 273.15(a) and (c)], a SQHUW may accumulate universal waste no longer than one year and must to be able to demonstrate the length of time that the universal waste has accumulated from the date that it became a waste or was received. The handler may make this demonstration by following F.A.C. Chapter 62-730.185(1) [40 C.F.R. § 273.15(c)(1-6).

The inspectors also observed broken fluorescent lamps accumulating on the floor next to the five containers of fluorescent lamps (Photographs 11 and 12). Signal cleaned up the broken lamps prior to the inspectors leaving the facility.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(d)4(i)(I) [40 C.F.R. § 273.13(d)(2)], a SQHUW must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

The inspectors also observed various size containers of chemical material consisting of hydraulic oil, paint, solvent, roofing material, and other chemical compounds. Signal representatives indicated the materials could be used. The inspectors discussed that Signal should audit the chemical material to determine usable and unusable material and conduct a waste determination on the unusable chemical material.

The inspectors returned to the maintenance shop after the record review. The inspectors observed the waste lamps were accumulated in two four-foot containers. The inspectors observed the containers were closed, marked with the words “universal waste lamps” and one container

marked with the date December 3, 2023 and the other container marked with the date December 5, 2023 (Photograph 13). The inspectors observed Signal representatives responded to the release of broken lamps (Photograph 14). The broken lamps were accumulated in a closed container.

Record Review

RCRA Notification

Inspectors observed Signal did not notify TDEC of the hazardous waste cyanide solutions (D003, F007), hazardous waste cyanide inorganic solids (D003, F007) and off-specification and out-of-date cyanide or metal cyanide solids (D003, F007, P029, P074, P106, P121).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(2)(d)1.(i)(IV), small and large quantity generators shall be responsible for maintain an up-to-date notification file by:

(i) Re-notifying the Commissioner of the following changes in the information submitted within 30 days after such changes by revising or submitting the appropriate notification forms, completed according to the instructions for completing the form:

(IV) Generating a new hazardous waste stream.

Manifests

The hazardous waste manifests and land disposal restriction notifications were reviewed. The nonhazardous waste manifests, universal waste and used oil records from 2019 to 2023 were reviewed.

Signal had two shipments of hazardous waste in 2022 from decommissioning of the brass rack and bronze rack plating lines. The facility generated approximately 18,289 pounds of waste cyanide solutions (D003, F007) and 915 pounds of off-specification and out-of-date cyanide or metal cyanide solids (D003, F007, P029, P074, P106, P121). The hazardous waste was transported by Safeway Industrial Services (ALR000053272) on March 14, 2022 to the designated facility, EQ Detroit, Inc., (MID980991566) on March 15, 2022 (manifest number 016300953 FLE).

The facility also generated 14,016 pounds of waste cyanide solutions (D003, F007) and 16,789 pounds of waste cyanide inorganic solids (D003, F007) from the decommissioned brass and bronze rack plating lines. The hazardous waste was transported by Safeway Industrial Services (ALR000053272) on March 28, 2022 to the designated facility, EQ Detroit, Inc., (MID980991566). The date the designated facility received the hazardous waste was not documented on the manifest (manifest number 016300954 FLE).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1) [40 C.F.R. § 262.42 (a)(2)], a generator of 1,000 kilograms or greater of hazardous waste in a calendar month, or greater than 1 kg of acute hazardous waste listed in § 261.31 or § 261.33(e) in a calendar month, must submit an Exception Report to the EPA Regional Administrator for the Region in which the generator is located if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The Exception Report must include:

A legible copy of the manifest for which the generator does not have confirmation of delivery and a cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

Signal did not determine its generator category and comply with the independent requirements.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(d) [40 C.F.R. § 262.10(a)(1)(i)(B)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(1) [40 C.F.R. § 262.13(a)(1-3) and is a condition of the VSQG Independent Requirements, generators of either acute hazardous waste or non-acute hazardous waste. A generator who either generates acute hazardous waste or non-acute hazardous waste in a calendar month shall determine its generator category for that month by doing the following:

- (1) Counting the total amount of hazardous waste generated in the calendar month;**
- (2) Subtracting from the total any amounts of waste exempt from counting as described in paragraphs (c) and (d) of this section; and**
- (3) Determining the resulting generator category for the hazardous waste generated using Table 1 of this section.**

The EPA inspector reviewed one hazardous waste manifest from the EPA's E-Manifest Record System for March 28, 2022.

Universal Waste

The inspectors reviewed one universal waste receipt for the shipment of 14 four-foot lamps and 68 five-foot or greater lamps to Electrical Technology Recycling dated March 3, 2008.

Universal Waste Training

It appears the facility did not train employees on universal waste handling and emergency procedures.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(2)(g) [40 C.F.R. § 273.16], a SQHUW must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

Waste Determination/Profiles/Safety Data Sheets (SDS)

The inspectors reviewed the waste profile record for the nickel/chromium filter press solid mixed with process filter solid dated June 1, 2019. The inspectors reviewed the waste profile number 571D record for the zinc sludge dated December 19, 2014. The inspectors reviewed the waste profile number 22-3616 record for the zinc wastewater filter press cake dated November 30, 2022.

The inspectors reviewed the waste profile number A225054DET for the waste cyanide solutions (D003, F007) and the waste profile number A225222DET for the off-specification and out-of-date cyanide or metal cyanide solids (D003, F007, P029, P074, P106, P121).

SDSs for CRC aerosol products QD Contact Cleaner, for Welder's Anti-Spatter, for 3M aerosol product Hi-Strength Adhesive 90 and for aluminium oxide blast media were reviewed.

Weekly Container Inspections

The weekly container inspections were not available for review at the time of the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(V) [40 C.F.R. § 262.17(a)(1)(v)], which is a condition of the LQG Permit Exemption, a generator is required to, at least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors.

RCRA Personnel Training Records

The training records were not available for review at the time of the inspection. It appears Signal did not develop a hazardous waste training program.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vii) [40 C.F.R. § 262.17(a)(7)], which is a condition of the LQG Permit Exemption, facility personnel must successfully complete a program of classroom instruction, online training (e.g., computer-based or electronic), or on-the-job training that teaches them to perform their duties in a way that ensures compliance with this part. The large quantity generator must ensure that this program includes all the elements described in the document required under paragraph (a)(7)(iv) of this section.

Annual Reports

The annual reports were not available for review at the time of the inspection. It appears Signal did not submit an annual report for 2021 or 2022.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(5)(b)1. a generator who is a large or small quantity generator for at least one month of the calendar year who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States must complete and submit an annual report to the Commissioner by March 1 for the preceding calendar year. Such report must be submitted on forms provided by the Commissioner, and the form must be completed according to the instructions accompanying it.

12) Closing Conference

The inspectors conducted a closing conference with Signal representatives. The inspectors stated their preliminary conclusions of the inspection. Inspectors discussed additional deliverables would be requested.

The EPA inspector in an email dated June 12, 2023, requested Signal submit additional waste determination/waste profile documentation and information on the designated facilities receiving Signal's waste streams. Signal responded with the documentation and information on June 16, 2023.

Comments

Signal should develop a plan for managing the spent aerosol cans.

13) **Sampling Overview**

Sampling was not conducted.

14) **List of Appendices**

Appendix 1 – Photograph Log:
Photos taken on: May 23, 2023
Photos taken by: William Kappler
Samsung Camera (Model WB250F)
EPA Property Tag# S75917

15) **Signed**

WILLIAM KAPPLER

William Kappler
Physical Scientist

Digitally signed by WILLIAM
KAPPLER
Date: 2023.07.11 11:07:02 -04'00'

Date

Concurrence

ARACELI CHAVEZ

Araceli B. Chavez
Chief
RCRA Enforcement Section

Digitally signed by ARACELI
CHAVEZ
Date: 2023.07.12 13:39:35 -04'00'

Date

Signal Plating, Inc
RCRA CEI Photographs



Polishing Area. Inspectors observed metal polishing dust in the container. Photograph 1 taken at 10:00 a.m.



Ramp Area. Inspectors observed two four-foot fluorescent lamps in the container. Photograph 2 taken at 10:06 a.m.



Blast Cabinet Area. Inspectors observed spent blast media in an open 5-gallon container and on the floor. The blast cabinet was not operating. Photograph 3 taken at 10:13 a.m.



Blast Cabinet Area. Inspectors observed spent blast media in an open 5-gallon container and on the floor. Photograph 4 taken at 10:14 a.m.



Nickel/Chromium Wastewater Treatment Line. Inspectors observed nickel/chromium solids generated from the filter press were accumulated in a container. Signal representatives indicated the solids are nonhazardous waste. Photograph 5 taken at 10:51 a.m.



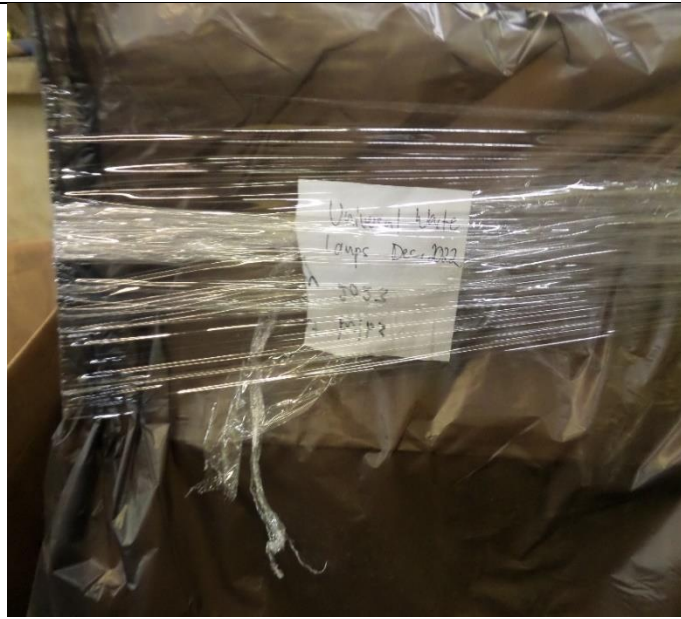
Zinc Wastewater Treatment Line. Inspectors observed zinc solids generated from the filter press were accumulated in a container that was not in good condition. Signal representatives indicated the solids are nonhazardous waste. Photograph 6 taken at 10:57 a.m.



Zinc Wastewater Treatment Line. Inspectors observed zinc solids generated from the filter press were accumulated in a container that was not in good condition. Inspectors observed the release of solids to the floor. Signal representatives indicated the solids are nonhazardous waste. Photograph 7 taken at 10:59 a.m.



Zinc Wastewater Treatment Line. Inspectors observed a container of four-foot universal waste lamps. Signal representatives marked the container with the words "universal waste lamps" and marked the container with the date December 19, 2022. Photograph 8 taken at 11:06 a.m.



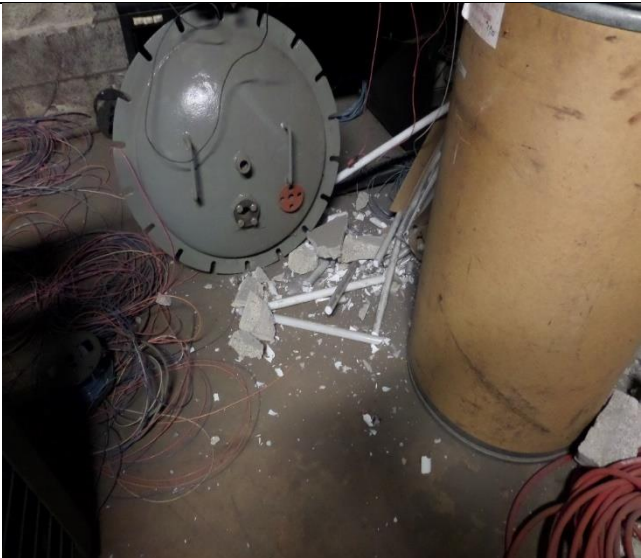
Zinc Wastewater Treatment Line. Inspectors observed a container of four-foot universal waste lamps. Signal representatives marked the container with the words “universal waste lamps” and marked the container with the date December 19, 2022. Consolidated the two lamps from the ramp area to this container. Photograph 9 taken at 11:06 a.m.



Basement. Inspectors observed the treated wastewater is discharged over a weir into a concrete basin that is connected to the POTW. Photograph 10 taken at 11:26 a.m.



Basement. The inspectors observed several containers accumulating fluorescent lamps were not closed, not marked or labeled “universal waste lamps” and not dated. Observed broken lamps on the concrete floor. Photograph 11 taken at 11:33 a.m.



Basement. The inspectors observed several containers accumulating fluorescent lamps were not closed, not marked or labeled “universal waste lamps” and not dated. Observed broken lamps on the concrete floor. Photograph 12 taken at 11:33 a.m.



Basement. The inspectors observed Signal representatives consolidated the fluorescent lamps in closed containers, marked the containers with the words “universal waste lamps” and marked the containers with the date December 3, 2023 or December 5, 2023. Photograph 13 taken at 12:07 p.m.



Basement. The inspectors observed Signal cleaned the release of broken lamps to the concrete floor. Photograph 14 taken at 12:07 p.m.



Basement. The inspectors observed Signal close and mark the container with the words “used oil”. Photograph 15 taken at 2:08 p.m.