U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Purpose: Pretreatment and Industrial Storm Water Compliance Evaluation Inspection

Facility: Hudapack Metal Treating of Illinois, Inc.
550 Mitchell Road
Glendale Heights, IL 60139

NPDES Tracking number: ILP000410

Date of Inspection: June 15, 2022

EPA Representatives:
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State Representative (Illinois Environmental Protection Agency):
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Report Prepared by: Sangsook Choi

Inspector's Signature: Sangsook Choi Digitally signed by Sangsook Choi Date: 2022.08.18 08:27:10 -05'00'

Approver Name and Title: Ryan Bahr, Section 2 Supervisor, Water Enforcement and Compliance Assurance Branch

Approver Signature and Date: Bahr, Ryan Digitally signed by Bahr, Ryan Date: 2022.08.18 10:19:32 -05'00'

INTRODUCTION & FACILITY DESCRIPTION

The purpose of this inspection report is to describe, evaluate, and document compliance with parts of the Clean Water Act (CWA) with respect to Hudapack Metal Treating of Illinois, Inc. located at 550 Mitchell Road in Glendale Heights, Illinois. Hudapack Metal Treating (Hudapack) is involved with heat treating carbon steel alloys 1075, 1050, and 1045 and has a Standard Industry Classification (SIC) Code of 3398 for Metal Heat Treating.

Hudapack Metal Treating of Illinois is a metal "heat treating" facility that heats customer supplied metal parts to varying temperatures for annealing (normal atmosphere), austempering (endothermic atmosphere), and batch tempering (draw furnace with normal atmosphere). The exact temperature and type of heat treatment varies depending on customer specifications, steel alloy type, and the type of part that is being heat treated. Temperatures for any of the above processes can range from 700 F to 1,600 F depending on what stage of the process the metal is physically located. The steel parts that Hudapack heat treats for its clients have melting points ranging from 2200 F to 2800 F, again depending on the alloy type. As Hudapack's heat treating processes never reaches such high melting point temperatures, no phase transformation (solid to a liquid, etc.) takes place in any of its products.

Hudapack has the following units for heat treating operations: 1 Electric Annealing Furnace, 4 Gas Fired Austempering Furnaces, 1 Gas Fired Small Batch Pit Draw Furnace, 2 Salt-to-Salt Electric Process Lines, and Optional Ancillary Processes for 2 Small Electric Spin Centrifuges to Apply/Remove Light Oil from Parts and 1 Small Electric Parts Tumbler to Coat Parts with Rust Inhibitor. See attached descriptions of the Process Units in the Process Block Flow Diagram (Attachment 1).

Austempering is very beneficial in reducing distortion and improving material toughness and has applications in many industries. The austempering process from the Gas Fired Austempering Furnaces and Salt-to-Salt Austempering lines provides low distortion, improved fatigue strength and high toughness (hardness + ductility) which results from the ausferrite microstructure developed in the austempering salt bath. This salt bath austempering system is ideal for long distortion prone parts such as cutting knives and lawn mower blades and hardening of ductile iron.

Hudapack is listed in the Toxic Inventory Release (TRI) database and has a National Pollutant Discharge Elimination System (NPDES) tracking ID ILP000410. Hudapack reported a 2021 Superfund Amendments and Reauthorization Act (SARA) Tier II Chemical Inventory Report dated January 16, 2022. Hudapack is an indirect discharger and discharges to the Glendale Heights WWTP. The Village of Glendale Heights WWTP does not have an approved Pretreatment Program but Special Condition 12 in the NPDES Permit No. IL0028967 identified a Schedule for Developing the POTW Pretreatment Program. The Glendale Heights WWTP is in the process of developing a Pretreatment Program and has started implementing parts of its Pretreatment Program as required per NPDES Permit IL0028967. Currently the Village of Glendale Heights WWTP has issued a Wastewater Discharge Industrial User Permit to

Hudapack as a Non-Categorical User with permit No. 1006-22 with an effective date of July 1, 2022, and an expiration date of June 30, 2025. See attached Hudapack Wastewater Discharge Permit (Attachment 2). The Hudapack Permit requires quarterly monitoring and compliance with the Glendale Heights Local Limits. Glendale Heights determined Hudapack as non-categorical based on the apparent absence of any 40 CFR 433 Metal Finishing core process operations onsite. Heat treating is listed as an ancillary process under 40 CFR 433, but not a core process. Hudapack is considered as a non-categorical industry subject to the General Pretreatment Standards in 40 CFR 403. Hudapack does not have any pretreatment system installed.

The Hudapack facility has an Illinois EPA Permit No. 2014-EE-59204, Permit to Construct and Operate which was issued on October 10, 2014, and expired on September 30, 2019. The Permit identified the discharge of furnace line 1 boiler blowdown, furnace line 2 boiler blowdown, furnace line 3 boiler blowdown, line 1 rust inhibitor, line 1 wash water, line 2 rust inhibitor, line 2 wash and rise water, pre-dip, parts tumbler, and cooling tower blowdown at an average rate of 0.0061 MGD, and a 0.0121 MGD maximum to the Glendale Heights STP. The IEPA Permit stated that contact cooling water may be used as make-up water for the cooling towers, and cooling tower water may be used as contact cooling water. See attached IEPA Permit 2014-EE-59204 (Attachment 3).

Hudapack employees 43 full time employees and operates 24 hours for 7 days a week. Work is all year around. They do shutdown equipment for holidays, and the equipment runs idle. Hudapack has four backflow devices to keep the wastewater from backing up into the clean water. Hudapack's Wastewater Discharge Permit allowed wastewater discharges f 2,500 GPD on average and daily maximum up to 3,500 GPD.

SITE INSPECTION

Opening Conference

At 10 a.m. June 15, 2022, Cheryl Burdett, Linda Wong, and I entered the Hudapack facility to conduct an unannounced compliance evaluation inspection to evaluate compliance with federal pretreatment requirements and any industrial storm water requirements under the Clean Water Act. We showed our credentials to Ms. Fleming, President of Hudapack, and Ms. Guzman, Quality Manager, and explained the purpose of our inspection at the opening conference.

At first, Ms. Fleming wanted to know why Hudapack was targeted for this inspection since the Village of Glendale Heights representatives were also there for an inspection not too long ago. The Village representatives conducted an inspection on May 13, 2022, and the Village of Glendale Heights WWTP manager, Mr. Jeff McCumber provided a copy of the Site Inspection Report to EPA which was prepared by a consultant, Trotter and Associates, Inc.

We explained to Ms. Fleming that EPA implements pretreatment requirements in Illinois and at Industrial Users where the POTW does not have a Federally approved pretreatment program and

that we are required to conduct inspections at selected industrial facilities every year and the Hudapack facility is one of the selected facilities for this year's inspection.

We asked Hudapack to explain the facility's manufacturing operations and wastewater processes, any treatment systems installed, chemicals and raw materials used, and waste handling and disposal practices, and any specific sampling and monitoring requirements. We also asked for a copy of the facility operations and process diagrams. Ms. Guzman provided a Facility Layout & Wastewater Process Diagram and explained its manufacturing operations and its wastewater discharges to the Village of Glendale Heights WWTP. See attached Facility Layout & Wastewater Process Diagram (Attachment 4).

Ms. Guzman explained how their operations generate wastewater discharges. Additional information provided by Ms. Fleming and consultant via follow-up emails after our inspection supported that there are the following four sources of wastewater discharges as shown in the Wastewater Diagram: The Gas Fired Furnace Lines, Salt-to-Salt Lines, Parts Tumbler, and Annealing Line and Cooling Tower.

The Furnace Lines use three successive dip tanks to treat the parts after they have been heated. The first tank is a weak salt solution quench tank. The second tank is a rinse tank for the quench. The third tank is a rust inhibition dip. There are three lines that employ this method. The three lines each cycle water from down process to up process and do the same among the lines from dirtiest to cleanest (the cleanest being the tank where the makeup water is added). Wastewater normally comes from the wasting of the final rust inhibition tank and flows into the floor pit which is then discharged to the POTW through Floor Drain #1 as indicated in the Wastewater Processes Diagram (Wastewater Process 2.0 - 2.3).

The two Salt-to-Salt Lines consist of 3 separate heat treatment tanks each filled with molten salt. The first tank is a high temperature bath, which has chloride salts. The second tank is a quench bath, which has nitrate salts. The third tank is a tempering bath that has nitrate salts. After the molten salt baths, the parts are dipped in a water bath and then a rust inhibitor bath. Both the water baths and the rust inhibitor baths are discharged to the POTW through Floor Drain #2 and #3 as indicated in the Wastewater Processes Diagram (Wastewater Process 3.1 and 3.2).

The facility has a parts tumbler that helps to finish the parts prior to distribution. The parts tumbler contains an aqueous rust inhibitor that is discharged to the POTW through Floor Drain #4 as indicated in the Wastewater Process Diagram (Process 4).

The facility also has a cooling tower associated with its annealing furnace. The cooling tower blowdown water is discharged to POTW by Floor Drain #4 as indicated in the Wastewater Processes Diagram (Wastewater Process 5.1 and 5.2).

Hudapack provided the List of Hazardous Materials which included the followings: 1. Metal Guard 822 for Rust Inhibitor, 2. Neutral Salt Rectifier Pellets, Neutral Salt MB, and Nu-Sal for High-Heat Salt Line, 3. Quick Temper 300-P for Quench Salt Tanks, 4. Perkleen 1346-HL for

Housekeeping, Perkote 40-262 for Rust/Corrosion Inhibitor in Oil Dip and Spray, and Phenolic Powder for Plastic Molding Compound Granules, 5. Rubber and Gasket Adhesive 1300, Rust Veto 4221 for Rust Preventive, Super 77 for Multipurpose Spray Adhesive and Tractor Hydraulic Fluid 303. See attached Hazardous Materials List and Safety Data Sheets (Attachment 5).

EPA discussed before walking through the site if any of the information discussed or that we are going to see would be Confidential Business Information (CBI). Ms. Fleming asked that we don't take pictures of the product for it may considered as CBI.

Facility Walkthrough

We looked at the austempering lines (Photo #1) and the quenching holding tank and rust preventative tank used in this process. Molten salt lines were observed (Photo #2) and we looked at the Generator and the flames that are used to release gas pressure (Photo #3). Then we observed floor drains, a part tumbler and a cooling tower. Hudapack cleans sludge out of rust prevention tanks and they have a company come in to remove the sludge.

Documents Reviewed

- Facility Layout & Wastewater Process Diagram
- Results of 2 samples from laboratory 3/25/2022 transmittal letter
- Sludge Report
- Permit 2022
- The 3rd Quarter 2021 Monitoring and Analytical Sampling Report
- Salt manifests 20 tons

Spill Prevention/Slug Control Plan

A Spill Prevention/Slug Control Plan dated April 2021 described the procedures for identifying potential spill sources, implementing preventative measures, conducting spill response, and notification to authorities. See attached Spill Prevention/Slug Control Plan (Attachment 6).

Waste Handling and Disposal Practice:

Hudapack prepared a Best Management Practices Plan (BMP Plan) that Mr. Earl J. Pack, CEO of the company certified on April 20, 2021, by. The BMP Plan describes all waste materials and hazardous waste handling and disposal practices, use of secondary-containment devices for material storage and handling areas, inventory for pollution prevention plan, and spill prevention practices. See attached BMP Plan (Attachment 7).

Closing Conference

The site inspection was completed at approximately 12:25 PM on June 15, 2022. A brief closing conference was held and the preliminary areas of concern were discussed. EPA discussed Confidential Business Information (CBI) and asked Hudapack to identify if any of the information collected was CBI. Hudapack did not identify any information as CBI.

AREAS OF CONCERN

Analytical Sampling Reports

EPA reviewed the 3rd Quarter 2021 Monitoring and Analytical Sampling Report. The Report indicated that a grab sample was collected at 10:56 am for FOG, Cyanide, Hexa-Chromium, pH, and temperature and that a composite sample was collected at 10:49 am on Sept 29, 2021, for Copper, Lead, Molybdenum, Nickel, Zinc, Mercury, COD, Total Nitrogen, and Nitrate as shown in the Chain-of-Custody Record. The Report is attached as Attachment 8.

40 CFR 403.12(g)(3) requires that grab samples must be collected for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. For all other pollutants (including BOD, TSS, COD, Total Nitrogen, Phosphorus, Mercury, Arsenic, Cadmium, Copper, Lead, Molybdenum, Nickle, Silver and Zinc), 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the Control Authority.

No Exposure Industrial Stormwater Certification

Hudapack stated that the facility did not have any potential to discharge contaminated stormwater within the facility's operations and that it had issues applying forfor a "No-Exposure Certification". Hudapack later applied for a "No Exposure Certification" Renewal Application on July 27, 2022. See attached application (Attachment 9).

Illinois EPA Permit No. 2014-EE-59204

The Permit to Construct and Operate expired on September 30, 2019, and Hudapack is required to submit an application renewal. Hudapack informed EPA via follow-up emails that the permit application will be submitted to Illinois EPA.

LIST OF ATTACHMENTS:

1. Process Block Flow Diagram
2. Wastewater Discharge Permit No. 1006-22
3. IEPA Permit 2014-EE-59204
4. Facility Layout & Wastewater Process Diagram
5. Hazardous Materials List and Safety Data Sheets
6. Spill Prevention/Slug Control Plan dated April 2021
7. Best Management Practices Plan dated April 20, 2021
8. The 3rd Quarter 2021 Monitoring and Analytical Sampling Report
9. No Exposure Certification Renewal Application dated July 27, 2022
10. Photo Log