

RCRA Inspection Report

1) Inspector and Author of Report

Brooke York
Environmental Engineer
york.brooke@epa.gov

U.S. Environmental Protection Agency (EPA)
Region 4
Enforcement and Compliance Assurance Division

Robert Nakamoto
Environmental Engineer
nakamoto.robert@epa.gov

Chemical Safety and Land Enforcement Branch
RCRA Enforcement Section
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

2) Facility Information

Polynt Composites USA, Inc. (Polynt)
71 Barnett Road
Forest Park, Georgia 30297

EPA ID# GAD084823301

3) Responsible Officials

Natalie Brandeberry
Southeast Region EHS Manager
Natalie.Brandeberry@polynt.com

4) Inspection Participants

Diane Loria, Site Manager, Polynt Composites USA, Inc.
Natalie Brandeberry, Eastern Region EHS Manager,
Darrell Hindman, Production Manager, Polynt Composites USA, Inc.
Ryan O'Dea, EHS Manager, Polynt Composites USA, Inc.
Marcus Scott, Technician and Trainer, Polynt Composites USA, Inc.
Jim McNamara, Program Manager, Georgia Department of Natural Resources
James Sliwinski, Unit Coordinator, Georgia Department of Natural Resources
Sarah Rowell, Environmental Engineer, Georgia Department of Natural Resources
Brooke York, Environmental Engineer, U.S. Environmental Protection Agency (EPA), Region 4
Robert Nakamoto, Environmental Engineer, EPA, R4

5) Date of Inspection

November 9, 2022, at 9:10 a.m.

6) Applicable Regulations¹

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927), Georgia Hazardous Waste Management Act (GHWMA), Ga. Code Ann. § 12-8-60 *et seq.*, 40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279; Georgia Hazardous Waste Management Rules (GHWMR), Georgia Compiled Rules and Regulations (Ga. Comp. R. and Regs.) 391-3-11-.01 to 391-3-11-.18, adopts and incorporates by reference 40 CFR Parts 260-266, 268, 270, 273 & 279, and Georgia Hazardous Waste Facility Permit No. HW-035 (CA).

Link for Georgia Regulations: <https://rules.sos.ga.gov/gac/391-3-11>

State Code for Georgia: Georgia Hazardous Waste Management Act (GHWMA), Ga. Code Ann. § 12-8-60 *et seq.*, and Georgia Hazardous Waste Management Rules, Georgia Compiled Rule and Regulations (Ga. Comp. R. and Regs.) 391-3-11.01 to 391-3-11.18 (2016 and 2018)

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.02(1) [40 C.F.R. § 260.10], a large quantity generator (LQG) of hazardous waste is a generator who generates greater than or equal to 1,000 kilograms (2,200 pounds) of non-acute hazardous waste in a calendar month.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.18 [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) is a universal waste handler who does not accumulate 5,000 kilograms or more of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(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 any 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 GHWMA, Ga. Code Ann. § 12-8-66 [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)], except as required in Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17], an LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by GHWMA, Ga. Code Ann. § 12-8-66 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Rule 391-3-11-.08(1) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.07(1) [40 C.F.R. § 261.21(a)(1)], (a) a solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of

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.

the following properties: (1) It is a liquid, other than a solution containing less than 24 percent alcohol by volume and at least 50 percent water by weight, that has a flash point less than 60 °C (140 °F), as determined by using one of the following ASTM standards: ASTM D93-79, D93-80, D3278-78, D8174-18, or D8175-18 as specified in SW-846 Test Methods 1010B or 1020C (all incorporated by reference, see § 260.11 of this subchapter). Hereinafter referred to as the “the Alcohol Exclusion.”

Pursuant to Ga. Comp. R. and Regs. 391-3-4 and 40 C.F.R. § 241.2, a Non-Hazardous Secondary Material (NHSM) is one that meets the legitimacy criteria requirements under the Air Pollution regulations. Pursuant to Ga. Comp. R. and Regs. 391-3-4 and 40 C.F.R. § 241.3(d) legitimacy criteria for NHSM used as a fuel in combustion units include but are not limited to three legitimacy criteria.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10 (1) [40 C.F.R. Part 265, Subpart BB], a condition of the LQG Permit Exemption, equipment that contains or contacts hazardous waste with organic concentration of at least ten (10) percent by weight for greater than 300 hours per year must comply with the RCRA Subpart BB Organic Air Emission Standards for equipment leaks.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10 (1) [40 C.F.R. Part 265, Subpart CC], a condition of the LQG Permit Exemption, a generator accumulation hazardous waste containing an average volatile organic concentration of great than 500 ppmv at the point of waste generation in tanks must comply with the RCRA Subpart CC Organic Air Emission Standards for tanks.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine Polynt’s compliance with the conditions of Georgia Hazardous Waste Facility Permit No. HW-035 (CA), and the applicable requirements of RCRA and the corresponding Georgia regulations. This was an EPA lead inspection.

8) Previous Inspection History

Georgia Department of Natural Resources, Environmental Protection Division, conducted two RCRA Compliance Evaluation Inspections (CEIs) at the subject Facility between 2015 and 2021 and found one violation during those inspections.

On June 15, 2017, the Georgia Department of Natural Resources, Environmental Protection Division, conducted the most recent RCRA CEI at the subject Facility and cited no violations of RCRA’s requirements. That CEI was conducted on June 15, 2017, by the Georgia Environmental Protection Division (EPD) to determine Polynt Composites USA, Inc.’s compliance with Georgia’s Hazardous Waste Management Act (O.C.G.A. §12-8-60, et seq.), the Georgia Rules for Hazardous Waste Management (Chapter 391-3-11), the federal regulations adopted by reference, and Permit HW-035(CA).

9) **Opening Conference**

On November 9, 2022, EPA inspectors Brooke York and Robert Nakamoto, accompanied by Georgia inspectors Jim McNamara, James Sliwinski, and Sarah Rowell, arrived at Polynt Composites USA, Inc. (Polynt) at approximately 9:10 a.m. Diane Loria, the Site Manager, immediately received the inspectors. Diane Loria, and the inspectors were joined by Natalie Brandeberry, Eastern Region EHS Manager, and Ryan O'Dea, EHS Manager, for the opening conference. The inspectors introduced themselves, showed their credentials to Diane Loria and Natalie Brandeberry. Inspectors explained the purpose of the inspection and that the site walk-through would include production areas, maintenance areas, SAAs, central accumulation areas (CAAs), and used oil and universal waste storage areas. The inspection participants also discussed health and safety protocols, including required personal protective equipment.

The inspectors described the anticipated use of equipment digital cameras during the inspection and provided a request for records. Safety concerns regarding the use of the digital camera were raised, and a Hot Work Permit was obtained. Polynt explained the procedure for use of the digital camera and monitoring for lower explosive limits prior to each use.

The EPA inspector, Brooke York, 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 submitted to the EPA. The company did not assert a business confidentiality claim.

Diane Loria, Site Manager, provided an overview of the Facility's history, current operations and production processes during the opening conference, which is discussed in more detail in the Facility, Process, and Regulatory Descriptions Section of this Report.

10) **Facility, Process and Regulatory Descriptions**

Wastes and Biennial Report

The Facility is classified as a Large Quantity Generator (LQG) of hazardous waste. The primary NAICS code for the site is 325211- Plastics Material and Resin Manufacturing. The most recent Biennial report filed by the Polynt Composites USA, Inc. (hereinafter referred to as "Polynt" or the "Facility") was on February 25, 2022, and was for the 2021 reporting cycle. The waste streams, with waste codes, reported were:

- 1) Phthalic Anydride from Cleaning Out Sublimation Boxes and from Small Spills During Maintenance Activities, Waste Codes U190 and D002.
- 2) Mixture of Off-specification Products and Spent Solvent, Generated from Cleanout of Process Equipment, Waste Codes D001, F003, and F005.
- 3) Off Specification Product That Is Discarded from Sampling Operations, Filtration Operations (Without the Filters), Or the Product Has Been Deemed Scrap Material, Waste Codes F003 and D001.

- 4) Waste Filter Bags and Filter Media Containing Resin, Waste Codes F003, D001, and F005.
- 5) Inhibited Styrene and Water Mixture Used in Cleaning of Equipment Prior To Specific Resin Production, Waste Codes D001.
- 6) Samples of Resin Still in Glass Jars and Cans Retained for A Specified Time Frame for Quality Control, Waste Code D001.
- 7) Obsolete And Overage Raw Materials – (Vinyl Toluene; 2,4 Pentanedione), Waste Code D001.
- 8) Acidic And Ignitable Waste Which Is Released as a Result of The Chemical Reaction During Resin Manufacturing, This Waste Stream Consists of Two Layers, Water, Phthalic/Maleic Acids, And Organic Acids, And A Second Layer of Org. Solvents, Waste Codes D001, D002, D018, and F003.
- 9) Maleic Anhydride, From the Cleaning of Equipment Prior To Performing Maintenance Activities, Waste Codes U147, D002.

Environmental Permits

The Facility personnel noted that they do not have a Title V Air Permit. Polynt has an Air Quality Permit, issued by the Georgia Department of Natural Resources, Permit Number 2821-063-0041-S-06-0, effective August 22, 2011. This permit addresses the units at the Facility, including Unit TI-1, the Solid Waste Incinerator/Waste Heat Boiler. The Air Permit was modified on December 16, 2016, for the installation of a new phthalic anhydride melting line.

Polynt has a Hazardous Waste Facility Permit, issued on October 29, 2004, by the Georgia Department of Natural Resources, Environmental Protection Division. This permit is for the RCRA Corrective Action of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs).

Polynt explained that the incinerator had formerly been a RCRA Permitted hazardous waste incinerator that was clean-closed on December 16, 2002. Following the incinerator's closure, it resumed operation as a solid waste (non-hazardous) incinerator on December 18, 2002. The Facility's primary waste stream, "water of reaction," is burned by Polynt in the on-site incinerator. The incinerator utilizes natural gas and fuel oil as a back-up fuel.

The Facility is ISO9001 certified.

General Facility Description

Polynt is located at 71 Barnett Road, in Forest Park, Georgia on a 12-acre site in an industrial area and operates as a batch resin manufacturing process producing both composite and alkyd resins. These resins and coatings are used in the paint industry, in products such as household paints and enamels that are used on the items such as refrigerator, trailers, and trucks; as well as in the composites industry in products used in composite structures such as countertops. Polynt employs approximately 51 people, three (3) temporary employees, and one to three (3) full-time contractors at its Forest Park, Georgia location. The Facility operates three shifts a day, 7 days a week, and 24 hours per day. This Facility is a subsidiary of the Polynt Group, which has over 3,000 employees in 36 plants around the world in Europe, North America, Asia, and South America.

The Facility includes a Polyester Blend Building (PEBB); Warehouse Building; a Process Building; separate containment areas for raw materials, hazardous waste tank treatment system (HWTTS), aboveground storage tanks (ASTs), and finished goods ASTs; truck loading and unloading areas; onsite laboratories; several warehouses; a maintenance and utility building, and a main office complex. There is a truck entrance on the northwest side of the Facility with a truck/trailer parking area immediately adjacent to the entrance. A railcar off-loading area is located along the eastern side of the property. Access to the Facility is controlled by fencing and secured gates.

The Process Building contains four (4) reactors (or kettles) that are used in the production of polyester and alkyd resins. Xylene and mineral spirits are the main solvents used in this batch production process. The main control room is used to manage the production processes. Hazardous wastes are generated from the alkyd and polyester resin processes. The Facility manages identified hazardous waste in SAAs and hazardous waste tanks, and in a designated CAA.

General Production Process Description

There are three main process areas the Process Building, the PEBB and the K5 Building. Reactors K1, K2 (UPR Reactor), K3 and K4 are located in the Process Building. Facility representatives explained that production processes are planned to minimize the clean-out of ancillary equipment, including piping, before the transition to the next batch; giving consideration to ensure similar color and consistency in the batch transitions. Other wastes that are generated in the production area include filter bags generated from filtering fluids, samples, bad batches, and off-spec, obsolete or expired products.

Alkyd Resin Production

The coatings reactors include Reactors K1, K3, and K4, and are used to produce alkyd resins. Reactors K1, K3 and K4 are similar in their configuration and are each located in the Process Building. Each reactor is equipped with a total condenser and decanter which limits those vessels to the production of alkyd resins that require a reflux process or a fusion cook which means that reactor needs to vent with no reflux. The reactor is charged with the appropriate raw material. Once the materials are all in the reactor and the hatch is closed, heat is put on the reactor to bring the material to reaction temperatures.

Coatings batches take 16-36 hours to complete. Raw materials are fed to the reactor vessel, once the reaction begins the vapors created by the reaction are sent to the condenser, and once condensed the waste liquids flow to the decanter.

According to Polynt's November 18, 2022, letter, which was provided after the inspection and contained significant information on the processes, uncondensed vapors from the condenser are sent to the Facility's vent collection system. From the decanter the solvents are returned to the Reactors. Condensed liquid is sent to the Liquid Knock Out Tank. These waste streams enter the HWTTS, which for the purposes of this Report consists of ancillary equipment, including piping, connectors/flanges, filters, pumps, and valves, the decanter, Knockout Tanks, and three (3) large hazardous waste tanks (Waste Tanks 2, 3 and 4), and an incinerator system.

Once a batch reaction is completed, the product is transferred to a mix tank (also known as a thin tank) to mix with a diluent (solvent) such as styrene. From the mix tank the product is packaged as required, either in containers, or tanker trucks and shipped to the customer.

Unsaturated Polyester Resin Production

The composite resin reactors include Reactors K2 and K5 which produce unsaturated polyester resins (UPR). Each reactor is charged with the appropriate raw material. Once the materials are all in the reactor and the hatch is closed, heat is put on the reactor to bring the material to reaction temperatures. The reaction process is a batch process, which is endothermic in nature. The batches are processes that require careful monitoring by the production staff.

Raw materials are charged to the reactor vessel. Once the reaction begins the vapors from the reaction are sent to the packed column/partial condenser (at which time glycol may be returned to the process). Liquid (with some entrained glycol) is sent to the total condenser (from which the waste does not return to the process). Vapors are sent to the vent collection system and liquid with entrained glycol flows to the receiver tank. Condensed liquids are then sent to the Liquid Knock Out Tank. Thus, the liquid waste not returned to the process once condensed enters the HWTTS, which for this process consists of the total condenser, receiver tank, ancillary equipment, including piping, connectors/flanges, filters, pumps, and valves, knockout tanks, three (3) waste tanks (Waste Tanks 2, 3 and 4), and an incinerator.

Once a batch reaction is completed, the product is transferred to a mix tank (also known as a thin tank) to mix with a diluent (solvent) such as styrene. From the mix tank the product is packaged as required, either in containers, or tanker trucks and shipped to the customer.

Hazardous Waste Tank Treatment System (HWTTS)

The primary waste stream is generated as a by-product of the reaction. Polynt calls the waste produced by the reaction processes the “water of reaction” or “W.O.R.” The waste streams from each of the reactors/kettles flow to the same hazardous waste piping just outside the Process Building. The liquid phase of this waste is sent to a Liquid Knock-Out Tank, and then to Waste Tank 4, for phase separation.

Facility representatives explained, that in Waste Tank 4, phase separation occurs, the solvent layer is separated and sent to Waste Tank 3 for shipment off-site as a hazardous waste. The water/alcohol phase is acidic and is sent to Waste Tank 2 where ammonium hydroxide is added for elementary neutralization to adjust the pH. The aqueous feed, water/alcohol phase after neutralization, is then fed to an on-site incinerator.

The vapor phase of the W.O.R. waste is sent to a Vapor Knock-Out Tank. The condensed liquid from the Vapor Knock-Out Tank is an organic aqueous feed, which can go to Waste Tank 2 or 3. The vapor from the Vapor Knock-Out Tank is piped to the incinerator. The condensed liquid would no longer be an uncontained gas, but is a solid waste, and a characteristic hazardous waste due to the ignitability characteristic (D001). Therefore, the hazardous waste condensate (liquid) cannot be pumped to Waste Tank 2 for incineration as it is a characteristic hazardous waste. The

incinerator is not permitted to burn hazardous waste and does not meet the required standards specified for incinerators burning hazardous waste.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.10(2) [40 C.F.R. § 264 Subpart O], RCRA requires that facilities operating a hazardous waste incinerator comply with waste analysis requirements, performance standards requirements, operating requirements, and monitoring and inspection requirements.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.11(2) [40 C.F.R. § 270(c)], RCRA requires a permit for the “treatment,” “storage,” and “disposal” of any “hazardous waste” as identified or listed in 40 CFR part 261. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit.

Facility representatives explained that solvent phase hazardous waste is shipped offsite from Waste Tank 3 using a uniform hazardous waste manifest (UHWM) to GeoCycle (SCD003368891), or Giant Cement Company (SCD003351699) and according to UHWM generally bears waste codes D001, F003 and D018.

Alcohol Exclusion and Non-hazardous Secondary Material Review

At the time of the CEI, Polynt representatives claimed that the aqueous feed (the water/alcohol phase following elementary neutralization) to the incinerator does not meet the definition of hazardous waste because pursuant to Ga. Comp. R. and Regs. 391-3-11-.07(1) [40 C.F.R. § 261.21(a)(1)], (a) a solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties: (1) It is a liquid, other than a solution containing less than 24 percent alcohol by volume and at least 50 percent water by weight, that has a flash point less than 60 °C (140 °F), as determined by using one of the following ASTM standards: ASTM D93-79, D93-80, D3278-78, D8174-18, or D8175-18 as specified in SW-846 Test Methods 1010B or 1020C (all incorporated by reference, see § 260.11 of this subchapter). Hereinafter referred to as the “the Alcohol Exclusion.”

Further, Polynt explained to the inspectors that it had determined that the aqueous feed meets the definition of non-hazardous secondary material (NHSM) per Ga. Comp. R. and Regs. 391-3-4 and 40 C.F.R. § 241.2, which means a secondary material that, when discarded, would not be identified as a hazardous waste under Part 261 of this chapter and meets the legitimacy criteria requirements of Ga. Comp. R. and Regs. 391-3-4 and 40 C.F.R. § 241.3(d). Pursuant to Ga. Comp. R. and Regs. 391-3-4 and 40 C.F.R. § 241.3(d) legitimacy criteria for NHSM used as a fuel in combustion units include but are not limited to the following factors:

1. NHSM must be managed as a valuable commodity, including reasonable storage time frames, appropriate management and release prevention;
2. NHSM must have *meaningful heating value* and be used as a fuel in a combustion unit that recovers energy;
3. The NHSM must contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) that the combustion unit is designed to burn.

The inspectors requested additional information to determine the validity of the claimed exemptions and exclusions, and the regulatory status of the waste streams including the aqueous feed to the incinerator, at the time of the CEI (November 9, 2022), again on December 8, 2022, December 30, 2022, and again on January 11, 2023. Polynt provided information on November 18, 2022, December 8, 2022, December 16, 2022, and January 20, 2023.

A review of the documents submitted in response to the multiple requests for information, did not reveal adequate or current analytical data to document compliance with Ga. Comp. R. and Regs. 391-3-11-.07(1) [40 C.F.R. § 261.21(a)(1)]. The analytical data on the water content was from 1997. The analytical data on the alcohol content was from 2001 and over 20 years old.

The water content analysis from August 22, 1997, documented a water content of 92% and 0 BTU value (material wouldn't burn, and therefore would not have *meaningful heating value*). This analysis did not address the alcohol content. Analytical results reported on December 5, 2001, demonstrated an alcohol content of around 12% and a BTU value of 1,175 BTUs/lb, but did not include the water content data. Analysis on BTU values, from 2021, did not include information on the water content or alcohol content but solely addressed BTU values. The BTU values from the 2021 analysis are over 10,000 BTU/lb. The 2021 analysis used method D240, which is not one of the methods for use in the Alcohol Exclusion.

The waste material (aqueous feed) fed to the incinerator has substantially changed over the past 20+ years. The reported BTU value has gone from zero in 1997, to approximately 1,175 BTU/lbs in 2001, to over 10,000 BTUs/lb in 2021. The material being burned in 2021 has a BTU value approximately ten times of that reported in the analytical results from 2001 listed. It is probable that the water content, alcohol content, and solvent content have changed.

In the request for information sent to the Facility on January 11, 2023, requesting updated information on the waste fed to the incinerator. It was noted in that request that:

1. In order to support the Alcohol Exclusion, and NHSM claim, documentation that the waste material being managed is an aqueous solution containing less than 24% alcohol by volume and at least 50% water by weight, that has a flash point less than 60°C (140°F), and the BTU value, must be obtained and retained on file.
2. Documentation, analytical results, to support the claim that aqueous feed was excluded from the definition of hazardous waste under the alcohol exclusion or met the criteria for NHSM had not been received in Polynt's previous responses.
3. The feed material in 2021 did not appear to be the same as that in 1997 or 2001. The materials in 1997 and 2001 also appear to be different from each other. In addition, it was noted that the analysis from 1997 and 2001 was not current and is out of date reference supporting a critical exclusion.

The Facility responded on January 16, 2023, that they were coordinating obtaining that information. On Monday, January 23, 2023, the Facility sent an update that they expected to have their sampling results to the agencies by February 13, 2023. The Facility did not have adequate information to verify the claimed exclusion.

UHMW list D001, D018 (benzene), and F003 on waste taken from Waste Tank 3. Therefore, it appears that the hazardous waste sent to, in, and from Waste Tank 4, that subsequently goes to Waste Tanks 2 and 3, is an F003 listed hazardous waste. Pursuant to O.C.G.A. § 12-8-62(10) and Ga. Comp. R. and Regs. 391-3-11-.07(1)[40 C.F.R. § 261.3(a)(2)(ii)], a solid waste is a hazardous waste if *“It is listed in subpart D of this part and has been excluded from the lists in subpart D of this part under §§ 260.20 and 260.22 of this chapter.”* The hazardous waste coming from Waste Tank 4 is listed F003 hazardous waste, unless the waste is no longer ignitable. The hazardous waste going from Waste Tank 4 to Waste Tank 3 and Waste Tank 2 will maintain the F003 listing since the hazardous waste in both tanks is still ignitable. The aqueous feed leaving Waste Tank 2 and being fed to the incinerator, would still carry the F003 listing. In addition, the Facility did not provide current or past documentation confirming that the “water of reaction” or aqueous feed meets the criteria of Ga. Comp. R. and Regs. 391-3-11-.07(1)[40 C.F.R. § 261.21(a)(1)] or any analysis on water or alcohol content since 2001.

As documented by the lack of analytical data on water content and alcohol content, lack of analytical records over the past 20 years, the reported BTU value of the feed to the incinerator from the waste tanks of approximately 14,000 BTUs/lb, and the information on the control screen (Figure 2), it appears that Polynt is feeding a listed and characteristic hazardous waste to the incinerator. Based on the information reviewed, it appeared that the water content was below 50% by weight. The “water of reaction” appears to be a listed hazardous waste and the Facility is treating hazardous waste via incineration in an unpermitted combustion device. Based on the information available at the time this Report was completed, Polynt appears to be operating a hazardous waste incinerator without a hazardous waste permit and under an air permit based on inaccurate information in the air permit application. The incinerator does not appear to have air pollution control equipment and appears to be emitting directly into the atmosphere. The incinerator is operating less than a mile from residential housing. The incinerator is not permitted to burn hazardous waste and does not meet the required standards specified for incinerators burning hazardous waste.

Pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. 12-8-66, et seq. as amended [Section 3005 of RCRA, 42 U.S.C. § 6925], owners and operators of treatment, storage and disposal facilities shall obtain a permit for the treatment, storage, and disposal of hazardous waste before first treating, storing, or disposing of hazardous waste.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.10(2) [40 C.F.R. § 264 Subpart O], RCRA requires that facilities operating a hazardous waste incinerator comply with waste analysis requirements, performance standards requirements, operating requirements, and monitoring and inspection requirements.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.11(2) [40 C.F.R. § 270(c)], RCRA requires a permit for the “treatment,” “storage,” and “disposal” of any “hazardous waste” as identified or listed in 40 CFR part 261. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(9)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.16 [40 C.F.R. Part 268], and is a condition of the LQG Permit Exemption, a generator is required to comply with land disposal restrictions (LDR) for hazardous waste, including meeting the UTSS.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. §262.17(a)(6)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.251], and is a condition of the LQG Permit Exemption, a generator is required to maintain and operate its Facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Point of Waste Origination Review

Polynt, in its November 18, 2022, cover letter stated, on page 7, Item 1.3:

Waste determinations for the NHSM water of reaction aqueous layer are made following separation and elementary neutralization (Waste Tank 2). The waste determination for the organic solvent layer is made following separation after the material is transferred to Waste Tank 3. Analytical results for the waste characterization of the water of reaction aqueous layer as a NHSM and for the water of reaction aqueous layer are in Folder B- Bulk Waste Determination Characterization.

In Polynt's November 18, 2022, letter it is noted on page 5 that:

Polynt designates the material as a "waste" for regulatory purposes at the exit from the decanters and receivers.

Information on the waste streams was again requested on December 30, 2022. Polynt noted that:

Polynt designates the materials in question as "waste" for regulatory purposes at the exit from the decanters and receivers. The material from each reactor "prior to mixing" are samples of the reactor material that are still "in-process" with chemical reactions that are still in progress. Samples at this point in the process are used for quality control tests to determine when it is time to transfer the material to the next process unit (Mix Tanks). The samples directly from the reactor are non-hazardous based upon generator knowledge.

Based on the information available at the time of the drafting of this Report, the actual point of generation/waste origination for each waste stream going to Waste Tank 4 is well before Waste Tank 4. The actual point of generation, where the hazardous waste determination must be made, is where the waste exits the decanter (for the Alkyd Reactor Configuration) or enters the total condenser (for the Composite Reaction Configuration, UPR). Further evaluation of the appropriate regulatory status of the waste streams following modifications to the original waste streams, such as comingling, treating (via phase separation), elementary neutralization, can be made, but the original point of generation is well before Waste Tank 4.

Given the flash points of the hazardous waste being shipped from Waste Tank 3, and fed to the incinerator, the hazardous wastes upstream would be expected to have similar flash points as they exited the process. In addition, the F003 listing and any D001, D002, and D018 codes would be expected to be present at the point of generation, as waste exited the decanters and receivers.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Ga. Comp. R. and Regs. 391-3-11-.07(1) [40 C.F.R. § 261.2], must make an accurate determination at the point of generation as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

11) Facility Walkthrough Observations

The CEI included inspecting processes that generate hazardous waste, SAAs, CAAs (tanks and containers), evaluating feeds to the on-site incinerator, Subpart AA, BB, and CC compliance, and reviewing pertinent records and documents regarding hazardous waste management.

Process Building

The inspection group went first to the Process Building where Reactor Kettles 1 through 4 (K1-K4) are located.

In the Process Building control room Marcus Scott, the technician, briefed the inspection team on the controls on the production process. The production process is controlled via computer controls. A photograph was taken, with the Facility's permission, at 10:56 a.m., during the November 9, 2022, inspection. The photograph was of the control screen monitoring the main Waste Tanks and the feed to the on-site incinerator. The screen reported information on the Vapor Knock-out Tank, Liquid Knock-Out Tank, and Waste Tanks 2, 3, and 4. The amount of water and solvent in each waste tank, by pounds, and the percent capacity of each tank, was reported on the screen to the control room technician(s). See Figure 2.

Waste Tank 2 has a capacity of 9,800 gallons. At the time of the inspection, the inspectors observed, as seen in Figure 2, Waste Tank 2 was at 71%. Therefore, there were approximately 6,958 gallons of water and solvent (liquid) in Waste Tank 2 at the time of the inspection. For Waste Tank 2, the Solvent amount recorded was 43,210 pounds. The water amount recorded was 16,001 pounds. By weight, Waste Tank 2 was at 27% water and 73% solvent. The contents of Waste Tank 2 to the incinerator, in total, is not an "aqueous" solution of over 50% water. The November 18, 2022, Polynt letter documented that Waste Tank 2 turns over every 5 days, for a burn rate of around 80 gallons per hour when the tank is operating at capacity. Regardless of whether the Alcohol Exclusion applied or not, Waste Tank 2 had solvent and was feeding the incinerator on the day of the inspection. The Facility has classified the waste solvent as an F003, D001, D018 hazardous waste.

On the control screen, Waste Tank 3 recorded zero pounds solvent and 9,804 pounds of water. Waste Tank 3's capacity is 10,400 gallons and it was 12% full. Waste Tank 4 instrumentation

reported 41,829 pounds of solvent and 17,828 pounds of water. Waste Tank 4's capacity is 12,180 gallons and it was 65% full. There was a total of approximately 85,039 pounds of solvent present as reported on the control screen (Figures 2 and 3). In addition to burning the hazardous waste "water of reaction", Polynt is also incinerating hazardous waste solvent. Per Polynt's waste determination, the waste solvent in Tank 2, which was feeding the incinerator, is a listed and characteristic hazardous waste.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.10(2) [40 C.F.R. § 264 Subpart O], RCRA requires that facilities operating a hazardous waste incinerator comply with waste analysis requirements, performance standards requirements, operating requirements, and monitoring and inspection requirements.

Pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. 12-8-66, et seq. as amended [Section 3005 of RCRA, 42 U.S.C. § 6925], owners and operators of treatment, storage and disposal facilities shall obtain a permit for the treatment, storage, and disposal of hazardous waste before first treating, storing, or disposing of hazardous waste.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.11(2) [40 C.F.R. § 270(c)], RCRA requires a permit for the "treatment," "storage," and "disposal" of any "hazardous waste" as identified or listed in 40 CFR part 261. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit.

The production process was inspected. The inspection team inspected Kettle Units K1, K2, K3, and K4 (Figures 4-27). Inspectors observed that as waste was generated by the K1, K3 and K4 it could be condensed and returned to the process prior to exiting the decanter. Following the decanter, the waste entered the HWTTS. The pipes and other ancillary equipment following the decanter on K1, K3, and K4 were not readily distinguishable from the other lines in the Process Building. The inspectors requested the waste determination records for each waste stream at the point of waste origination. The Facility was not able to provide any waste determination records prior to the hazardous waste tank.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(1)(i)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10(1) [subparts AA, BB, and CC of 40 C.F.R. Part 265], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste with organic concentrations of at least 10 percent by weight in tanks must comply with the RCRA Subpart BB Organic Air Emission Standards for Equipment Leaks, including the requirement to mark each piece of equipment in a manner that can be distinguished readily from other pieces of equipment in Ga. Comp. R. and Regs. 391-3-11-.10(1) [40 C.F.R. § 265.1050(c)].

The inspectors observed K2 and the K2 Receiver Tank. K2 is used to manufacture unsaturated polyester resin, and is configured slightly different than K1, K3 and K4. Polynt employs the K2 Receiver Tank following the total condenser to collect the waste and ensure that the process maintains the appropriate pressure. The inspectors observed the K2 Receiver Tank (Figures 16-19) to be partially tagged with Leak Detection and Repair (LDAR) tags, including some of the

inbound lines. The K2 Receiver Tank was not labeled hazardous waste, or with any indication of the hazards associated with the waste, or the length of time or amount of waste had been stored.

Pursuant to Ga. Comp. R. and Regs. 391.3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to comply with the applicable requirements of Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], except as provided in Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. § 265.197(c)] (closure and post-closure care) and Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. § 265.200] (waste analysis and trial tests).

Pursuant to Ga. Comp. R. and Regs. 391.3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [Subparts AA, BB, and CC of 40 CFR Part 265], and is a condition of the LQG Permit Exemption, a generator is required to comply with applicable organic air emission standards for tanks.

Inspectors observed LDAR tags just above a flange on the line transporting waste generated by K1 just prior to its union with waste from the K2 Receiver Tank (Figure 19). LDAR records are further discussed in the Record Review Section of this Report.

It was noted that all of the process vessels have rupture lines. Each of the kettles was equipped with a rupture disc and line. The rupture lines from K1, K2, K3, and K4 feed to a Process Rupture Catch Tank. The rupture lines from K5 feed to the K5 Rupture Catch Tank. The Facility utilizes these “Rupture Catch Tanks” to capture waste vapors and liquids released when a rupture seal breaks. All rupture lines are used occasionally when there is an adverse issue with production.

The inspectors observed the Process Rupture Catch Tank (Figures 28-30) did not have a level sensor or secondary containment. The Process Rupture Catch Tank was not dated or labeled hazardous waste or with any other indication of hazard. Inspectors observed several bolts missing from the manway on the Process Rupture Catch Tank. Inspectors inquired about the last time the Rupture Catch Tank was cleaned out, and the Facility representatives did not know and as of the drafting of this Report have not provided information relevant to the clean out of either of the Rupture Catch Tanks or any information related to the waste stored in the tanks. However, the Facility did provide a log of rupture events, as seen in Table 1.

Table 1: Log of Rupture Events

Title	Date
Burst rupture disc K3	1/8/2018
K5 rupture disc burst	9/19/2018
M8 rupture disc burst	9/21/2018
K2 burst rupture disc	3/6/2019
K-5 Rupture Disk Burst	9/28/2020
M-8 Rupture Disk	10/2/2020
PSM- K-5 Rupture Disk Burst	5/20/2021
K-2 Rupture Disk Release- Over Pressure	4/5/2022

Title	Date
K-5 Rupture Disk Failure	6/22/2022
K-2 Rupture Disk Release	7/20/2022
M4 rupture disc burst	7/29/2022
Rupture disc – K2	10/17/2022

Following the inspection, the Facility provided integrity testing from 2019 for both the Process and K5 Rupture Catch Tanks. It appears that both tanks were designed similarly. However, it appears that the Facility had not identified either of these tanks as hazardous waste tanks.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to comply with the applicable requirements of Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], except as provided in Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R § 265.197(c)] (closure and post-closure care) and Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R § 265.200] (waste analysis and trial tests).

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [Subparts AA, BB, and CC of 40 CFR Part 265], and is a condition of the LQG Permit Exemption, a generator is required to comply with applicable organic air emission standards for tanks.

The inspection group observed the southside of the Process Building where Facility representatives explained that the waste lines for K3 and K4 exit the building (Figures 14 and 15). The inspectors followed the waste lines to the Hazardous Waste Tank Area. The inspectors evaluated the hazardous waste lines for compliance with 40 C.F.R. § 264/265 Subpart BB. Numerous flanges, valves, pumps, and other ancillary equipment was observed without LDAR tags. The LDAR tags that were noted were largely illegible or obscured (Figures 32, 33, 36-90).

Inspectors observed the following open-ended valves/lines:

1. Valve dripping above the floor drain sump (Figure 33)
2. Valve seen in Figure 38
3. Open-ended line below the Liquid Knock-Out Tank (Figures 39 and 45)
4. Open-ended line seen in Figure 47
5. Open-ended line seen in Figures 68 and 69
6. Leaking open ended line near the Vapor Knock-Out Tank (Figure 75)

Inspectors observed the following evidence of leaks:

1. Valve dripping above the floor drain sump (Figure 33)
2. Flange on the hazardous waste line on the north side of the Process building was observed to be dripping (Figure 36 and 37)
3. Elevated flange with staining seen in Figure 50
4. Staining on and around all the in-line filters (Figures 41, 48, 52, 72)
5. Staining and waste accumulation near pumps seen in Figures 53, 66, 68, 69, 71

6. Leaking open-ended line in Figure 75
7. Release from capped line in Figure 76

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(1)(i)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10(1) [subparts AA, BB, and CC of 40 C.F.R. Part 265], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste with organic concentrations of at least 10 percent by weight in tanks must comply with the RCRA Subpart BB Organic Air Emission Standards for Equipment Leaks.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. §262.17(a)(6)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.251], and is a condition of the LQG Permit Exemption, a generator is required to maintain and operate its Facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

The Liquid Knock-Out Tank (also known as Knock-Out Tank 2), which is receiving hazardous waste, was observed undated and not labeled with the words “Hazardous Waste” (Figure 39 and 40) or with any other indication of the hazard of its contents. The Vapor Knock-Out Tank (also known as Knockout Tank 1) had some small leaks that were observable. The Facility does not appear to have identified either knockout tank as a hazardous waste tank.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to comply with the applicable requirements of Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. Part 265, Subpart J], except as provided in Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R § 265.197(c)] (closure and post-closure care) and Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R § 265.200] (waste analysis and trial tests).

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [Subparts AA, BB, and CC of 40 CFR Part 265], and is a condition of the LQG Permit Exemption, a generator is required to comply with applicable organic air emission standards for tanks.

Waste Tank 4 was labeled as a hazardous waste tank and had an accumulation start date on the tank of August 9, 2022. The containment area was dry. No significant cracks were observed in the concrete containment. Waste Tank 3 had a pump that had a small leak with about a 1/3 of a pint of spilled material visible.

Central Accumulation Area

The 90-day container area had 40 55-gallon drums of hazardous waste present. No spills or releases or compromised containers were observed. The containers appeared to be properly labeled and no out of date containers were observed.

Universal Waste Storage

The Universal waste storage area was inspected. At the time of the inspection there were three 5-gallon buckets of ballasts and one 5-gallon bucket of batteries. There were three boxes of 4-foot lamps, one box of 3-foot lamps, and one box of 8-foot lamps.

Laboratory

The lab area several solid waste trash receptacles that contained used sample materials in small quantities (Figures 118-120). This is an area of concern.

Upper Warehouse

At the time of the CEI, the Upper Warehouse (Warehouse) was being used to house retained samples and other items that had been removed from service.

The inspectors observed, an out of service fume hood holding an open bucket labeled hazardous waste phthalic acid (Figures 121-123). The container did not appear to have an indication of the hazards of its contents and was not dated. Facility representatives did not recall any operations in the Warehouse that would require the use of phthalic acid and speculated the source.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.15(a) and (a)(4)], which is a condition of the SAA Permit Exemption, (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, and (a)(4) a generator is required to keep containers of hazardous waste closed at all times during accumulation, except when adding, removing, or consolidating waste; or when temporary venting of a container is necessary for the proper operation of equipment, or to prevent dangerous situations, such as build-up of extreme pressure.

Records Review

The records were reviewed after the inspection. The records for review were requested during the November 9, 2022, site inspection and were subsequently sent via electronic transmission to both EPA and Georgia EPD on November 18, 2022. Polynt submitted a detailed cover letter and the records below. The cover letter and these areas were reviewed by the regulatory agencies.

- a) Piping and Instrumentation Diagrams (P&IDs)
- b) Analytical Data on the Feed to the On-Site Incinerator
- c) Air Permit Information
- d) LDAR Monitoring Records
- e) Hazardous Waste Fee Records
- f) Corrective Action Permit Information
- g) Financial Assurance Documentation
- h) Waste Determination Information
- i) Rupture Tank Information
- j) RCRA Site Identification Form

- k) Hazardous Waste Manifests
- l) Hazardous Waste Biennial Reports
- m) Training
- n) Contingency Plan and Contingency Arrangements
- o) Hazardous Waste Minimization
- p) Tank Inspections
- q) Hazardous Waste Tanks
- r) Closure of Formerly Permitted Units
- s) Universal Waste Records
- t) Used Oil Records
- u) Waste Tank Containment Records
- v) Permit and Permit Application

After an initial review of the submitted data, adequate characterization information on the material being fed to the incinerator could not be located. Clarification requests on LDAR monitoring, the use of the rupture tank, and how some units operated was also included in the request. An email was sent by U.S. EPA R4 staff to the Facility on December 8, 2022, with a response date goal of December 16, 2022. The Facility responded on December 16, 2022, with a detailed cover letter and associated records and clarifications on where information identified was in the November 18, 2022, submission.

Daily and Weekly Inspections

Inspection records were reviewed for 2022, from January 1, 2022, to November 9, 2022. These daily inspection records were a combined inspection of compliance areas associated with the CAA, Waste Tanks 2, 3 and 4, and the pH value of the waste feed to the incinerator.

A total of approximately 116 daily tank inspections were missing. Two weekly inspection periods of the CAA were missing. The two missing weeks were February 12 -19, 2022, and March 6 – 12, 2022.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [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.

The review of the daily inspection from February 2022 is provided below as an example.
 February 2022 Daily Inspections Conducted: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 22, 24, 25
 February 2022 Daily Inspection days missing: 3, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 26, 27, 28.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10(1) [40 C.F.R. Part 265, Subpart J], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to comply with the applicable requirements of Ga. Comp. R. and Regs. 391-3-11-.10(1) [40 C.F.R. Part 265, Subpart J], including Ga. Comp. R. and Regs.

391-3-11-.10(1) [§ 265.195(g)], which requires the owner or operator document in the operating record the inspection of those items in paragraphs (a) and (b) of this section.

The inspection forms note that the inspection will check for corrosion on “tank legs” but not other parts of the tank system, to include the tanks themselves. Large Quantity generators are required to inspect the above ground portions of the tank system for corrosion, not just the tank legs. In addition, the inspection of some hazardous waste tanks, such as the Knock-Out Tanks, is not recorded on the inspection forms. The daily inspection of the hazardous waste piping from the production area to the first waste tanks and to the final storage tanks was not included on the inspection forms.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10(1) [40 C.F.R. Part 265.195(e)], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to inspect ancillary equipment that is not provided with secondary containment, as described in § 265.193(f)(1) through (4), at least once each operating day.

The inspection forms, at the bottom of the form, note *“The water in WT4 is transferred to WT2 and neutralized with ammonia hydroxide following the waste neutralization procedure (FP-PRO-W-0095). The neutralization process will increase the pH to above a 2.3 minimum, prior to beginning the waste feed to the incinerator.”* The inspector is required to record the pH of Waste Tank 2 and to note if a pH adjustment was required. A review of the inspection record determined that the inspectors typically did not record the pH reading and/or if an adjustment was needed. For example, for the nine inspection forms in November 2022 that were reviewed, the pH reading was recorded 2 times (7.98 and 11.4) not recorded 7 times. This is a further indication that the waste feed to the incinerator is not fully monitored. In October 2022 the pH was recorded ten times. In October 2022, for the ten recorded pH readings, the pH number recorded was always 7.98. In September 2022, there were nine pH readings recorded. A reading of 7.98 was recorded 8 times and 9.98 was recorded one time.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17(a)(2)], which incorporates Ga. Comp. R. and Regs. 391-3-11-.10(1) [40 C.F.R. Part 265.195(b)(2) and (b)(3)], and is a condition of the LQG Permit Exemption, a generator accumulating hazardous waste in tank systems is required to complete inspect at least once each operating day: (2) Above ground portions of the tank system, if any, to detect corrosion or releases of waste; and (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

Hazardous Waste Manifests

The three years of uniform hazardous waste manifests (UHWI) were reviewed. A load that had been rejected by the destination Facility was identified during the review. Information on the one shipment rejected by the destination facility was requested. Polynt was able to adequately explain the circumstances of the rejection and steps taken to repackage and ship the wastes to a second destination Facility.

LDAR Monitoring Records

No clear waste determination or analysis demonstrating the waste's organic concentration by weight was available for review.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. 265.1050(b)], and is a condition of the LQG Permit Exemption, a generator is required to comply with organic air emission standards for equipment leaks when equipment contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight.

The EPA requested LDAR records for the past five years. Polynt provided the LDAR records from January 2018 to August 2022. The LDAR records provided appear to indicate that Polynt is having a consultant monitor 6 pumps in the HWTTS approximately monthly and all other equipment including flanges and valves are monitored approximately annually. The annual monitoring was not provided for 2022.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. § 265.1052], and is a condition of the LQG Permit Exemption, a generator is required to visually inspect pumps in light liquid service at least weekly.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [40 C.F.R. § 265.1057], and is a condition of the LQG Permit Exemption, a generator is required to monitor valves in light liquid service at least monthly using Method 21, unless certain conditions are met.

Additional requirements of Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.17 (a)(2)], which incorporates Ga. Comp. R. and Regs. 391.3-11-.10(1) [Subparts AA, BB, and CC of 40 CFR Part 265], are likely applicable. However, based on the limited information available at the time this report was draft no additional requirements are being identified in this section.

Training Records

It was briefed that all employees receive initial hazardous waste training and annual refresher training. The Facility is keeping electronic training records. The Facility submitted the training roster (in an excel sheet) for the hazardous waste refresher training for 2018, 2019, 2020, 2021, and 2022.

Further Evaluation of the Feed Material to the Incinerator

On the 2021 Biennial Report, submitted by Polynt to the Georgia EPD on February 25, 2022, Polynt reported on its waste generation and management. In the 2021 Biennial Report (Folder L – Hazardous Waste Biennial Reports), for Waste Stream GM 8, the water/solvent mix, Polynt reported 5,293,175 pounds generated and 195,740 pounds shipped. Waste stream GM 8, in the description of hazardous waste block, is described as *“Acidic and ignitable waste which is released as a result of the chemical reaction during resin manufacturing. This waste stream consists of two layers: water, phthalic/maleic acids, and organic acids, and a second layer of*

org. solvents.” Polynt is reporting the 5,097,435 pounds that are managed on site as being treated by Management Method Code H121, which is “Neutralization only (no other treatment).”

According to the 2021 Biennial Report, approximately 96% of Waste Stream GM8 (about 2,549 tons) were managed on site. 2,549 tons were managed on site via neutralization and then incineration. Approximately 4% of the water/solvent mixture was shipped. Polynt reported shipping 195,740 pounds of solvent. This was approximately 50 tons of solvent shipped per year and 1,274 tons incinerated per year. On a monthly average approximately 4 tons of hazardous waste solvent was shipped per month and 106 tons of waste was incinerated per month.

At the time of the inspection, the inspectors observed, as seen in Figure 2, Waste Tank 2 was at 71%. Therefore, there were approximately 6,958 gallons of water and solvent (liquid) in Waste Tank 2 at the time of the inspection. For Waste Tank 2, the Solvent amount recorded was 43,210 pounds. The water amount recorded was 16,001 pounds. By weight, Waste Tank 2 was at 27% water and 73% solvent. On the control screen, Waste Tank 3 recorded zero pounds solvent and 9,804 pounds of water. Waste Tank 3’s capacity is 10,400 gallons and it was 12% full. Waste Tank 4 instrumentation reported 41,829 pounds of solvent and 17,828 pounds of water. Waste Tank 4’s capacity is 12,180 gallons and it was 65% full. There was a total of approximately 85,039 pounds of solvent present as reported on the control screen (Figures 2 and 3). From the data on reported on the control screen in Waste Tanks 2, 3, 4 there was a total of 43,633 pounds of water and 85,039 pounds of solvent, for a total of 128,672 pounds. By weight, the amount present in all of the main hazardous waste tanks, was approximately 66% solvent and 34% water. On the day of the inspection, the solvent totals of the tanks in the control screen shot on that single day represented approximately 10 months of solvent shipment.

From the on-site briefing and the November 18, 2022, letter, Waste Tank 3 should not have contained any water and Waste Tank 2 should not have contained any solvent. Waste Tank 2 turns over every 5 days, for a burn rate of around 80 gallons per hour. When running at 100% of capacity, using 7 pounds per gallon, that is about 560 pounds per hour or 13,440 pounds burned per day or 1,920 gallons per day.

The long-term burn rate for the incinerator is about 290 pounds per hour, assuming year-round operation, 24 hours per day. Using 7.5 pounds per gallon (assuming some amount of water mixed with organics) that is about 38.7 gallons per hour. The BTU value of the hazardous waste solvent is 16,800 BTU/lb. Per Polynt’s November 18, 2022, letter, the average BTU value of the “water of reaction” is 14,171 BTU/lb, or about 84.35% of the BTU/lb of the solvent. In the screen shot, what is in Waste Tank 2 is 73% solvent. Multiplying .73 times 16,800 BTU/lb would yield a BTU value of 12,264 BTU/lb which is close to the BTU range of the “water of reaction”. In the November 18, 2022, letter Polynt noted that the average BTU value of the “water of reaction” is 14,171 BTU/lb. By comparison, the average BTU value of pure ethanol is approximately 11,550 BTU/lb. The BTU value of gasoline is approximately 20,833 BTU/lb. Instead of managing and shipping this material as a hazardous waste, or adequately verifying and maintaining the integrity of the alcohol exemption exclusion, the material is being disposed of on-site via incineration in an unpermitted incinerator that does not meet the performance standards required for hazardous waste incineration.

Review of Piping Diagrams

Drawing Number FGA-9T-077 of Waste Feed Tank WS-D-2 (provided by Polynt on November 18, 2022) and Drawing Number FGA-9T-076 for the Waste Organic Storage Tank WS-D-3 (provided by Polynt on January 20, 2023) were reviewed. The review of Drawing Number FGA-9T-076 for the Waste Organic Storage Tank WS-D-3 found that Waste Tank 3 can feed to Waste Tank 2, Waste Tank 4, Organic Shipment Trucks, and the Incinerator. The review of Drawing Number FGA-9T-077 of Waste Feed Tank WS-D-2 documented that a feed from Waste Tank 2 can be piped into the line feeding the incinerator or to Waste Tank 3 or back to itself (Waste Tank 2). This matches the information on the control screen in that it appeared that either Waste Tank 2 or 3 can feed the incinerator. Waste Tank 2 can be fed by Waste Tank 3, Waste Tank 4, Knock Out Tank WS-G-5, and/or the Ammonium Hydroxide Pump.

The drawings of the Liquid Knock-Out Tank and Vapor Knock-Out Tank were reviewed. Drawing Number FGA-9T-074 was the P&ID for Waste Knock-Out Tank 6, which is the liquid knock-out tank. This tank can be fed by feeds from the Decanters, Receivers, the Dike Pump, and Waste Tank 4. This tank can feed to Waste Tanks 2, 3, or 4. The tank is accumulating hazardous waste and must be managed as a hazardous waste tank.

The drawing for the Vapor Knock-Out Tank was drawing number FGA-9T-048. This knock-out tank receives vapors via the Facility's vapor collection system. Vapors from the Vapor Knock-Out Tank can be sent to the incinerator. The vapor collection system receives vapors from production and waste tanks. Liquid condensate from the tank can be pumped to Waste Tank 2 or Waste Tank 3. When the uncontained vapors condense into a liquid the material is then a solid waste. This is a new point of generation. A hazardous waste determination is required. It appears that this liquid waste can be shipped as hazardous waste or burned in the incinerator. This material is a hazardous waste. The tank is accumulating hazardous waste and must be managed as a hazardous waste tank.

Pursuant to Ga. Comp. R. and Regs. 391-3-11-.08(1) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Ga. Comp. R. and Regs. 391-3-11-.07(1) [40 C.F.R. § 261.2], must make an accurate determination at the point of generation as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

February 13, 2023, Submission

On February 13, 2023, Polynt sent in an email with an updated summary of analytical results on the "Water of Reaction." The information below was reported by Polynt:

Table 2: Updated Information Polynt Provided February 13, 2023

Parameter	Standard	Laboratory Results (Averages)
% Water	>50% Water by Weight	82%
% Alcohol	<24% Alcohol by Volume	6%

Parameter	Standard	Laboratory Results (Averages)
Flash Point	<140 Degrees Fahrenheit	85 Degrees Fahrenheit
BTU Value	>5000 BTU/lb	5834 BTU/lb

The February 13, 2023, email, reported BTU value differed substantially from earlier information submitted by Polynt from 1997, 2001, 2021, and 2022. The BTU value reported by Polynt went from 14,171 BTU/lb on November 18, 2022, letter to 5,834 BTU/lb on February 13, 2023. Polynt in their November 18, 2022, letter, on page 6, stated:

USEPA established 5,000 BTU/lb as a general guideline for meaningful heating value for a NHSM. Testing indicates that the average BTU/lb of the water of reaction is 14,171 BTU/lb. This exceeds what USEPA has determined to be a meaningful heating value.

The material reported on February 13, 2023, is not the same material as described in the November 18, 2022, letter or in the analytical data from 2021 (reported as a BTU values of greater than 10,000 BTU/lb), or the analytical data from 1997 or 2001. The submitted information appears to confirm that Polynt has been burning a hazardous waste in its solid waste incinerator at a rate of over 100 tons per month. On February 13, 2023, following review of the information in the email, the EPA again requested the actual analytical results for all of the testing on the Water of Reaction following the November 9, 2022, inspection.

12) Closing Conference

A closing conference was conducted at the end of the site inspection portion of the inspection at approximately 5:05 p.m. The following personnel were present at the closing conference:

Diane Loria, Site Manager, Polynt Composites USA, Inc.
Natalie Brandeberry, Eastern Region EHS Manager,
Darrell Hindman, Production Manager, Polynt Composites USA, Inc.
Ryan O'Dea, EHS Manager, Polynt Composites USA, Inc.
Jim McNamara, Program Manager, Georgia Department of Natural Resources
James Sliwinski, Unit Coordinator, Georgia Department of Natural Resources
Sarah Rowell, Environmental Engineer, Georgia Department of Natural Resources
Brooke York, Environmental Engineer, U.S. Environmental Protection Agency (EPA), Region 4
Robert Nakamoto, Environmental Engineer, U.S. EPA, R4

Brooke York, with support from the other inspectors, gave the closing briefing. It was decided that Polynt would send records after the inspection. Polynt submitted records electronically on November 18, 2022, December 16, 2022, January 20, 2023, February 13, 2023, and February 17, 2023.

The following points of concern were described.

- 1) Missing and illegible Subpart BB tags.
- 2) Some areas where piping insulation was missing and there appeared to be small leaks.
- 3) Some open-ended valves needed a double valve or cap.
- 4) Staining and corrosion on several pumps and flanges.
- 5) It was difficult to readily distinguish the piping for the hazardous waste tank system.
- 6) Catch buckets for hazardous waste should be drained immediately and kept covered.
- 7) The Knock-Out tanks required hazardous waste labeling.
- 8) Information on the alcohol exemption for the Incinerator was requested.
- 9) Some open Satellite Accumulation Containers were observed.
- 10) The Aerosol Can drum needs a hazard indication marking.
- 11) The waste from the filter press needs to be collected and the container must stay closed excepting when adding or removing waste.
- 12) Housekeeping was an issue in some areas.
- 13) Hazardous waste determinations were required on the socks.
- 14) There was no Satellite Accumulation Area in the truck loading area.
- 15) At the QC laboratory, some liquid waste was observed in the trash can.
- 16) A write up on the exclusion for materials being fed to the incinerator was requested.

13) List of Appendices

Appendix 1 – Photo Log:

Appendix 2 – November 10, 2022, U.S. EPA Email on Request for Records

Appendix 3 – November 18, 2022, Polynt Cover Letter

Appendix 4 – December 8, 2022, US EPA Email on Request for Records

Appendix 5 – December 16, 2022, Polynt Cover Letter

Appendix 6 – December 30, 2022, US EPA Request for Analytical Documentation

Appendix 7 – January 11, 2023, US EPA Request for Information on the of Waste Feed to the Incinerator

Appendix 8 – January 20, 2023, Polynt Cover Letter

Appendix 9 – January 23, 2023, Polynt Email on Analysis for the Feed to the Incinerator

Appendix 10 – Daily Inspection Sheet for November 8, 2022

Appendix 11 – August 22, 1997, Analysis of Water Content of Water of Reaction

Appendix 12 – December 5, 2001, Analysis of Alcohol Content of Water of Reaction

Appendix 13 – March 5, 2008, Analysis of Waste Solvent

Appendix 14 – October 2021 Analysis of BTU value for Water of Reaction

Appendix 15 – February 13, 2023, Email With Summary of Water of Reaction Data

14) Signed

BROOKE YORK Digitally signed by BROOKE YORK
Date: 2023.02.21 08:23:22 -05'00'

Brooke York
Environmental Engineer

Date

ROBERT NAKAMOTO Digitally signed by ROBERT NAKAMOTO
Date: 2023.02.21 12:46:16 -05'00'

Robert Nakamoto
Environmental Engineer

Date

15) Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI
CHAVEZ
Date: 2023.02.21 13:07:24 -05'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date