

RCRA Inspection Report

1) Inspector and Author of Report

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Enforcement and Compliance Assurance Division
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2) Facility Information

Dart Polymers, Inc.
2400 Harbor Road
Owensboro, Kentucky 42301

EPA ID#: KYD038911632
NAICS #: 325211 – Plastics Material and
Resin Manufacturing

3) Responsible Officials

Mr. Craig Frizzell
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2400 Harbor Road
Owensboro, Kentucky 42301
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4) Inspection Participants

Craig Frizzell, Plant Engineer, Dart Polymers, Inc.
Ross Fogle, Operations Manager, Dart Polymers, Inc.
Nate Hopewell, Environmental, Health, and Safety (EHS) Manager, Dart Polymers, Inc.
Curtis Scott, Environmental Scientist Advisor, Division of Waste Management (DWM),
Kentucky Department for Environmental Protection (KYDEP)
John Rundle, Environmental Scientist Advisor, DWM, KYDEP
Robert Nakamoto, Environmental Engineer, U.S. EPA, R4

5) Date of Inspection

December 5, 2023, at 8:30 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), and 40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279; Kentucky Revised Statutes Title XVIII, Chapter 224, Subchapter 46-Hazardous Waste *et seq.* (2006), and Title 401 of the Kentucky Administrative Regulations (K.A.R.) Chapters 30 through 38, 43 and 44 (2006).

Pursuant to 401 KAR 39:005, Section 1 [40 C.F.R. § 260.10], a large quantity generator of hazardous waste (LQG) 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 401 KAR 39:080, Section 3(1) [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 401 KAR 39:080 Section 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 KRS 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with 401 KAR 39:080 Section 1 [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area (SAA) conditions listed in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.15] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to 401 KAR 39:080 Section 1 [40 C.F.R. § 262.17], a generator of 1,000 kilograms or greater of hazardous waste in a calendar month is a large quantity generator (LQG) and may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by KRS 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in 401 KAR 39:080 Section 1 [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to 401 K.A.R. 39:060, Section 3(1) [40 C.F.R. § 261.4(a)(8)], secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process are not solid wastes provided that the conditions listed in 401 K.A.R. 39:060, Section 3(1) [261.4(a)(8)] (hereinafter referred to as the “Closed-Loop Recycling Exemption”) are met.

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 401 K.A.R. 39:060, Section 3(1) [40 C.F.R. § 261.4(b)(18)], solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation, provided that the conditions listed in 401 K.A.R. 39:060, Section 3(1) [40 C.F.R. § 261.4(b)(18)] are met (hereinafter referred to as the “Solvent-Contaminated Disposable Wipe Exclusion”).

Pursuant to 401 K.A.R. 39:060, Section 3(1) [40 C.F.R. § 261.4(a)(26)], solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes from the point of generation, provided that the conditions listed in 401 K.A.R. 39:060, Section 3(1) [40 C.F.R. § 261.4(a)(26)] are met (hereinafter referred to as the “Solvent-Contaminated Reusable Wipe Exclusion”).

7) Purpose of Inspection

The purpose of this inspection was to conduct a joint unannounced compliance evaluation inspection to determine Dart Polymer, Inc.’s (hereinafter referred to as “Dart Polymer” or “the facility”) compliance with the applicable requirements of RCRA and the corresponding Kentucky regulations. This was an EPA lead inspection supported by KYDEP inspectors.

8) Facility Description

Dart Container’s parent company was Dart Manufacturing Company. Dart Manufacturing manufactured such products as steel tape measurers and dog tags for military personnel. The company founded Dart Container in 1960 and began manufacturing foam cups in 1963. Dart Polymer is a subsidiary of Dart Container. Dart Container develops, manufactures, and distributes foodservice packaging solutions. Dart Container’s corporate office is in Mason, Michigan, and its global sales headquarters is in Fort Lauderdale, Florida. Dart Container manufactures cups, plates, containers, lids, and straws made from such materials as expanded polystyrene foam, solid polystyrene, polypropylene, polyethylene terephthalate (PET), paper and sugar cane. Its foodservice products are sold to hospitals, schools, restaurants, and residential. It also builds its own molding machinery and uses trucks to deliver products from more than 30 manufacturing and distribution facilities in the U.S., two in Canada, and two in Mexico. Dart Container has over 13,000 employees with revenues of over \$3 Billion per year.

Dart Polymers in Owensboro, Kentucky, manufactures food grade polystyrene beads and pellets that are used to make food containers at other facilities. Styrene is the primary raw material utilized by the facility. The facility can manufacture general purpose polystyrene and high impact polystyrene. Ethylbenzene is utilized in the process. A waste styrene/ethylbenzene mixture is the primary production waste, but part of that material stream is now sold as a product. The Owensboro facility has approximately 175 employees and operates 24/7 per week. The facility was constructed in the mid-1970s and was purchased by Dart Containers in 1983. The facility receives bulk raw materials via rail and barge.

The facility is a large quantity generator of hazardous waste, a used oil generator, and also generates universal waste batteries. Styrene waste, ethylbenzene waste, and corrosive wastewater are the bulk of the facility’s hazardous waste generation. The facility has notified on 16 Hazardous Waste Streams: 1) styrene/ethylbenzene mixture (D001), 2)

ethylbenzene/styrene/water (D001), 3) styrene-spill clean-up materials (D001, F003), 4) wastewater (D002), 5) waste paint related materials (D001), 6) peroxides/ethylbenzene (D001, D003), 7) methylene chloride (F001, U080), 8) dimethylformamide (D001), 9) ethanol solutions (D001), 10) toluene/acetic acid (D001, F003), 11) peroxides-solid (D003), 12) peroxides-liquid (D001, D003), 13) tertiary-butyl-catechol/methanol mixtures (D001), 14) waste mercury (D009), 15) flammable liquids-aerosol residuals (D001, F003), and 16) waste tetrahydrofuran (D001, U213). Most waste streams are maintained as a contingency or are rarely generated. Dart Polymers' latest notification was submitted on 2/06/2023.

9) Previous Inspection History

KYDEP had conducted six RCRA CEIs at the subject facility between 2008 and 2021 and found a total of six violations during those inspections. On 4/27/2021, KYDEP conducted the most recent RCRA CEI at the subject facility and found no apparent violations of RCRA's requirements.

10) Opening Conference

On December 5, 2023, EPA inspector Robert Nakamoto, accompanied by KYDEP inspectors Curtis Scott and John Rundle, arrived at Dart Polymers at approximately 8:30 a.m. Craig Frizzell, the Plant Engineer, immediately received the inspectors. Craig Frizzell, and the inspectors were joined by Ross Fogle, Operations Manager, and Nate Hopewell, Environmental, Health, and Safety (EHS) Manager, for the opening conference. The inspectors introduced themselves, showed their credentials to Craig Frizzell and Nate Hopewell, and explained the purpose of the visit.

The inspectors described the anticipated use of equipment as limited to a digital camera (EPA) and cell phone (KYDEP) to take photographs during the inspection and provided a request for records. 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 was provided to the facility. 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 EPA. The company did not assert a business confidentiality claim.

Craig Frizzell 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 the facility representatives led the inspectors on a tour of the Facility operations. The plant polymerizes styrene to manufacture polystyrene. Styrene is the primary raw material and is received by both barge and rail. Ethylbenzene is utilized as a diluent in the production process. The facility operates six batch reactors to produce this product. Products can be shipped as raw materials to other plants for further chemical processing or as raw materials to other plants to manufacture consumer products (cups, lids, etc.). Used oil is generated in the plant's maintenance area and the plant also

generates universal waste batteries. The facility was no longer using fluorescent lamps so universal waste lamps are no longer generated.

One key change since the last inspection was that the company was decreasing their main waste stream (purge material) by selling a portion of the material (a Styrene/Ethylbenzene mixture), as a product, to another manufacturing company. The facility had begun separating the purge material and managing it as a product in June 2022. Purge material that couldn't be sold was still managed as a hazardous waste via moving the material to the facility's new hazardous waste tank system. More information was collected on this change during and after the site portion of the inspection and is described later in the report.

11) Inspection Observations

The inspection team began the walk through of the site at approximately 10:00 a.m. The walk through began at the edge of the plant where raw materials are received via barge and/or rail.

Hazardous Waste Accumulation Tank

The facility had recently changed which tank was being utilized as a 90-day hazardous waste accumulation tank. The former hazardous waste accumulation tank had been converted to a product storage tank for the former waste stream that was being sold as a product. Portions of that material stream that cannot be sold are managed as a hazardous waste in the new tank system (Photos 1 and 3). This transfer of tank purposes was implemented in June 2022. The hazardous waste tank was located in a tank farm area with numerous tanks holding either raw materials or intermediate materials (partially processed).

The new hazardous waste tank system is covered under the facility's Title V Air permit. The inspectors did view the marking tags on the piping. The facility has installed metal tags at the monitoring points that the facility is monitoring for their Title V permit. The facility maintains a Leak Detection and Repair (LDAR) program per the facility's Title V air permit. The facility has several thousand inspection points in their production process (non-waste), and the facility performs LDAR on their single Hazardous Waste tank system that is designated for styrene/ethylbenzene. Each test point has a unique identifier tag attached to it. Any component associated with the Hazardous Waste tank contains a "09" designation on the tag.

The 6,500-gallon tank appeared to be well maintained and no areas of corrosion or any leaks were observed. The associated piping, pumps, and valves also appeared to be well maintained and no evidence of corrosion or leaks were observed. The tank is a fixed-roof tank. The tank is in a tank farm with numerous other production (non-waste) tanks. The entire tank farm has a walled concrete secondary containment system. The secondary containment system for this area was a liner system per 401 KAR 39:090, Section 2(1) [40 C.F.R. § 265.193(e)(1)].

Some limited cracks were observed in the vicinity of the hazardous waste tank (Photos 5-9). It was also observed that the concrete was not coated with an impervious type of sealant or coating (Photos 4-9). Concrete secondary containment for hazardous waste accumulation tanks

is required to have an impermeable liner or impermeable coating and to be free of cracks and gaps in the structure.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(2)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: Accumulation of hazardous waste in tanks. If the waste is placed in tanks, the large quantity generator must comply with the applicable requirement of subpart J (except §§ 265.197(c) and 265.200 of this subchapter) as well as the applicable requirements of 40 CFR 265, subparts AA through CC.

Pursuant to 401 KAR 39:090, Section 2(1) [40 C.F.R. § 265.193(b)(2)], secondary containment systems must be: (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

Pursuant to 401 KAR 39:090, Section 2(1) [40 C.F.R. § 265.193(e)(1)], (e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements: (1) External liner systems must be: (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary; (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event; (iii) Free of cracks or gaps; and (iv) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the waste).

Pump House SAA

This area has pumps for transferring materials from raw material tanks to the production area. A single satellite accumulation area had a 55-gallon metal container of hazardous waste (Waste Styrene) present (Photo 10). The container was labeled as hazardous waste and had a Class 3 DOT marking to indicate the hazard. The container was on a plastic pallet that provided secondary containment. The container was closed and appeared to be in good condition.

Central Accumulation Area (CAA)

The Central Accumulation Area (CAA) was inspected. The area was identified with a sign which read "Hazardous Waste Area, Authorized Personnel Only." A sign stating "Danger – Flammable Storage" was also present (Photos 11 and 12). Dart Polymer manages ignitable wastes in this CAA, and there was no "No Smoking" sign present, although the Flammable Storage sign was present. During the inspection the facility personnel did put up a "No Smoking" sign on the building.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(2)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: (B) The large quantity generator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to the following: Open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (*e.g.*, from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the large quantity generator must confine smoking and open flame to specially designated locations. “No Smoking” signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

The CAA is equipped with an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; it is equipped with a device capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; it is equipped with portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and the area is equipped with water to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray system.

The CAA had ten 55-Gallon, one 30-gallon, and one 15-gallon containers of hazardous waste present at the time of the inspection (Photos 13-18). Nine of the 55-gallon containers (D001 wastes) were dated 11/9/2023, 11/13/2023, 11/15/2023, 11/16/2023, 11/18/2023, 11/22/2023, 11/27/2023, 12/1/2023, and 12/3/2023. The 15-gallon metal container (D001) was dated 11/15/2023. Two containers, a metal 55-gallon (Waste Polymer), dated 8/24/2023, and 30-gallon plastic container (Waste Initiator), dated 7/31/2023, were past the 90-day limit. The facility had requested an accumulation extension on these two containers and had received an approved extension from KYDEP on 11/21/2023. The extension was granted due to a backlog at the incinerator where the wastes would be shipped. All containers in the CAA were labeled as hazardous waste, had a hazard indicator marking, were closed, and were in good condition.

Former Hazardous Waste Tank

The former hazardous waste tank was converted to a product tank in the summer of 2022 (Photos 20-22). It was managing the same material that was formerly a hazardous waste but a portion of this Styrene/Ethylbenzene mixture is now being sold as a raw material for another manufacturer to utilize as a raw material in their production process. Mr. Frizzell briefed that when the product cannot all be sold it is sent to the hazardous waste tank and is shipped as a hazardous waste. This initial briefing and information provided by Dart Polymers, and observations from the inspection, supported that the material could potentially qualify for the exclusion under 401 KAR 39:060, Section 3(1) [40 C.F.R. § 261.2(e)(1)(ii)] for materials being used as effective substitutes for commercial products, and/or possible other related/similar exclusions. More information to further review this topic was discussed later in the inspection and subsequently discussed on 12/20/2023 (see below in the “Recycling Review” section).

Reactor Building SAAs

The first SAA had a single 55-gallon container for waste Ethylbenzene & Water (D001, D018) from Reactor Building maintenance operations (Photos 23 and 24). The next SAA was for operations associated with filter draining operations. There was a plastic 30-gallon container of (Waste Initiator Peroxide, D001), and a metal 20-gallon container for Waste Polymer, D001 (Photos 25 and 26). The containers were all closed, in good condition, labeled as hazardous waste, and had the appropriate hazard markings.

Laboratory SAAs

The facility had established different SAAs for different laboratory waste streams. The laboratory performs quality control testing for the entire plant and different waste streams are generated based on the production area products and materials being tested. One area (Photo 27) held a single plastic 30-gallon container of waste acid and toluene (D001, F003). One area (Photo 28) held a metal 55-gallon container of Waste Styrene (D001) and a third area (Photo 29) held a metal 30-gallon container of waste Methylene Chloride (F003). The containers were all closed, in good condition, labeled as hazardous waste, and had the appropriate hazard markings.

Plant Maintenance Area

The Satellite Accumulation Area (Photo 30) had a can puncturing device that was affixed to a metal 30-gallon SAA hazardous waste container for liquids from the aerosol cans (Waste Codes D001, F003, F005). Punctured metal cans are being collected for metal recycling (Photo 31). Two plastic 210-gallon used oil tanks were present. No spills or leaks were observed. The tanks were labeled as "Used Oil" (Photo 32). There was also a SAA for paint waste (Photo 33), from painting at the facility, containing a single metal 30-gallon container (D001). The containers were all closed, in good condition, labeled as hazardous waste, and had the appropriate hazard markings.

Suspension Plant

This area had a single SAA containing one metal 55-gallon container for extruder waste (Waste Styrene Monomer, D001). The container was closed, in good condition, labeled as hazardous waste, and had the appropriate hazard marking (Photos 34 and 35).

Production Effluent Water and Air Pollution Control

Effluent water from the suspension process and the impregnation process is hazardous for corrosivity (D002) but is managed in an on-site wastewater plant where the wastewater is neutralized (Photos 36 – 38). The facility has a Title V permit and has associated air pollution control equipment (Photo 39). The wastewater from the on-site wastewater plant is discharged to a Publicly Owned Treatment Works (POTW).

12) Records Review

Contingency Plan and Quick Reference Guide (QRG):

The actions that facility personnel should take in response to an emergency are described in the facility's "Emergency Response and Hazardous Waste Contingency Plan" which was last updated in April 2022. The plan describes actions facility personnel must take in response to

fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. The plan describes arrangements agreed to with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals or the Local Emergency Planning Committee. The plan lists the names and emergency telephone numbers for persons identified as emergency coordinators. Mitch Hertzler is listed as the primary emergency coordinator, and the other individuals are listed in the order in which they will assume responsibility as alternates.

The plan includes a list of emergency equipment at the facility. The list includes fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment. The list appears to be up to date. The plan includes the location and a physical description of each item on the list, and a brief outline of its capabilities. The plan includes an evacuation plan for personnel. This plan describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

Quick Reference Guide

At the time of the inspection the facility was missing a Quick Reference Guide (QRG). The requirements for a QRG were discussed and the facility committed to completing a QRG (and subsequently provided the QRG via email to the inspectors the following week on 12/15/2023).

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.262(b)], which is a requirement of the Preparedness, Prevention, and Emergency Procedures for Large Quantity Generators: (b) A large quantity generator that first becomes subject to these provisions after May 30, 2017 or a large quantity generator that is otherwise amending its contingency plan must at that time submit a quick reference guide of the contingency plan to the local emergency responders identified at paragraph (a) of this section or, as appropriate, the Local Emergency Planning Committee. The quick reference guide must include the following elements: (1) The types/names of hazardous wastes in layman's terms and the associated hazard associated with each hazardous waste present at any one time (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid); (2) The estimated maximum amount of each hazardous waste that may be present at any one time; (3) The identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; (4) A map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes; (5) A street map of the facility in relation to surrounding businesses, schools and residential areas to understand how best to get to the facility and also evacuate citizens and workers; (6) The locations of water supply (e.g., fire hydrant and its flow rate); (7) The identification of on-site notification systems (e.g., a fire alarm that rings off site, smoke alarms); and (8) The name of the emergency coordinator(s) and 7/24-hour emergency telephone number(s) or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

Training Records:

The inspectors reviewed facility job descriptions and employee names that were provided for employees with hazardous waste duties. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position. The facility provided a written description of the type and amount of both introductory and continuing training to be given to each person filling the positions listed above. The inspectors reviewed records of employee hazardous waste training completed in 2022 and 2023. Two training issues were identified. First, the primary facility trainer, although knowledgeable in his duties, had not yet personally received his own formal hazardous waste training. It was also discovered that the plantwide annual hazardous waste refresher training, last conducted in November 2022, had not been scheduled yet and was overdue.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(7)(i)(B)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: (B) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(7)(iii)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: (iii) Facility personnel must take part in an annual review of the initial training required in paragraph (a)(7)(i) of this section.

Waste Manifest and Land Disposal Restriction (LDR) Records:

The inspectors reviewed available hazardous waste manifest records and land disposal restriction forms for shipments of hazardous waste for 2022 and 2023. The manifests were found to be maintained in a well-organized manner. The waste profiles and associated LDR documentation are maintained with the respective manifest.

One minor discrepancy was identified in reference to a partially rejected load (Manifest # 022544715JJK), dated 3/28/2022. Waste returned to the facility was later re-manifested (Manifest # 022545338JJK). The description of the rejected waste on both manifests did not match (volume and container type), with a 50 gallon discrepancy. The source of the error was identified and explained to the inspection team in writing following the inspection and this explanation was fully satisfactory. In a 12/8/2023 email the facility explained that due to incinerator issues at the TSDF, two 30-gallon drums (60 gallons total) were returned to Dart Polymers but were mistakenly listed as two 55-gallon drums, containing 110 gallons total. The actual amount returned was the original 60 gallons in the original two 30-gallon containers.

Per 401 KAR 39:090, Section 1 [40 C.F.R. § 264.72(a)], which addresses manifest discrepancies and when a report is required, based on the information submitted by the facility, and observed on the manifests, no discrepancy report was required. This discrepancy, which did not involve bulk containers or involve a discrepancy on the number of containers (piece count) or type of waste, did not require a discrepancy report.

Leak Detection and Response Records

The facility maintains a Title V air permit that requires Leak Detection and Repair (LDAR). Components associated with the Hazardous Waste tank and piping are identified in the air permit. LDAR records were spot checked during the inspection. It is noted the facility is exempt from the 40 CFR 265 Subpart BB requirements if it is in compliance with the Title V permit. The facility has a full-time employee who is monitoring several thousand compliance points. The facility maintains a Leak Detection and Repair (LDAR) program per the facility's Title V air permit. The facility has several thousand inspection points in their production process (non-waste), and the facility performs LDAR on their single Hazardous Waste tank system that is designated for styrene and ethylbenzene. During the inspection, evaluation of 40 CFR 265 Subparts BB and CC were performed. Each test point has a unique identifier tag attached to it. Any component associated with the Hazardous Waste tank contains a "09" designation on the tag. The facility uses LeakDAS software to schedule testing. Facility staff perform testing as per Method 21 and use flame ionization instrumentation.

Inspection Records:

The inspectors reviewed the facility's available records of inspections of the hazardous waste central accumulation area (CAA) and hazardous waste tank system for 2022 and 2023. The inspection logs included a checklist to record observations about leaking containers and for deterioration of containers caused by corrosion or other factors. The records included the date and time of the inspection and the name, signature and initials of the employee conducting the inspection. No issues were identified with the weekly inspections.

For the daily hazardous waste tank system inspections, it was noted that the inspection records were missing for the following days: 7/1/2022, 7/2/2022, 7/28/2022, 1/6/2023, 1/14/2023, and 1/25/2023. The inspections for September 2023 could not be located on the day of the inspection but were subsequently found the next morning and a copy of the folder was emailed to the inspectors on 12/6/2023. The daily inspections for September 2023 were found to be complete. The daily tank inspection forms for these days were not completely filled out: 6/11/2022, 6/12/2022, 11/13/2022, 12/9/2022, 6/9/2023, and 7/18/2023. The daily inspection forms were not signed or initialed on 5/20/2022 and 3/15/2023.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(2)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: *Accumulation of hazardous waste in tanks*. If the waste is placed in tanks, the large quantity generator must comply with the applicable requirements of subpart J (except §§ 265.197(c) and 265.200 of this subchapter) as well as the applicable requirements of 40 CFR Part 265, subparts AA through CC.

Pursuant to 401 KAR 39:090, Section 2(1) [40 C.F.R. § 265.195(b) and (g)], (b) Except as noted under the paragraph (c) of this section, the owner or operator must inspect at least once each operating day: (1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; (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). (g) The owner or operator must document in the operating record of the facility an inspection of those items in paragraphs (a) and (b) of this section.

New Tank System Records Review:

The records for the new hazardous waste tank system were reviewed. The facility had contracted to have the new hazardous waste tank inspected by a tank inspection company (Acuren Inspection). The facility had a report, issued on 6/2/2022, documenting that it was the inspector's professional opinion that the tank was fit for use of storing hazardous waste. The report included visual inspection notes and instrument readings on thickness readings on the tank. The report also included photographs of the interior and exterior of the tank. This information documents that the tank was inspected prior to use and was determined to be serviceable, but the overall tank system assessment was not certified by a Professional Engineer. For new tank systems (tank and related equipment), to include the associated secondary containment system, the new system must be assessed and certified by a Professional Engineer.

Pursuant to 401 KAR 39:080, Section 1(1) [40 C.F.R. § 262.17(a)(2)], which is a condition of the Large Quantity Generator Accumulation Permit Exemption: Accumulation of hazardous waste in tanks. If the waste is placed in tanks, the large quantity generator must comply with the applicable requirement of subpart J (except §§ 265.197(c) and 265.200 of this subchapter) as well as the applicable requirements of 40 CFR 265, subparts AA through CC.

Pursuant to 401 KAR 39:090, Section 2(1) [40 C.F.R. § 265.193(b)(2)], (a) Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by a qualified Professional Engineer in accordance with § 270.11(d) of this chapter attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include the following information: (1) Design standard(s) according to which the tank(s) and ancillary equipment is or will be constructed. (2) Hazardous characteristics of the waste(s) to be handled.

Recycling Review

The review of the portion of materials (Waste Styrene/Ethylbenzene) formerly managed as hazardous waste was assessed after the site inspection. A brief teleconference on the material was held on 12/20/2023 between the facility and KYDEP and EPA staff. An email was sent from EPA to the facility, with a cc to KYDEP, on 12/20/2023 requesting more information on the recycling of the materials (Attachment 2). Due to the holiday season the facility was told that a

response in the first week of January would be acceptable. Dart Polymers sent in a detailed and comprehensive response on 1/4/2024 (Attachment 3).

The facility's response was reviewed and no issues were identified to contest the facility's diversion of a former waste into management as a commercial product. The review, based on the information provided, indicated that the facility appears to be legitimately recycling a portion of a former hazardous waste stream. Dart Polymers had traditionally managed this material as a characteristic by-product for the hazardous waste characteristic of ignitability (D001). The documentation provided to the inspectors, observations by the inspectors from the on-site portion of the inspection, and the product management briefing by Mr. Frizzell, with supporting briefing information from Mr. Hopewell and Mr. Fogle, supported that the material was being managed and sold as an industrial raw material for direct use by another manufacturer as a replacement for a portion of that company's normal raw materials. Per 401 KAR 39:060, Section 3(1) [40 C.F.R. § 261.2(c)], Table 1, characteristic by-products are not a "solid waste" when they are being reclaimed. In this case, the material appeared to be a direct substitute for a raw material.

Per 401 KAR 39:060, Section 3(1) [40 C.F.R. § 261.2(e)(1)], pertaining to materials that are not solid wastes when recycled, the regulations state:

(1) Materials are not solid wastes when they can be shown to be recycled by being: (i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or (ii) Used or reused as effective substitutes for commercial products;

The briefings and information provided by Dart Polymers, and observations from the inspection, supported that the material would qualify for the exclusion under 401 KAR 39:060, Section 3(1) [40 C.F.R. § 261.2(e)(1)(ii)] for materials being used as effective substitutes for commercial products. It is noted the facility is required to maintain documentation, per 401 KAR 39:060, Section 3(1) [40 C.F.R. § 261.2(f)], documenting this exclusion for this material in the facility file. The sales records, contracts, quality testing, shipment records, product specifications, etc. must be maintained for all material sales for at least three years in the facility record to document compliance with the terms of the exclusion(s). The information contained in the facility's 1/4/2024 letter is an example of the information that must be maintained on site to document the facility's compliance with the above regulatory exclusions.

Post-Inspection Follow-Up

Dart Polymers provided documentation in December 2023 and January 2024 that all issues identified during the inspection, that could be corrected, had been corrected excepting the tank and secondary containment issues. The inspectors had advised the facility to wait for the final report to address that tank system and secondary containment issues to ensure any remedies were accurate and also due to winter weather issues that would impede applying a secondary containment coating.

The folder for the missing daily tank system inspections for September 2023 were located the by the facility the following morning (12/6/2023) and a copy was emailed to the inspectors that same day. No issues were identified with those September 2023 inspections. Nate Hopewell, the EHS Manager and primary facility hazardous waste trainer, completed third party hazardous waste management training, from Lion Technology, on 12/6/2023. On 12/8/2023, the facility sent an email explaining the manifest discrepancy described above in the manifest records review. The facility completed its hazardous waste refresher training for its personnel on 12/12/2023 and 12/14/2023, via two classes per day (four hazardous waste refresher classes total). The Quick Reference Guide (QRG) was completed on 12/15/2023 and a copy was emailed to the inspectors. The QRG was reviewed and was found to be complete.

The facility reported, on 1/4/2024, that the tank inspection company would be able to work with a Professional Engineer to provide an assessment and certification. The facility also reported that they were in the process of obtaining quotes on a coating for their secondary containment system. In their 1/4/2024 letter, the facility also provided information, as noted above in the Recycling Review section, supporting that the styrene/ethylbenzene characteristic byproduct was being managed as a commercial product.

13) Closing Conference

The inspectors conducted the exit meeting at approximately 4:30 p.m. with Craig Frizzell, the Plant Engineer, Ross Fogle, the Operations Manager, and Nate Hopewell, the Environmental, Health, and Safety (EHS) Manager, for the closing conference. During this meeting, the inspectors stated their preliminary conclusions of the inspection. The facility agreed to provide follow-up records and all information requested, including documenting the correction of compliance observations. The inspection concluded at approximately 5:00 p.m. This information was subsequently provided in December 2023 and early January 2024.

14) List of Attachments

Attachment 1 – Photo Log

Attachment 2 – 12/20/2023 Information Request to Dart Polymers on Recycling

Attachment 3 – 1/4/2024 Dart Polymer Letter on Recycling and Update on the Facility
Addressing Inspection Observations

15) Signed

Nakamoto, Robert Digitally signed by Nakamoto, Robert
Date: 2024.02.06 15:29:01 -05'00'

Robert S. Nakamoto
Environmental Engineer
RCRA Enforcement Section

16) Concurrence

ARACELI CHAVEZ

Digitally signed by ARACELI
CHAVEZ

Date: 2024.02.07 09:25:36 -05'00'

Araceli B. Chavez

Chief

RCRA Enforcement Section

Attachment 1 – Photo Log

Photos taken on: December 5, 2023

Photos taken by: Robert Nakamoto

Photos taken with: Kodak PixPro FZ53

EPA Property Tag: SX9091



Photo 1: Hazardous Waste Accumulation Tank.



Photo 2: Air Monitoring Tags on the Hazardous Waste Pump Ancillary Equipment.



Photo 3: Top of the hazardous waste accumulation tank.



Photo 4: Secondary containment under the hazardous waste accumulation tank. The concrete is not coated.



Photo 5: Repaired crack in the secondary containment in the vicinity of the hazardous waste accumulation tank.



Photo 6: Cracks near the hazardous waste accumulation tank.



Photo 7: Cracks in the concrete containment wall in the area adjacent to the hazardous waste accumulation tank.



Photo 8: Small hairline crack in the containment wall near the hazardous waste accumulation tank. The concrete is not coated.



Photo 9: Partially repaired cracks in the secondary containment concrete.



Photo 10: Hazardous Waste SAA Metal 55-Gallon Container in the Pump House.



Photo 11: Signs on the Hazardous Waste Central Accumulation Area (CAA).



Photo 12: Additional signage on the hazardous waste CAA.



Photo 13: Metal 55-Gallon Container in the CAA. The container is dated 8/24/2023 but received an accumulation variance from KYDEP.



Photo 14: Metal 16-Gallon Hazardous Waste Container in the CAA. Plastic 30-Gallon Hazardous Waste Container is dated 7/31/2023 but has received an accumulation variance from KYDEP.



Photo 15: Metal 55-Gallon Container, Dated 12/1/203 in the CAA.



Photo 16: Group of Metal 55-Gallon Containers in the CAA.



Photo 17: Group of Metal 55-Gallon Containers in the CAA.



Photo 18: Third photo of the eight grouped metal 55-Gallon containers in the CAA. The inspectors were able to see the labels and markings but advised the facility to consider moving the containers away from the wall.



Photo 19: Example Photo of Fire Extinguisher. Fire Extinguishers were present throughout the facility.



Photo 20: Former 90-Day Hazardous Waste Accumulation Tank Converted to a Product Tank.



Photo 21: Secondary Containment for the Former 90-Day Hazardous Waste Accumulation Tank. The concrete in this area had been coated.



Photo 22: Secondary Containment for the Former 90-Day Hazardous Waste Accumulation Tank. The concrete in this area had been coated.



Photo 23: Satellite Accumulation Area Sign Utilized by the Facility.



Photo 24: Metal 55-Gallon SAA Container in the Plant 1 Containing Waste Ethylbenzene and Water.



Photo 25: SAA Containers in Plant 1 Containing Waste Initiator and Waste Polymer.



Photo 26: Metal 30-Gallon Hazardous Waste SAA Container in Plant 1 Containing Waste Polymer.



Photo 27: SAA Hazardous Waste Containers for the Facility Laboratory.



Photo 28: SAA Hazardous Waste Containers for the Facility Laboratory Containing Waste Styrene (55-Gallon Container) and Waste Methylene Chloride (30-Gallon Container).



Photo 29: Labeling and Marking on the 30-Gallon Waste Methylene Chloride Container.



Photo 30: Aerosol Can Puncturing Device Affixed to Metal 30-Gallon SAA Container.



Photo 31: Punctured Aerosol Cans Being Collected for Scrap Recycling.



Photo 32: Used Oil Tanks in the Facility Maintenance Area.



Photo 33: 55-Gallon Hazardous Waste SAA for Paint Waste.



Photo 34: Metal 55-Gallon Hazardous Waste SAA Container in the Suspension Plant Containing Extruder Waste.



Photo 35: Label on Metal 55-Gallon Container Containing Extruder Waste.



Photo 36: Wastewater Treatment tanks.



Photo 37: Wastewater Treatment Tanks.



Photo 38: Caustic Storage tank for pH Neutralization.



Photo 39: Air Pollution Control equipment for the facility.



Photo 40: Empty Universal Waste Battery Container.

Attachment 2

12/20/2023 Information Request
to Dart Polymers on Recycling

Nakamoto, Robert

From: Nakamoto, Robert
Sent: Wednesday, December 20, 2023 12:00 PM
To: Nate Hopewell
Cc: Ross Fogle; Craig Frizzell; Scott, Curtis (EEC)
Subject: Discussion points for the 2 p.m. call
Attachments: Discussion Points for Call & Response.docx

Nate,

Attached are some discussion points for the recycling/re-use issues on the portion of materials diverted out of the hazardous waste stream and back into commerce that you all briefed on during the inspection.

Thank you for taking time from your schedule to discuss this issue.

Will also discuss the hazardous waste tank issues on the certification and possible coating upgrades.

Thank you! Robert

Robert Nakamoto, P.E., CHMM
Environmental Engineer
RCRA Enforcement Section
Chemical Safety and Land Enforcement Branch Enforcement and Compliance Assurance Division USEPA-Region 4
Phone: 404-562-9341
Nakamoto.Robert@epa.gov

'CONFIDENTIALITY NOTICE'

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Discussion Points
December 20, 2023

Regulatory Contacts: Robert Nakamoto, U.S. EPA, R4
Curtis Scott, KDEP

Note: For materials being put back into legitimate/normal commerce, there are many potential exclusions and exemptions, so that the materials are no longer considered to be a waste for regulatory purposes. Some potential exclusions and exemptions are covered in 40 CFR 261.2(e) and 261.4(a)(24).

In some cases that I've reviewed, materials that were formerly "wastes" became a significant source of income for companies, sometimes becoming a key sale item supporting the long-term viability of the company. In some cases the former "waste" becomes the main cash flow.

To avoid Confidential Business Information (CBI) issues, it is recommended that specifics such as exact pricing, the customer name(s), copies of contracts, etc. not be included in the written response. If this information is needed, we can give instructions on submitting it under CBI protections. Typically this exact type of information is not needed or an inspector can visually look at items on site to verify information (whether with this inspection or at a future inspection). However, if you would prefer to file the response under CBI provisions that is fine.

It is recognized that pricing can vary at times due to market conditions and/or contract agreements that may not necessarily reflect current market conditions or that favor one party over another.

- 1) Exactly what is the material being transferred? What waste stream(s) is that coming out of?
- 2) Is the material sold to the other firm? That is, does Dart Polymers receive a positive cash flow? Or is Dart paying the customer to take the material? Or, is the material transferred for free?
- 3) If applicable, in general terms, how does any positive cash flow compare to what the company receiving the material was paying for an analogous raw material? Example – similar, much less, the same, about half, about a third, they get it for free, etc.
- 4) Who pays for the transportation?
- 5) If Dart is paying for the transportation, does the payment Dart Polymers receives exceed the cost of the transportation?
- 6) What is the general type of product/input that the material is substituting for?
- 7) In general, what type of processing to the material that Dart ships does the receiving facility have to do that differs from its processing of the normal raw material input?
- 8) What is the general product that the material is used to produce? Example – Plastic containers
- 9) Or, is the material processed, then sold as a chemical product?
- 10) Any other information that you can share to help explain why the material should be considered to be a "product" for commercial purposes versus a "waste" for regulatory purposes.

Attachment 3

1/4/2024 Dart Polymer Letter
on Recycling
and Update on the Facility
Addressing Inspection Observations



DART POLYMERS, INC.

2400 Harbor Road
Owensboro, Kentucky 42301
(270) 926-3434

January 4, 2024

Mr. Robert Nakamoto, P.E., CHMM
US EPA Region 4
61 Forsyth Street S.W.
Atlanta, GA 30303

Re: Former Waste Material in Commerce

Dear Mr. Nakamoto,

This correspondence is submitted to provide information regarding Dart Polymers' ("Dart") handling of material produced by the facility's industrial processes. Such information was requested in our recent conference call, and as detailed in your discussion points document dated December 20, 2023. The material at issue could potentially be categorized as a hazardous waste due to the product exhibiting the characteristics of ignitability (EPA Hazardous Waste Number of D001). However, Dart has found that the material has value in commerce to certain customers as effective substitutes for other commercial products. Dart works with both current and potential customers to use or reuse the material as viable feedstock in other industrial processes. The questions in the referenced discussion points document, and corresponding answers, are provided below:

- 1) **Exactly what is the material being transferred? What waste stream(s) is that coming out of?**
 - a. Dart Polymers produces polystyrene resins in various grades (both high impact and general purpose) via mass polymerization. The primary feedstock in Dart's process is styrene monomer, with ethylbenzene being utilized as a carrier solvent to aid in material flow through the process. Unreacted styrene monomer and ethylbenzene are removed from the polymer melt near the end of the process and then returned to the feed stream. To maintain acceptable feed stream properties, a portion of the recycled stream is removed from the process.
- 2) **Is the material sold to the other firm? That is, does Dart Polymers receive a positive cash flow? Or is Dart paying the customer to take the material? Or, is the material transferred for free?**
 - a. The material is sold to the customer at an agreed upon price, generating a positive cash flow to Dart (apart from freight costs – see items 4 and 5 below).
- 3) **If applicable, in general terms, how does any positive cash flow compare to what the company receiving the material was paying for an analogous raw material? Example – similar, much less, the same, about half, about a third, they get it for free, etc.**
 - a. Dart is not aware of the cost of the customer's analogous raw material.
- 4) **Who pays for the transportation?**
 - a. Dart currently pays for transportation of the material to the customer.



DART POLYMERS, INC.

2400 Harbor Road
Owensboro, Kentucky 42301
(270) 926-3434

- 5) **If Dart is paying for the transportation, does the payment Dart Polymers receives exceed the cost of the transportation?**
 - a. Under the current terms and pricing agreement, the cost of transportation does slightly exceed payment received by Dart. However, when the cost to dispose of the material as hazardous waste is considered, there is a net financial benefit to Dart.
- 6) **What is the general type of product/input that the material is substituting for?**
 - a. Dart is not aware of exact details regarding the raw material being substituted by the customer. Upon information and belief, the styrene content is processed to make resins, while the ethylbenzene acts as a carrier solvent.
- 7) **In general, what type of processing to the material that Dart ships does the receiving facility have to do that differs from its processing of the normal raw material input?**
 - a. Dart is not aware of any processing of our material that is required by the customer to make it suitable for use in their process.
- 8) **What is the general product that the material is used to produce? Example – Plastic containers**
 - a. See response to item 6 above.
- 9) **Or, is the material processed, then sold as a chemical product?**
 - a. No, according to information provided by the customer, the styrene-ethylbenzene mixture is handled and processed in a manner consistent with any other prime/virgin-grade feedstock.
- 10) **Any other information that you can share to help explain why the material should be considered to be a “product” for commercial purposes versus a “waste” for regulatory purposes.**
 - a. Dart has made capital investment in its industrial process to ensure that the material offered for sale is useful as a feedstock and therefore marketable. In the past, when this material was strictly handled as a waste, components other than the material removed from the feed stream were included (e.g., oligomers, filter solutions). Process changes were made to remove these heavier materials from the co-product in order to improve the material’s marketable characteristics. Additionally, Dart continues to engage in discussions regarding the sale of the material with potential customers.

During the conference call, there was a brief discussion regarding the facility’s handling of the material in the event that a customer is unavailable to accept it. Dart was asked to describe that handling process in this response. Material that is removed from our primary process feed stream is transferred to a storage tank during normal operations. The inventory level in that tank is continuously monitored, and scheduling of shipment to a customer is dictated by the need to empty the tank. In the event that a customer is not available to receive a shipment when needed to accommodate the facility’s processing requirements, material in the co-product storage tank is transferred to a tank designated for, and appropriately marked as, hazardous waste. Storage and accumulation limits are managed in that tank based on dates of shipment of waste by bulk truck to



DART POLYMERS, INC.

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a TSDF. Stated differently, the 90-day storage clock for the tank begins on the date that it is emptied.

During our call we also discussed the status of two additional items relating to: 1) the hazardous waste storage tank; and 2) Dart's containment dike where such hazardous waste is located. As indicated on the call, Dart reached out to an inspection service (Acuren) that was used to evaluate the condition of the tank when it was commissioned for hazardous waste storage in 2022. As noted during your inspection, the tank was certified for use according to API standards, but the tank and inspection report were not evaluated by a professional engineer. The facility has reached out to Acuren for assistance as Dart moves forward with additional evaluation of the dike, and Acuren's inspection staff stand ready to provide such assistance once Dart receives more detailed information on the requirements that will need to be met. The facility also has begun the process of obtaining quotes for coating/sealing the containment dike. As previously discussed, that process will likely need to wait for better weather in order to be effective. The facility will be prepared to move forward when appropriate based on your guidance and/or weather conditions.

I trust the information provided is sufficient to answer the questions regarding Dart's handling of co-product offered for sale, and that the information regarding the tank inspection, dike coating, and waste handling is helpful as well.

Please contact me (craig.frizzell@dart.biz) or Nate Hopewell, EHS Manager (nate.hopewell@dart.biz) if you have any questions or need more information. We look forward to your favorable reply.

Sincerely,

A handwritten signature in dark ink, appearing to read "Craig Frizzell", written in a cursive style.

Craig Frizzell
Plant Engineer

Copy to: Mr. Curtis Scott
Kentucky DWM