

RCRA Inspection Report

1) Inspector and Author of Report

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Enforcement and Compliance Assurance Division
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61 Forsyth Street, SW
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2) Facility Information

Arkema Inc.
13755 Highway 43 North
Axis, Alabama 36505

EPA ID#: ALD000827154

NAICS #s:
325211 for Plastic Materials and Resin
Manufacturing and
325199 for All Other Basic Organic Chemical
Manufacturing

3) Responsible Officials

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4) Inspection Participants

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Lisa O'Brien, Arkema
Michelle Haney, Arkema
Jonathan Allred, Arkema

Lanny Sasser, Alabama Department of
Environmental Management (ADEM)
Laurie Benton DiGaetano, USEPA
Alexis Wilson, USEPA
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5) Date of Inspection

November 20, 2024, 10:10 AM

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, &

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.

279; and Alabama Hazardous Waste Management and Minimization Act of 1978 (AHWMMA), Ala. Code § 22-30-1 et seq., and rules 335-14-1 to 335-14-17 (2016 and 2018) of the ADEM Administrative Code (ADEM Admin. Code).

Pursuant to ADEM Admin. Code r. 335-14-1-.02(1)(a)111. [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 ADEM Admin. Code r. 335-14-1-.02(1)(a)157. [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 ADEM Admin. Code r. 335-14-3-.01(5)(a) [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 Section 22-30-12(b) of the AHWMMA, Ala. Code § 22-30-12(b) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with ADEM Admin. Code r. 335-14-3-.01(6)(b) or 335-14-3-.01(7)(a) [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in ADEM Admin. Code r. 335-14-3-.01(5)(a)7. and 8. [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in ADEM Admin. Code r. 335-14-3-.01(5)(a) [40 C.F.R. § 262.15] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to ADEM Admin. Code r. 335-14-3-.01(7) [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 Section 22-30-12(b) of the AHWMMA, Ala. Code § 22-30-12(b) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in ADEM Admin. Code r. 335-14-3-.01(7) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection (CEI) to determine Arkema Inc.’s compliance with the applicable requirements of RCRA and the corresponding Alabama regulations. This was an EPA lead inspection.

8) Facility Description

The Arkema Group produces specialty materials, including acrylic monomers, adhesives, emulsion systems, fluorochemicals, fluoropolymers, functional additives, hydrogen peroxide, specialty polyamides and thiochemicals, for use in products such as vehicles, cosmetics, aeronautics, packaging, electrics, and sporting goods. The Arkema Group operates in 55 countries and has a total of 151 production plants, including 44 production plants in the United States. It is organized into four business segments: Adhesive Solutions, Advanced Materials,

Coating Solutions, and Intermediates, and it has total of approximately 21,200 employees worldwide.

The subject Arkema, Inc. (Arkema) production plant is located on a 220-acre facility in Axis, Alabama. Approximately 90 acres of the facility have been developed, and the plant has 120 employees. This plant operates under Arkema's Advanced Materials and Coating Solutions business segments and has five batch-process production lines. Arkema manufactures plastic additives (PLADS), waterborne latex (WBR), and polyetherketoneketone (PEKK) polymer at this facility, and also operates and maintains two on-site tin-based organometallic chemical production units for PMC Organometallics (ALR000053371). The plastic additives manufactured here are used in the production of a wide variety of plastic items. The additives may be impact modifiers (IM) that improve properties such as impact resistance of PVC compounds used in pipe, siding, fencing, decking, windows and trim, or they may be process aids (PA) that improve the productivity, quality, and cost of producing those products and of producing film, sheet, bottles, and packaging products. The PEKK polymer is a lightweight, high-performance thermoplastic used for demanding applications, such as those found in the aerospace industry. Although, the PEKK production process operates on a five-day schedule, the remaining product lines operate twenty-four hours per day, seven days per week. The plant has an on-site Brigade for emergency response services; one on-site laboratory for quality assurance and quality control testing; and a wastewater treatment facility and utilities that service the entire plant.

Although, the Arkema Group was created in October 2004, the subject facility has been in operation for over 40 years. Arkema first notified as a large quantity generator of hazardous waste (LQG) at this location in 2004, but the facility was operated by Atofina Chemicals, Inc. for at least ten years before that. Between 2004 and 2020, Arkema notified as the operator of an LQG owned by the Mobile County Industrial Development Authority at this location. Since December 2021, the Arkema has notified as the owner and operator of an LQG at this location. In its most recent notification of regulated activity (ADEM Form 8700-12), dated February 19, 2024, Arkema notified as the owner and operator of an LQG, a used oil generator, and a small quantity handler of universal waste that manages and reclaims approximately 83 short tons of F002 as a hazardous secondary material each year.

Arkema operated this facility under a RCRA Corrective Action Permit until February 6, 2008, when ADEM determined that the corrective action obligations had been fulfilled in accordance with the ADEM Administrative Code. The facility entered the Alabama Voluntary Cleanup Program (VCP) in November 2003 following the identification of Isopropyl Ether (IPE) in groundwater on-site. In February 2009, ADEM received a Site Assessment Report that summarized the Alabama VCP investigations of IPE contamination and recommended continued confirmation of site conditions through groundwater monitoring. Arkema continues monitoring groundwater on an annual basis under the Alabama VCP.

The largest volume of hazardous waste that Arkema routinely generates at this facility is spent organic solvent generated during the production of the PEKK polymer. Spent solvent is removed from reacted material in the PEKK production process and sent to a distillation unit to recover solvent for reuse on-site. Liquid still bottoms generated by the distillation process are characterized as F002 hazardous waste organic solvents. Historically, Arkema accumulated and

stored this F002 hazardous waste in a storage tank (T-404) that was managed under the LQG Permit Exemption. Within the past three years, Arkema installed a white film evaporator (WFE) to recover additional solvent and reduce the amount of hazardous waste generated in the PEKK production process. Instead of generating, accumulating, storing, and shipping bulk volumes of liquid F002 hazardous waste organic solvent, the process now generates approximately 55 gallons of waxy F002 hazardous waste organic solvent for every 24 hours that the solvent recovery system is in operation. As a result, Arkema isolated, cleaned, and closed the hazardous waste storage tank (T-404). On January 18, 2024, Arkema submitted a RCRA Closure Report to ADEM detailing the closure activities of the hazardous waste accumulation storage tank (T-404) that were completed on December 11, 2023. In response, ADEM sent a letter dated January 26, 2024, stating that the Department had determined that the submittal appeared to satisfy the applicable closure reporting requirements.

In addition to the F002 hazardous waste organic solvents described above, Arkema also routinely generates F002 hazardous waste organic solids from cleaning process equipment; D022 hazardous wastes halogenated organic liquid used in laboratory analyses; D001, D035, F005 hazardous waste ink containers and wipes; D001, F002 hazardous waste HPLC solvent; and F002 hazardous waste solids from the WFE. Arkema may also generate hazardous waste from process changes, production upsets, and tank cleaning activities; from discarding various unused or off-specification laboratory chemicals; and from discarding unused commercial chemical raw material products.

9) Previous Inspection History

The ADEM has conducted five RCRA CEIs at the subject facility over the past ten years and found two potential violations of the universal waste management requirements during the first of those inspections.

On August 30, 2024, the ADEM conducted the most recent RCRA CEI at the subject facility and found no apparent violations of RCRA's requirements.

10) Opening Conference

On November 20, 2024, EPA inspectors Laurie Benton DiGaetano, Alexis Wilson, and Devon Robinson, accompanied by ADEM inspector Lanny Sasser, arrived at the Arkema facility at approximately 10:10 AM. The inspectors were processed through the security gate before they were received by Lisa O'Brien, Environmental Engineer, Michelle Haney, Environmental Leader for the Business Unit, and Jonathan Allred, Health, Environment, and Safety Manager. The inspectors introduced themselves, showed their credentials to Michelle Haney, and explained the purpose of the visit. Rene Neron, Plant Manager, joined the other participants for the opening conference.

The inspectors described the anticipated use of equipment (digital camera) and the records that will be reviewed during the inspection. Jonathan Allred explained that some areas require a hot-work permit for photographs, and he volunteered to take any requested photographs using an intrinsically safe camera. The EPA lead inspector explained that the EPA has resources available for small businesses, a classification in the Small Business Regulatory Enforcement

Fairness Act that 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 lead 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 but did request that the inspectors avoid identifying certain raw materials used on-site in the written report.

The facility representatives 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 Lisa O'Brien, Michelle Haney, and Jonathan Allred led the inspectors on a tour of the facility operations.

11) Inspection Observations

PEKK/Distillation Area SAA:

The inspection tour of facility operations began in the PEKK Control Room, where operators provided additional information on the PEKK production process and solvent recovery systems. Dirty solvent is removed from reacted material in the PEKK production process and sent to the distillation unit for recovery. Personnel stated that Arkema also uses another solvent to clean the equipment, and that the cleaning solvent is also recovered and reused on-site. Spent solvent is stored as a secondary hazardous material in Tank T-812-02 before it is sent through the distillation process. The inspectors observed Tank T-812-02, which was labeled "crude solvent" and identified with a National Fire Protection Association (NFPA) hazard diamond. Reclaimed solvent is accumulated in one of three small tanks in this area and then transferred to one of the larger storage tanks (T-422-03A or T-422-03B) before it is reused on-site.

According to facility personnel, waste solids that are removed from spent solvent during the distillation process are mixed with wax to keep the waste in a fluid state. Personnel explained that the solvent recovery system is kept under vacuum pressure until the solvent recovery cycle is complete. At the end of the cycle, the system is removed from vacuum pressure, the lid is removed from the 55-gallon accumulation container in the Distillation Area SAA, the valve is opened, and the F002 hazardous waste organic solvent uses gravity to exit the system and fall into the 55-gallon accumulation container below the open line. After draining, the system is prepared for the next solvent recovery cycle by closing the valve and replacing the lid on the 55-gallon hazardous waste accumulation container.

The inspectors observed one 55-gallon container in the PEKK/Distillation Area SAA (Photo 1). The drum was labeled with the words "Hazardous Waste," and it was identified with a Class 9 DOT hazard sticker. Because the DOT Class 9 label does not indicate any specific hazard associated with the waste, the EPA has determined that it is not appropriate to meet the RCRA indication of hazards labeling standard ([Frequent Questions About Implementing the Hazardous Waste Generator Improvements Final Rule | US EPA](#)). Pursuant to ADEM Admin. Code r. 335-14-2-.04(2)(a) [40 C.F.R. § 261.31(a)], F002 hazardous waste spent solvents are listed hazardous waste due to the hazard code associated with a toxic waste. The container was not marked with an indication that the contents are toxic, and the lid had not been secured to

close the container. In addition, the inspectors observed waste material on the outside of the 55-gallon container and on the pavement and equipment beneath the container. The inspectors also observed an approximately 2.5-foot piece of piping that was plugged with F002 hazardous waste on the pavement in this area (Photo 2). Facility personnel explained that the piping was removed yesterday, because they experienced an issue that caused the piping to become clogged with F002 hazardous waste.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)4. [40 C.F.R. § 265.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except: when adding, removing or consolidated 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.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a)7. [40 C.F.R. § 262.17(a)(6)], which incorporates ADEM Admin. Code r. 335-14-3-.14(2) [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.

In an email dated November 20, 2024, Jonathan Allred provided Lanny Sasser, ADEM, and Laurie Benton DiGaetano, EPA, with photographs that he had taken on the day of the inspection. In addition to the photographs that were taken during the inspection tour of facility operations, Jonathan Allred also provided photographic evidence that the 55-gallon container in the PEKK/Distillation Area SAA had been identified with a DOT toxic hazard sticker (Photo D); that the lid on the container had been secured to close the container (Photo E); that the outside of the 55-gallon container and the pavement and equipment beneath the container had been cleaned to remove hazardous waste (Photo F); and that the 2.5-foot piece of piping had been cleaned to remove hazardous waste (Photo G).

PA Process Area and SAAs:

Arkema has identified two SAAs in the PA Process Area for managing D001, D035, F005 hazardous waste ink containers and wipes containing methyl ethyl ketone (MEK) and ethanol that is generated when packaging products for shipment. The inspectors observed one 55-gallon container in each SAA. The first container, which was located in the Phase 0 SAA, was closed; it was labeled with the words "Hazardous Waste;" and it was identified with a DOT flammable hazard sticker (Photo 3). The second container, which was located in the Phase 3 SAA, was also closed; it was labeled with the words "Hazardous Waste;" and it was identified with a DOT flammable hazard sticker. Pursuant to ADEM Admin. Code r. 335-14-2-.03(5)(b) [40 C.F.R. § 261.24(b)], D035 hazardous waste is a solid waste exhibiting the characteristic of

toxicity for MEK. Neither container was marked with an indication that its contents exhibit the hazardous waste characteristic of toxicity.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

In an email dated November 20, 2024, Jonathan Allred provided Lanny Sasser, ADEM, and Laurie Benton DiGaetano, EPA, with photographs that he had taken on the day of the inspection. In addition to the photographs that were taken during the inspection tour of facility operations, Jonathan Allred also provided photographic evidence that the 55-gallon container in the Phase 0 PA Process Area SAA had been marked with a DOT toxic hazard sticker (Photo H).

Laboratory SAAs:

Arkema has identified SAAs in the laboratory for managing hazardous waste generated during the laboratory analysis procedures. The inspectors observed one 5-gallon container of D022 hazardous waste under fume hood EX-601-06 (Photo 4); and one 5-gallon container of HPLC hazardous waste and one 1-liter container of hazardous waste sulfuric acid/methanol mixture under fume hood EX-601-02. The 5-gallon container of D022 hazardous waste, which was open, was labeled with the words “Hazardous Waste” and identified with a DOT toxic hazard sticker. Facility personnel immediately closed the container. The 5-gallon container of HPLC hazardous waste, which was closed, was labeled with the words “Hazardous Waste,” and identified with DOT toxic and flammable hazard stickers. The 1-liter container of hazardous waste sulfuric acid/methanol mixture, which was closed, was labeled with the words “Hazardous Waste,” and identified with a DOT toxic hazard indicator. The 1-liter container was also marked with an indication that its contents exhibit the hazardous waste characteristics of ignitability, toxicity, and corrosivity.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)4. [40 C.F.R. § 265.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except: when adding, removing or consolidated 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.

Maintenance Area SAA:

Arkema has identified one SAA in the Maintenance Area for managing hazardous waste aerosol cans and hazardous waste adhesives. The inspectors observed two 55-gallon containers inside a clam-shell-type storage unit at this SAA (Photo 5). Generators may manage more than one container in the same SAA, but the SAA Permit Exemption limits the total volume of waste accumulated in a SAA to be no more than 55-gallons. Although the total capacity of these containers exceeds the 55-gallon limit for a SAA, the volume of waste inside the containers appeared to be less than 55-gallons at the time of the inspection. The first drum was labeled as D001 hazardous waste adhesive containing flammable liquid, and it was identified with a DOT flammable hazard sticker. The second drum was labeled as D001, D035 hazardous waste aerosol cans, and it was identified with a DOT flammable hazard sticker. The second drum was

not marked with an indication that its contents also exhibit the hazardous waste characteristic of toxicity.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

300 Warehouse SAA:

Dead and broken fluorescent lamps are pulverized using a bulb crusher and the crushed material is accumulated in the 300 Warehouse SAA. The inspectors observed one 55-gallon container in this SAA. The container was closed; it was labeled as D009 hazardous waste; and it was identified with a DOT Class 9 hazard sticker. Pursuant to ADEM Admin. Code r. 335-14-2-.03(5)(b) [40 C.F.R. § 261.24(b)], D009 hazardous waste is a solid waste exhibiting the characteristic of toxicity for mercury. Facility personnel immediately wrote the word “toxic” on the hazardous waste label.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

Paint Storage SAAs (by PMC 200):

Arkema has identified two SAAs in the Paint Storage Area near the PMC Process Area 200. One SAA is used to manage D001, D035 waste paint related solids, and the other is used to manage D001, D035 waste paint related liquids containing MEK and xylene. The inspectors observed two 55-gallon containers inside a roll-top secondary containment shed for managing hazardous wastes generated in these SAAs. Each container was labeled with the words “Hazardous Waste” and identified with a DOT flammable hazard sticker, but neither container was marked with an indication that its contents exhibit the hazardous waste characteristic of toxicity. Facility personnel immediately wrote the word “toxic” on each of the hazardous waste labels.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

PEKK Process Area (300) SAA:

Arkema has identified one SAA in the PEKK Process Area for managing used filters as F002 hazardous waste solids when they are removed from the process lines. The inspectors observed one 55-gallon container in this SAA. The container was closed; it was labeled with the words “Hazardous Waste;” and it was identified with a DOT Class 9 hazard sticker. Facility personnel immediately wrote the word “toxic” on the hazardous waste label.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

IM Tank Farm:

The inspectors observed a 750-gallon used oil storage tank (T-811-01) in the IM Tank Farm. The tank was closed, and it was labeled with the words “used oil.”

Central Accumulation Area (CAA):

The CAA is a concrete pad surrounded by a four-inch-high curbing, equipped with a metal roof, and surrounded by a locked, chain-link fence topped with barbed wire (Photo 6). The inspectors observed one sign that read “danger, hazardous waste storage area” and another that read “no smoking” posted on the exterior of the entry gate. The area is equipped with portable fire extinguishers, spill equipment, and an emergency eyewash and shower station. Facility personnel stated that personnel working in this area carry two-way radios to signal an emergency alarm or summon emergency assistance.

The inspectors observed six wooden pallets holding containers of hazardous waste in the CAA (Photo 7):

- Pallet 01 - two 55-gallon containers: one container of F002 hazardous waste solid, n.o.s. dichlorobenzene, was labeled with the words “Hazardous Waste,” marked with the EPA waste code F002, marked with an accumulation start date of November 11, 2024, and identified with a Class 9 DOT hazard sticker; and one container of F002 hazardous waste environmental hazardous substance orthodichlorobenzene, was labeled with the words “Hazardous Waste,” marked with an accumulation start date of November 11, 2024, and identified with a Class 9 DOT hazard sticker. The second container was not marked with the EPA waste code associated with its contents.
- Pallet 02 – four 55-gallon containers of F002 hazardous waste generated by the WFE: each container was labeled with the words “Hazardous Waste;” three of the four containers were marked with an accumulation start date of November 11, 2024; the fourth container was marked with an accumulation start date of November 14, 2024; each container was identified with a DOT Class 9 hazard sticker; and none of the containers were marked with the EPA hazardous waste number(s) associated with its contents.
- Pallet 03 – Two overpacks of D002, D003 hazardous waste Isophthaloyl chloride (ICL), which were shrink wrapped together: each container was labeled with the words “Hazardous Waste,” and marked with an accumulation start date of November 9, 2024. Pursuant to ADEM Admin. Code r. 335-14-2-.03(3)(b) and r. 335-14-2-.03(4)(b) [40 C.F.R. §§ 261.22(b) and 261.23(b)], a D002 hazardous waste is a solid waste exhibiting the characteristic of corrosivity and a D003 hazardous waste is a solid waste exhibiting the characteristic of reactivity, respectively. Neither container was marked with an indication that its contents exhibit the hazardous waste characteristics of corrosivity or reactivity, and neither container was marked with the EPA hazardous waste number(s) associated with its contents.
- Pallet 04 – Two overpacks of D002, D003 hazardous waste ICL: the first container was labeled with the words “Hazardous Waste,” and marked with an accumulation start date of November 11, 2024; and the second container was not labeled with the words “Hazardous Waste,” or marked with accumulation start date. Neither container was

marked with an indication that its contents exhibit the hazardous waste characteristics of corrosivity or reactivity, and neither container was marked with the EPA hazardous waste number(s) associated with its contents.

- Pallet 05 – Two overpacks, which shrink wrapped together: one container of D002 hazardous waste corrosive liquid (hydrochloric acid, terephthaloyl chloride) was labeled with the words “Hazardous Waste,” marked with an accumulation start date of November 9, 2024, and marked with the EPA hazardous waste number D002, but it was not marked with an indication of the hazards of its contents; one container of D002, D003 hazardous waste ICL was labeled with the words “Hazardous Waste” and marked with an accumulation start date of November 11, 2024, but it was not marked with an indication that its contents exhibit the hazardous waste characteristic of corrosivity or the hazardous waste characteristic of reactivity, or with the EPA hazardous waste number(s) associated with its contents.
- Pallet 06 – Two overpacks of D002, D003 hazardous waste ICL, which were shrink wrapped together: the first container was labeled with the words “Hazardous Waste” and marked with an accumulation start date of November 11, 2024; and the second container was not labeled with the words “Hazardous Waste” or marked with an accumulation start date. Neither container was marked with an indication that its contents exhibit the hazardous waste characteristics of corrosivity or reactivity, and neither container was marked with the EPA hazardous waste number(s) associated with its contents.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a)5.(i) [40 C.F.R. § 265.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: the words “Hazardous Waste”; an indication of the hazards of its contents; the date upon which each period of accumulation begins clearly visible for inspection on each container; and all appropriate EPA hazardous waste numbers associated with the hazardous waste.

In an email dated November 20, 2024, Jonathan Allred provided Lanny Sasser, ADEM, and Laurie Benton DiGaetano, USEPA, with photographs that he had taken on the day of the inspection. In addition to the photographs that were taken during the inspection tour of facility operations, Jonathan Allred also provided photographic evidence that the unlabeled container on Pallet 04 had been labeled with the words “Hazardous Waste,” marked with an accumulation start date of October 1, 2024, marked with the EPA hazardous waste numbers D002 and D003, and marked with an indication that its contents exhibit the hazardous waste characteristic of corrosivity and the hazardous waste characteristic of reactivity (Photo A); that the container of F002 hazardous waste environmental hazardous substance orthodichlorobenzene on Pallet 01 had been marked with an indication that its contents are toxic (Photo B); and that DOT corrosive hazard stickers had been added to overpack containers on Pallets 04, 05, and 06 to indicate that the contents exhibit the hazardous waste characteristic of corrosivity (Photo C).

12) Records Review

Contingency Plan and Quick Reference Guide (QRG):

The facility's Contingency Plan, which was last updated in May 2023, 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. This description includes reference to the on-site Emergency Response Brigade, which is available twenty-four hours per day, seven days per week. Members of the brigade are required to complete annual training for firefighting, confined space rescue, hazmat technician level response, high angle/confined space rescue, and medical first responder activities. The Contingency Plan includes a personnel evacuation plan, which describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes. It also includes a list of emergency equipment, including fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment, that are available at the facility, and it identifies the location and a physical description of each item on the list, and a brief outline of its capabilities.

Because the plant operates twenty-four hours per day, seven days per week, the Contingency Plan indicates that the emergency coordinator responsibilities are assigned to the current shift leader, and the plan includes a list of the names and emergency telephone numbers for those shift leaders. The Contingency Plan also describes arrangements agreed to with the Mobile County Emergency Management Agency, the Mobile County Local Emergency Planning Committee, the plant medical services, the Springhill Memorial Hospital, the University of South Alabama Medical Center, and the Mobile County Sheriff.

The Contingency Plan's quick reference guide includes the types/names of hazardous waste in layman's terms and the associated hazard associated with each hazardous waste present at any one time; the estimated maximum amount of each hazardous waste that may be present at any one time; the identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; a map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes; a street map of the facility in relation to surrounding businesses, schools and residential areas; the locations of water supply; the identification of on-site notification systems; and the name of the emergency coordinator(s) and emergency telephone number(s).

A copy of the Contingency Plan and its quick reference guide was most recently submitted to the Springhill Medical Center, the ADEM, the University of South Alabama Medical Center, the Mobile County Emergency Management Agency, the Mobile Central Fire Station, the Alabama Department of Public Safety, and the Mobile County Sheriff on June 5, 2023.

Training Records:

The inspectors reviewed facility job descriptions and employee names that were provided for the HESQ Manager and the Lead Environmental Engineer, and the records of employee hazardous waste training completed in calendar years 2023 and 2024.

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 sent during the past three years.

Weekly Inspection Records:

The ADEM inspector reviewed Arkema's available records of inspections of the hazardous waste central accumulation area (CAA) since January 2022. The inspection log includes a checklist to record observations about: hazardous waste container labels; information to identify contents of containers; accumulation start dates; closed containers; cleanliness of containers; deterioration of containers caused by corrosion or other factors; leaking containers; cracks in the curbing surrounding the containment pad; cracks in the surface of the containment pad; absence of debris in pad drainage area; operational status of sump pump; aisle spacing; stacking of containers less than two-high; operational status of eyewash station; inspection status of fire extinguisher; condition of security fencing; and the date of the oldest container.

13) Closing Conference

The inspectors conducted the exit meeting at 4:00 PM with Rene Neron, Lisa O'Brien, Michelle Haney, and Jonathan Allred. During this meeting, the inspectors stated their preliminary conclusions of the inspection.

In an email dated November 20, 2024, Jonathan Allred provided Lanny Sasser, ADEM, and Laurie Benton DiGaetano, USEPA, with photographs that he had taken on the day of the inspection. In addition to the photographs that were taken during the inspection tour of facility operations, Jonathan Allred also provided photographic evidence of corrective actions taken following the inspection tour of the facility. These photographs are included in Attachment 1 to this CEI report.

14) Sampling Overview

This CEI did not include waste or media sampling.

15) Summary of Observations

During the inspection, observations were made concerning the following RCRA requirements:

- Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)4. [40 C.F.R. § 265.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except: when adding, removing or consolidated 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.
- Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a)5. [40 C.F.R. § 265.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of its contents.

- Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a)5.(i) [40 C.F.R. § 265.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: the words “Hazardous Waste”; an indication of the hazards of its contents; the date upon which each period of accumulation begins clearly visible for inspection on each container; and all appropriate EPA hazardous waste numbers associated with the hazardous waste.
- Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a)7. [40 C.F.R. § 262.17(a)(6)], which incorporates ADEM Admin. Code r. 335-14-3-.14(2) [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.

16) List of Attachments

Attachment 1 – Photo Log

17) Signed

LAURIE DIGAETANO Digitally signed by LAURIE DIGAETANO
Date: 2025.01.14 10:25:51 -05'00'

Laurie Benton DiGaetano, Environmental Engineer
RCRA Enforcement Section

18) Concurrence

BROOKE YORK Digitally signed by BROOKE YORK
Date: 2025.01.16 07:46:11 -05'00'

Brooke York, Acting Chief
RCRA Enforcement Section

Attachment 1 – Photo Log

15 Photos taken on: November 20, 2024
Photos taken by: Jonathan Allred, Arkema



Photo 1: One 55-gallon container in the PEKK Process Area SAA.



Photo 2: An approximately 2.5-foot piece of piping that is plugged with F002 hazardous waste on the pavement near the 55-gallon container in the PEKK Process Area SAA.



Photo 3: One 55-gallon container in the Phase 0 SAA at the PA Process Area.



Photo 4: One 5-gallon container of D022 hazardous waste under fume hood EX-601-06 in the Laboratory SAA.



Photo 5: Two 55-gallon containers inside a clam-shell-type storage unit at the Maintenance Area SAA.

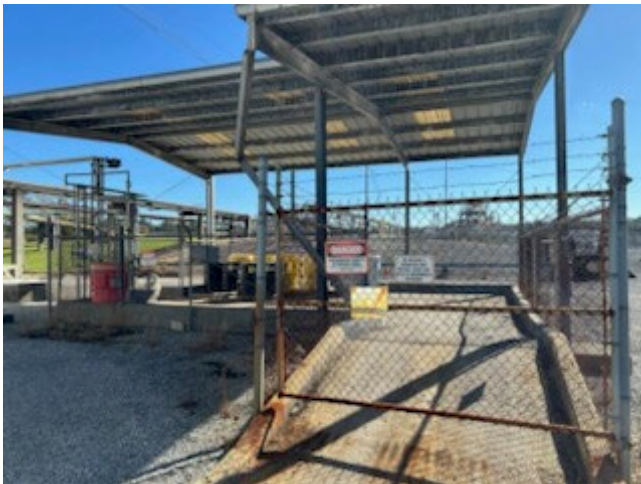


Photo 6: The CAA and its entry gate.



Photo 7: Six wooden pallets holding containers of hazardous waste in the CAA.



Photo A: Following the inspection tour of facility operations, the unlabeled container on Pallet 04 in the CAA was labeled with the words “Hazardous Waste,” marked with an accumulation start date of October 1, 2024, marked with the EPA hazardous waste numbers D002 and D003, and marked with an indication that its contents exhibit the hazardous waste characteristics of corrosivity and reactivity.



Photo B: Following the inspection tour of facility operations, a DOT toxic hazard sticker was added to the container of F002 hazardous waste environmental hazardous substance that was observed on Pallet 01 in the CAA.



Photo C: Following the inspection tour of facility operations, DOT corrosive hazard stickers were added to overpack containers that were observed on Pallets 04, 05, and 06 in the CAA.



Photo D: Following the inspection tour of facility operations, the DOT toxic hazard sticker was added to the 55-gallon container in the Distillation Area SAA.



Photo E: Following the inspection tour of facility operations, the lid on the 55-gallon container in the Distillation Area SAA was secured to close the container.



Photo F: Following the inspection tour of facility operations, the outside of the 55-gallon container in the Distillation Area SAA and the pavement and equipment below the container was cleaned to remove hazardous waste.



Photo G: Following the inspection tour of facility operations, the 2.5-foot piece of piping in the Distillation Area SAA was cleaned to remove hazardous waste.



Photo H: Following the inspection tour of facility operations, a DOT toxic hazard sticker was added to the 55-gallon container in the Phase 0 PA Process Area SAA.