

RCRA Inspection Report

1) Inspector and Author of Report

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2) Facility Information

Mosaic Fertilizer, LLC–Riverview Facility
8813 U.S. Highway 41
Riverview, Florida 33569
EPA ID No: FLD064696107

3) Responsible Officials

Ann Wortman, CHMM Environmental Lead
Ann.Wortman@mosaicco.com

4) Inspection Participants

Kayla Acosta, U.S. Environmental Protection Agency
Laura Dahlgren, U.S. EPA
Leslie Pedigo, Florida Department of Environmental Protection (FDEP)
Sarah Green, FDEP
Ann Wortman, Mosaic Fertilizer, LLC
Tyler Huffman, Mosaic Fertilizer, LLC

5) Date of Inspection

March 1, 2022

6) Applicable Regulations

Resource Conservation and Recovery Act (RCRA) Sections 3002, 3005 and 3007 (42 U.S.C. §§ 6922, 6925 and 6927), and the regulations promulgated pursuant thereto at 40 Code of Federal Regulations (C.F.R.) Parts 260-270, 273 and 279.

Florida Statutes (F.S.) Chapter 403.702 et seq., and the regulations promulgated pursuant thereto and set forth at the Florida Administrative Code (Fla. Admin. Code Ann. r.), Chapters 62-

710, 62-730 and 62-750.

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

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(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 total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17], a LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the "SAA Permit Exemption").

7) Purpose of Inspection

The purpose of this inspection was to conduct a compliance evaluation inspection (CEI) to determine Mosaic Fertilizer LLC—Riverview Facility's (hereinafter referenced as "Mosaic Riverview" or "the facility") compliance with the applicable requirements of RCRA and the corresponding FDEP regulations.

8) Previous Inspection History

The last RCRA CEI was conducted by FDEP on July 13, 2017, which resulted in no violations being identified.

9) Facility Description

Mosaic Fertilizer has been operating at this location since 2004 when Cargill Fertilizer, Inc. and IMC Phosphates merged to form Mosaic Fertilizer LLC. Previously, the facility began operating under the name Gardiner, Inc.—East Tampa Plant starting in August 1980 and changed its name

in July 1993 to Cargill Fertilizer, Inc. The Mosaic Riverview property is roughly 953 acres. The facility employs 400 workers which includes onsite independent contractors. The facility operates 24 hours a day, seven days a week, and has four shifts.

The facility first notified as a Small Quantity Generator (SQG) of hazardous waste on August 30, 1994. On May 14, 2013, Mosaic Riverview notified as a Large Quantity Generator (LQG) of hazardous waste. The facility submitted their most recent notification with their biennial report on March 25, 2020. Hazardous wastes identified in the report include the following EPA waste codes: D001, D002, D005, D007, D009, and D035. The facility also generates and universal waste, such as spent mercury-containing lamps. Mosaic Riverview operates under the NAICS Code: 325312–Phosphatic Fertilizer Manufacturing.

Mosaic Riverview is a phosphate chemical fertilizer manufacturing facility. The facility processes phosphate rock to produce merchant grade phosphoric acid, sulfuric acid, fluorosilicic acid, and ammoniated phosphate fertilizers which include monoammonium phosphate (MAP) and diammonium phosphate (DAP). Cogeneration of electricity also occurs in the plant. Incoming and outgoing materials can be shipped via barge, rail, or truck. The company no longer manufactures animal feed ingredients at this site. The two former production units for the animal feed operation have been decommissioned. The facility typically generates between 100 kg and 1000 kg per month (SQG equivalent) amounts of wastes per month; however, when plant equipment is serviced or undergoing maintenance (turnaround events), it frequently generates greater than 1000 kg (LQG equivalent) of hazardous waste per month. Hazardous wastes generated at the facility primarily consists of paint-related waste (D001), corrosive waste (D002), chromium waste (D007), and mercury contaminated waste (D009). Spent parts washer solvent is managed as non-hazardous waste and undergoes sampling and analysis every 5 years to verify that the spent parts washer solvent continues to be non-hazardous. The parts washer solvent was last sampled in July 2021 and continues to be non-hazardous.

The facility is currently operating under a Judicial Consent Decree (CD) with both the EPA and FDEP for issues regarding mixtures of RCRA exempt phosphoric acid production wastewater with non-exempt RCRA wastewater. The Judicial CD was entered on August 5, 2016.

Areas that were inspected include the Kitting Building, Waste Storage Area/ 90-Day Central Accumulation Area (CAA), Sulphuric Acid Production (CAP #7 Pad, DIPA Waste Satellite Accumulation Area, #5/6 Sulfuric Acid Tank Containment Area, Sulfuric Acid Plant Maintenance), Analytical Laboratory, Blast Yard, Ostara Pad, Phosphoric Acid Production (#9 Sulfuric Acid Tank Containment Area, Barium Chloride Laboratory Waste CAA, Phosphoric Acid Plant Maintenance), Granulation Plant Maintenance, and the Vector Shop.

10) Opening Conference

On March 1, 2022, EPA inspectors Kayla Acosta and Laura Dahlgren, accompanied by FDEP inspectors Leslie Pedigo and Sarah Green, arrived at Mosaic Riverview at approximately 8:50 a.m. and were received by security at the Visitor Office where they introduced themselves and showed their credentials. After watching a safety video and receiving visitor passes, the inspectors proceeded to the Administrative Building where Ms. Ann Wortman, CHMM

Environmental Lead and Mr. Tyler Huffman, Environmental Specialist received the inspectors. The inspectors introduced themselves, showed their credentials, and explained the purpose of the visit. The inspectors described the anticipated use of a digital camera during the inspection, and discussed the company's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information submitted to the EPA. The company did not assert a business confidentiality claim.

Facility representatives provided an overview of the facility's history and current operations during the opening conference. The company does not appear to meet the Small Business Regulatory Enforcement Fairness Act's classification of a "small business," which is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. Therefore, the EPA inspectors did not provide a copy of the agency's information sheet for small businesses, which can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>.

The inspection participants also discussed health and safety protocols and required personal protective equipment before Ms. Wortman and Mr. Huffman led the inspectors on a tour of the Facility operations.

11) **Findings**

KITTING BUILDING

The Kitting Building is located south of the Phosphoric Acid production area and west of the Sulphuric Acid production area. This building conducts maintenance activities and also stores electronic waste and universal waste. The inspectors observed the following universal waste:

- One (1) 55-gallon closed drum of HID bulbs, labeled "Universal Waste", and dated November 24, 2021
- One (1) eight-foot cardboard box of spent mercury-containing lamps, closed, labeled "Universal Waste", and dated January 27, 2021 which is over the one-year accumulation storage limit. (Photo 1)
- One (1) 5-gallon closed container of compact lamps, labeled "Universal Waste", and dated January 27, 2021 which is over the one-year accumulation storage limit. (Photo 2)
- One (1) 5-gallon container of broken bulbs, closed, labeled "Universal Waste", and dated May 10, 2021. (Photo 3)

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(1) and Fla. Admin. Code Ann. r. 62-737.400(7) [40 CFR 273.15(a)], a small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.

Waste Storage Area/ 90-Day Central Accumulation Area (CAA)

The 90-day CAA is located inside the Waste Storage building, which is directly behind the Kitting Building, facing north (Photo 4). The CAA had "No Smoking" and "Hazardous Waste" signs and was equipped with spill and emergency safety equipment (fire extinguishers and spill

kits). All hazardous waste drums appeared to have adequate aisle space. The inspectors observed the following hazardous and non-hazardous waste (Photos 5, 6, 7, 8, and 9):

- (11) 55-gallon drums of used oil, closed, and labeled “Hazardous Waste”.
- Two (2) 55-gallon drums of oily water, closed, and labeled “Hazardous Waste”.
- One (1) 55-gallon drum of oily debris, closed, and labeled “Hazardous Waste”.
- Two (2) 55-gallon drums of greasy rags/ pigmats, closed, and labeled “Hazardous Waste”.
- One (1) 55-gallon drum of grease, closed, and labeled “Hazardous Waste”.
- Two (2) 5-gallon containers of DIPA Waste, closed, labeled “Hazardous Waste”, and dated February 28, 2022 and February 29, 2022. The containers were marked with a placard to indicate a hazard for flammability.
- One (1) 55-gallon drum of paint waste, closed, labeled “Hazardous Waste”, and dated December 16, 2021. The container was marked with a placard to indicate a hazard for flammability.
- One (1) 55-gallon drum of spent aerosols, closed, labeled “Universal Waste”, and dated November 3, 2021.
- One (1) 5-gallon container of lead-acid batteries, closed, labeled “Universal Waste, and dated February 24, 2022.
- One (1) 5-gallon container of nickel cadmium batteries, closed, labeled “Universal Waste, and dated February 24, 2022.
- One (1) 5-gallon container of lithium batteries, closed, labeled “Universal Waste, and dated February 24, 2022.
- Six (6) 55-gallon drums of used oil filters, closed and labeled “Hazardous Waste”.

Sulphuric Acid Production

Sulfuric acid production occurs on the eastside of the Mosaic Riverview property. The facility has three double conversion, double absorption sulfuric acid plants (Plants No. 7, 8, and 9).

CAP #7 Pad:

This concrete pad is for drum staging of waste related to sulfuric acid production and is a CAA. There is a frac tank stored in this area which was currently empty. No hazardous waste was observed in this area. (Photo 10)

DIPA Waste Satellite Accumulation Area (SAA):

This SAA is a part of the sulfuric acid production. DIPA is a reagent that is used to raise the pH for a sodium analyzer. The inspectors observed:

- One (1) 5-gallon closed container of DIPA waste, closed, labeled “Hazardous Waste”, and marked with a placard to indicate a corrosivity hazard. (Photo 11)

#5/6 Sulfuric Acid Tank Containment Area:

This area is situated in a containment dike and includes a CAA for possible hazardous waste

storage, as well as aboveground tanks for product storage. Mosaic has a certified containment and integrity plan for the tanks in accordance with the mineral acid tank rule, Admin. Code Ann. R. 62-762.891(6)(c). There are 669,620-gallon aboveground storage tanks (ASTs) which store 98% Sulfuric Acid product (Photo 12). No hazardous waste was observed in this area. The inspectors observed the following non-hazardous waste (Photos 13 and 14):

- One (1) 55-gallon drum labeled “Oil Impacted Boom”.
- Five (5) 55-gallon drums labeled “Oil Impacted Soil”.

Analytical Laboratory:

The analytical laboratory (lab) is located north of the sulfuric acid production area and east of the phosphoric acid production area. The lab is mainly used for analyzing product quality for dry products and phosphoric acid. The inspectors observed the following hazardous waste in SAAs:

- One (1) 5-gallon closed SAA container of magnesium perchloride, labeled “Hazardous Waste”, and marked with a placard to indicate a hazard for an oxidizer. (Photo 15)
- One (1) 15-gallon closed SAA container of methanol lab waste, labeled “Hazardous Waste”, and marked with a placard to indicate a hazard for flammability. (Photo 16)
- One (1) 5-gallon container of non-hazardous waste—halogen scrubber.

Blast Yard:

The Blast Yard is located north of the lab and is a maintenance area. There is one roll off dumpster that is used to clean dry goods. The waste is frequently tested and disposed of as non-hazardous waste. The inspectors observed one SAA that stored:

- One (1) 55-gallon closed drum of paint waste. The drum was labeled “Hazardous Waste” and marked with an indication of hazard for flammability. (Photo 17)

Ostara Pad:

The Ostara Pad was previously used as hazardous waste CAA pad for a spill incident that was reported by Mosaic on May 27, 2017. The spill has been cleaned up and the CAA is no longer used. No hazardous waste was observed in this area.

Phosphoric Acid Production:

The Phosphoric Acid Production area is located towards the north of the property. The facility has a dual train phosphoric acid production plant where sulfuric acid is reacted with phosphate ore to produce phosphoric acid. Ore is usually received from beneficiation plants at other Mosaic facilities by rail and occasionally by truck. Hopper cars are unloaded, and the ore is conveyed to storage piles. Ores of different grades can be blended and milled to provide the plant with a consistent feed. After the ore is reacted, the phosphoric acid is filtered from the phosphogypsum and unreacted material, and the gypsum is conveyed by process wastewater to the gyp stack. Diluted acid is then clarified and concentrated to merchant grade acid. Fluoride emissions from the process and from the acid evaporators are controlled by scrubbers.

A byproduct from the phosphoric acid concentration process is hydrofluorosilicic acid (FSA),

which is marketed as a fluoridation chemical to potable water plants. The acid is shipped either by rail or tanker to a variety of municipalities and to Harsco Chemical. Phosphoric acid is reacted with anhydrous ammonia to produce granulated MAP and DAP fertilizers in the No. 5 and No. 6 ammoniated phosphate manufacturing plants. Ammonia is received by pipeline. Emissions from these operations are controlled by scrubbers. Dry product emissions from material handling operations are controlled by baghouses. Dry product is also coated with a dust control agent when it is conveyed from the storage to shipping vessels. Two phosphoric acid tanks are located within secondary containment near the dock. Storm water from the containment drains to a sump and is usually pumped to a lined process water ditch. Major acid spills are supposed to be detected by a conductivity monitor so that the acid can be pumped back to the tank.

#9 Sulfuric Acid Tank Containment Area:

This area is a staging area for cleaning of the #9 sulfuric acid tank and is also a CAA. No hazardous waste was observed in this area (Photo 18).

Sulfuric Acid Plant Maintenance:

This area is a maintenance shop. No hazardous waste was observed in this area. The inspectors observed:

- One (1) 55-gallon closed drum of spent aerosol cans. Labeled “Universal Waste”. The aerosol cans are collected monthly and moved to the Waste Storage Area/ 90-Day CAA.

Barium Chloride Laboratory Waste CAA:

This CAA is for wastes generated in the Barium Chloride Laboratory. This CAA is equipped with a fire extinguisher and spill kit. The inspectors observed:

- One (1) 55-gallon drum of barium chloride waste, closed, labeled “Hazardous Waste”, and dated February 15, 2022 (Photo 19). The drum was also marked with a placard to indicate a hazard for corrosivity.

Phosphoric Acid Plant Maintenance:

This area is a maintenance shop for parts. There is a bead blasting machine which generates non-hazardous blast media waste. No hazardous waste was observed in this area. The inspectors observed the following waste:

- One (1) 55-gallon closed drum of spent aerosol cans. Labeled “Universal Waste”. The aerosol cans are collected monthly and moved to the Waste Storage Area/ 90-Day CAA.

Granulation Plant Maintenance:

Granulation Plant Maintenance is another maintenance shop. No hazardous waste was observed in this area. The inspectors observed the following waste:

- One (1) 55-gallon closed drum of spent aerosol cans. Labeled “Universal Waste”. The aerosol cans are collected monthly and moved to the Waste Storage Area/ 90-Day CAA.

Vector Shop:

The Vector Shop is used for vehicle maintenance. The inspectors observed the following waste (Photos 20, 21, and 22):

- One (1) 55-gallon closed drum of spent aerosol cans. Labeled “Universal Waste”. The aerosol cans are collected monthly and moved to the Waste Storage Area/ 90-Day CAA.
- One (1) 55-gallon drum of off-road diesel, closed and labeled.
- One (1) 55-gallon drum of used oil debris, closed, and labeled.
- One (1) 500-gallon AST for used oil, in secondary containment, under a roof, and labeled “used oil” (Photo 23).

Records Review

Disposal Records:

Hazardous waste manifests were available for review. Manifest copies (including the original generator signed copy and designated facility signed copy) and Land Disposal Restriction notifications were available for review.

Contingency Plan:

The facility’s Hazardous Waste Contingency Plan, which describes actions that facility personnel should take in response to an emergency, were provided as part of the records review. The facility’s plan included the following: list of emergency coordinators and contact information; an equipment list and capabilities addressed including fire response, spill response, and communication; location of fire control equipment; a map including the location of the CAAs and other hazardous waste SAAs and generation points throughout the facility; and a Quick Reference Guide (QRG). Copies of the contingency plan were mailed to the Hillsborough County Fire Department on July 6, 2021, Hillsborough County Sheriff’s Office on July 2, 2021, Brandon Regional Hospital on July 2, 2021, and Tampa Bay Regional Planning on July 2, 2021.

Employee training / annual training and position descriptions:

Training records for online hazardous waste training and position descriptions were available for review. Annual hazardous waste training was last conducted on July 15, 2021. Records were reviewed for Anne Wortman, Tyler Huffman (McCoy Training October 2021), Dara Ford, Jordan Genevie, and Jeff Ryman.

Weekly Inspections:

Weekly container inspections were reviewed for the past three years. Inspections appeared to be conducted on a weekly basis and documented all the required inspection elements.

12) Closing Conference

An exit meeting was held at the end of the inspection with Ms. Wortman and Mr. Huffman to discuss preliminary conclusions and to go over the findings.

13) **Inspection Findings**

Based on the observations made during the inspection, Mosaic Riverview was apparently deficient with the following RCRA requirements:

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(1) and Fla. Admin. Code Ann. r. 62-737.400(7) [40 CFR 273.15(a)], a small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.

14) **List of Appendices**

Appendix 1–Photo Log:
{23} Photos taken on: [March 1, 2022]
Photos taken by: Kayla Acosta
Photos taken with: Olympus Tough Digital Camera
EPA Property Tag: S75903

15) **Signed**

Kayla Acosta
Enforcement and Compliance Specialist

Date

Concurrence

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date