

RCRA Compliance Evaluation Inspection Report

1) **Inspector and Author of Report**

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2) **Facility Information**

Reichhold LLC 2
54 Wamsly Road
Jacksonville, Florida 32254-2847
County: Duval
Latitude: 30.326730
Longitude: -81.746970
EPA ID Number: FLD004061529

Primary NAICS - 325199 – All other basic organic chemical manufacturing
SIC Code: 2869 – Industrial Organic Chemicals

3) **Responsible Official**

Matt Medlock, Site Environmental Health and Safety Manager (Site EHS Manager)
Natalie Brandeberry, Southeast Environmental Health and Safety Manager

4) **Inspection Participants**

Daryl R. Himes U. S. EPA, Region 4
Luke Lewis, Florida Department of Environmental Protection (FDEP)
Matthew Medlock, Reichhold LLC
Natalie Brandeberry, Reichhold LLC

5) **Dates of Inspection**

March 23, 2021, 9:00 a.m.

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 (F.A.C.), Chapters 62-710 and 62-730.

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. 62-730.160(1) [40 C.F.R. § 262.10], a Large Quantity Generator (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2200 lbs) of non-acute hazardous waste in a calendar month.

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").

7) **Purpose of Compliance Evaluation Inspection**

On March 23, 2021, Luke Lewis, Florida Department of Environmental Protection (FDEP), and Daryl Himes, EPA, conducted a routine compliance evaluation inspection of Reichhold LLC 2 (Reichhold or the facility) to determine the facility's compliance with state and federal hazardous waste regulations. This was an EPA lead inspection. Reichhold was represented by Matthew Medlock, Site EHS Manager and Natalie Brandeberry, SE Region EHS Manager. Upon entering the facility, the inspectors introduced themselves, showed their credentials and explained the purpose of the visit and a description of the facility's process was discussed.

8) **Facility Description**

Reichhold is a chemical manufacturing facility located on 7.7 acres. Reichhold is one of the world's largest suppliers of unsaturated polyester and vinyl ester resins for composite applications. This facility has been at this location since 1952. The facility currently has 37 employees and operated three shifts five days per week.

The facility consists of raw material receiving areas, production areas, product warehouses, solid waste holding area and a main office building.

Reichhold manufactures polyester resins by combining phthalic anhydride, maleic anhydride, and glycols with various chemical promoters. Unsaturated polyester resins are formed by the reaction of polyols, such as 2-methyl-1,3-propanediol (MPDiol), ethylene glycol, diethylene glycol and polyethylene glycol, dicyclopentadiene (DCPD), and dibasic organic acids, such as

maleic anhydride, phthalic anhydride and isophthalic acid. As the resulting resins are very viscous, styrene (a liquid) is commonly used as a thinning material to allow for ease of processing.

Hazardous wastes are generated in plant areas as a result of sampling, raw material filtering and hose flushes in between product changeouts.

Reichhold's most recent hazardous waste generator notification (EPA form 8700-12) submitted on January 30, 2020, characterized the facility as a large quantity generator (LQG) of hazardous waste, generating D001-D003, D007, D009, D018, F003, P030, U008, U096, U131, U147, U154, U162, U166 and U190 hazardous wastes.

9) Inspection Findings

A walk-through inspection of the facility was performed with the Reichhold representatives. Below is a description of the observations made in the various areas of the facility inspected.

Quality Control Lab

This lab is used for quality assurance testing at various stages of the resin manufacturing process. Small resin jars containing resins which have been tested are taken just outside of the lab and emptied into a 55-gallon drum. The resin in this container is returned to the process. The resin jars are then placed within a separate 55-gallon drum within a satellite accumulation area adjacent to the other drum. This drum was closed, labeled with a "Hazardous Waste" label and a label identifying the hazard contents of the container (Photo 1).

Reactor Building

Within this building, raw materials from the storage tank farm, which consists of thirteen tanks, are combined in pressurized and heated reactor tanks. The reactors are connected in a closed-loop system that use a thermal treatment and heat recovery unit in the resin manufacturing process. Production resin is transferred to the Base Resin Tank Farm discussed below.

The manufacturing process which occurs in the reactors generates production residues. These residues are sent to the Receivers Tank where the vapor and liquid streams are separated. The vapor stream is directed to a fresh-water Scrubber Tank. The added fresh water serves as a buffering agent for pH control. The vapor stream from the Scrubber Tank is then directed to an air abatement Thermal Oxidizer and then vented to the atmosphere. The liquid streams from the Receivers Tank and the Scrubber Tank are directed to an Agitated Liquid Feed Tank. The Agitated Liquid Feed Tank directs the resulting mixture into the Thermal Oxidizer. The recovered liquid and steam heat from the Thermal Oxidizer is fed back to the boiler and then to the reactors.

Filter socks used in the reactor building to remove unwanted solids are collected in a 55-gallon drum within a SAA outside of the Reactor Building (Photo 2). The drum was closed, labeled with the words "Hazardous Waste" and marked with a label indicating the hazard contents of the container. (Photo 2)

Production Lab

This lab is also used for quality assurance testing at various stages of the resin manufacturing process. Small resin cans containing resins which have been tested are taken just outside of the lab and emptied into a 55-gallon drum. The resin cans are then placed within a separate 55-gallon drum. Each of the drums are considered to be within separate satellite accumulation areas. These drums were closed, labeled with “Hazardous Waste” labels and a label identifying the hazard contents of the containers (Photo 3).

Shovel Cleaning Bin

In an area between the Production Lab and the Tank Farm, a metal box measuring approximately 4’ by 3’ by 2’ was observed for the purpose of cleaning shovels used by the facility. Shovels are placed in the metal box and rinsed with isopropyl acetate. No liquid was observed within the metal box at the time of the inspection (Photo 4).

Tank Farm

Filter socks used for the collection of solidified vapors from the off-loading of railcars are collected in a 55-gallon drum within a SAA in the area of two horizontal tanks in the Tank Farm (Photo 5). The drum was closed, labeled with the words “Hazardous Waste” and marked with a label indicating the hazard contents of the container. (Photo 5)

Rail Car Off-Loading Area

Hose cleanout material from the off-loading of DCPD from railcars is collected in a 55-gallon drum within a SAA in the area of the rail line (Photo 5). The drum was closed, labeled with the words “Hazardous Waste” and marked with a label indicating the hazard contents of the container. (Photo 6)

Warehouse 2

The facility has two product warehouses on-site. The larger of the two can hold up to 2,000 55-gallon drums of product.

The smaller warehouse is divided into two sections. One section is used for the management of research and development materials, the other is set within a cage on top of a concrete pad with a concrete berm. At the time of the inspection, fifty 55-gallon drums of various hazardous wastes from the facility’s generation areas were observed in this area (Photo 7). Each of the containers were closed, labeled with the words “Hazardous Waste” and an indication of the hazard contents of the containers and marked with an accumulation start date of less than 90 days. This hazardous waste central accumulation area was equipped with a fire extinguisher, spill control, “No Smoking” signs and had service for emergency cell phone use.

Maintenance Building

Small amounts of used oil are generated from equipment used to perform maintenance activities and pipe cutting operations. Used oil is collected in containers within the building and poured into a 55-gallon drum within secondary containment located just outside the building. The

container was closed and labeled with the words “Used Oil” at the time of the inspection.

Within the Maintenance Building, one 30-gallon drum equipped with an aerosol can puncturing device was observed. The drum was closed, labeled with the words “Hazardous Waste” and had a placard indicating the hazard contents of the container.

Utilities Building

The facility was operating a thermal oxidizer within the Utilities Building. The device serves as an emission control device to burn fumes and condensed liquids generated during the production of resins in the Reactor Building. Two vapor lines and one liquid line feed the thermal oxidizer. The thermal oxidizer operates at a minimum temperature of 1400 degrees Fahrenheit. Exhaust from the thermal oxidizer passes through a waste heat boiler. The waste heat boiler captures heat from the exhaust to generate steam. The exhaust also passes through the tubes of a boiler in the utilities building and then is exhausted to the atmosphere. The facility has an Air Operating Permit for this unit with FDEP.

The facility personnel provided the EPA and FDEP inspection team with analysis of the liquid stream being fed to the thermal oxidizer on March 3, 2006. The waste stream was analyzed for pH and ignitability to determine if the waste stream would be characteristically hazardous for ignitability or corrosivity. The results of the analysis show the flashpoint of the sample to be greater than 142 degrees Fahrenheit and have a pH of 2.29. Duplicate samples taken at this time were stated to have given similar results. Upon going to the control room, a shut-off valve on the waste stream feed was said to be set for a pH of 2 at the low end and 13 at the high end. The pH of the feed stream at the time of the inspection was slightly greater than 8. Results for pH could only be saved for about 14 days so historic data for pH could not be obtained at the time of the inspection. The limits set for pH on the equipment would potentially allow for hazardous waste to be fed to the thermal oxidizer at the low and high end of the pH spectrum.

Pursuant to [Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Fla. Admin. Code Ann. r. 62-730.030(1), must make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations articulated in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.11].

Truck Off-Load

Socks used to filter the unloading of products coming into the facility to be used as ingredients are placed into a 55-gallon drum within a SAA. The drum was closed, labeled with the words “Hazardous Waste” and marked with a label indicating the hazard contents of the container.

A separate 55-gallon container used for contaminated trash and small spill cleanup was also observed in this area. The drum was closed, labeled with the words “Hazardous Waste” and marked with a label indicating the hazard contents of the container.

Seven 5-gallon containers were observed in this area to capture various product solvents. The solvents captured are placed back into the facility’s product containers or tanks.

Universal Waste Accumulation Area

A shed attached to the facility's Maintenance Building was used as a collection point for Universal Wastes. At the time of the inspection, two 4-foot cardboard tubes, one 8-foot cardboard box and one 5-gallon container were used to collect used fluorescent lamps. One box was also being used for the collection of universal waste mercury thermometers. All of the containers were labeled with appropriate universal waste labeling and marked with accumulation start dates of less than one year.

Record Review

A review of the facility's contingency plan did not find any discrepancies. A review of the facility's hazardous waste training requirements did not find any discrepancies.

A review of the facility's hazardous waste manifests for the past three years did not find any discrepancies.

A review of the facility's inspection logs for their hazardous waste container central accumulation area located within Warehouse 2 found missing records for numerous weeks. Below is a list of the days on which the facility performed an inspection of their hazardous waste accumulation area starting in March of 2018.

2018	2019	2020	2021
3/23	1/2	4/30	1/19
3/29	1/14	5/21	2/22
4/6	2/4	6/30	3/22
4/13	2/11	7/30	
4/20	3/4	8/26	
4/26	3/26	9/15	
5/4	4/9	10/7	
5/25	4/17	11/19	
6/1	6/6	12/14	
6/8	8/13		
6/20	9/17		
6/29	10/2		
7/6	10/9		
7/13			
7/27			
8/10			
8/17			
8/24			
8/31			
9/7			
9/14			
9/21			
9/28			
10/19			
11/16			
12/4			

For the three-year time period from March 23, 2018 through March 22, 2021, a review of the weekly inspections performed find the facility to have conducted 53 weekly inspections. One hundred five weekly inspections were not performed.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(3) [40 C.F.R. § 262.17(a)(1)(v)], which is a condition of the LQG Permit Exemption, a generator is required to, at least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors. In addition, the generator shall keep written documentation of the inspections under this section for at least three years from the date of the inspection. At a minimum, this documentation shall include the date and time of the inspection, the legibly printed name of the inspector, the number of containers, the condition of the containers, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

10) Signed

DARYL HIMES Digitally signed by DARYL HIMES
Date: 2021.04.22 08:35:32 -04'00'

Daryl R. Himes
Inspector and Author of Report

Date

11) Concurrence and Approval

ARACELI CHAVEZ Digitally signed by ARACELI
CHAVEZ
Date: 2021.04.22 08:59:33 -04'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date



Photo 1 – Hazardous waste drum outside of the Quality Control Lab receiving resin jars used for holding samples



Photo 2 – 55-gallon drum receiving filter socks outside of the Reactor Building



Photo 3 – Hazardous waste collection drums outside of the Production Lab receiving resin and resin cans used for holding samples.



Photo 4 – Shovel Cleaning Box in area near the Production Lab



Photo 5 – Drum used to collect filter socks with solidified vapors from the off-loading of materials into tank within the tank farm.



Photo 6 – Drum used to collect DCPD from hose cleanouts in the Rail Car off-loading area.



Photo 7 –Hazardous Waste Container Central Accumulation Area



Photo 8 – Thermal Oxidation Unit



Photo 9 – Hazardous waste accumulation container for socks in the truck offloading area.