UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SUBJECT:	CLEAN AIR ACT INSPECTION REPORT Mexichem Specialty Resins, Inc., Henry, Illinois
FROM:	Natalie Schulz, Environmental Engineer AECAB (MN/OH)
THRU:	Brian Dickens, Section Supervisor AECAB (MN/OH)
TO:	File

BASIC INFORMATION

Facility Name: Mexichem Specialty Resins, Inc.

Facility Location: 1546 County Road 1450 North, Henry, Illinois 61537

Date of Inspection: April 11, 2023

EPA Inspector(s):
1. Natalie Schulz, Environmental Engineer
2. Karyn DeFranco, Environmental Scientist

Other Attendees:
1. Doug Bishop, Environmental, Health, Safety and Security Supervisor
2. Michael Brinly, Manufacturing Manager

Contact Email Address: douglas.bishop@vestolit.com

Purpose of Inspection: HAP emissions limits and requirements for polyvinyl chloride and copolymer production

Facility Type: Polyvinyl chloride and copolymers production facility

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production (NESHAP 7H)

Arrival Time: 10:00 a.m.

Departure Time: 1:20 p.m.

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Presented Credentials
☒ Stated authority and purpose of inspection
☐ Provided Small Business Resource Information Sheet
☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
☒ Provided CBI warning to facility

The following information was obtained verbally from Doug Bishop and Michael Brinly unless otherwise noted.

Company Ownership: Mexichem Specialty Resins, Inc. owns the facility. The facility is often referred to as Vestolit, which is the name of the product that is made at the facility. The facility is co-located with a facility owned by Environmental Liability Transfer (ELT), which is a separate company. ELT's facility is in the process of being decommissioned.

Process Description:
Vinyl chloride is brought to the facility via rail. The vinyl chloride is stored in one of two spherical tanks until it is pumped to the reactor building ("the poly building"). The reactors are charged with vinyl chloride, water, catalyst, ammonia laurate, and other additives. The reactors have a steam-heated jacket. The slurry in the reactor is polymerized. The residual vinyl chloride is then stripped from the slurry either in the reactor and sent to the blend tanks or in the stripping column and sent to the blowdown tank. The emissions from the poly building's equipment are routed to an absorber or a thermal oxidizer. The absorber is the primary air pollution control device; the thermal oxidizer is only used as a back-up device.

The slurry is sent to the dryer building; the dryer building houses a spray dryer, rotary dryer, venturi dryer, and a resin reclaim dryer. The product is dried to a moisture content of 0.013% or lower. All of the dryers vent to an air pollution control device; baghouses are connected to each production line. The product is packaged in bags and super sacks and sent offsite via truck.

The production lines are cleaned after every charge. Prior to opening process units, the unit will be run down to as low as possible and steam and vacuum are applied, air is bled from the units, and a sample is taken to monitor the contents of the unit. The reactors are cleaned with water and a pressure washer. The water used in cleaning constitutes a part of the facility's wastewater.

The facility's wastewater is sent to the co-located ELT facility for treatment; the wastewater goes through a lift station and filtration before being transferred to ELT.

Staff Interview:
The facility's Title V operating permit expired in 2013; the facility has been operating under several construction permits and the expired operating permit in accordance with a Stipulation Agreement with the State of Illinois. The Stipulation Agreement and permit application were requested for review.

The facility does not have fence line monitoring. NESHAP 7H requires a vinyl chloride monitoring system for the detection of major leaks and identification of the general area of the affected source where a leak is located. The facility conducts daily visual checks. A third-party service has conducted LDAR inspections for the facility since approximately May 2022.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:
A reactor being cleaned was observed during the tour. Mists of process water were seen escaping from the reactor, i.e., sprays of process water left the closed reactor through gaps in the closures during the pressurized cleaning process.

The dryers were not running during the tour. A white dust was seen on the floor of the dryer building.

NESHAP 7H requires reporting of deviations from various other NESHAP 7H requirements. The previous three deviation reports were requested for later review.

NESHAP 7H requires the facility conduct leak detection and repair. The facility's leak detection and repair summary sheets since May 2022 were requested for later review.

NESHAP 7H requires initial performance testing and repeat testing every five years for facilities that do not use a CEMS to demonstrate continuous compliance. The most recent performance tests were requested for later review.

NESHAP 7H requires treatment of process wastewater depending on the concentration of vinyl chloride or HAP; the facilities wastewater sampling records were requested for later review.

NESHAP 7H requires the facility develop a list of HAP that are expected to be present in each grade of resin produced at the facility; the list was requested for later review.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Operating permit, operating permit application, and consent agreement
- Previous three deviation reports
- LDAR summary sheets since May 2022
- Most recent performance tests for each mode of operation
- Facility diagram
- Previous three months of wastewater samples
- List of HAP in each product

DIGITAL SIGNATURES

Report Author: NATALIE SCHULZ Digitally signed by NATALIE SCHULZ Date: 2023.06.09 09:10:40 -05'00'

Section Supervisor: DAVID SUTLIN Digitally signed by DAVID SUTLIN Date: 2023.06.09 09:45:11 -05'00' for Brian Dickens