



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Freudenberg-NOK General Partnership, Morristown, IN

FROM: Karyn DeFranco, Physical Scientist
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Freudenberg-NOK General Partnership

Facility Location: 487 West Main Street, Morristown, Indiana

Date of Inspection: May 31, 2022

EPA Inspector(s):

1. Karyn DeFranco, Physical Scientist
2. Carlo Demma, Physical Scientist

Other Attendees:

1. Vaughn Ison, Indiana Department of Environmental Management (IDEM) Inspector
2. Chad Howe, Facilities and Maintenance Manager Freudenberg-NOK, Morristown
3. Stacy Flora, Strategic Executive Officer, Freudenberg-NOK, Morristown
4. Wyatt Herper, Health, Safety and Environment (HSE) Administrator, Freudenberg-NOK, Morristown

Contact Email Address: chad.howe@fnst.com

Purpose of Inspection: To investigate compliance with VOC emission limits.

Facility Type: Rubber product manufacturing facility

Regulations Central to Inspection: The Indiana State Implementation Plan (SIP). Freudenberg operates as a Minor Source under PSD and Emission Offset Rules. To comply with BACT and

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the SIP, Freudenberg is required to route emissions from three automated adhesive spray coating booths to a regenerative thermal oxidizer (RTO) to control VOC and HAP emissions. The coating booths must be operated in a permanent total enclosure with 100% capture efficiency to route emissions to the RTO. The RTO must be operated to have a VOC destruction efficiency greater than 98%. To ensure greater than 98% VOC destruction efficiency, Freudenberg is required to keep the RTO 3-hour block average temperature above a minimum temperature set by the most recent valid stack test that demonstrates compliance. In addition, the automated spray booths and dip coating tanks are subject to, among other things, a total VOC emission limit, total adhesive/thinner usage limits, and VOC content adhesive/thinner limits.

Arrival Time: 12:30pm
Departure Time: 3:32pm

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

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

The following information was obtained verbally from Chad Howe, Stacy Flora, and Wyatt Herper unless otherwise noted.

Process Description:

Freudenberg-NOK General Partnership (Freudenberg) injection molds rubber compounds and vulcanizes rubber and rubberized metal components at its Morristown Indiana facility. Freudenberg operates several types of emission units including coating booths, dip coating, rubber presses, cure ovens, and blasters. Rubber is molded in presses; rubber and/or metal is then sprayed/dipped with an adhesive coating and vulcanized in a hot air cure oven.

Freudenberg processes approximately fifteen different rubber compounds at the facility including, but not limited to HMBR, MBR, silicones, FKM, and EPDM rubber. Molded rubber and metal components are coated with an adhesive spray in an automated spray booth or coated with an adhesive coating in a dip tank.

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Staff Interview:

Presses are operated at approximately 350-400°F. Freudenberg cure ovens are hot air curing ovens with electric heaters that operate at approximately 350°F. Freudenberg tracks air emissions from the curing operations by throughput weight (metal and rubber). All emissions from the presses, cure ovens, and cooling area are vented to atmosphere.

Freudenberg applies adhesive coatings to approximately 80% of all rubber compounds processed at the facility. Recently Freudenberg has increased the use of their dip tank process for adhesive coatings.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA toured the facility and observed, among other things, the coating booths, dip coating, RTO, rubber presses, and cure ovens. EPA requested required records documenting compliance with VOC emissions limits, usage limitations, and RTO temperature requirements. EPA observed the permanent total enclosure of the paint room. The draw reading from one of the digital static gages was -0.44 at 1:16pm. EPA observed the control screen of the RTO and observed that the 3-hour block average temperature was 1601.5°F at 1:38pm.

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:

- Working internal emissions calculation master spreadsheets (2017-2022), including but not limited to emission factors and rolling total rubber throughput;
- Complete list of rubber compound amount used (lbs) (2017-2022);
- RTO pressure and temperature logs (April 2022-present);
- Weekly overspray inspections/observations logs (Jan 2020 – present); and

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- Copy of the latest stack test report for the RTO demonstrating the percent destruction efficiency achieved.

DIGITAL SIGNATURES

Report Author: **KARYN DEFRANCO**  Digitally signed by KARYN DEFRANCO
Date: 2022.07.11 08:58:07 -05'00'

Section Supervisor: **DAVID SUTLIN**  Digitally signed by DAVID SUTLIN
Date: 2022.07.11 11:48:48 -05'00' for Brian Dickens