

N1060

Mawila

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N106073311

FACILITY: BASF CORP		SRN / ID: N1060
LOCATION: 13000 LEVAN ROAD, LIVONIA		DISTRICT: Detroit
CITY: LIVONIA		COUNTY: WAYNE
CONTACT: Stephanie Weirts , EHS and Learning Specialist		ACTIVITY DATE: 08/28/2024
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION: August 28, 2024

TIME OF INSPECTION: 11:00 am

INSPECTED BY: Jill Zimmerman

PERSONNEL PRESENT: Stephanie Weirts, EHS and Learning Specialist

FACILITY PHONE NUMBER: 734-591-5561

EMAIL CONTACT: stephanie.weirts@basf.com

FACILITY BACKGROUND

BASF is a chemical blending facility. The facility is located in Livonia, on Levan Road, just south of Schoolcraft Road. The facility is currently operating as a synthetic minor facility operating two different mixing processes, isocyanate and resin.

PERSONAL PROTECTION EQUIPMENT

During this onsite inspection, I wore steel-toed shoes, a hard hat, a safety vest and safety glasses. I was also given chemical safety gloves from the facility should I need to touch anything.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received regarding this facility since the last time that it was inspected.

OUTSTANDING VNs

No Violation Notices (VN) have been issued regarding this facility since the last time that it was inspected.

PROCESS EQUIPMENT AND CONTROLS

BASF is a mixing facility. Different chemicals are added to a batch reactor, where they react to achieve the desired final product. The isocyanate process occurs on the west side of the facility and the resins process occurs on the east side of the facility. There are over thirty storage, blending, and reactor tanks in various sizes.

The isocyanate mixing process begins when the raw materials, including methylene diphenyl diisocyanate (MDI), polyol resin, and catalysts combine. Raw materials are brought to the facility by truck. Railcars no longer bring raw materials to the facility, though the tracks are still present. There are seven reactors to create the final product, liquid urethane. The reaction vessels and any transporting of raw materials are controlled by mist eliminators. The carbon adsorption equipment was removed and replaced by the mist eliminators when the most recent permit was issued.

The resin operations include the raw materials polyol resin, blowing agent HFC-134a and HFC-245fa and liquid and powder additives. There are not reactions in this operation, just mixing the chemicals in one of twelve resin blending vessels.

A 500 kW natural gas fired emergency generator is at this location.

INSPECTION NARRATIVE

I arrived at the facility and met with Ms. Stephanie Weirts, who explained the process at the facility, which is mostly different batch mixing of different chemicals in reactors. No changes have been made to the process since the last inspection. I explained that EGLE would be using MIENVIRO for inspection reports, emission reports and complaints in the near future as well as the annual equipment inventory.

Next we walked through the facility, which included raw material storage, and final product storage. There were also large reactor vessels where the different reactions take place. Depending on the customer's requests, different batches are made. On the isocyanate side of the facility, the chemicals react with each other to create the final desired product. On the resin side, the chemicals are mixed together to create the final product, though no reactions occur in this area of the facility.

The emergency generator is located in front of the building near the northwest corner of the property. Typically, the generator will be tested monthly for approximately 30 minutes. Otherwise the generator will only be used during times of lost power to the facility.

APPLICABLE RULES/PERMIT CONDITIONS

The facility is currently operating under opt-out permit 198-00H, which was issued on April 2, 2015.

FGISOCYANATE – This flexible group contains all equipment associated with the isocyanate side of the process, including reactors, storage tanks, loading and drumming operations, and various miscellaneous activities.

- I. **Emission Limits – Compliance.** Based on the records submitted with the annual emissions report, no emission unit has exceeded the MDI emission limit for the past twelve months. During 2023, less than 1 pound of MDI was emitted. These records are attached to this report.

II. Material Limits

1. **Compliance.** During 2023, the EUISOREACTORS had a throughput of less than 14,000 tons of MDI, which is less than the permit limit of 50,000 tons of MDI.
2. **Compliance.** During the past twelve months, the throughput of MDI for EUISODRUMMING1 and EUISODRUMMING2 was less than 13,000 tons, which is less than the permit limit of 50,000 tons.

III. Process/Operational Restriction – Compliance. The storage tanks at the facility comply with 40 CFR Part 60 Subparts A and Kb.

IV. Design/Equipment Parameters – NA

V. Testing/Sampling – NA

VI. Monitoring/Recordkeeping

1. **Compliance.** The monthly and 12-month rolling time period calculation MDI emission records for EUISODRUMMING1, EUISODRUMMING2, EUISOSCRAPHOOD, EUEXHAUSTVENT, EUWASTEHOOD, and EUMIXINGBOOTH are properly maintained and updated monthly. For this evaluation, the records submitted with the emissions report were used and are attached to this report.

2. **Compliance.** The monthly and 12-month rolling time period records of the MDI throughput for EUISOREACTORS, EUISODRUMMING1, and EUISODRUMMING2 are properly maintained. For this evaluation, the records submitted with the emissions report were used and are attached to this report.

VII. Reporting – NA

VIII. Stack/Vent Restriction – Compliance. All stacks have been installed at this facility to meet the permitted requirements. No modifications have been made to these stacks since the last inspection.

IX. Other Requirements – NA

FGRESIN – These emissions units make up the resins sections of the facility and include fixed roof resin blend tanks, fugitive emissions and bulk tanker resin emptying and fillings.

I. Emission Limits – NA

II. Material Limits

1. Compliance. The facility reported a throughput of polyol resin of less than 12,000 tons in 2023, which is less than 130,000 tons per year.

2. Undetermined. The triethylamine throughput was not evaluated during the onsite inspection.

III. Process / Operational Restrictions – NA

IV. Design / Equipment Parameters – Compliance. The facility operates this flexible reporting group under the required conditions, which include all tanks having a fixed roof.

V. Testing / Sampling – NA

VI. Monitoring / Recordkeeping – Compliance. The facility keeps records for the polyol resin and trimethylamine throughput. These records were discussed during the onsite inspection and are updated monthly.

VII. Reporting – NA

VIII. Stack / Vent Restrictions – Compliance. All stacks have been installed at this facility to meet the permitted requirements. No modifications have been made to these stacks since the last inspection.

IX. Other Requirements – NA

FGFACILITY

I. Emission Limits – Compliance. The facility is limited to emitting less than 90 tons per year of VOC. During 2023 the facility emitted less than 1 ton of VOCs. The facility is limited to emitting less than 9 tons per year of an individual HAP and less than 22.5 tons per year of aggregated HAPS. During 2023, the facility emitted less than 1 ton of all HAPS.

II. Material Limits – NA

III. Process / Operational Restrictions – Compliance. The facility promptly cleans up all spills of MDI in an effort to minimize the amount emitted. During the onsite inspection no MDI spills were observed. Railcars no longer deliver materials to this facility. The facility has submitted a MAP plan and there is no evidence that this plan is not being followed.

IV. Design / Equipment Parameters – NA

V. Testing / Sampling – NA

VI. **Monitoring / Recordkeeping – Compliance.** The facility maintains records for the throughout and emissions of all HAP containing materials at the facility. A copy of these records is attached to this report.

VII. **Reporting – NA**

VIII. **Stack / Vent Restrictions – NA**

IX. **Other Requirements – NA**

The 500kW emergency generator is subject to NSPS JJJJ. A stack test was performed to verify emission on May 23, 2019. The engine is natural gas fired and uses a 770 horsepower engine with a fuel consumption of 7018 cfh. This engine is exempt from permitting by Rule 285 (g) since it is smaller than 10,000,000 Btu / hr.

EMISSION REPORT REVIEW

The emission report was received on March 14, 2024. This report was received on time. It appears that all emissions were reported accurately. Supplied data supported the reported emissions.

FINAL COMPLIANCE DETERMINATION

BASF appears to be operating in compliance with all state and federal regulations as well as all permit conditions.

NAME J. J. J. J. DATE 9/5/2024 SUPERVISOR JK