

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

N694467789

FACILITY: Pregis		SRN / ID: N6944
LOCATION: 2700 Wills Street, MARYSVILLE		DISTRICT: Warren
CITY: MARYSVILLE		COUNTY: SAINT CLAIR
CONTACT: Marc Cobb , EHS Specialist		ACTIVITY DATE: 03/29/2023
STAFF: Noshin Khan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: scheduled inspection; facility is in violation of S.C. I.2		
RESOLVED COMPLAINTS:		

On Wednesday, March 29, 2023, I, Noshin Khan, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, performed a scheduled, on-site inspection of Pregis located at 2700 Wills Street, Marysville, Michigan 48040 (SRN: N6944). Owen Pierce (EGLE-AQD) joined me for the inspection. The purpose of the inspection was to determine the facility's compliance status with the requirements of the federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (Act 451); the AQD administrative rules, and the conditions of Renewable Operating Permit (ROP) Number MI-ROP-N6944-2022.

Owen and I arrived at the facility at 10AM and met with Marc Cobb, EHS Specialist, Colin Ferres, Plant Manager, and Tetra Tech consultants Marianne Gutknecht and Keith Farquhar. Colin explained the facility's operations. Pregis produces foam products, primarily for protective packaging. According to Colin, the facility operates 24 hours a day, 7 days a week, and has 83 employees. Colin said that there are no emergency generators, boilers, or parts washers at the facility, and I did not observe any during the inspection.

The facility has 4 extrusion lines through which polyethylene pellets are melted, injected with isobutane as a blowing agent, and pushed out through pressurized barrels to form final foam products. 2 material reclaim lines melt, extrude, and cut leftover foam back into polyethylene pellets. The facility has an Ionization Control System (ICS) to control the isobutane emissions released in the manufacturing process. The ICS is composed of ionization tubes which generate positive and negative ions which are dispersed through ventilation supply ducts (eco-ducts) into the production and reclaim rooms. The ions reduce isobutane molecules to carbon dioxide and water. The production and reclaim rooms act as a reaction chamber for the ICS and meet the requirements for a non-fugitive enclosure. The ICS relies on negative building pressure into the non-fugitive enclosure to ensure isobutane capture.

After the pre-inspection meeting, Colin and Marc led us on a facility walkthrough. In the production room, Colin pointed out the eco-ducts along the ceiling associated with the ICS, and I observed the eco-ducts in place over the extrusion area. We walked to the extrusion lines and Colin pointed out extrusion lines 1 through 4. Line 3 was operating during the inspection. Colin explained that Lines 1 and 2 cannot run at the same time since they share an extruder, so the maximum number of lines that can run at once are three. Next to the extrusion lines Colin pointed out a central LEL (lower explosive limit) monitor that flashes red and automatically shuts down production if LEL exceeds 60%. We observed how the polyethylene is pushed through a barrel and dye to produce foam material that comes out as a roll. This foam is then cut, needle punched, and rolled into bundles for storage. Bundles are marked with colored tape that indicates information including the density, thickness, and type of material. The bundles are stored along the sides of the production area. I observed blowers along the sides of the room to promote air flow and dispersion of ions. We did not observe the reclaim lines.

In a room adjacent to the production area we observed the continuous emissions monitoring system (CEMS). Marc said the monitor takes readings every 1 to 3 minutes. I observed a reading of 41.9 lb/hr and 254.1 ppm during the inspection. Marc said that staff record readings a few times a day in a physical log which ensures that air flow can be adjusted based on the VOC reading. Marc said that the facility's pyrolysis oven is also located in the CEMS room. The oven was previously determined to be exempt from permit requirements per Rule 291. Marc provided additional records after the inspection including a manufacturer description of the oven and a usage log since the oven is not used regularly. The oven is used to clean extruder parts. According to the manufacturer description, the oven uses heat and vacuum to remove material from metal parts. The oven was used three times in 2022, and only once in 2023 according to the usage log.

Pregis received a violation in February 2023 due to a failed smoke test. One of the roll-up doors had a tear and we observed smoke pass through it during the test, indicating that the non-fugitive enclosure was not

maintained and Source-Wide Special Condition (S.C.) IV.2 in the ROP was violated. Shortly after the smoke test, Marc provided video confirmation that the rollup door was patched and passed a smoke test. In response to the violation Pregis submitted a revised malfunction abatement plan that includes increased inspection of entry points until a new roll-up door is purchased. During the inspection, Marc said he checks entry points daily, and showed me quotes for a new rollup door.

Pregis received a violation on May 15, 2023, from Andrew Riley (EGLE-AQD, Technical Programs Unit) for a 15.7% CEMS downtime in Quarter 1 of 2023. This was due to a reporting deviation on the CEMS unit between January 11 and January 25, of which the facility notified me of on January 13 via email (as required by S.C. VII.6) and later provided a memo describing why the incident occurred and the actions taken to fix it.

On June 7, 2023, Marc notified me via email that the facility exceeded its permitted 8-hour average VOC limit of 476 lb/8-hr on May 31 (for 2 consecutive hours) and June 2 (4 consecutive hours). Marc sent a follow-up memo via email on June 12, prepared by Marianne, which stated that further review of CEMS records showed exceedances on April 12 (7 consecutive hours), May 19 (7 consecutive hours), and May 23 (4 consecutive hours). These exceedances are a violation of Source-Wide S.C. I.2.

ROP Compliance Evaluation and Records Review

Source-Wide Conditions

Emission Limits

I.1: The facility provided records for 12-month rolling VOC emissions (in compliance with recordkeeping condition VI.2.b) for each month from October 2022 through March 2023. The highest 12-month total was 138.2 tons per year as calculated in December 2022, which is below the limit of 178 tons per year as specified in this condition.

I.2: As discussed above, the facility violated the VOC 8-hour average emission limit of 476 lb/8-hr on April 12, May 19, May 23, May 31, and June 2 of 2023. The facility provided records for December 26, 2021 through March 26, 2023 that calculate 8-hour rolling emissions each hour, in compliance with S.C. VI.2.a and VI.4. These records show exceedances in 2022 on May 30 and May 31. These two exceedances were previously reported and a violation was not issued at the time.

VOC emission records from the CEMS unit may not accurately reflect emissions from when the non-fugitive enclosure was not maintained. However, there doesn't seem to be a method to determine the impact the enclosure leak had on emissions.

Process/Operational Restrictions:

III.1: The facility provided a copy of its malfunction abatement plan, which outlines items including daily, monthly, quarterly, and semi-annual, and annual maintenance and inspection procedures and meets the requirements of this condition. During the pre-inspection meeting, Marc showed me folders containing logs of all maintenance and inspection activities, in compliance with S.C. VI.6.

III.2: This condition requires that the east and west exhaust fan systems are maintained such that the individual exhaust fan flow rate is the same as the flow rate measured during the most recent compliance test. The exhaust fan flow rate shall be maintained between 22,500 and 24,500 scfm.

During the pre-inspection meeting, Pregis staff informed me that fan flow rates are verified during Relative Accuracy Test Audits (RATAs) and are kept at the flow rate measured during the tests, in compliance with this condition. Marc provided a copy of the most recent RATA performed in July 2021. The combined flow rate through both exhausts ranged from 21,983 scfm to 27,412 scfm over the 10 runs performed during the RATA, with an average of 25,252 scfm. The exhaust fans may be operating at a rate slightly higher than the permitted range.

Design/Equipment Parameters:

IV.1: Based on observations during the inspection and maintenance records provided, the facility operates with the ionization control system installed, maintained, and operated in a satisfactory manner as specified in the malfunction abatement/preventative maintenance plan, and complies with this condition.

IV.2: This condition requires that the permittee shall not operate any portion of FGFACILITY unless the non-fugitive enclosure is installed, maintained and operated in a satisfactory manner. Based on the corrective actions taken in response to the February 2023 violation and smoke test that confirmed proper seal of the roll-up door, the facility is now in compliance with this condition.

IV.3: During the inspection I observed that the facility installed, calibrates, maintains, and operates in a satisfactory manner a CEMS to monitor and record the VOC emissions from FGFACILITY on a continuous basis, in compliance with this condition.

IV.4: This condition requires that the permittee installs and operates the Compliance Assurance Monitoring System (CAMS) system to meet the timelines, requirements and reporting detailed in Appendix 9 and uses the CAMS data to assure compliance with the VOC emission limits in SC I.1 and 2.

The emissions records provided by the facility use data from the CEMS to calculate 8-hour average VOC emissions and 12-month rolling emissions to evaluate compliance with S.C. I.1 and I.2, as required by this condition. The requirements in Appendix 9 also include performance of quality assurance procedures according to the methods stated in S.C. V.4. This condition requires RATAs to be performed at least once every eight calendar quarters and Cylinder Gas Audits (CGAs) conducted in three of four calendar quarters. Pregis is due for a RATA later this year and provided copies of 2022 CGA reports. The records provided indicate compliance with condition IV.4.

Testing/Sampling:

V.1: This condition requires that a smoke test be performed at least once every six months to verify that the direction of air flow at each natural draft opening (NDO) is into the non-fugitive enclosure. The facility provided records (in compliance with S.C. VI.3) of smoke tests performed in 2022. The tests were performed on June 30, September 27, and December 20, indicating compliance with this condition.

V.2 and V.3: Based on AQD records, the department has not required testing to verify VOC emission rates since the last inspection.

Monitoring/Recordkeeping:

VI.5: The facility provided records from January 2023 onwards tracking the use of blowing agent (isobutane) in the extruders on a daily, monthly, and 12-month rolling time period basis, in requirement with this condition. In January 2023, the facility used 165,860 pounds of isobutane. The permit does not include a material limit for isobutane.

Reporting:

VII.1-VII.4, VII.6: The facility has submitted timely reports including quarterly CAMS compliance, semiannual monitoring and deviations, annual compliance reports, and test reports as required by reporting conditions. The facility has also notified me within two business days after the discovery of an abnormal condition or malfunction of the CAMS.

The facility violated the VOC 8-hour average emission limit of 476 lb/8-hr on April 12, May 19, May 23, May 31, and June 2 of 2023 and is in violation of S.C. I.2. I will be citing a violation for these exceedances.

NAME *Noorhin Khan*

DATE 6/26/23

SUPERVISOR *K. Kelly*