

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

B729465599

FACILITY: Lear Corporation, Farwell Plant		SRN / ID: B7294
LOCATION: 505 HOOVER ST, FARWELL		DISTRICT: Bay City
CITY: FARWELL		COUNTY: CLARE
CONTACT: Kathleen Kelly , EHS Specialist		ACTIVITY DATE: 11/29/2022
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Onsite Inspection FY2023		
RESOLVED COMPLAINTS:		

On November 29, 2022, AQD staff conducted a scheduled onsite inspection at Lear Farwell, SRN B7294. Staff arrived onsite at 9:30 AM and departed at 10:50 AM. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) Administrative Rules; and to evaluate compliance with the facilities Renewable Operating Permit (ROP), MI-ROP-B7294-2018. EGLE staff were assisted onsite by Ms. Kathleen Kelly.

Facility Description and History

Lear Farwell is located at 505 Hoover Street, Farwell, MI. The facility specializes in the production of molded polyurethane automotive components including, seating, head rests, and arms rests. Four production lines are utilized at the facility including, EUSEATINGLINE#4, EUCANNONLINE, EUPROTOTYPELINE#1 and EUSMALLPARTS#1.

Polyol used in production is blended onsite as part of the emission unit EUPOLYOLBLENDING. The blended polyol is then used to fill various polyol tanks associated with the various production lines. Each production line consists of a series of molds in which the polyol is injected. Each mold consists of two halves. The top half is known as the lid. The bottom half is known as the bowl. Prior to filling the molds with polyol, both the lids and the bowls are coated with a mold release agent. Currently, the facility utilizes both a water-based and a solvent-based mold release as part of the production process. The mold release coated mold rotates, and polyol is mechanically placed into the bowl. The lid then closes, and the mold is clamped shut. The table continues to rotate towards the demold station. As the table rotates, the polyol expands to fill the shape of the mold. At the demold station, the foam product is removed from the mold. The molds are then wiped out by hand. Once the molds are wiped, mold release is once again applied, and the process loop begins again.

Lear Farwell is a major source of volatile organic compounds (VOCs) and a minor source of hazardous air pollutants (HAPs). The large source of VOC emissions for the facility comes from the mold release agents used on the production lines. Lear Farwell was last inspected in March 2021. At the time of the March 2021 inspection, the facility was found to be in non-compliance for exceeding a VOC emission limit from FGFOAMLINES for five months in 2019. On August 17, 2021, the company provided supplemental information demonstrating that the VOC emission limit was not exceeded and that the error was due to incorrect calculations that included totes of release agent that were not used at the facility.

Lear Farwell is currently subject to a Consent Order. The consent order became effective on July 28, 2022. As part of the Consent Order, Lear Farwell is implementing a Supplemental Environmental Project (SEP). The facility has committed to using a water-based mold release on a portion of the production process. The water-based mold release will be used on a minimum of 2,700,000 lid parts per year for three years. The SEP will result in a VOC emission reduction of 22,021 pounds per year, totaling a reduction of 66,064 pounds of VOCs over the three-year course of the SEP. As part of the compliance inspection, time was taken to review the facilities current progress with the SEP.

Compliance Evaluation

EUPOLYBLENDING

EUPOLYBLENDING is the onsite polyol blending operation which consists of a batch operation of filling, blending, and un-filling polyol in a tank. The emission unit is subject to 40 CFR Part 63, Subpart OOOOOO. Materials used in EUPOLYBLENDING shall not contain methylene chloride as an equipment cleaner to flush the mixhead, elsewhere as an equipment cleaner, or a mold release agent containing methylene chloride, Special Condition (S.C.) II. 1. A signed compliance certification is on file certifying the facility does not use any cleaners or mold release agents containing methylene chloride, S.C. VI. 2. Staff report the facility has a chemist onsite who helps ensure no materials containing methylene chloride are used.

FGFOAMLINES

The flexible group FGFOAMLINES encompasses the foam production lines at the facility. Emission units in the flexible group include EUSEATINGLINE#4, EUCANNONLINE, EUPROTOTYPELINE#1 and EUSMALLPARTS#1. The flexible group is subject to 40 CFR Part 63, Subpart OOOOOO.

Onsite staff report VOC and/or HAP containing materials are kept in closed containers when not in use, S.C. III. 2. Improper material storage was not observed while onsite. The facility utilizes a flammable storage locker to store flammable materials that aren't in use. Staff report process lines are not purged, as a result there is no waste mold release, S.C. III. 1.

Lear Farwell currently utilizes two different mold releases as part of onsite production. The two mold releases include Chem-trend PU-11517 and HT 9386. Chem-trend PU-11517 is a liquid hydrocarbon naptha wax. HT 9386 is a water-based mold release produced by Hightower Products LLC. The water-based wax is currently used on the lid portions of EUSEATINGLINE#4 and EUCANNONLINE. The solvent-based mold release is used on EUPROTOTYPELINE#1 and EUSMALLPARTS#1, as well as the bowl portions of EUSEATINGLINE#4 and EUCANNONLINE.

Special Condition V. 1. requires a Federal Reference Test Method 24 be completed on any mold release agent. Records of Federal Reference Test Method 24 results for each of the mold releases used at the facility were provided and reviewed. Method 24 analysis of the Chem-trend PU-11517 mold release was completed by GPI Laboratories. Test results were dated April 29, 2021. Results show the mold release has a VOC content of 6.0 lbs/gal, below the limit of 6.15 lbs/gal (minus water), S.C. II. 1. Method 24 analysis of the HT 9386 mold release was completed by RTI Laboratories. Test results were dated October 14, 2021. Results show a VOC content of 4.99

lbs/gal (less water), below the limit of 6.15 lbs/gal (minus water), S.C. II. 1. HT 9386 has a water content of 78% and a VOC content (as received) of 1.28 lbs/gal.

The facility maintains VOC emission records for each emission unit in FGFOAMLINES. Emissions are calculated and tracked using a spreadsheet. The amount, in gallons, and type of mold release used for each emission unit is tracked. Staff input these values into the spreadsheet at the end of each month to calculate the monthly and 12-month rolling VOC emissions from each emission unit, S.C. VI. 3. Staff report time is taken at the beginning of each month to review the monthly production forecasts. If the forecast were to indicate emission levels could be exceeded, production for that month is adjusted accordingly.

Time was taken to review the facilities spreadsheet calculations and emission factors used. Correct calculations appear to be used. VOC emissions from the Chem-trend PU-11517 are calculated using the emission factor of 6.0 lbs/gal, as determined by Method 24 testing. VOC emissions from the HT 9386 are calculated using the VOC content (as received) of 1.28 lbs/gal, rather than the VOC content (less water) of 4.99 lbs/gal. Using the as received value results in slightly higher VOC emission calculations than would result from calculating VOC emissions based on the amount of mold release used minus water and the VOC content (less water) emission factor.

VOC emission records were reviewed for the period of October 2021 to October 2022. During the period of records reviewed the highest 12 month rolling VOC emissions from EUSEATINGLINE#4 occurred at the end of February 2022 with 82.30 tpy VOCs. This is below the facilities permitted limit of 94.5 tpy, S.C. I. 1. The lowest 12-month rolling VOC emissions for EUSEATINGLINE#4 during the period reviewed was 72.46 tpy at the end of October 2022. The highest monthly VOC emissions for EUSEATINGLINE#4 occurred at the end of November 2021 with 10.99 tons. The lowest monthly VOC emissions occurred at the end of April 2022 with 3.47 tons.

During the period of records reviewed the highest 12 month rolling VOC emissions from EUCANNONLINE occurred at the end of February 2022 with 56.05 tpy VOCs. This is below the facilities permitted limit of 60.0 tpy, S.C. I. 2. The lowest 12-month rolling VOC emissions for EUCANNONLINE during the period reviewed was 47.56 tpy at the end of October 2022. The highest monthly VOC emissions for EUCANNONLINE occurred at the end of November 2021 with 6.57 tons. The lowest monthly VOC emissions occurred at the end of July 2022 with 2.48 tons.

During the period of records reviewed the highest 12 month rolling VOC emissions from EUPROTOTYPELINE#1 occurred at the end of March 2022 with 0.14 tpy VOCs. This is below the facilities permitted limit of 2.5 tpy, S.C. I. 3. The lowest 12-month rolling VOC emissions for EUPROTOTYPELINE#1 during the period reviewed was 0.092 tpy at the end of March 2022. The highest monthly VOC emissions for EUPROTOTYPELINE#1 occurred at the end of August 2022 with 0.025 tons. The lowest monthly VOC emissions occurred at the end of November 2021 with 0.0026 tons.

During the period of records reviewed, monthly mold release usage for EUSMALLPARTS#1 was recorded as being the same usage of 392.6 gallons a month for all 12 months reviewed. Twelve month rolling VOC emissions were 14.13 tpy for all twelve months, below the permitted limit of 24.0tpy, S.C. I. 4. Monthly VOC emissions were 1.18 tons a month for all 12 months reviewed. Lear staff explained mold release usage for the Small Parts Line remains standardized. Each

month 1 tote of mold release is allocated for the emission unit. The small parts line does not exceed usage of one tote per month.

At the time of inspection, EUPRTOTYPELINE#1 was still being operated at 505 Hoover Street, Farwell, MI. The facility plans to relocate the emission unit to a building north of the current facility on Commerce Dr. Lear staff said a PTI application is in house at the facility and will be submitted to the AQD soon. EUPROTYPE#1 is being relocated to create room at the facility. Lear Farwell plans to eventually install new foam lines at the facility. Lear staff are aware a PTI must be obtained prior to commencing construction.

Supplemental Environmental Project

Lear Farwell is currently implementing a Supplemental Environmental Project (SEP) as part of the July 28, 2022, Consent Order. The facility has committed to using a water-based mold release on a minimum of 2,700,000 lid parts per year for three years. The SEP is expected to reduce VOC emissions by 66,064 pounds of VOCs over the three-year course of the SEP.

Time was taken during the inspection to evaluate the facilities current progress with the SEP. At the time of inspection, the facility was using the water-based mold release as part of onsite processes. Currently the water-based mold release is being used on the lid portion of EUCANNONLINE and EUSEATINGLINE#4.

Lear is to submit quarterly SEP progress reports. The first report was to be submitted no later than 90 days after the effective date of the Consent Order. Subsequent quarterly reports will be submitted no later than the last day of each succeeding calendar quarter. The Consent Order became effective on July 28, 2022. Lear Farwell submitted the first quarterly report on time, dated October 26, 2022. The report was for the period of 7/1/2022 to 9/30/2022. During the reporting period water-based mold release was used on EUCANNONLINE and EUSEATINGLINE#4. Emissions of VOCs from the solvent-based mold release during the period was 42525.8lbs of VOCs; this calculation includes all emission units in which the solvent-base mold release was used. Emissions of VOCs from the water-based mold release was 5659.2lbs of VOCs. During the first reporting period a VOC emission reduction of 5042.03lbs of VOCs was reported.

The facility does not foresee any reasons the water-based mold release will not be able to be used throughout the three-year term of the SEP. Staff report the facility hopes to eventually use the water-based mold release instead of the solvent-based mold release in other portions of their process.

Summary

On November 29, 2022, AQD staff conducted a scheduled onsite inspection at Lear Farwell, SRN B7294. Lear Farwell specializes in the production of molded polyurethane automotive components including, seating, head rests, and arms rests. The facility is a major source of volatile organic compounds (VOCs) and a minor source of hazardous air pollutants (HAPs). Based on records reviewed and the observed activities onsite, the facility appears to be operating in accordance with the requirements of MI-ROP-B2872-2018. At this time, the facility appears to be in compliance.

NAME Mathomael, Shontel

DATE 12/15/2022

SUPERVISOR Chris Lane