

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

N567768946

FACILITY: Lear Corporation dBa Eagle Ottawa		SRN / ID: N5677
LOCATION: 2930 WEST AUBURN RD, ROCHESTER HLS		DISTRICT: Warren
CITY: ROCHESTER HLS		COUNTY: OAKLAND
CONTACT: Larry Abramowski , Facility Engineering Manager		ACTIVITY DATE: 08/17/2023
STAFF: Marie Reid	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled on-site inspection.		
RESOLVED COMPLAINTS:		

On August 17, 2023, I (Marie Reid) and Iranna Konanahalli conducted a scheduled on-site inspection at Lear Corporation DBA Eagle Ottawa (Lear) (SRN: N5677) located at 2930 West Auburn Road, Rochester Hills, MI. The purpose of the inspection was to determine the company's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); and the conditions of Permit to Install (PTI) No. 433-95C.

Introduction

I arrived at the facility at 1:00 PM, identified myself, and met with Iranna Konanahali, EGLE-AQD, Larry Abramowski, Facility Engineering Manager and Andrew McCave, Senior Maintenance Technician. Doug Andrews, Global Manager of Energy and Environment was present on Microsoft Teams during our opening meeting. We began with an opening meeting, stated the purpose of the inspection, and toured the facility. Plant operations cease at 1:00 PM so no emission units were operating during the inspection. I did not observe any visible emissions or odors during the inspection.

Background

PTI No. 433-95C was approved August 10, 2017, to remove two coating lines (EU-NC1 & EU-NC2) and replace them with a new coating line to process hides (EU-SL3). Additionally, EU-SL2 (previously identified as EU-SP3) has its spray booth and ovens replaced. EU-SP1 & EU-SP2 are now designated as EU-SL1. A few stack parameters were changed to increase stack height and flow rate, improving air dispersion modeling impacts.

This facility is an existing opt-out source. PTI No. 433-95C continues to include enforceable limits for individual and aggregate HAPs, which were previously accepted to restrict the facility's PTE to less than the major sources threshold to opt out of 40 CFR 63 NESHAP Subpart TTTT for Leather Finishing Operations and the ROP Program.

AQD issued a Violation Notice (VN) to Eagle Ottawa on July 29, 2014, for failing to maintain required emission records of VOC and HAPs (PTI No.433-95A Special Condition Nos. 19 & 21) and installing and operating coating booths/lines without obtaining a PTI (Rule 336.1201). AQD issued a another VN on August 27, 2014, for failure to submit a timely ROP application or obtain an enforceable operating restriction to reduce the PTE of VOCs (Rule 336.1210).

To resolve the two 2014 VNs, the AQD executed a Consent Order (CO) (AQD No. 18-2015), on May 29, 2015, with a settlement amount of \$66,000.00. As of this inspection consent order has not been terminated.

Process

Eagle Ottawa operates a research and development (R&D) facility and is also capable of production activities. They operate in production mode as a backup to its plant in Mexico. Larry informed me that they have not ran production since September 2022 and they do not plan to run production until 2028 at the earliest. The facility receives tanned animal hides and develops processes for “finishing” the hides so they can be used at other facilities to manufacturer vehicle seating. The leather finishing activities conducted at the facility include softening, stretching, coating, and patterning the hides. The softening and coating activities generate air emissions. Lear has around 105 employees and operates M-F 8 hours a day (5am-1pm) and is followed with an 8-hour cleaning shift.

The facility uses 12 leather mills (EU-LeatherMills) to soften leather hides. The mills tumble the hides under heated conditions, and exhaust through fabric dust collectors. The leather mill exhausts air back to the in-plant environment in cooler weather, when the moisture and warmth are desired indoors, and are exhausted outdoors otherwise. Leather mills cause the hides to shrink from the heat, so the leather is processed through a stretcher to smooth and flatten the hides. This process creates dust which is collected in a baghouse. The stretchers are not permitted because the filtered exhaust is released back to the general in-plant environment and therefore are exempt from R201 per R285(2)(i).

A splitting machine (EU-Splitter) may be used to split thick hides to produce hides of the desired thickness. Larger removed material falls into a tray. Its emissions are vented through a cyclone dust collector with a hopper, which may exhaust indoors or outdoors, similar to the leather mill exhausts.

A laser etching machine (EU-LaserEtcher) was purchased in hopes to enhance leather patterning options. The laser etching machine is enclosed and vented to a filter house to remove smoke created by burning hides in the process. Eagle Ottawa determined that the laser etching machine does not provide the quality of patterning they had hoped for, so it is rarely operated.

The facility uses several automatic coating lines to coat leather hides (EU-SL1, EU-SL2, EU-SL3, EU-SP4, and EU-SP5and6) and includes a manual spray booth to test coatings being developed at the facility (EU-TestBooth). Each coating line consists of rollcoaters, spray booths, curing ovens, and airoff ovens. The facility only uses waterborne coatings, using its own formulations. Larry informed me that EU-SL1 has been out of service since September 2022 and began disassembly in July 2023. SP6 has been completely disassembled and removed from site since February 2020 due to low demand.

Rollcoaters are used to apply the base and color coat followed by spray coating to apply the final surface finish. Rotary sprayers are used in the automated spray booths which consist of a series of arms with a HVLP applicator located at the extremity of each arm. The spray arms are mounted on a central shaft that rotates as the leather passes underneath on a conveyor. The rotary sprayers are controlled by optical eyes to detect the position and shape of the hides entering the spray booth and activates and stops the spray applicators. Optical eyes reduce overspray which results in cost savings. Automatic spray booths are equipped with a water curtain collector and wet scrubbers to remove overspray. Water is drained each day and treated at Great Lakes Water Authority. The manual test booth is controlled by fabric filters and equipped with a pressure drop meter.

Coating is cured to hides in two steps. The first curing occurs in the natural gas-fired “curing ovens” to drive off water from the water-based coating and dry the coating. Complete curing occurs in the natural-gas fired “air-off ovens” which provides final curing to the coating.

After the coating application and curing, hides are softened in a leather mill and stretched/flattened in a stretcher. The final process involves impressing patterns into hides and storing them for shipment.

FG-COATING EMISSION LIMITS

I requested recordkeeping data from Lear from July 2022 through July 2023 which Larry provided. Larry stated that they only needed to record data while operating in production mode, and not for R&D because they permitted the facility for production only, and they can use R 336.1283 as an exemption. Rule 283 does not apply in this situation because the coating lines in FG-Coating are already permitted and the permit does not have any language specifying that they only need to record data for production and not R&D. Larry said they are able to provide estimated R&D operation calculations of emission and material limit records, which the AQD District Supervisor, Joyce Zhu, deemed acceptable. Lear provided R&D records from January 2022 through July 2023 and agreed to continue to keep R&D recordkeeping on file. Although it is unlikely that operating the coating lines strictly for R&D will exceed any emission or material limits in this permit, it is required to keep all records on file and make them available to the Department upon request per SC VI.3 - VI.8.

However, the permit states that achievement of the conditions in SC VI.9 & SC VI.10 and upon written approval by the AQD District Supervisor in response to a written request from the permittee, the monthly mass emission calculations required by SC VI.4.d, VI.4.e, & VI.5.d, shall be suspended. At the time of this inspection, the AQD has not received a written request from the permittee to suspend these calculations.

SC I.1 Limits 2-Dimethylaminoethanol from FG-Coating to 5,330 pounds per 12-month period. Based on the records I reviewed Lear's emissions are below this limit. The most recently reported 12-month rolling total ending in July 2023 showed 2-Dimethylaminoethanol emissions at 12.1 lbs. 12-month rolling emissions were highest during the 12-month period ending in December 2022 (14.5 lbs).

SC I.2 Limits Triethylamine (TEA) from FG-Coating to 3.9 pounds per day. Based on the records I reviewed, daily Triethylamine emissions are under <1 lb.

SC I.3 Limits VOC from FG-Coating to 36.0 tpy based on a 12-month rolling time period. Based on the records I reviewed Lear's emissions are below this limit. The most recently reported 12-month rolling total ending in July 2023 showed VOC emissions at 0.7 tons. 12-month rolling emissions were highest during the 12-month period ending in April 2022 (1.68 tons).

MATERIAL LIMITS

SC II.1 Limits hides coated from FG-Coating to 18,000,000 square feet per 12-month period. Based on the records I reviewed, hides coated are below this limit. The most recently reported 12-month rolling total ending in July 2023 showed around 243,400 square feet of hides coated. Square feet of hides coated was highest during the 12-month rolling period ending in April 2022 (531,700 square feet of hides).

SC II.2 Limits VOC to 4.0 lb per 1,000 square feet of the hide coated based on a 12-month period. Based on the records I reviewed, VOC per hide is <1 lb for every 12-month period.

SC II.3 States Lear shall not use any purge or clean up solvent in FG-Coating that contains VOC. Lear uses waterborne coatings. Water is used to flush the spray booth, lines, and guns. No solvent containing VOC is used in purge and cleanup activities in FG-Coating.

PROCESS/OPERATIONAL RESTRICTIONS

SC III.1 Requires Lear to capture all waste coatings and purge materials and shall store them in closed containers and dispose of them in an acceptable manner. At the end of each day, short term material storage containers are emptied into a barrel for long term storage and properly disposed of when full. I observed that the short-term material storage containers were emptied and cleaned for the day & long-term material storage containers were closed.

SC III.2 Requires Lear to dispose of spent filters in a manner that minimizes the introduction of air contaminants to the outer air. EU-TestBooth is equipped with a differential pressure meter that will indicate when the dry filters need to be replaced. Larry said that EU-TestBooth is rarely used so Lear does not need to change the dry filters very often. I observed that dry filters were clean and properly installed during the inspection and that the pressure drop meter did not indicate the filters needed to be replaced.

SC III.3 Requires Lear to handle all VOC and HAP containing materials to minimize the generation of fugitive emissions. All material storage containers were closed during my inspection. Larry stated that VOC and HAP containing material containers are only opened while in use.

SC III.4 Limits Lear's coating operations in FG-Coating to no more than 20 hours per calendar day. According to Larry, the maximum hours of coating operations in FG-Coating are 8 hours per calendar day since their operating hours are from 5 AM – 1 PM followed by an 8-hour cleaning shift. I conducted the site tour portion of the inspection at 1:30 PM and confirmed there were no workers operating FG-Coating. I observed employees arriving for cleaning shift, which includes cleaning the equipment in FG-Coating.

DESIGN/EQUIPMENT PARAMETERS

SC IV.1 Requires that Lear does not operate any spray booth in FG-Coating unless all respective overspray control systems are installed, maintained, and operated in a satisfactory manner. Spray booths were cleaned and drained of water for the day. During my inspection, the control systems in the spray booths were installed and maintained properly.

SC IV.2 Requires Lear to equip and maintain FG-Coating with HVLP applicators or comparable technology regarding transfer efficiency. All spray booths in FG-Coating are equipped with HVLP spray applicators.

TESTING/SAMPLING

SC V.1 Requires coatings in Lear to be tested for VOC content, water content, and density of any coatings, as applied, and as received, using federal Reference Test Method 24. Lear formulates coatings using their own formulations. Larry stated that every coating they formulate has been tested using Method 24 by RTI Laboratories. I reviewed some of the analytical reports from RTI Laboratories and confirmed Method 24 is used to test each coating.

MONITORING/RECORDKEEPING

SC VI.2 Requires the facility to maintain a current listing from the manufacturer of the chemical composition of each coating as applied, including the weight percent of each component. Lear formulates its own coatings. I reviewed records on site that list the chemical composition of each coating as applied, including the weight percent of each component.

SC VI.3 Requires the facility to keep records of the gallons (with water) and VOC content of each material used in FG-Coating. Additionally, Lear must maintain the monthly and 12-month rolling records of VOC mass emissions. I reviewed VOC content of some coatings during the inspection. Larry provided me with monthly and 12-month rolling records from July 2022 through July 2023, and they meet the emission limit in SC VI.3.

SC VI.4 Requires the facility to keep records of gallons (with water) and 2-Dimethylaminoethanol content of each material used and reclaimed in FG-Coating. Additionally, Lear must maintain monthly and 12-month rolling records of 2-Dimethylaminoethanol emissions. I reviewed the 2-Dimethylaminoethanol content of some coatings during the inspection. Larry provided me with monthly and 12-month rolling records from July 2022 through July 2023, and they meet the emission limit in SC I.1.

SC VI.5 Requires the facility to keep records of gallons (with water) and TEA content of each material used and reclaimed in FG-Coating. Additionally, Lear must maintain daily mass emission calculations, square feet of hides coated in FG-Coating, and any day no material containing TEA is used. I reviewed the TEA content of some coatings during the inspection. Larry provided the daily emissions, hides coated, and days when no material containing TEA is used. The daily emission records provided meet the emission limit in SC I.2.

SC VI.6 Requires the facility to record square feet of hides coated in FG-Coating monthly, for the proceeding 12-month rolling period. Larry provided these records, and they meet the material limit in SC II.1.

SC VI.7 Requires the facility calculate the VOC emission rate from FG-Coating monthly for the proceeding 12-month rolling period, in pounds per 1,000 square feet of hides coated. Larry provided these records, and they meet the material limit in SC II.2.

SC VI.8 Requires the facility to record daily hours of coating operations conducted in FG-Coating. See SC III.4

No written request has been received by the AQD from Lear regarding SC VI.9 and SC VI.10.

STACK/VENT RESTRICTIONS

I did not verify stack parameters for FG-Coating during this inspection.

**FG-PM
EMISSION LIMITS**

SC I.1 Limits PM emissions to 0.01 lb/1,000 lb of exhaust gas on a dry gas basis for each leather mill and splitting machine in FG-PM. SC I.2 and SC I.3 Limits PM 10 and PM 2.5 emissions to 0.5 pph in FG-PM. Based the information in SC IV.1, an emission test to verify compliance with the emission limits in SC I.1, SC I.2, & SC I.3 has not been requested by the AQD. I did not observe any visible emissions during the inspection.

DESIGN/EQUIPMENT PARAMETERS

SC IV.1 Requires that Lear shall not operate any leather mill or splitting machine in FG-PM unless the associated emission control device is installed maintained and operated in a satisfactory manner. No equipment in FG-PM was operating during this inspection. The leather splitting machine is controlled by a cyclone. There are 12 leather mills, each with its own baghouse. Larry stated that bags are shaken after every use. I observed some of the baghouses and did not see any tears in the bags and the hoppers were recently emptied.

MONITORING/RECORDKEEPING

SC VI.1 and SC VI.2 Requires Lear to inspect each leather mill or splitting machine before the first use of each day to verify the associated control device is operating properly. Each inspection shall verify both the integrity of the dust collection media and that the dust collection media is properly attached. If any fault of integrity or any improper attachment is observed, the permittee shall correct the fault or improper attachment before operating the mill or splitting machine. Larry supplied inspection records that contain the name of the person inspecting the control device, the results, and any corrections made. Each inspection verifies both the integrity of the dust collection media and that the dust collection media is properly attached before operation. Any faults or improper attachment is fixed prior to operating the mill or splitting machine.

STACK/VENT RESTRICTIONS

VIII. I did not verify stack parameters for FG-PM during this inspection.

FGFACILITY

EMISSION LIMITS

SC I.1 & SC I.2 limits each individual HAP to less than 9 tpy (18,000 lbs/yr) and aggregate HAPs to less than 22.5 tpy (45,000 lbs/yr) per 12-month rolling period for FGFACILITY. Based on the records I reviewed, Lear's emissions are below this limit. The most recently reported 12-month rolling total ending in July 2023 showed TEA at 26.7 lbs, Ethyl Benzene at 0.12 lbs and Xylene at 3.7 lbs. The aggregate HAPs emission total is around 30.5 lbs. 12-month rolling emissions were highest during the 12-month period ending in December 2022 which showed TEA at 33.9 lbs, Ethyl Benzene at 0.16 lbs, and Xylene at 4.6 lbs. The aggregate HAPs emission total is around 39 lbs.

TESTING/SAMPLING

SC V.1 Requires the facility to determine HAP content of any coating as received and as applied, using manufacturer formulation data. Lear keeps HAP content information using its own formulations.

MONITORING/RECORDKEEPING

SC VI.2 Requires the facility to keep records of gallons or pounds of HAP content of each material used and reclaimed in FG-Coating. Additionally, Lear must maintain monthly and 12-month rolling records of individual and aggregate HAP mass emissions. These records are maintained. Larry provided me with these records, and they meet the emission limit in SC I.1 & SC I.2.

CONCLUSION

Based on this inspection, Lear Corporation DBA Eagle Ottawa (SRN: N5677) is in compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); and the conditions of Permit to Install (PTI) No. 433-95C.

NAME Mark Reid

DATE 09/21/2023

SUPERVISOR K. Kelly