

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection**

B729447123

FACILITY: Lear Corporation, Farwell Plant		SRN / ID: B7294
LOCATION: 505 HOOVER ST, FARWELL		DISTRICT: Saginaw Bay
CITY: FARWELL		COUNTY: CLARE
CONTACT: Joshua Axline, Environmental Health & Safety Engineer		ACTIVITY DATE: 11/30/2018
STAFF: Meg Sheehan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled site inspection for FY19		
RESOLVED COMPLAINTS:		

**On Friday, November 30, 2018, a scheduled site inspection was conducted by AQD District staff at Lear Corporation EEDS & Interiors – Renosol Seating Facility in Farwell, Clare County. Lear representative Joshua Axline (Environmental Health & Safety Engineer) provided a tour of the facility. Most of the facility was in operation upon arrival. Site inspection activities were conducted with the intent of confirming compliance with Renewable Operating Permit (ROP) No. MI-ROP-B7294-2018.**

MI-ROP-B7294-2018 was issued on September 5, 2018 and expires on September 5, 2023. Permit to Install (PTI) 91-06E for a new Emission Unit (EU) EUPROTOTYPELINE#1 was rolled into the ROP as part of the most recent renewal.

### FACILITY DESCRIPTION

The Renosol Seating Facility (RSF) is owned by Lear Corporation EEDS & Interiors, an international company specializing in automotive components. It is bounded to the east by Corning Street and a limited number of residences, to the south and west by railroad lines and predominantly undeveloped properties, and to the north by West Maple Grove Road (see attachment 1). The subject facility manufactures molded polyurethane automotive seating, head rest, and arm rest cushions.

The facility consists of one main building which houses the manufacturing area, QA lab, maintenance, chemical storage, packaging and offices. One smaller independent building exists onsite for storage of pallets, totes, and waste materials for disposal by a licensed disposal company.

### REGULATORY SUMMARY

RSF is a relatively new major source, with the initial ROP (MI-ROP-B7294-2013) having been issued on July 2, 2013. Prior to that, activities at the source were covered under a VOC opt-out permit (PTI 91-06). RSF is now a major source of volatile organic chemicals (VOCs) and a minor source of hazardous air pollutants (HAPs). The facility is also subject to 40 CFR Part 63, Subparts A and OOOOOO: National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources. The applicable requirements for Subpart OOOOOO were added to the most recent ROP renewal.

### PROCESSES & EMISSION UNITS

Several materials are used in producing the foam seating components:

- Suprasec 7007 – Contains 13-60% methylene diphenyl diisocyanate (MDI) and 7-30% isocyanic acids (attachment 2)
- MONDUR 445 – Contains 10-80% toluene diisocyanate (TDI) and 1-30% MDI (attachment 3)
- RU7150R (attachment 4); RU7151R (attachment 5); RU7152R (attachment 6); RU7153R (attachment 7) – All contain approximately 85% polyether polyols and polymers
- PU-11335 – Mold release agent used on EUSEATINGLINE#4, EUCANNONLINE and EUPROTOTYPELINE#1. Began using in 2012, contains >90% petroleum distillates, the VOC content is 96% and it does not contain any HAPs (attachment 8)
- PU-11379 – Mold release agent used on EUSMALLPARTS#1. Began using in 2018, contains >90% petroleum distillates, the VOC content is 98% and the HAP content is <0.2% (attachment 9)

The mold releases are the primary source of VOC emissions at the facility. PTE calculations that were submitted as part of the ROP renewal indicated that the source is truly a minor source of HAPs. The production materials are transported from storage tanks within the facility to the seating lines via a closed-loop system. The facility is equipped with TDI monitors at appropriate locations for worker safety.

Prior to application of the foam, metal molds (carriers) are coated with a waxy release agent applied by workers

using airless, high volume low pressure (HVLP) spray guns. Steel inserts are then placed in the carriers, which travel along a carousel where the foam is injected into the carrier by a robotic arm. The lid of the carrier is immediately closed and clamped shut, allowing the foam to cure as it travels along the carousel. When the carrier completes the circuit, the finished foam cushion is removed from the mold and inspected by workers for inconsistencies. The carrier is wiped clean and begins the circuit again.

The manufacturing area consists of four production lines and one blending operation:

- EUSEATINGLINE#4 – Produces bench and bucket seat cushions
  - o Commenced operation on December 9, 2014
  - o VOC limit of 94.5 tpy
  - o Associated stacks include SV-A4-A, SV-A4-B, and SV-A4-C, as well as an exempt stack that is associated with cushion "crushing" activities (the cushion is compressed after it's removed from the mold for quality purposes. It has been determined that no significant change in emissions occurs since any potential emissions have already been released during the curing process.)
- EUCANNONLINE – Produces bench and bucket seat cushions
  - o Commenced operation on January 1, 1999
  - o VOC limit of 60.0 tpy
  - o Material limit for toluene diisocyanate of 11,110 lb/day
  - o Associated stacks include SV-CAN-A, SV-CAN-B, and SV-CAN-C
- EUPROTOTYPELINE#1 – Supports production as well as research and development of new foam materials
  - o Commenced operation on December 29, 2015
  - o VOC limit of 2.5 tpy
  - o Associated stack includes SV-A1-A
- EUSMALLPARTS#1 – Produces small cushions for headrests, armrests, etc.
  - o Commenced operation on February 1, 2018
  - o VOC limit of 24.0 tpy
  - o Associated stacks include SV-SP-A and SV-SP-B
- EUPOLYOLBLENDING – A batch operation of filling, blending, and un-filling polyol in tanks. The polyol produced is being used in-house or shipped to other plants. It was included in the ROP though no special conditions or stacks for the emission unit were specified in the PTI. Commenced operation on March 15, 2011.

## EXEMPT EQUIPMENT

Equipment onsite identified as exempt in the most recent ROP renewal application:

- EUHEATERMAINBUILDING – Natural gas fired space heater located in main building rated at 0.75 MMBTU/Hr (R 336.1282(2)(b)(i))
- EUHEATERPOLEBARN – Natural gas fired space heater in pole barn rated at 0.75 MMBTU/Hr (R 336.1282(2)(b)(i))
- EUHEATERQCLAB – Natural gas fired space heater for conditioning rooms used for production QC labs rated at 0.75 MMBTU/Hr (R 336.1282(2)(b)(i))
- EUSTORAGETANKADM – Storage tanks west of seating lines, <40,000 gallons with true vapor pressure of <1.5 psia (R 336.1284(2)(i))
- EUSTORAGETANKOUT – Storage tanks in outdoor tank farm, west of main building, <40,000 gallons with true vapor pressure of <1.5 psia

Not included in the ROP renewal application (because it is not required pursuant to Rule 212(4)) is an exempt hood and stack associated with the QA lab. It appears this equipment may be exempt under R 336.1283(2)(b)

## COMPLIANCE HISTORY

No complaints are of record for the facility. At the time of the most recent site inspection (March 2017), the facility was found to be in compliance with its ROP and air rules. A violation notice was issued on April 9, 2018, due to consistently late annual and semi annual ROP certifications. The source responded with the appropriate information and the violation was resolved on April 27, 2018. Reports have been received in a timely manner since then.

## COMPLIANCE EVALUATION

The compliance evaluation is based off the Special Conditions under FGFOAMLINES, because as previously stated, EUPOLYOLBLENDING does not have any Special Conditions (other than periodic monitoring and

Subpart OOOOOO requirements, which are also included under FGFOAMLINES). No visible emissions were observed from any of the stacks at the time of the inspection.

#### MATERIAL LIMIT(S)

II.1. Mold releases used by the facility have a material limit of 6.15 lb VOC/gal (minus water) as applied. The permittee is in violation of this condition, please see the discussion under Compliance Determination for additional explanation.

II.2. EUCANNONLINE is restricted to 11,110 lb/day of toluene diisocyanate. A review of the records provided indicates the source is in compliance with this limit (see attachment 12).

II.3. Mr. Axline indicated that none of the materials used onsite for production or maintenance contain methylene chloride. A review of the Safety Data Sheets (SDS's) that were provided by Mr. Axline confirmed this (see attachments 2 – 9).

#### PROCESS/OPERATIONAL RESTRICTION(S)

III.1. Material storage and waste storage areas were noted at various locations in the facility. Materials appeared to be properly marked and stored. Facility staff reported that a licensed waste disposal contractor picks up the materials for disposal. It should be noted that except for accidental spillage, no waste material is generated with respect to the mold release agents.

III.2. No leaks, spills or open containers were noted at the time of the inspection.

#### DESIGN/EQUIPMENT PARAMETER(S)

IV.1. Each line is equipped with HVLP spray guns for application of the mold release agent. They are tested for calibration daily. The facility uses an airless system, and Mr. Axline indicated test caps were not available or applicable for airless systems. This is consistent with information gathered from previous inspections.

#### TESTING/SAMPLING

V.1. The permittee is required to determine the VOC content, water content, and density of any mold release agent using Federal Reference Test Method 24 or receive prior written approval from the AQD District Supervisor to use the manufacturer's formulation data. The permittee is in violation of this condition, please see the discussion under Compliance Determination for additional explanation.

#### MONITORING/RECORDKEEPING

Calculations are performed in a timely manner, and records from the past five years are maintained and available through the facility's central tracking spreadsheet.

VI.2. Two mold releases are used in production, PU-11335 and PU-11379. The SDS's were provided and list the weight percent of each chemical (see attachments 8 and 9). See also the discussion under the Compliance Evaluation for additional explanation.

VI.3.a. Records of gallons (with water) of each mold release agent used on each line are maintained (see attachment 10).

VI.3.b. The permittee supplied correspondence from the supplier of the mold releases (Chem-Trend) of the actual VOC content for both mold releases (see attachments 8 and 9). See also the discussion under the Compliance Evaluation for additional explanation.

VI.3.c. Records of the VOC mass emission calculations determining the monthly emission rate in tons per calendar month are maintained (see attachment 11). The permittee is well below the emission limit for each seating line.

VI.3.d. Records of the VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period are maintained (see attachment 11). There was a slight error in the calculations for the 12-month rolling average, which Mr. Axline was notified of. A violation notice will not be issued at this time for the mistake so long as it is corrected in a timely manner. The file will be updated with the corrected document once it is received from the facility.

VI.4. The permittee maintains daily usage records of toluene diisocyanate (TDI) in pounds per calendar day for EUCANNONLINE (see attachment 12). In addition to this, the facility tracks monthly TDI usage for each production line.

VI.5. An original copy of the compliance certification signed by the current Responsible Official is maintained at the facility. A copy was also provided to the Inspector (see attachment 13).

#### **COMPLIANCE DETERMINATION**

The inspection resulted in two violations pertaining to the mold releases. The permittee has been using the manufacturer's formulation data to determine the VOC content, water content and the density of the mold release agents but has not received prior written approval from the AQD District Supervisor to do so as is required by Special Condition V.1. Federal Reference Test Method 24 has also not been performed on either of the mold releases.

Using the manufacturer's data, the source has determined the lb VOC/gal (minus water) content of PU-11379 is 6.22, which is over the permit limit of 6.15 lb VOC/gal (minus water) in Special Condition II.1. However, based on emissions calculations, it appears as though these violations have not resulted in a violation of any of the emission limits. A violation notice was mailed to the facility on December 19, 2018.

At this time, Lear Corporation EEDS & Interiors – Renosol Seating Facility is non-compliant due to the previously mentioned violations of Special Conditions II.1. and V.1. Except for these violations, the rest of the facility appears to be in general compliance with the conditions of MI-ROP-B2875-2018.

NAME Meg Sheehan

DATE 12/19/18

SUPERVISOR C. Hase