

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

N178155284

FACILITY: Magna Mirrors Corporation		SRN / ID: N1781
LOCATION: 3575 128th Aveune, HOLLAND		DISTRICT: Grand Rapids
CITY: HOLLAND		COUNTY: OTTAWA
CONTACT: Andy Garceau , EHS Specialist		ACTIVITY DATE: 09/21/2020
STAFF: Chris Robinson	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY '20 inspection to determine the facility's compliance status with applicable air quality rules and regulations including PTI nos. 188-04G and 184-19.		
RESOLVED COMPLAINTS:		

On September 21, 2020, Chris Robinson (CR) from the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) contacted Magna Mirrors Corporation (SRN N1781), located in Holland, Ottawa County, Michigan, to conduct a records review to determine compliance with applicable air quality rules and regulations, including the facility's General Permit to Install (PTI) No. 184-19 and Title V Opt-out PTI No. 188-04G. This records review in conjunction with the onsite observations (Activity Report **CA_N178155527**) conducted on September 28, 2020 complete the requirements for a scheduled inspection. CR contacted Andy Garceau, Environmental Health and Safety Specialist on September 8, 2020, to ensure proper staff would be available for the onsite inspection. Multiple attempts to conduct an onsite inspection were made but were unsuccessful due to the facility's covid-19 entry procedures.

CR and Mr. Garceau spoke over the phone on September 21, 2020. The purpose of the call and the facility's permit were discussed. Records were provided as requested in a timely manner.

During the September 21st phone conversation, it was determined that an onsite inspection was necessary. AQD staff April Lazzaro (AL) conducted an onsite inspection of the facility on September 28, 2020 (See Activity Report **CA_N178155527**).

A) Facility Description

Magna Mirrors (Magna) is an automotive parts supplier that consists of four buildings. The two (north & South) buildings located at 3501 John F. Donnelly (JFD) Drive are **Magna Engineered Glass**, while the other two (north & South) buildings located at 3575 128th Avenue are **Magna Mirrors Holland**. The facilities operate pursuant to Opt-out Permit to Install No. 188-04G and General PTI No. 184-19.

B) Compliance Evaluation

Per a records and file review as well as discussions with Mr. Garceau, the facility determines the VOC content of all coatings used as required in Special Condition V.1 of EU-RIMPRIME (FG-PLASTICPARTSCOATING), EU-SILVERLINE, FG-BONDINGPROCESS (plus adhesives), FG-PLASTICPARTSCOATING, and FG-ECMIRRORS by use of Manufacturer's Formulation Data. Approvals to use manufacturer's formulation data were provided by the AQD on December 12, 2012, November 14, 2006, and January 12, 2018.

Per Mr. Garceau all waste material is being captured and stored in closed bins throughout the facility as required per SC III.1 and SC III.2 of FG-ECMIRRORS and EU-SILVERLINE. A diagram showing the location of each emission unit is being maintained as required by FG-BONDINGPROCESS SC III.1, which is attached.

1) PTI No. 188-04G

EU-RIMPRIME:

Emission Unit EU-RIMPRIME is located in the JFD South facility of Magna Engineered Glass and consists of five (5) prime coat spray booths where a glass preparatory coating is applied prior to the molding operation. Mr. Kimmitt provided a "Final Draft" copy of a letter dated December 2, 2019, notifying the AQD Permit Section that the equipment for EU-RIMPRESS24-26 and EU-RIMPRIME were removed in early 2019. However, records for these emission units was kept through October 2019. At this time, it is unclear if the letter was finalized and received by the AQD Grand Rapids District office. AQD staff AL noted in Activity Report **CA_N178155527** that of the five prime coat spray booths only two remained.

EU-RIMPRIME is subject to a VOC emission limit of 10.0 tpy based on a rolling 12-month time period. The following records required by SC I.3.a-e were provided and are attached. Based on these records the maximum 12-month rolling? VOC emissions for EU-RIMPRIME was 1.88 tons for the month of November 2018, which is

below the permitted limit.

EU-SILVERLINE:

Emission Unit EU-SILVERLINE is located at the 128th North facility of Magna Mirrors-Holland. This line is a flow coating operation which coats panes of glass to manufacture mirrored glass. The process is an automated conveyerized line consisting of multiple stages of glass cleaning, application of sensitizer solutions, silver solutions, and two (2) flow coaters (#1 and #2) with associated curing ovens. Emissions are controlled by a Regenerative thermal oxidizer.

EU-SILVERLINE is subject to a VOC emission limit of 18.2 tpy and a Cumene emission limit of 3,900 lb./yr., both based on a rolling 12-month time period. Records were provided and are attached. Based on these records the maximum rolling 12-month VOC emissions were 8.66 tons in January 2019 with maximum rolling 12-month Cumene emissions of 14.49 pounds in November 2018. Both are within the permitted limit.

Per Mr. Garceau flow coater #1, cure oven #1, flow coater #2, and cure oven #2 of EU-SILVERLINE are not operated unless the regenerative thermal oxidizer is operating satisfactorily. Satisfactory operation of the RTO includes a minimum VOC capture efficiency of 80% (by weight), a minimum VOC destruction efficiency of 95% (by weight), maintaining a minimum temperature of 1,450°F, a minimum retention time of 0.5 seconds, and operating and maintaining the control device in accordance with an approved Malfunction Abatement Plan (MAP) as required in SC III.3. Per Mr. Garceau, the minimum operating temperature on the RTO is set to 1,500°F, which is confirmed in the provided circle charts, and alarms are installed to ensure proper temperature is being met. AL observed the RTO during the September 28, 2020, onsite inspection. In response to her visit, Mr. Garceau emailed a copy of the most recent Field Service Report (Attached) to CR documenting an inspection conducted on October 10, 2019 by Durr. Other than aesthetics, which is not an air regulation or requirement, and some recommended maintenance, Durr noted that the RTO is in good operating condition. Thermal images were also taken.

The RTO appears to be maintained appropriately; see attached maintenance logs. The last inspection was conducted on October 10, 2019 (Service Report attached) indicating that the unit was in good working order. A calibration was last conducted in January 2020; the calibration record is attached. Temperature is displayed on the control panels screen for continuous monitoring (See attached pictures). Temperature data is recorded continuously. Temperature data was provided for July and August 2020 and is attached. The RTO appears to be properly maintained and operated. A revised Malfunction Abatement Plan for the RTO was received by the AQD on February 3, 2020. AL observed the RTO operating (See Activity Report **CA_N178155527**)

Records as required per SC VI.3-5 are being maintained and are attached.

EU-MIRSEAMING:

Emission Unit EU-MIRSEAMING is located in the 128th North facility of Magna Mirrors Holland. The mirror seaming operation process grinds the exterior edge of the mirrored glass to the appropriate specifications. The process consists of workstations where an employee runs the edges of a cut mirror shape onto a belt sander to smooth the edges. Particulate emissions are controlled by use of a cartridge filter dust collector system. Per Mr. Garceau, no portion of EU-MIRSEAMING is operated without the control device operating properly. Filters are replaced based on differential pressure, see attached photos. Example maintenance record was provided and is attached.

The facility maintains a Preventative Maintenance Plan (PMP) as required in SC VI.1. Emission unit EUMIRSEAMING is subject to a Particulate Matter emissions limit of 0.1 lb./1,000lb exhaust gasses based on time period/operating period of "Test Protocol". Compliance with this emission limit is demonstrated through properly maintaining and operating the control device, which Magna appears to be doing. Baghouse observations shall be conducted the next time AQD is onsite.

FG-RIMPRESS:

Flexible Group FG-RIMPRESS consisted of the RIM presses (EU-RIMPRESS24-26) used to attach molding to automobile glass windows, all of which were located in the JFD South facility of Magna Engineered Glass building.

Mr. Kimmitt provided a "Final Draft" copy of a letter dated December 2, 2019 notifying the AQD Permit Section that the equipment for EU-RIMPRESS24-26 and EU-RIMPRIME were removed in early 2019. However, records for these emission units was kept through October 2019. At this time, it is unclear if the letter was finalized and received by the AQD Grand Rapids District office. AQD staff will verify equipment has been removed during the

next onsite visit.

FG-RIMPRESS is subject to a VOC emission limit of 12.0 tpy and based on a 12-month rolling time period. Records were provided and based on these records the maximum rolling 12-month VOC emissions were 1.10 tons for November 2018, which is within the permitted limit.

Records as required per SC VI.3 are being maintained and are attached.

FG-BONDINGPROCESS:

Flexible Group FG-BONDINGPROCESS consists of the work cells (EU-BONDING1-20 & EU-CLEANUP) that apply either a primer to the automotive glass surface or an adhesive to the plastic fixture. All of these work cells are located in the JFD South facility.

FG-BONDINGPROCESS is subject to a VOC/Acetone combined emission limit of 30.0 tpy and a Phenyl diethanolamine emission limit of 1.8 tpy, both based on a rolling 12-month time period. Records were provided and based on these records the maximum 12-month rolling VOC/Acetone emissions were 25.14 tons in February 2020 and the maximum 12-month rolling Phenyl diethanolamine emissions were 0.10 tons in October 2019. Both are within the permitted limit.

Records are being maintained as required per SC VI.3 and are attached.

FG-PLASTICPARTSCOATING:

Flexible Group FG-PLASTICPARTSCOATING consists of all plastic parts coating operations located at both the **Magna Engineered Glass**, and **Magna Mirrors Holland** buildings (EU-RIMPRESS24-26, EU-RIMPRIME, and EU-BONDING1-20). Mr. Kimmitt provided a "Final Draft" copy of a letter dated December 2, 2019 notifying the AQD Permit Section that the equipment for EU-RIMPRESS24-26 and EU-RIMPRIME were removed in early 2019. However, records for these emission units was kept through October 2019. At this time, it is unclear if the letter was finalized and received by the AQD Grand Rapids District office. AL verified that no plastic parts coatings is conducted (See Activity Report **CA_N178155527**). However, monthly records seem to indicate otherwise. Monthly and 12-month rolling VOC emissions data was provided for September 2019 through August 2020.

FG-PLASTICPARTSCOATING is subject to a VOC emission limit of 30.0 tpy based on a 12-month rolling time period. Records were provided. Based on these records the maximum rolling 12-month VOC emissions were 26.4 tons in September 2019, which is within the permitted limit. Daily records as required by SC VI.2 are being maintained are attached. These include the following:

- Gallons of each coating used for the purpose of coating plastic parts.
- The VOC content of each coating used.
- VOC mass emission calculations determining the monthly and annual emission rate in tons per calendar month and 12-month rolling time period.

FG-ECMIRRORS:

Flexible Group FG-ECMIRRORS is located at the **Magna Mirrors Holland building**. This Flexible Group includes the Electro-chromatic mirror production lines (EU-GLASSCUT, EU-GLASSBEND, EU-WASHER, EU-COATER, EU-VACFILL, EU-INSPECTION) consisting of a pre-clean room where glass cutting, bending, seaming and cleaning takes place; a clean room where additional glass cleaning, vacuum coating, glass mating, vacuum filling and sealing takes place; and a post-clean room where glass cleaning and inspection takes place.

FG-ECMIRRORS is subject to a VOC emission limit of 47.4 tpy and an Acetone emission limit of 11.5 tpy. Emission unit EU-washer, which is covered under this flexible group, is subject to a total VOC emission limit of 20.0 tpy for all of the individual washing lines combined and in EU-WASHER and an individual washer line VOC emission limit of 13.0 tpy. All of these limits are required to be based on a 12-month rolling time period. Records were provided and are attached. The 12-month rolling results are as follows:

FG-ECMIRRORS Max VOC emissions - 44.20 tons (December 2018)

FG-ECMIRRORS Max Acetone emissions - 8.30 tons (January 2019)

EU-WASHER Max VOC emissions - 18.22 tons (October 2019)

Max individual wash line VOC emissions and line - 10.34 tons, Washer 1 (August 2020)

VOC emissions for Flex Group FG-ECMIRRORS appears to be within the limit specified in the permit. However, VOC data for the individual and combined wash lines was not provided for the month of April 2020. Therefore,

compliance with the individual and combined wash lines is unknown for April.

FG-FACILITY:

FG-FACILITY of this permit contains the federally enforceable "facility-wide" restrictions needed in order for Magma to opt-out of the Title V program. Hazardous air pollution (HAP) emissions are limited to less than 9.0 tpy for any individual HAP and 22.5-tpy for all HAPS combined (aggregate). Magma is also subject to a facility-wide VOC emission limit of less than 90.0 tpy. Both HAPS and VOC emission limits are annual based on any given 12-month rolling time period. The monthly and rolling 12-month facility-wide HAP and VOC emissions were provided. Based on data from January 2018 through August 2020 the maximum 12-month rolling total for total HAPS was 9.98 tons for the month of September 2019. The maximum individual HAP was 5.11 tons of Hexane for the month of September 2019, which is within the permitted limits. The VOC limit of less than 90 tpy was exceeded from November 2018 through March 2020 with a maximum emission of 96.63 tons in September 2019 and a minimum emission of 91.47 tons in November 2018. Mr. Garceau informed CR of this exceedance during the phone call on September 22, 2020, also indicating that the AQD was notified in writing in approximately June 2020. The AQD has no record of any prior notification of such exceedance.

Records are being maintained as required per SC VI.2 and VI.3 and are attached.

2) PTI No. 184-19

This permit covers the facility's burn-off oven. AQD Staff AL was on-site on September 28, 2020 and observed this unit (See Activity Report **CA_N178155527**). As required by SC VI.1 temperature data for both the main oven and afterburner are being monitored. The permit only requires afterburner temperature to be recorded, which is being done; data was provided and is attached. Afterburner temperature data and pictures of the displays are also attached to this report and Activity Report **CA_N178155527**. CR discussed this unit over the phone with Mr. Garceau. He indicated that the unit is new and has not required a calibration. The permit was issued on November 19, 2019 and SC VI.2 requires at least annual calibrations. Therefore, the facility has until November 19, 2020 to conduct the calibration. At the time of AL's inspection, the main burner temperature was observed to be 559°F with an afterburner temperature of 401°F. Generally speaking, burn-off oven secondary chambers are much smaller than the main chambers, therefore the temperature of the afterburner chamber will cool down much faster than the main chamber when the unit is switched off. In addition, only the main chamber holds parts being cleaned which may tend to hold heat, slowing down the cooling of the main chamber. So, although the afterburner temperature was not above 1,400°F, the unit was in a cool down mode and most likely the main chamber's burner was not on. The burn-off oven appears to be operating as intended from the manufacturer. AL's report also notes that this unit is used for burning powder coat off racks. For this report it is being assumed that the facility does not use this unit for the removal of any rubber, plastics, uncured paints or other materials containing sulfur or halogens, transformers, wire or parts coated with lead or rubber or any waste materials as prohibited in SCs III.1-2 of this permit.

3) MAERS

AQD reviewed Magna's 2019 submission on April 27, 2020. Emissions were comparable to previous years and the facility appeared to have renamed the equipment. Magna is basing the emissions on both MAERS emission factors and mass balance calculations, which were attached. No changes to the database were made. Total VOCs reported for 2019 were 94.5 tons, which exceeds the facility-wide limit of less than 90 tpy on a 12-month rolling time period specified in PTI No. 188-04G.

4) Rule 201 Permitting Exemptions

Magna operates several emission units under Rule 201 permitting exemptions. Based on the records provided the following emission units may be operating under the facility claimed exemptions. **Note that the facility may be claiming more than one exemption per emission unit.** Only one exemption may apply to each emission unit at a time. The emission units identified with an " * " below require recordkeeping in order to demonstrate continuous compliance with the emission limits specified in the Rule. See Activity Report **CA_N178155527** for additional information for some of the exempt equipment at this facility.

- * Glass Cutting (Rule 285(2)(I)(vi) or Rule 290)
Max 348.7 lbs. (Sept. & Dec. 2019 and Jan. & June 2020)

- * Contour Grinding (Rule 290)
Max 32.8 lbs. (Oct 2019 & Jan 2020)

- * Blanchard Grinding (Rule 290)
Max 281.9 lbs. (Jan. 2020)
- * Chuck Room (Rule 285(2)(a) & Rule 290)
Max 479.7 lbs. (Aug. 2020)
- * Tumble (Rule 290)
Max 20.9 lbs. (Sept. 2019, Jan. 2020 & March 2020)
- * Basket Strip (Rule 290)
Max 393.0 lbs. (Sept. 2019, Jan. 2020 & Feb. 2020)
- * FF4 Assembly (Rule 290) – Mirror assembly including solder reworks.
- Cold Cleaner (Rule 281(2)(h) or Rule 285(2)(r)) – Per discussions between CR and Mr. Garceau on September 30, 2020, this unit is non-agitated and non-heated, uses Zep Dyno 143 cleaner and is kept closed when not in use. Instructions are posted on the unit and the surface area is less than 10 square feet. This unit appears to be exempt from Rule 201 permitting requirements per Rule 281(2)(h).
- Die Cast (Rule 285(2)(l)(ii))
- Powder Coating (Rule 287(2)(d)) – Per discussions between CR and Mr. Garceau on September 30, 2020, this unit is exhausted through a dry filter and vented internally. Filter media is replaced as needed. This unit appears to be exempt from Rule 201 permitting requirements per Rule 287(2)(d).
- Injection Molding (Rule 286(b))
- Generator - South Building (Rule 285(2)(g)) – Per discussions between CR and Mr. Garceau on September 30, 2020 this unit was installed on March 23, 2001 and is a 1.5L (15kw) natural gas engine. Since this unit was installed prior to December 2006 and has not been modified or reconstructed it is not subject to the Standards of Performance (NSPS) for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subpart JJJJ.

However, since this unit is not located at a residence or commercial/institutional facility and is for emergency use only it is subject to the Area Source requirements under the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated under 40 CFR, Part 63, Subpart ZZZZ. This requires the following:

- 100 hours of operation per year for maintenance
- Minimize engine idle and limit startups to less than 30 minutes
- Change oil and filter annually or conduct an oil analysis
- Inspect hoses and belts every 500-hr of operation or annually, whichever comes first
- Operate and maintain the unit according to manufacturer's recommendation
- Install a non-resettable hour meter and record the hours of operation

Per discussions between CR and Mr. Garceau on September 30, 2020 the facility was not aware of the NSPS and NESHAP applicability but already conducts the necessary maintenance and records hours of operation from the installed hour meter. Based on records provided the emergency generator has run for a total 207.1 hours. Therefore, maintenance is being conducted annually (See attached maintenance tracking spreadsheet). An Initial Notification is not required.

Also, in order for this unit to be exempt from Rule 201 permitting requirements under Exemption Rule 285(2)(g), the heat input needs to be less 10 MMBtu/hour. A 293 KW unit would have a heat input of approximately 1MMBtu/hr. Since this unit is only 15KW, it is well under the 10MMBtu/hr requirement specified in this exemption.

- Soda Blaster (Rule 285(2)(l)(vi))

AL noted that the facility's MAERS emission units may not be correctly reported. A Rule 278a demonstration for use of exemptions will be requested.

Conclusion

Magna is not in compliance with the facility-wide VOC emission limit specified in FG-FACILITY SC I.3 of PTI No. 188-04G. A violation notice will be issued along with a Rule 278a demonstration request.

NAME 

DATE 9/30/2020

SUPERVISOR 