

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

N127659804

FACILITY: WEBASTO SUNROOFS INC		SRN / ID: N1276
LOCATION: 2700 PRODUCT DR, ROCHESTER HLS		DISTRICT: Warren
CITY: ROCHESTER HLS		COUNTY: OAKLAND
CONTACT: Bradley Lawrence , HSE Manager		ACTIVITY DATE: 09/13/2021
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Annual scheduled inspection to verify compliance with PTI No. 84-05 and 84-05A.		
RESOLVED COMPLAINTS:		

On May 24,2021, I, Michigan Department of Environment, Great Lakes & Energy – Air Quality Division (EGLE-AQD) staff, Sebastian Kallumkal, requested information and records pursuant to PTI No. 84-05 and 84-05A from Webasto Roof Systems (N1276) located at 2700 Product Drive, Rochester Hills, Michigan. Due to the Covid 19 pandemic protocols, the records were requested and reviewed prior to conducting inspections to limit the time spent at the site. The records were requested to be submitted by June 11th. Lawrence Bradley, HSE Engineer forwarded of the records. These records were not reviewed prior to the onsite inspection because the records did not match the permit requirements. Being new to the position and to the facility, Mr. Bradley was not familiar with the permit and its requirements.

On Monday, September 13, 2021, I conducted an onsite inspection at Webasto Roof Systems, Inc. located at 2700 Product Drive, Rochester Hills. 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 Environmental Quality, Air Quality Division (MDEQ-AQD) Rules and conditions of Permit-to-Install (PTI) No. 84-05 (approved June 2, 2005) and 84-05A (approved December 19, 2019). Previous AQD inspection at this facility was conducted on December 21, 2015.

I arrived at the facility at about 10:30 AM. The inspection was announced due to the Covid pandemic protocol. I followed the company’s entry requirements to comply with its safety procedures for Covid Pandemic. At the facility, I met Mr. Lawrence Bradley, Health, Safety, Environment (HSE) Engineer. He is relatively new to this position.

Webasto is an OEM sunroof, moonroof, and panorama roof manufacturer for automotive vehicles such as FCA Jeep, Dodge RAM, Ford F-150, etc. Facility operates with 2 shifts, 10.5 hours each, Mon-Friday with occasional Saturdays. The facility has no emergency generators, fire pumps or cold cleaners on site.

During the pre-inspection meeting we discussed the permit requirements and processes at the facility. The coating processes permitted under PTI No. 84-05 is no longer at the facility. He told me that the processes were ceased operation around 2018-2019. He does not know the exact date. The PTI for the current PU process (five polyurethan encapsulation presses) was issued on December 19, 2019. He told me that the parts production using the current PU process started in the spring of 2018. Two glass coating lines G4 and G5 which were considered Rule 290 exempt was ceased production in June 2021. He told me that the facility did not operate in April 2020 due to Covid pandemic related shutdown.

PTI No. 84-05 includes requirements for EU-W1-AIR1GLASS, EU-W1-SRXGLASS, EU-W1-BSEALANT, (FG-W1-GLASSLINES); EU-W2-AIR1GLASS, EU-W2-BSEALANT (FG-W2-GLASSLINE) and FGFACILITY which has synthetic minor limits for individual and aggregate hazardous air pollutants (HAP). He inquired my opinion about facility's decision to keep or void the PTI No. 84-05 because the processes are no longer at the facility. I suggested that if the processes covered under PTI 84-05 is no longer at the facility, they may request to void this PTI. However, because it contains the synthetic minor limits for HAPs, they need to evaluate their current potential to emit (PTE) for individual and aggregate HAPs and if the PTE is less than the major source thresholds (10 tons per year {TPY} for individual HAP and 25 TPY for aggregate HAPs), the facility does not need synthetic minor limits for HAP(s) and they could request to void the PTI. If the PTE is more than major source thresholds for HAPs, they may keep PTI No. 84-05 which has synthetic minor limits for HAPs or apply for a permit to limit their HAP PTE to opt out of being subject to potential National Emission Standards for HAPs (NESHAP, 40 CFR Part 63) and Clean Air Act Title V permit (40 CFR Part 70). Even though the volatile organic compound (VOC) emissions for FG-POLYPRESSES are limited to 8.1 TPY, this is not a facility-wide limit and hence cannot be considered a synthetic minor limit for HAPs. I briefly explained to him how to calculate the PTE. He agreed to evaluate the PTE and act accordingly.

The process at the facility includes encapsulating the laminated glass (sunshade) in a mold using polyurethane (which is a polymer of Elastolit M5000 T Isocyanate (liquid) and Elastosit M55310 R-01 Resin (liquid)). According to the manufacturer of the chemicals, BASF Corporation, the resin and the isocyanate are kept in closed systems before mixing. Their reaction together to produce a urethane substrate generates no off gassing or other emissions, so there are no VOC emissions from this process. He informed me that the polymer components are currently applied using robots.

He also informed me that they use a water-based mold release agent and alcohol wipes to clean the inside of the mold (applied manually). I advised him to keep records of these compounds and include them in the VOC emission calculations, if they contain VOCs. He agreed to do so.

After the pre-inspection meeting, he accompanied me for an inspection of the facility. The facility has five Polyurethane Encapsulation Presses (EU-POLYPRESS1, EU-POLYPRESS2, EU-POLYPRESS3, EU-POLYPRESS4, and EU-POLYPRESS5).

Prior to the encapsulation process, clear and black primer are applied manually to the sunshade glass (brought from an outside vendor), using disposable felts. The used felts are collected and send out as hazardous waste. Mr. Bradley told me the facility is considered a small quantity generator for waste regulations. The application of the primers would be automated (robotic) soon.

From this station, it goes to a holding section prior to the encapsulation. Initially mold release is manually sprayed to the sides of the mold where encapsulation take place. Next, inside of the mold which touches the glass is cleaned using alcohol wipes. Glass is placed in the mold and kept it closed. The resin and the isocyanate

are combined and injected into the mold. The molding is formed. The mold is opened, and encapsulated glass is transferred to next station.

Here, the excess molding is cut off and the glass is wiped using commercial glass cleaner mixed with water using tissues. In the next station, a small amount of catalyst liquid is added to the glass to enhance the sticking of the labels. I informed him that they need to track the usage and VOC emissions, if any, from this catalyst usage. Next, the encapsulated glass is racked and send to the assembly area.

The spent felt, wipe issues are hauled away as hazardous/non-hazardous waste by US Ecology. Facility was requested to include the VOC emissions from the applications of primers, mold release agent, mold cleaner, glass cleaning, catalysts, etc.

Next, we visited the assembly area. I observed a mixing station. He informed me that they are mixing the black grease to lubricate the machines. The assembly lines are assigned for different vehicles.

W1-10 is a service line and uses butyl sealant. Sealant is applied to the front rails and the end caps of the sunroof assembly frame. The butyl sealant is applied to prevent water leaks in the roof module. The rest of the assembly process consists of putting together the glass, sunshade, motor, module and other components. This line will be removed soon. It was not operating at the time of inspection.

W1-21 was not operating.

W1-31, W1-41, W1-61: - Was operating at the time of inspection.

W1-95 and W1-90-Not operating at the time of inspection. They plan to add one more assembly line in the near future.

Each of these lines uses Teroson RB 962N -Terostat 962 N as the sealant (white) in the sunroof assembly. It is applied using robots. Facility was requested to calculate the VOC emissions from the sealant application process.

During the post-inspection meeting, we discussed the material usage and the VOC emissions to track and record.

PTI No.84-05

Requirements for FG-W1-GLASSLINES and FG-W2-GLASSLINE are not evaluated because these processes are no longer at the facility since 2018-2019.

FGFACILITY-Has facility wide synthetic minor limit for HAPs.

SC 3.1a and SC 3.1b: Facility-wide individual HAP limit is 9.0 TPY and facility-wide aggregate HAP limit is 22.5 TPY. Facility submitted emissions calculations for 2020 and 2021, but the emissions does not appear to be properly calculated. I contacted Mr. Lawrence and Mr. Geoffrey Mooney, HSE Management Systems Lead, about this and they requested time until Thursday, September 16th to submit proper calculations. Mr. Bradley informed me on Friday, September 17th that they won't be above to submit the emissions timely. This is a violation of the special condition 3.3. A notice of violation would be sent to the facility.

SC 3.2. HAP content is determined using formulation data, as allowed in permit.

SC 3.3. The required calculations are not submitted properly. Therefore, a notice of violation would be sent.

SC 3.4. Facility keeps the following information on a monthly basis: material usage records; HAP content of each HAP containing material; HAP individual and aggregate mass emissions per month; and HAP individual and aggregate mass emissions per 12-month rolling time period. However, these records do not properly match the processes or the material usages at the facility. This is a violation of this condition.

PTI No.84-05A

This PTI contains requirements for five polyurethane encapsulation presses which uses water-based mold release material. Prior to encapsulation, the raw glass panels are cleaned and primed by manually applying using disposable felts. The primed glass panels are then placed in the mold to install the polyurethane molding. FG-POLYPRESSES contains requirements for these five poly press units.

SC I.1-VOC emissions are limited to 8.1 TPY based on a 12-month rolling time period as determined at the end of each calendar month. As noted earlier, each sunshade glass is primed (edges), mold release agent sprayed to the mold, mold cleaned, glass cleaned after molding, and a catalyst applied to enhance adhesion of labels. Facility submitted records, but these do not appear to include emissions from all the materials used in the process and do not properly identify the processes. Compliance is not verified.

SC III.1- requires the permittee to capture all clean-up solvents and waste coatings and store them in closed containers. Also requires the permittee to dispose all waste materials in an acceptable manner. The facility collects all waste materials which are hauled offsite by US Ecology.

SC III.2- requires that the permittee handle all VOC and HAP containing materials in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times exempt when operator access is necessary. Facility keeps the containers for the spent felts (used in the application of primers) and the tissue papers (used in cleaning the glass) in closed containers.

SC IV.1- requires that the FG-POLYPRESSES be equipped with manual applicators or comparable technology with equivalent transfer efficiency. The polymer is applied to the mold using robotic applicators.

SC VI.1-requires the permittee to complete all required calculations in a format acceptable to the AQD Supervisor by the 15th day of the calendar month for the previous month. The permittee appears to be completing the calculations by this time but based on the records I reviewed the emission calculations were not properly completed. On Tuesday, September 14th, I requested the facility contacts Lawrence Bradley and Geoff Mooney to recalculate the emissions and to include emissions from primer usage, mold release, mold cleaning, glass cleaning, sealant injection in the assembly line and cleaning of final products prior to packaging. Provided until

September 16th, Thursday to submit the records properly. On Friday, September 17th Mr. Bradley informed me that they won't be able to complete the calculations time. This is a violation of this special condition and notice of violation would be sent to the facility.

SC VI.2-requires the permittee to main a current listing from the manufacturer of the chemical composition of each chemical including weight percent of each component. The facility is keeping SDS for each chemical they are using in production.

SC VI.3 requires the permittee to keep the gallons of each material used, VOC content of each material in pounds per gallon, VOC emission calculations in tons on a monthly and 12-month rolling time period as determined at the end of each calendar month. Facility is using the VOC content information from the SDS. I advised Bradly to keep records of the VOC content information. Facility calculated and submitted the monthly and 12-month VOC emissions calculations, but these were not properly completed. This is a violation of this special condition.

SC VII.1-requires the permittee to notify the EGLE-AQD within 30 days after the completion of the installation of the processes authorized by this PTI. This permit was issued on December 19, 2019, but according to Mr. Bradly, parts were produced in this process starting from the spring of 2018. Facility appears to have installed and operated the process prior to obtaining a permit to install. This appears to be in violation of Permit to Install requirement Rule, R336.1201. A notice of violation would be issued for this violation.

Rule 290 exempt equipment

Operation of the Rule 290 exempt processes, Glass lines G4 and G5 were ceased by June 2021. Facility did not submit proper calculations for these processes. This is a violation of Rule 290 requirements. A notice of violation would be sent to the facility.

Assembly lines

Facility applies butyl sealant in the service line (W-10) and Teroson RB 962N (Terostat 962N) sealant in the front rails and the end caps of the sunroof assembly frame to prevent water leaks in the roof module. The facility did not submit emissions calculations for this final assembly process which includes sealant application and cleaning the final product prior to packaging. Facility was informed to keep track of the usage and calculate the VOC emissions. The facility was advised to evaluate the permit to install (R336.1201) applicability for this final assembly process (usage of sealant and any other solvent including the alcohol wipe prior to shipping). This would be included in the violation notice.

Conclusion:

Based on the onsite inspection and records reviews, the facility did not comply with the requirements of PTI No. 84-05 and 84-05A. The facility did not properly calculate the VOC and HAP emissions from the use of sealants and cleaning solvent in the final assembly line. The facility appears to have installed and operated processes prior to obtaining a permit to install. A violation notice would be issued to the facility.

NAME Sebastianykallenkal DATE 06/21/2021 SUPERVISOR Joyce