

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

N203748367

FACILITY: DENSO AIR SYSTEMS MI, INC.		SRN / ID: N2037
LOCATION: 300 FRITZ KEIPER BLVD, BATTLE CREEK		DISTRICT: Kalamazoo
CITY: BATTLE CREEK		COUNTY: CALHOUN
CONTACT: Scott LeForge , Safety, Health, and Environmental Manager		ACTIVITY DATE: 02/20/2019
STAFF: Amanda Chapel	COMPLIANCE STATUS:	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

On February 20, 2019, AQD's Amanda Chapel (staff) conducted an unannounced air quality inspection at Denso Air Systems Michigan (facility) located in Battle Creek, Calhoun County Michigan. The purpose of the inspection was to determine the facility's compliance with permit to install (PTI) 298-07B covering two natural gas-fired thermal degreasing ovens and PTI 207-10 making the facility a synthetic minor source for volatile organic compounds (VOCs). At the time of the last inspection on August 25, 2015 the facility was in compliance with all of the requirements of the permits at the time. The following will summarize facility operations and compliance status.

Denso Air Systems Michigan manufactures vehicle under floor pipe and hose assemblies connecting heater and A/C systems from the engine compartment to rear heater cores and evaporator units in various models for foreign and domestic automakers. Their products are made from purchased aluminum alloy tubing and accessories on assemblies ranging from insulation to various switches, connectors, clamps etc. to make a complete product.

I arrived on site at 1:30 pm, entered the building, and called the operator on the phone sitting on the desk. I identified myself and said that I was there to complete an unannounced air quality inspection and that I was looking for the environmental manager. The woman said that I was looking for Mr. Scott LaForge and he would come and get me in the lobby. Mr. LaForge come and got me, and we went into a small conference room to have our pre-inspection meeting. I told Mr. LaForge that the inspection would consist of a facility tour and then a records review.

I asked if there had been any changes since the last inspection in 2015. He told me the facility has continued to downsize since the last inspection. They also removed EU-OVEN3, the 10'x6'x7' natural gas-fired degreasing oven in about March or April of 2018. He also said the facility is no longer using Cedar Draw but instead are using another evaporative lubricant, VP 4970 and a water-soluble paste-like substance, CK345 which is a water-soluble press oil which is diluted with water. This increased the use of isopropyl alcohol and decreased the use of oil at the facility. They also removed their aqueous wash system which was identified in the previous inspection.

Currently, there are about 160 staff that work two shifts Monday to Friday and some Saturdays from 4am-2:30pm and 2:30-11pm or 1 am. The facility does not have any boilers but uses natural gas fired space heaters for the building and warehouse areas. These are exempt from permitting under Rule 282 (2)(b)(i). The facility has two cold cleaners that is serviced by Safety Kleen. Safety Kleen services the cleaners about once per quarter. They are filled with Safety-Kleen Premium Solvent which the SDS lists as 100% VOC. These are exempt from permitting under Rule 282(2)(h). There is one electric emergency generator for the building that powers the office area in the event of a power outage.

Mr. LaForge then gave staff a tour of the facility. The required PPE is safety glasses and steel toed boots. The facility has multiple tube machining, forming, bending, and cutting operations that vent internally and are exempt from permitting under Rule 285(2)(l)(vi)(B). The facility does cut their own tubes, but they mainly receive pre-cut tubes which are then bent and formed to specifications for the part. Some of the bent parts are then coated with isopropyl alcohol and a foam insulation cover is slid over them. There are three natural gas fired brazing machines that are used for production welding and small repairs which are exempt under Rule 285(2)(i). Some of the equipment is leak checked using helium which is exempt under Rule 283(2)(d). There are ink printing operations at some of the parts stations which, according to records, use 8 quarts of ink per year. These are exempt under Rule 287(2) (c). The one oven at the facility, EU-OVEN1, has a high temperature setting of 225 degrees Fahrenheit, which is below the permit limit of 425 degrees Fahrenheit. The temperature is checked at least once per day, while the oven is running. The oven does not run every day. There is a sand blaster on site which is

used for cleaning. It is vented outside through two dust collectors. This is exempt under Rule 285(2)(I) (vi)(C).

The facility has two air use permits. PTI 298-07B is for two natural gas-fired batch thermal degreasing ovens. Since EU-OVEN3 has been removed from the facility, permit conditions are no longer applicable for that emission unit. The permit limits the facility to 17.2 tons per year (tpy) of VOC on a 12-month rolling basis. According to their records, the facility has a 12-month rolling VOC total of 10.79 as of December 2018 with the highest month being September 2018 with a VOC 12-month rolling total of 12.12 tons.

The facility performed the required evaporative oil mass balance test in February 2018 and had the one for 2019 scheduled to be completed in the next few weeks. In 2018, the test was done on four parts; 447631-3242, 447621-1492, 1210, and 9960. The average of all parts for oil loss to evaporation was 32.56% or an emission factor of 0.674. Facility appears to have the gallons of each material used, the VOC content in pounds per gallon of each material used, and the VOC mass emission calculations required by the permit.

The second air permit is PTI 207-10 which limits facility wide VOC emissions to less than 90 tons per year on a 12-month rolling average. As noted above, the highest VOC emissions on a 12-month rolling basis is 12.12 tons, well below the 90-ton limit. The facility is also limited to not more than 45,750 pounds per 12-month rolling period of isopropyl alcohol. As of December 2018, the facility had used about 15,009.28 gallons of isopropyl alcohol. The facility is limited to not more than 22,500 gallons of Cedar Draw (evaporative oil) at the facility. As of December 2018, the facility used 1,320 pounds of evaporative oil. This is well below the permit limit.

There was discussion about whether Denso Air needs to maintain PTI 207-10. Denso Air is required to be rolled into the Denso ROP with an application due April 2019. Since PTI 207-10 only exists to keep Denso out of the ROP program and it contains no other emission units besides FGFACILITY, it is possible the permit can be voided. An internal discussion will be had to determine if the facility can void this permit. It was determined that if the facility can do a PTE demonstration showing they are below significance levels, they can void PTI 207-10.

On Thursday May 2, I received the PTE calculations (attached) demonstrating that ASMI can void PTI 207-10. They are a true minor source and therefore the permit is unnecessary. Since the facility is going to void the permit, they appear to be in compliance with PTI 298-07B.

NAME Aimee Chyell DATE 5/16/19 SUPERVISOR RIL 5/6/19