

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

N235431589

FACILITY: TRMI		SRN / ID: N2354
LOCATION: 100 HILL BRADY RD, BATTLE CREEK		DISTRICT: Kalamazoo
CITY: BATTLE CREEK		COUNTY: CALHOUN
CONTACT: Aya Hashimoto , HR Generalist		ACTIVITY DATE: 08/25/2015
STAFF: Rex Lane	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Self Initiated Inspection		
RESOLVED COMPLAINTS:		

On August 25, 2015, Air Quality Division (AQD) staff, Rex Lane and Monica Brothers (hereafter "staff") arrived at TRMI, Inc. (hereafter "facility") located at 100 Hill Brady Road, Battle Creek, Michigan at 1:30 pm to conduct an unannounced air quality inspection. Staff provided the receptionist with their business card and stated the purpose of their visit. Ms. Aya Hashimoto, HR Generalist came out shortly thereafter and took staff to a conference room for further discussion. Staff stated that they would like to conduct an unannounced air quality inspection and provided Ms. Hashimoto with their credentials, business card and a copy of the MDEQ's Environmental Inspection brochure. The last air quality inspection of the facility occurred on August 16, 2011 and the facility was considered to be in non-compliance at that time for non-submittal of annual registration under Rule 208a. The facility has since been issued air use permit No. 158-11 and is considered to be a synthetic minor source for volatile organic compounds (VOC) and hazardous air pollutants (HAP).

The facility manufactures circuit boards and automotive switches such as window regulators and turn signals primarily for foreign automakers. The facility has around 800 associates and operates three shifts per day, five to six days per week.

Staff asked Ms. Hashimoto several questions regarding process equipment at the facility. Per Ms. Hashimoto, the facility does not have any boilers and uses natural gas fired space heaters for building heat which are exempt from air use permitting under Rule 282(b)(i).

Ms. Hashimoto then gave staff a tour of the facility along with Mr. Darrin Hobson, TRMI, Operations Manager. Required PPE is steel toed shoes and safety glasses. Safety vests are also required if going into the warehousing area. Information provided below is based on observations and discussions during the inspection and records requested and provided during and following the inspection:

The facility has one 162 HP natural gas fired emergency generator for their IT area that is readiness tested semi-annually. The engine is exempt from permit to install requirements under Rule 285(g). Based on the engine test date (8/21/2006) provided by the facility and the facility's current source status for HAPs, it appears that the emergency generator is classified as a new emergency RICE under 40 CFR Part 63, Subpart ZZZZ (aka RICE MACT). MDEQ-AQD has not taken delegation authority from USEPA, therefore, compliance was not evaluated by the inspector. The unit is equipped with a non-resettable hour meter (current reading – 520.8) and unit is maintained by an outside vendor.

The facility has approximately 50 – 55 plastic injection molding machines. Only one machine uses a mold release agent and staff was provided with a copy of the product MSDS. The mold release agent is a dry PTFE lube product that comes in an aerosol can that contains approximately 30% hexane by weight. Staff informed Ms. Hashimoto that they should start tracking mold release spray usage on a monthly basis because hexane is both a VOC and a HAP and the facility has facility wide emission limits

for both VOC and HAPs. The plastic injection molding machines are exempt from permit to install requirements under Rule 286(b).

The facility has two cold cleaner units. One cold cleaner uses an n-propyl bromide based solvent (MSDS attached) and is slated to be removed shortly and the other uses Safety Kleen premium gold solvent (MSDS attached) and neither solvent contains halogenated compounds. The cold cleaners are exempt from permitting under Rule 285(r)(iv). Staff provided Ms. Hashimoto with several replacement MDEQ cold cleaner stickers to place on or adjacent to these units.

The facility has a small maintenance paint booth that uses only paint spray cans which is exempt from permitting under Rule 287(b). The paint booth was not in use at the time of the inspection. Staff pointed out some corner gaps in the square filters used in the paint booth where overspray will exit the booth without particulate control. Staff suggested that either a larger mat filter be installed on top of the square filters or the facility purchase better fitting filters. Mr. Hobson said that he would talk to maintenance staff about the paint booth filters.

The facility has a clean room for manufacturing of printed circuit boards (PCB) that is referred to as the PCB room. Staff had to remove their safety boots and wear facility clean room shoes, jacket and hair net. Prior to PCB room entry, personnel must stand on a grounding mat and press a button to discharge any remaining static electricity. The PCB room has two reflow soldering machines and three wave soldering machines. The soldering machines are exempt from air use permitting under Rule 285(i). The facility uses two soldering fluxes, Koki (used with Pb containing solder; contains VOC) that is used on one wave solder machine and Tamura (used with Pb free solder; contains VOC and HAP) which is used on the remaining solder machines. The facility has recently started using BIOACT SC-10 cleaner (MSDS attached) to reduce isopropyl alcohol (IPA) usage on the wave solder machines. The PCB room also contains eight bench style coating machines (i.e. Elepcoat) to apply surface coating to printed circuit boards. The Elepcoat booths are operated under permit to install exemption Rule 287(c). Toluene is used as a reducer for the coatings used in Elepcoat. Per monthly facility coating records submitted on 9/25/15, the maximum coating usage rate in any booth during this time period is 59 gallons/month coating applied which is about 30% of the allowable rate under this exemption.

The facility has two automated and five manual Tampro printing lines used to print ink graphics on plastic parts that are operated under permit to install exemption Rule 287(c). Per monthly facility coating records submitted on 9/25/15, the maximum coating usage rate in any Tampro line during this time period is 16 gallons/month coating applied which is about 8% of the allowable rate under this exemption. Tampro ink hardeners and thinners both contain HAPs.

The facility uses IPA squeeze bottles and Toluene squeeze bottles at various locations throughout the plant that operate under permit to install exemption Rule 290. Per monthly facility IPA and toluene squeeze bottle usage records submitted on 9/25/15, the maximum IPA and Toluene usage rate was 62 pounds/month and 12 pounds/month, respectively which is well below the allowed emission rate in Rule 290.

The facility has two surface coating booths for painting of plastic parts that are in a paint clean room and use water wash curtains for particulate control. Paint booths # 1 and # 2 are currently operated under permit to install exemption Rule 287(c). Per monthly facility coating records submitted on 9/25/15, the maximum coating usage rate in any booth during this time period was 199.8 gallons/month (Paint Booth # 2 – October 2014) which is 99.9% of the allowable rate under Rule 287(c). Paint booth # 1 had five months during the requested time period that coating usage exceeded 190 gallons/month (95% of allowable). Paint booth # 2 had eight months during the requested time period that coating usage

exceeded 190 gallons/month. Note: On 9/25/15, staff emailed Ms. Hashimoto and recommended that they work with their consultant to evaluate other permitting options for this surface coating equipment [emphasis added].

The facility has a laser marker process that etches certain plastic parts to allow part to be backlit. According to the previous AQD inspection report, the process equipment was vented externally. Per Ms. Hashimoto, the equipment now vents internally to filter controls which would be exempt from permitting per Rule 285(I)(vi)(B).

During the post-inspection meeting, staff requested to review VOC and HAPs emission records and material usage records to demonstrate compliance with PTI No. 158-11. For July 2015, facility wide emission records for individual HAP, aggregate HAPs and VOCs on a 12-month rolling average were 3.59 tons (Toluene – 40% of allowed), 4.51 tons (20% of allowable) and 47.7 tons (53% of allowable), respectively, under SC I.1 through I.3. For July 2015, facility wide material usage records for IPA and Toluene squeeze bottles, solder enhancing elements, Elepcoat, Tampo printing and surface coating on a 12-month rolling average were 3,586 gallons (32% of allowable), 10.1 gallons (2% of allowable), 1,596 gallons (54% of allowable), 1,166 gallons (52% of allowable), 329 gallons (27% of allowable) and 4,303 gallons (90% of allowable), respectively under SC II.1 of PTI No. 158-11.

Staff thanked Ms. Hashimoto for her time and left the facility at 4:25 pm.

At the time of the inspection and based on a review of emission and material usage records obtained during or following the inspection, it appears that the facility is in compliance with the listed permit to install exemption rules and the requirements of PTI No. 158-11. As noted above, this inspector has concerns with the extremely thin margin of compliance with the monthly coating usage limit under Rule 287(c) for both paint booth # 1 and # 2. -RIL

NAME RIL

DATE 9/30/15

SUPERVISOR MA 10/1/2015