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

P061545856

FACILITY: Toyota Motor North America R&D		SRN / ID: P0615
LOCATION: 8777 Platt Road, SALINE		DISTRICT: Jackson
CITY: SALINE		COUNTY: WASHTENAW
CONTACT: Terryl Blackmore , Manager & Acting Environmental Engineering Mgr		ACTIVITY DATE: 08/30/2018
STAFF: Diane Kavanaugh-Vetort	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Complete scheduled compliance inspection at Opt Out Facility. PCE/FCE		
RESOLVED COMPLAINTS:		

P0615 Toyota Motor North America (TMNA) 8777 Platt Road, Saline, referred to as "York Township Campus".

TMNA contacts present: Terryl Blackmore, Josh Strapec, Casel Burnett, Briggs Hamilton. All accompanied AQD during the inspection.

On August 30, 2018 the MDEQ AQD conducted a complete scheduled compliance inspection at the Toyota Motor North America (TMNA) facility located at 8777 Platt Road, Saline, MI. The purpose of the inspection is to determine TMNA's compliance status with applicable federal and state Air Pollution Control Regulations, particularly Michigan Act 451, Part 55 Air Pollution Control, the administrative rules and the conditions of their Air Use Permit to Install (PTI) No. 111-15 and General PTI 172-15 for Coating Line(s) Emitting Up To 10 Tons Per Year of volatile organic compounds (VOCs). PTI 111-15 contains limitations for hazardous air pollutants (HAP) making the facility an Opt Out or synthetic minor source. This facility also has an installed (permit) exempt natural gas fired Emergency Generator subject to federal National Emission Standard for HAP for Reciprocating Internal Combustion Engines (RICE) 40 CFR Part 63, Subpart ZZZZ (RICE MACT). TMNA facilities are Minor (Area) Sources of HAPs. TMNA's 2017 Michigan Air Emissions Report System shows approximately 2 tons of VOC emissions during the calendar year.

The Platt Rd, York Twp. site is near US-23 /Willis Rd exit and conducts vehicle engineering, research and development and safety testing. The site was recently expanded to incorporate/consolidate coating facilities previously in Plymouth and Livonia. TMNA operates what they call two "campuses". The other site location in Ann Arbor includes 1555 and 1558 Woodridge and is a Major Stationary Source ROP subject facility (N2915). TMNA operates vehicle and engine research and developmental testing for their automobile manufacturing company at the Ann Arbor location. That site contains two buildings referred to as Evaluation and Powertrain.

On this day I met the TMNA contacts at the York Twp. facility. Following this inspection TMNA contacts and I then drove separately to the Woodridge Road facility for that inspection (See separate report). The prior AQD inspection of both facilities was August 11, 2016. At that time the York site's permits had been issued and construction of the expansion had started. Installation was not completed until early 2017.

PRE-INSPECTION CONFERENCE

AQD explained the purpose of the inspection and requested general facility information and updates. Terryl provided me with two (York & Ann Arbor) one-page color layout with site photos and building drawing with some information on site size and square feet. The York Twp. site is 712 acres and was built in 2008. It has four buildings and operates generally 1-2 shifts and 5 days per week. Terryl and the others confirmed that four Coating booths/lines and two Cure Ovens are operational in the new Prototype Building. In addition, there is an existing "Paint Drain Room" that includes underbody coating and an Aerosol Spray Table top booth with filters & ambient exhaust. This process includes a can disposal unit. The Paint Drain Room & Aerosol Spray booth processes are currently using permit exemptions Rule 287(2)(c) and Rule 287(2)(b).

General Permit 172-15 covers VOC emissions from FG-COATING and FG-SOURCE. The GP requires FG-COATING not exceed 10 tons per year of VOCs. The GP requires FG-SOURCE not exceed 30 tpy VOC total (all lines). These include one or more coating lines and all associated purge and clean-up operations as described in the permit. As stated TMNA operates four enclosed coating spray booths with filters and vertical exhaust stacks and two associated natural gas fired cure ovens with separate exhausts. VOC emission limits are 2000 pounds per month for each coating line plus all associated purge and clean-up; and 10 tons per year per 12 month rolling time period as determined at the end of each calendar month.

FG-COATING Condition VI. 3. requires coating records, and emission calculations

FG-SOURCE Condition VI. 1. requires coating records and emission calculations

AQD requested TMNA's VOC records as required by PTI 172-15 for the 12 month rolling time period for month ending August 2018. It was agreed records would be submitted electronically on or before September 17th.

PTI 111-15 covers the HAP content of coatings and materials used on permitted, grandfathered and/or exempt equipment at FGFACILITY. The HAP emissions from TMNA's facility are limited to 9 tons per year for each individual HAP and 22.5 tons per year for all HAPs.

FGFACILITY Condition VI. 1-3 requires coating records and emission calculations

AQD requested TMNA's HAP records as required by PTI 111-15 for the 12 month rolling time period for month ending August 2018. It was agreed records would be submitted electronically on or before September 17th.

FACILITY SITE INSPECTION

TMNA has installed and is operating a Rule 201 permit exempt emergency generator subject to the RICE MACT at this location. The Unit was reviewed previously and AQD does not have delegation of authority for this Area Source MACT. During the inspection we walked by this Unit located in a court yard between buildings, and it was not operating. Per Terryl it is tested weekly and maintenance is kept up. They had outages requiring its use in August and December 2017 and May 2018.

During the inspection we walked through the existing Safety Test building and into the Paint Drain Room. I observed the R287(b) and (c) exempt underbody coating process area in this room and the Aerosol paint can booth with can disposal. We met with the Operator, Jeff Collins, briefly. There are two coating systems in this room for highlighting underneath cars. I observed none of the coating operations in this room were operating at the time. Coating processes were identified during the prior inspection as qualifying for permit exemption. AQD requested records which are required as part of the demonstration of compliance with the FGFACILITY PTI 111-15.

We then walked to the new Prototype Building. One of the four new booths is located in a separate room with several small lab-type processes. There is a 3D printer, a plastic process of some sort, a table top booth of some sort, and miscellaneous small machining equipment. I observed the GP 172-15 Coating Booth #4 was not operating. The filters appeared to be installed and in good condition. There were several exhaust ducts in this room including the booth. I requested additional information from Terryl and Josh regarding whether the equipment in the room qualify for permit exemption. I also requested related stack exhaust configuration in order to clearly determine what process emissions were being exhausted to the ambient air.

Terryl, Josh and the others agreed to review the processes in this room for potential exemption qualification, and to provide this information with the exhaust stack building diagram (or similar) for the entire building to me on or before September 17th with the required permit recordkeeping submittal.

Outside this room is the remaining Prototype plant. I observed the three large GP 172-15 Coating Line Booths are separate but connected in a line with separate exhausts. I observed inside Booth #3 where there were several panel parts on stands that had been recently coated. I observed two stand alone Cure Ovens associated with the booths. All the booths and ovens are large enough to fit a car or truck. The Ovens are natural gas. Ovens were not operating during inspection.

Next to the Ovens is another separate booth, TMNA referred to it as a "Phosphate Cleaning booth". Prototype cars or parts are cleaned here, then coated and dried. This Cleaning booth was not operating during the inspection. I requested additional information for this process booth, materials used, and emissions. It was not clear if it qualifies for permit exemption and TMNA agreed to review and provide the required information. Another large enclosed booth nearby was identified as a Laser Welding operation (exemption Rule 285(2)i).

TMNA explained when the Prototypes are completed there are several mini-assembly lines that can run additional tests. Completely assembled vehicles are road ready with catalytic converters. I observed a small

pick-up truck at one station. The final stations in this area include a downdraft in the floor vehicle exhaust duct that continues vertically up a post and through the roof of the building.

RECORDKEEPING

On 9/14/18, AQD received TMNA recordkeeping by email as requested. AQD review of the compliance information is summarized below.

General Permit 172-15 Total VOC emissions for the 12 month period ending August were 0.896 tons. No individual booth exceeded 10 tons VOC per 12 month period. No individual booth exceeded 2000 lbs VOC per month. One Lacquer Thinner is used in the FG-COATING booths PPG DTL876, Safety Data Sheet (SDS) was provided and is attached to this report to file.

PTI 111-15 covers the HAP content of coatings and materials used on permitted, grandfathered, and/or exempt equipment at FGFACILITY. Total HAP emissions for the 12 month period ending August were 1.155 tons. No individual HAP was close to 9 tons per 12 month period.

TMNA attached an exempt equipment list for the Prototype Development Building. The Lab equipment qualifies for exemptions Rule 283(2)(b), Rule 285(2)i and (l)i, Rule 286(2)(a), Rule 287(2)(b).

AQD review of the records noted:

1. TMNA is reporting for two Delisted HAPs: Butanone (MEK) and Ethylene Glycol. AQD notified TMNA.
2. TMNA SDSs for the Cleaning Booth (referred to in submittal as *Degreasing Booth*) list a HAP not included in their recordkeeping, **Hydrogen fluoride CAS 7664-39-3 ITSL 14 ug/m3 annual, 2nd ITSL 240 ug/m3 1 hr**. AQD notified TMNA and requested they update their records.
3. Several other chemical compounds in the Cleaning SDSs have ITSL. One Hexafluorozirconic acid CAS 12021-95-3 has a low ITSL 0.1 ug/m3 annual.
4. Total of eight SDSs for: Cleaners, Alkaline Cleaners, Conversion Coatings, and a Surfactant additive.

On 9/17/18 AQD emailed TMNA regarding 1 & 2 above and requested permit exemption determination for Cleaning booth and verification that *purge/cleanup solvents* are being included in Coating booth emissions calculations. TMNA submitted a response on 9/20/18 with the following:

1. Updated HAP recordkeeping and added H Hydrogen fluoride.
2. Renamed Degreasing booth "**Pretreatment Coating Booth**" explained purpose is to apply a zirconium oxide conversion coating to the metal surface of the vehicle body, preparing it for additional coatings in FG-COATING.
3. TMNA proposing exemption Rule 285 (2) (r)(i) and (iv). TMNA provided detailed process description and claim stack is closed off during spray processes, and followed by rinse step(s) before open/exhaust.

It is noted the proposed exemption does not apply for this process due to the presence of an exhaust stack, exemption requires process to exhaust in-plant. On 10/5/18, following telephone call the prior week, I received the remaining requested information and clarifications for compliance items. TMNA determined the Rule 291 exemption better applies to the metal Pretreatment Booth. TMNA records demonstrating the exemption are thorough and acceptable.

COMPLIANCE SUMMARY

AQD has determined TMNA to be in substantial compliance with the conditions of their Air Use PTI Nos. 111-15 and 172-15, and the applicable administrative rules. TMNA was advised to maintain sufficient demonstration of exemptions for processes discussed in this report.

NAME

D. Kaur

DATE

10/8/18

SUPERVISOR

[Signature]