

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

B523368230

FACILITY: THERMOTRON INDUSTRIES		SRN / ID: B5233
LOCATION: 836 BROOKS AVE, HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Steve Kempkers , Maintenance Supervisor		ACTIVITY DATE: 07/18/2023
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: Scheduled Onsite Inspection		
RESOLVED COMPLAINTS:		

On July 18, 2023 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 836 Brooks Avenue, Holland Michigan at 12:30 PM to conduct an unannounced air quality inspection of Thermotron Industries (hereafter Thermotron) SRN (B5233). Staff made initial contact with the office receptionist and stated the purpose of the visit. Steve Kempkers, Thermotron, Maintenance Supervisor, is the environmental contact and arrived shortly thereafter and took staff to his office for further discussions.

Thermotron manufactures environmental and vibration testing chambers for a wide variety of customers. They make chambers that are small and portable up to larger units. The facility operates 24 hours a day Monday through Friday with 3 shifts.

Thermotron was last inspected by the AQD on September 6, 2006 and appeared to be in compliance at that time with PTI No. 571-90 Staff asked, and Mr. Kempkers stated that the facility does not have any cold cleaners or boilers.

Mr. Kempkers gave staff a tour of the facility. Required personal protective equipment are safety glasses and steel toe boots. Staff observations and review of records provided during and following the inspection are summarized below:

PTI No. 571-90:

This PTI was issued to permit four dry filter paint booths. The facility currently only has three booths installed and two are have been used for operation. This permit is older and has only few special requirements associated with the operations of these booths. The largest paint booth is located on the south side of the facility and is referred to as the lower-level spray booth. The lower-level spray booth has two exhaust stacks associated with it. The 2nd paint booth is the sheet metal paint booth. During the inspection Staff was told that this sheet metal paint booth has not been in operation in 2-3 years. The paint booth on the north side of the facility is known as the SPD paint booth.

Special Condition 14 requires that the VOC emission rate from the metal painting process shall not exceed 12.2 pounds per hour (pph) or 12.2 Tons per Year (TPY). The pph limit is a limit that can only be verified through stack testing. It does not appear that the facility has required any testing to verify that limit. The facility is keeping records of VOC emissions for the these coating operations on a calendar bases. Records include yearly coating usage in gallons and VOC density of the coating in lbs/gallon. Looking at the SDS's the facility does appear to have a few of the VOC densities incorrect. These inaccuracies would not make much of a difference in total VOC

emission but should be corrected moving forward for future records. The inaccuracies found are listed below.

The 1489184 Lacquer Thinner's SDS had a VOC density of 6.94 lb/gal. The information of the CN 1156202 Paint Primer Gray shows a relative density of 1.06 and the high value VOC content is calculated to be 84.2% which would produce a VOC density of 7.45 lbs/gal. The information of the 1155866 – Paint Water Airdry SW Lab Gray shows a relative density of 1.12 and the high value VOC content is calculated to be 11.3% which would produce a VOC density of 1.06 lb/gal. The information of the 1155874 – Paint Water Airdry SW T-Blue shows a relative density of 1.17 and the high value VOC content is calculated to be 11.3% which would produce a VOC density of 1.10 lb/gal. The information of the 1155997 – Paint Water Airdry SW White shows a relative density of 1.19 and the high value VOC content is calculated to be 11.3% which would produce a VOC density of 1.12 lb/gal. The information of the 1156171 – Paint Water Airdry SW Black shows a relative density of 1.19 and the high value VOC content is calculated to be 13.2% which would produce a VOC density of 1.31 lb/gal.

Staff was provided with VOC emission records for the 2020, 2021, and 2022 calendar years. The total calculated VOC emissions for these years are 2.5, 3, and 3 TPY respectively. This is well below the permitted limit of 12.2 TPY.

Special Condition 15 is a limit for dimethyl ethanolamine. Looking at the SDS's for the primers, lacquer Thinners, and paint provided they do not contain any dimethyl ethanolamine.

Special Condition 16 requires that the facility not operate the paint spray booths unless they are equipped with exhaust filters and properly operating. During the inspection Staff did observe all three booths. Staff noted that each booth was equipped with filters that appeared to be in good condition with not a lot of "caking" and no rips or tears. Staff was told that filters are usually changed every 2 weeks depending on how much painting is performed. The facility appears to be meeting this requirement.

Special condition 17 gives the stack dimensions and height for the exhaust stack. It also requires that the exhaust be unobstructed vertically upwards. Staff observed the booth on the North side of the building (SPD Paint Booth) and Staff noted that the exhaust was unobstructed. No Stack height measurements were taken during the inspection.

Special Condition 18 requires the applicant to not substitute any coatings or raw materials for those described in the 571-90 permit application which would result in an appreciable change in the quality or any appreciable increase in the quantity of the emission of an air contaminant without prior notification to and approval by the Air Quality Division. During the review staff compared the original permitted SDS's to that of the current SDS's and did note that the CN1156202 – Paint Primer Gray and the CN 554259S – 1489184 coatings do appear to violate this condition. The CN1156202 – Paint Primer Gray contains ethylbenzene which is an air contaminant that does have IRSL and SRSL air toxic screening levels which none of the original permitted material appeared to contain. Staff would believe this to be an appreciable change in quality that does not appear to have been approved by the Air Quality Division. The CN 554259S – 1489184 lacquer thinner contains toluene at a weight percent of 52.14%. This is about 3.6 times the amount of toluene that was in the original permitted lacquer thinner Nitrocellulose Lacquer Enamel. Staff would believe this to be an appreciable increase in the quantity of the emissions of

an air contaminant which does not have prior notification or approval by the Air Quality Division. Staff will send a violation notice for the identified issue. The facility will have to request and get approval to use the non-compliant materials, get their PTI modified to allow for the material, or switch to a material that they can request and get approval for use.

Curing Oven/Water Based Paint Booth:

The Thermotron owns a building that is located kiddy corner from the main facility. The address of the adjacent facility has the address of 875 Brooks Avenue. This second facility appears to be apart of the same stationary source as the 836 Brooks Avenue location. The building has one coating booth and curing oven that appear to be exempt from Rule 201.

The curing oven has Powder-X Model FD150-PB burner that has a max heat input capacity of 1.5 MMBTU/hr natural gas burner. This appears to meet the requirements of Rule 282(2)(b)(i) for natural gas fuel burning equipment that is used for indirect heating and having not more than 50,000,000 BTU/hr.

The coating booth in this building uses water-based coatings. Based on records the facility appears to use less than 50 gallons per month in this booth. From these records it would appear that the facility would meet the requirements of Rule 287(2)(c), which allows for 200 gallons per month minus water. This exemption does require monthly usage records and the booth be equipped with a fabric filter exhaust. Both requirements appear to be met.

Emergency Generator:

The facility does have one Generac Model 0064610 generator with a unit output of 16 KW. This is roughly 0.055 MMBTU/hr. This appears to be installed under Rule 285(2)(g), which is for internal combustion engines that have less than 10 MMBTU/hr maximum heat input.

Staff asked how often the generator gets serviced. Staff was told that the unit gets serviced every 6 months. It was indicated that the unit was last serviced April 21, 2023 which included an oil and filter change.

The facility indicated that the generator operates 5 minutes per week for maintenance and readiness testing.

Metal Working Equipment/Welding/Metal Surface Treatment:

There are several metal cutting, grinding, and fabrication equipment that only emit to the general in-plant environment. These operations appear to meet the requirements of Rule 285(2)(l)(vi)(B). The facility also has an acid cleaning station that is used to surface clean metal parts. The acid cleaning station is located in the middle of the building and appears to only emit to the general in-plant environment. The acid cleaning station appears to meet the requirements of Rule 285(2)(r)(iv) for metal treatment processes that process emissions are only released into the general in-plant environment. The facility has several welding stations located at the facility that appear to meet the requirements of Rule 285(2)(i).

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in non-compliance with PTI No. 571-90 Special Condition 18.

Staff stated to Mr. Kempkers that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 2:15 PM.-CJY

NAME Cody Yuzgila

DATE 9/14/23

SUPERVISOR Marisa