

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

N130838688

FACILITY: TRI MER CORP		SRN / ID: N1308
LOCATION: 1400 MONROE, OWOSSO		DISTRICT: Lansing
CITY: OWOSSO		COUNTY: SHIAWASSEE
CONTACT: Greg Frantz , Plant Manager		ACTIVITY DATE: 02/14/2017
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection		
RESOLVED COMPLAINTS:		

On February 14, 2017, I conducted an unannounced, scheduled inspection of Tri-Mer Corporation (Tri-Mer) in Owosso. This facility was last inspected on August 26, 2011.

Facility Name/Address:

N1308 – Tri-Mer Corporation
1400 Monroe, Owosso, Michigan

Facility Contact:

Mr. Greg Frantz, Plant Manager, 989-723-7838, gfrantz@tri-mer.com
Mr. Doug Kirby, Floor Supervisor

Facility Description:

Tri-Mer manufactures air pollution control equipment for particulate matter and gaseous pollutants. Tri-Mer originally specialized in wet scrubber systems. In the last 7 years, Tri-Mer has developed a ceramic filter technology for air pollution control of hot gas streams. The ceramic filters are similar to an SCR catalyst and lime injection is used to coat the outside of the filter tubes for acid gas control. The technology treats nitrogen oxides (NOx), sulfur dioxides (SO₂), acid gases, and particulate matter. The size of the systems that Tri-Mer builds range from 10,000 scfm to 300,000 scfm. The air pollution control systems are made up of modular components for ease of scale and transport. A Tri-Mer system was installed about 3 years ago on the glass furnaces at Guardian Industries in Carleton, MI. They are also working on systems that can be used to scrub diesel engine exhausts at ports.

Commencement of Mfg. Operations: 1960

Plant Capacity: Full to half capacity depending on the orders

Staff #: 54 – 55 Shifts/Day: 1 (8 – 10 hrs) Days of Operation/Week: 5 days/week (sometimes Saturday)
Work hours are from 6:00 am to 4:30 pm for the 10-hour shift, and 6:00 am to 2:30 pm for the 8-hour shift.

Boilers for process heat or steam? No

Building heat in the manufacturing areas is provided by natural gas-fired space heaters.

Emergency Generators? No

Cold Cleaners? No

List of Exempt Equipment:

Emission unit description	Permit to Install, or exemption rule
Plastic fabrication	Rule 285(2)(l)(vi)(B)
Natural gas-fired oven	Grandfathered (pre-1967)
Paint spray booth and mat or panel filters in plant with the office	Rule 287(2)(c); also pre-1967
Paint spray booth and mat or panel filters located in the warehouse	Rule 287(2)(c)

Machine shop	Rule 285(2)(l)(vi)(B)
Metal fabrication	Rule 285(2)(l)(vi)(B)
Plastic welding	Rule 285(2)(f)
Welding	Rule 285(2)(i)
Natural gas-fired space heaters	Rule 285(2)(b)(i)
Paint touch-up in final assembly	Rule 287(2)(b)

List of Active Air Use Permits:

Emission unit description	Permit to Install (PTI)
Sand blast booth and Torit dust collector	PTI No. 664-88

Regulatory Review:

The facility is a minor source of any regulated air pollutants including hazardous air pollutants (HAPs) and not subject to the Title V Renewable Operating Permit (ROP) program.

Michigan Air Emissions Reporting System (MAERS):

The facility is not required to report emission information to MAERS.

Inspection:

Arrived: 12:45 pm

Departed: 3:00 pm

Weather: 40°F, WSW@8 MPH, UV Index 1 Low

No visible emissions (VEs) were observed from the facility upon arrival. No odors were identified surrounding the facility.

A pre-inspection meeting was conducted with Mr. Doug Kirby (Floor Supervisor). The purpose of my visit and the status of the facility operations were discussed. Mr. Bret Ruess (Vice President) joined us for some of the discussion, and explained the new ceramic filter technology and the business. A facility tour was then taken followed by a records review. Mr. Greg Frantz (Plant Manager) was not in upon my arrival, but did check in to see how the inspection was going.

The facility consists of three buildings that have been added as the business has grown. The original plant has the business offices, and manufacturing areas that include cut-out, machining and painting. The second building has final assembly and the third building is a warehouse that has another paint booth.

In the original plant is plastic fabrication that includes cut out of large plastic sheets. The plastic sheets are softened for bending in a grandfathered natural gas-fired oven. It was manufactured by Michigan Oven Co. (Serial no. 3-4511-A) and operates at 340°F. Machine cutting is exempt per Rule 285(2)(l)(vi)(B). The plastic welding that is done in the area is exempt per Rule 286(2)(f).

A small machine shop has drills, two (2) lathes, and grinding wheels with no external venting of emissions. These activities are exempt per Rule 285(2)(l)(vi)(B). A steel fabrication area has some metal welding which is exempt per Rule 285(2)(i) and is located beside the small machine shop.

A large walk-in spray paint booth has dry fabric filters with an external exhaust stack. A gun labeled "HVLP" is marked as capable of going to 20 psi (can be operated as not high volume low pressure (HVLP)) is used to spray paint. The fabric filters are changed regularly when the pressure gauge reads 0.07. The booth is operated as exempt per Rule 287(2)(c).

PTI 664-88, Sand blast booth and Torit dust collector –

The sand blast booth and dust collector are properly installed, and was not operating at the time of the inspection. There are also plastic curtains to block off the area from storage areas. The dust collector does have a pressure gauge and bags are changed every six (6) months. Waste from the dust collector is collected in 55-gallon drums and properly disposed of. The system is vented vertically out the roof and appears to be meeting the conditions of the permit. (See pictures.)

Final assembly is where the modular boxes that hold the ceramic filters are finished. There is some touch-up of paint using hand held spray cans and brushes that is exempt per Rule 287(2)(b).

RWI Manufacturing which does metal fabrication is located between Tri-Mer manufacturing buildings. RWI does the metal fabrication for Tri-Mer. Welding operations (exempt per Rule 285(2)(i)) is done in this building. The business is considered a support facility to Tri-Mer and would share the same State Registration Number (SRN). A back driveway / road connects the Tri-Mer manufacturing facilities and RWI.

The third building is a warehouse with another paint booth (exempt per Rule 287(2)(c)) and is located across the street from the Tri-Mer manufacturing facilities and RWI. The records for the two paint booths are actually combined into one. The records show that the highest usage of paint was 177 gallons in February of 2016 below the 200 gallon per month exemption requirement for each booth. The paint used is solvent-based and does contain HAPs such as ethylbenzene, xylene, and toluene.

The paint with the highest volatile organic compound (VOC) content was Safety Yellow with a VOC content of 3.26 lb/gallon (minus water). With the Rule 287(2)(c) exemption limit of 200 gallons per month (minus water), worse-case potential to emit (PTE) for VOC works out as follows:

200 gallons per month x 3.26 VOC lb/gallon = 652 lb/month
VOC in tons per year (tpy) = 12 months/year x 652 lb/month x 1 ton/2000 lb = 3.91 tpy

Since there are two (2) paint booths, PTE is approximately 8 tpy of VOC.

Records Review:

Copies of the records are attached to this activity report.

1. Monthly paint usage from 1-2016 to 1-2017 for booth paint booths combined.
2. Safety Data Sheets (SDS) for the most common paints used.

Summary:

The facility appeared to be in compliance with all applicable air quality rules and regulations, and PTI 664-88.

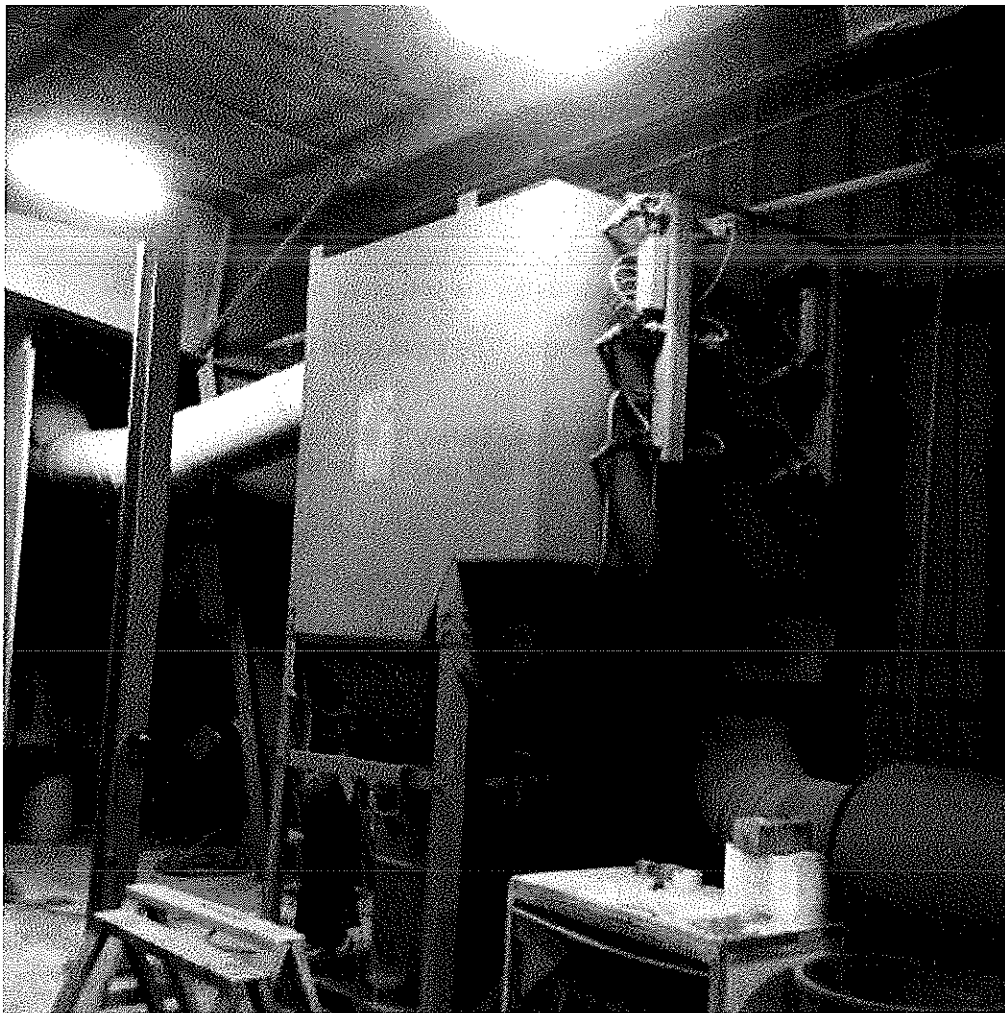


Image 1(1) : Dust collector, PTI 664-88



Image 2(2) : Sand blasting booth, PTI 664-88

NAME Jubel P. Brown DATE 2/21/17 SUPERVISOR D. M.

