

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

N206435762

FACILITY: COMTREX LLC		SRN / ID: N2064
LOCATION: 24060 HOOVER RD, WARREN		DISTRICT: Southeast Michigan
CITY: WARREN		COUNTY: MACOMB
CONTACT: Robert Peavler, Process Improvement Coordinator		ACTIVITY DATE: 07/29/2016
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Unscheduled inspection		
RESOLVED COMPLAINTS:		

Background

Mitsubishi Chemical Performance Polymers (Mitsubishi) SRN: N2064 is a polymer fabrication facility located at 24060 Hoover Rd, Warren, MI 48089. The facility was formerly known as Comtrex LLC. The manufacturing facility was inspected on Friday 7/29/16 by Tyler Salamasick of the Michigan Department of Environmental Quality, Air Quality Division. The intent of the inspecting was to determine compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, and Michigan's Air Pollution Control Rules. Mitsubishi currently operates without permits under potential permit exemptions.

The site contact is the Process Improvement Coordinator, Robert Peavler. Robert showed me on the facility as well as discussed/describe the process operations.

Inspection

Site arrival was at 12:15 pm Friday afternoon. The weather conditions were 81F with a North wind at 5 mph and partly cloudy. Mitsubishi is located in a primarily industrial/residential area with the nearest residential structure approximately 350ft south of the facility. I was greeted by Robert Peavler. Upon meeting I showed Robert my state inspector ID and informed him of the intent of my inspection. Robert informed me that Mitsubishi has approximately 50 employees and operates 24 hours a day, 7 days a week. The facility makes polymer pellets for the automotive industry. Their products are for both internal and external plastics with an approximate distribution of the sales at 50/50. The plant has a total of 7 extruders, of which 3 are single screw extruders and 4 are twin screw extruders. The single screw extruders produce flexible polyvinyl chloride (PVC) and the twin screw extruders produce thermoplastic vulcanizates (TVP). TVPs are sometimes referred to as thermoplastic elastomers (TPE) due to their shared similarities.

Quality Control Lab

Robert showed me the quality control lab as well as an injection mold the facility uses to make weather testing plastics. The lab did not have any equipment that appeared to require permitting. The injection mold process used compressed air as a release gas. This appears to be exempt from permitting under **R 336.1286(c)(i)**. Robert also showed me the weathering station which was used for UV light exposure testing. The process consists of two Xenon Arc Weatherometers (models Atlas Ci5000 and Atlas Ci4000). The Ci4000 can simulate 3 years of sun exposure in the period of 5 weeks, where the Ci5000 can equate 9 weeks of testing to 3 years of sun exposure.

PVC (Polyvinyl Chloride) Line

The PVC equipment was housed at the north end of the building. This equipment is used to blend the PVC resin with softening agents to create more flexible PVC. The softening agents (epoxidized soybean oil, diisodecyl phthalate, and compure 12) are stored in 4 large storage tanks (2 ~20,000lbs and 2 ~40,000lbs) inside of the facility. The PVC resin is stored outside in a silo and is not made on site from the PVC monomer form (VCM). Mitsubishi's PVC resin storage appears to be exempt from permitting pursuant to **R 336.1286(a)**. VCM is considered carcinogenic and is subject to different federal regulations than that of PVC resin. The resin and softening agent are blended in a large hopper which is heated with friction; the final product is a dry softened powder. Any fugitive dust from this process is controlled by a bag house that is vented into the in plant environment. Mitsubishi's bag house is equipped with a pressure drop gauge. It appears this equipment is permit exempt per **R 336.1285(I)(vi)(B)**. This PVC is then sent to the single screw extruder. The facility currently has 3 single screw extruders. At this stage the material is heated via the equipment's electric coils. Once heated the

material liquefies and forms a paste like substance. The material is pushed through the screw extruder and is pelletized as it exits the equipment. The pellets are small round plastic beads. This process is not vented to the outside air and appears to be exempt from permitting pursuant to **R 336.1286(a)**.

TPV (Thermoplastic vulcanizate) Line

The TPV line consists of 4 twin screw extruders and two drying towers. Mitsubishi's TPV line blends polypropylene, rubber powder and conditioning agents to make TPV pellets. A synthetic rubber block is ground into a powder before being added to the mixture. Most of the emissions from this process are controlled by a bag house which is vented into the in plant environment. This rubber grinding process appears to be exempt from permitting under **R 336.1285(I)(vi)(B)**. A difference between the twin screw and the single screw extrusion is the fact that the twin screw extrusion both blends and heats the mixture at the same time while the single screw extruder complete these steps separately. Once the twin screw extruder liquefies the blend, the mix is cut by the machine and the beads are carried via water pipes to a drying station. This process appears to be exempt from permitting under **R 336.1286(a)**. If the beads are too wet after the initial drying stage they can be placed in one of the two drying towers. These towers can dry approximately 3000lbs of beads per batch. The dryers operate at approximately 189F and are controlled via bag house that is vented to the in plant environment. This process appears to be exempt from permitting under **R 336.1286(a)**. Once the material is dried it is sent to the associated cooling tower to bring the beads back to ambient temperatures. If the beads are not cooled there is a chance that they stick and form together in a large mass.

Conclusion

In addition to the process Robert provided me with a full plant tour during which I did not observe other processes that appeared to produce air emissions. It appears that Mitsubishi is in compliance with Michigan Air Quality Rules and Regulations.

NAME



DATE

8/1/16

SUPERVISOR

CJE