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

A164028738

FACILITY: DEMMER CORP		SRN / ID: A1640
LOCATION: 1600 N LARCH ST, LANSING		DISTRICT: Lansing
CITY: LANSING		COUNTY: INGHAM
CONTACT: Pedro Chavez , Corp. EHS Manager		ACTIVITY DATE: 02/27/2015
STAFF: Brian Culham	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The purpose of the activity was to make an initial contact with Pedro Chavez, the new air quality contact and to determine the sources compliance status. I arrived at 2:00 as scheduled earlier that morning. I met with Pedro Chavez, Corporate EHS Manager and Cort Stebbins, Paint Engineer.		
RESOLVED COMPLAINTS:		

Pedro Chavez, Corporate EHS Manager pchavez@demmercorp.com

Demmer Corporation (North) is located at the old Motor Wheel site on the north side of Lansing. The areas north and east of the plant are mostly residential with industrial and commercial areas to the south and west.

Demmer North operates metal cutting, bending, welding, and painting processes for fabricating large thick metal components which are primarily used in military vehicles or construction equipment. The metals are primarily steel and aluminum. Current production includes welded elements for the Mine Resistant Armored Personnel (MRAP) vehicle and armor upgrade kits for other military vehicles.

Two Permits to install (PTI), 309-07 and 271-07B, have been issued to Demmer for painting operations. PTI 271-07B limits VOC and Hazardous Air Pollutants (HAP) to levels below Title V Major Source threshold; opting Demmer out of the ROP program. For Title V purposes Demmer North is considered a Synthetic Minor Source. Demmer North is also an Area Source.

Because Demmer is an area source they should consider the applicability of 40 CFR 63 subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating at Area Sources. It is my understanding that construction equipment is considered mobile equipment and that some construction components are being painted at Demmer North. I did not investigate if any of the coatings being applied contained compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd); collectively referred to as "target HAPs". The AQD does not presently have regulatory authority for this subpart; therefore I did not pursue an applicability determination or a compliance determination. I also did not find a copy of an initial notification submitted to this office.

Because Demmer is an area source they could be subject to 40 CFR 63 subpart XXXXXX, Nine Metal Fabrication and Finishing Area Source Categories. Establishments primarily engaged in manufacturing Military Armored Vehicle, Tank, and Tank Components have a NAICS of 336992. This is the NAICS reported by Demmers in their 2011 MAERs submittal. This NAICS is not listed by the EPA as one which belongs to a category subject to the requirements of this subpart, therefore it is my determination that Demmer North is not subject to subpart XXXXXX.

Demmers submits emissions reports to MAERs annually because they are a synthetic minor opt-out source. They do not presently pay fees.

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No.	Emission Unit or Flexible Group	Description	Permit Number or Exemption	Comp. Status
1	FGDoor	Door Line including prep, wash, prime and topcoat processes	PTI 271-07B	NO
2	FG-MRAP/Parts	MRAP line including prep,	PTI 271-07B	C

		wash, prime and topcoat processes		
3	EU-MetalParts	Miscellaneous Metal Parts Paint Spray Booth and Drying Oven	PTI 309-07, condition 1.8 and condition 1.11	U
4	Shot Blast		Rule 285(l)(v)(i)(C)	C
5	Metal Cutting	Water Jet and various other small types	Rule 285(l)(vi)	C
6	Other			
7	FGFacility	All processes located at the source.	PTI 271-07B	

FGDoor – Door Line including prep, wash, prime and topcoat processes.

FGDoor is no longer in operation. The area where the process existed in 2011 has been walled off and is now leased to another firm as a storage area. I asked for access into the area to verify the removal of the equipment. P. Chavez stated the Demmer does not have access, but attempted to find a person who could open that portion of the building. After contacting several people he was unable to gain entry.

Demmer had photographically documented the removal of the paint booth ventilation to the RTO. I examined the photographs as verification of the disassembled process. The RTO was still on site, but according to C. Stebbin it had been sold and would be transported away during warmer weather.

FG-MRAP/Parts - MRAP line including prep, wash, prime and topcoat processes

The coating lines/tunnels for both MRAP and MRAP Parts were identified. The MRAP line is configured to apply prime, flash, apply topcoat, oven cure, and then cool. A multistage parts washer precedes a parts coating booth. The parts line is primarily an application of prime and an oven cure. All coating booths, flash areas, and ovens are exhausted through the control device.

The control device includes three fluidized carbon adsorption beds used to strip low concentrations of VOC from the large volumes of exhaust air. The large air volumes are necessary to collect all of the VOC emissions from the associated booths, flash areas, and ovens. The VOC is stripped from the carbon into a high concentration of a smaller volume of air. The high VOC concentration air is combusted in a thermal oxidizer.

The thermal oxidizer was operating at 1443° F, a minimum of 1425° F is required by permit. Carbon was visible in the glass viewing pipe for both adsorb and desorb of the carbon concentrator. The carbon was properly entrained in each air flow indicator.

In October 2008 testing was completed on the Carbon Desorption/Thermal Oxidizer unit for overall VOC destruction efficiency. T. Gasloli of AQD reviewed the data and determined the overall VOC destruction efficiency of the test was 94%. At that time there was confusion about what the expected overall destruction efficiency of the system should be. The permit limit was later amended to make it clear that the require value was a minimum of 90% and not 95%.

All paint spray guns used at Demmer North are HVLP

Paint records are maintained based on an opened container basis. As an example, if a 55 gallon drum or 5 gallon pail is opened and sent to the paint line, the whole drum is marked down as being used. Purchase records are used to confirm use records.

A Malfunction Abatement Plan (MAP) was submitted on August 24, 2009 to satisfy a permit requirement.

VOC emissions from FGMRAP coating operations were reported at 1.0 tons for 2014. The permit limits VOC emissions to 69.1 tpy.

I discussed issues with the collection and recordkeeping of purge and cleanup solvents with C. Stebbins. He indicated that acetone is mainly used for purge and cleanup. Annual records and the recordkeeping procedure were submitted to me. Solvent recovery is about 121% because of the additional paint recovered from the lines.

The purge and cleanup solvents and waste paint are recovered, stored to minimize evaporation, and manifested through a waste disposal firm.

EU-MetalParts – Miscellaneous Metal Parts Paint Spray Booth and Drying Oven

The paint booth and associated oven are located in a separate building located to the north of the main plant. The building is sometimes referred to as the McKinley Street plant. The building is primarily used as a warehouse. Because the building is contiguous to the Larch Street plant and is also operated by Demmer, it is considered as part of the Larch Street stationery source.

The miscellaneous metal parts coating process at McKinley is a single large paint booth. Large weldments or other parts enter the booth on a fork lift. The paint booth door is closed prior to painting. Both prime and topcoats are applied in the booth. An oven of similar size is adjacent to the booth to the south. Drying temperatures are below 194° F (low bake). The paint process has seen intermittent use over the last several years. Records indicated use of about one day a week. It was not operating during the inspection.

Records are being maintained and a summary was submitted to me following the inspection. Records indicated 0.6 tons of VOC emitted per a 12-month rolling time period ending December. The limit is 12.9 tpy.

Carbon adsorption was required for this paint process to assure that facility wide VOC emissions could be maintained at a synthetic minor level.

Dry overspray filters were in place covering the west wall of the booth. A door gives access into the plenum immediately behind the overspray filters. The western "wall" of this room is a series of slide out trays containing activated carbon beds. The trays are stacked in pairs where the inlet air enters over one side of the two stacked trays and exits the opposite side. It is my understanding that samples of carbon are checked annually for VOC collection capacity. P. Chavez stated the analysis completed late last fall indicated that about 12% of the carbon life remained. He believed that he had several months before replacement would be necessary.

A thermocouple is installed in the outlet of the carbon bed adsorption unit. Although the unit was not in operation during the inspection, the thermocouple displayed the ambient temperature of 56° F. The permitted operating temperature is limited to 110° F.

During the December holidays temperature monitoring showed several peaks over 110° F. Many of the peaks occurred during periods when the paint booth was not in use. In January, P. Chavez contacted the AQD by phone to alert us of the possible exceedances. The paint booth was not used throughout the holidays and not used again until after the carbon had been replaced by the end of January.

Because the carbon life was nearing depletion, P. Chavez assumed that the carbon was causing the temperature spikes. The carbon was replaced as Demmer's action plan for resolving the temperature spikes. During earlier phone conversations I had agreed that this was the appropriate resolution. During my inspection I learned that the temperature spikes were still occurring.

At the end of my inspection C. Stebbins, P. Chavez, and I discussed other possible cause of the temperature spikes. On March 3, 2017 I received a second action plan from P. Chavez. Demmer will replace/repair the temperature monitoring instrumentation.

PTI 309-07 condition 1.8 requires a temperature maintained below 110° F and condition 1.11 requires proper monitoring of the temperature. I have not sited any violations at this time because I do not believe that actual temperatures have ever exceeded the 110° F limit. It is not certain yet that the temperature monitoring instrumentation has failed, however Demmer has committed to the repair and/or replacement of the components necessary for reliable operation. After the instrumentation has been repaired I am to receive a report of collected temperature data.

Shot Blast

The blast unit is Rule 285(l)(v)(i)(C) exempt.

Metal Cutting

It is my understanding that they are multiple large table type cutters at this source. The one I inspected appeared to be a water jet. Under table draft collection is used for initial particulate control. Metal cutting is Rule 285(l)(v)(i)(B) exempt.

Other

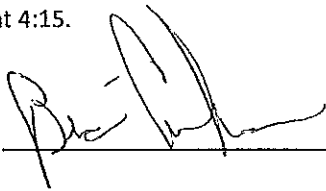
Welding of metal is exempt by Rule 285(i). Bending of metal is exempt by Rule 285(l)(i).

FGFacility - All processes located at the source.

VOC emissions from FGFacility were reported in the Demmer Monthly Emissions Report at less than 1.0 tons for 2014. The permit limits VOC emissions to 90.0 tpy.

HAP emissions from FGFacility were reported in the Demmer Monthly Emissions Report at less than 1.0 tons for 2014. The permit limits VOC emissions to 22.5 tpy.

I left at 4:15.

NAME 

DATE 3.4/15

SUPERVISOR 