

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

E509427991

FACILITY: Hutchinson Antivibration Systems, Inc.		SRN / ID: E5094
LOCATION: 460 Fuller Ave. NE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Jim Niesen, Maintenance Manager		ACTIVITY DATE: 12/04/2014
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility at 9:30 to conduct an unannounced, scheduled inspection and met with Jim Niesen, Maintenance Manager. Mr. Niesen was in a meeting until 10:00, so I told him I would wait.

At 10:00, Mr. Niesen returned to the lobby and we accessed a conference room where he was presented with the DEQ Environmental Inspections: Rights and Responsibilities brochure and its contents were discussed. The scope of the inspection was outlined to include the components of the facility Renewable Operating Permit (ROP) identified as MI-ROP-E5094-2012b, including 40 CFR Part 63, Subpart Mmmm- National Emission Standards for Hazardous Air pollutants for Surface Coating of Miscellaneous Metal Parts and Products.

FACILITY DESCRIPTION

Hutchinson Antivibration Systems, Inc. manufactures rubber molded metal parts. First the rubber is manufactured using both natural and synthetic rubber and various types of binders. It is extruded and semi-cured then dusted with powder so it doesn't stick to itself. Next metal parts are coated with a primer and adhesive top coat in one of 4 silver booths or a chain-on-edge (COE) two booth system that was permitted in 2013. Following the coating, the rubber and metal part meet in a molding cell where they are joined together under heat and pressure in a vulcanization process. The final parts are used in the automotive industry.

COMPLIANCE EVALUATION

EUCARBON

This EU consists of the carbon black transport system, which includes 4 silos for different size/grades of carbon black with each silo controlled by a baghouse. Each "baghouse" is basically an insertable cartridge filter. The transfer of the carbon black is also ducted to the main system lines, and as such can also be controlled by either the EUMIX or EURUBBERMIX2, depending on how much equipment is in operation at any one time. Each baghouse/silo has a particulate limit of 0.10 lbs/1,000 lbs corrected to 50% excess air. Compliance with the limits are based on either stack testing which is not being required and operational and performance checks as conducted through the preventative maintenance plan. The facility records the maintenance activities, and a preventative maintenance plan is on file.

EUMIX

This EU consists of four rubber mills and one mixer controlled by a baghouse. It is referred to as the "Fuller" baghouse. The pressure drop gauge is set to alarm outside the pressure drop range of 1-7" H₂O. The value observed at the time of the inspection was 5". There was evidence of carbon black on the entire exhaust ductwork, but there was no evidence on the ground that the staining occurred recently. Mr. Niesen indicated that when they change out the bags, it is really messy. The area beneath the unit was clean. There are emission limits for particulate at 1.44 lbs/hr, 6.29 tons per year and 0.01 lb/1,000 lbs exhaust gas calculated on a dry gas basis. Compliance with the limits are based on either stack testing which is not being required and operational and performance checks as conducted through the preventative maintenance plan. Mr. Niesen is conducting quarterly maintenance checks, as was verbally discussed. The stack was not measured at the time of the inspection. The facility records the maintenance activities and a preventative maintenance plan is on file.

EURTO

This EU consists of one COE machine, one turbo spray machine (silver #2), and three silver booths (silver #1, 3 and 4). The facility is currently in the process of removing the adhesive dip line that has been decommissioned. A VOC limit of 50.4 tons per year has been assigned to this EU. The reported 12-month rolling VOC emissions

through November 2014 are 10.91 tons.

During the inspection, the coating equipment and the regenerative thermal oxidizer (RTO) were visually inspected. The RTO was operating at an instantaneous reading of 1,519 °F. Mr. Niesen and I discussed that this was in compliance with the permit limit of 1,450 °F. The facility keeps the set point of the unit at 1,500 °F. There have not been any problems. Staff observed the RTO inlet air flow monitoring read out. At the time of the inspection, the air flow to the RTO was 7,585 CFM. This is within the parameters established for this unit per the Compliance Assurance Monitoring (CAM) requirements. We discussed the coating booth filter change schedule which is twice a shift for the lower filters and once a week for the top filters. The overall VOC emissions control efficiency for the process (RTO system) shall not be less than 85% and testing is to be conducted for capture and destruction efficiency once every five years. The facility has not conducted capture efficiency testing in the past five years and with several equipment changes the efficiency is unknown. This will be cited as a violation of the permit requirement. The applicators were not tested to ensure they are HVLP during the inspection, but that's what has been used in the past. They appeared properly installed and operated during the visual observations. Mr. Niesen and I discussed what happens if the temperature of the RTO drops below the limit, and he indicated that the entire system will shut down. Staff requested the VOC content lab results and they indicated that VOC content is very similar to what is currently being reported. It was recommended to Mr. Niesen that he update his spread sheet with the VOC report results.

The recordkeeping was evaluated for compliance and it was found that overall it appears to meet the requirements. I requested the toluene purchase amount in gallons for September 2014, and received it right away. I then clarified with Mr. Niesen how often they do purchasing for toluene and asked for all 2014 purchase quantities. A review of this indicates that purchase and usage records year-to-date are within 800 gallons. Since Hutchinson purchases toluene in 337 gallon totes and currently have ~3 totes (2 full 2, partially full) this margin of error is acceptable. MSDS's were requested and received timely. As indicated above, the Method 24 results are very close to the data sheet values. It should be pointed out that technically, the amount of toluene used in the two small satellite gun cleaning stations should be kept in a separate record, since that usage is not controlled by the RTO. It is likely a small amount. During the external RTO visual inspection, I noticed and pointed out a couple things. One is that the inlet ductwork that is located outside the building and before the control device was dented and had holes in it. Mr. Niesen indicated that it was probably only the outer shell that was damaged. I agreed somewhat and commented that it doesn't look good and at that moment the RTO switched beds and the vacuum created was loud and caused what sounded like back pressure in the inlet duct of a degree that may be more than normal. (a gauge is present, but the value was not recorded by me and vacuum is normal when the beds switch inside a RTO) I recommended that Mr. Niesen look into it and he stated he would. The RTO stack was not measured.

The facility was in non-compliance with EURTO at the time of the inspection.

EUWHEEL

This EU consists of one wheelabrator tumblast (shot blast) controlled by a baghouse. There are emission limits for particulate limit set at 0.10 lbs/1,000 lbs of exhaust gas on a dry gas basis. Compliance with the limits are based on either stack testing which is not being required and operational and performance checks as conducted through the preventative maintenance plan. Mr. Niesen is conducting quarterly maintenance checks, as was verbally discussed and he also observes the roof around the stack on a routine basis. The stack was not measured at the time of the inspection. The facility records the maintenance activities. A preventative maintenance plan is on file.

FGMMMM

This flexible group consists of EURTO: one COE machine, one turbo spray machine (silver #2), and three silver booths (silver #1, 3 and 4) and clean-up, thinning etc. solvent usage subject to 40 CFR Part 63, Subpart MMMM-National Emission Standards for Hazardous Air pollutants for Surface Coating of Miscellaneous Metal Parts and Products (MMMM). It is considered an existing affected source and had an initial compliance date of January 2, 2007. The facility is subject to an organic HAP limit of 37.7 lbs/gal of coating solids per 12-month rolling time period as all coating operations appear to meet the definition of existing rubber-to-metal coating, and is clarified to state that all coatings, thinners and/or other additives, and cleaning materials are included in the calculated emission rate. The facility utilizes the emission rate with add-on controls option.

The Initial Compliance Notification submitted in 2008, indicates that the regenerative thermal oxidizer (RTO) must operate at a minimum gas temperature of 1,550 °F (+/- 100 °F). There is no allowance in MMMM for a temperature variance of +/- 100 °F. Additionally, in the notification the facility identifies the coating booths as Permanent Total

Enclosures (PE). EPA Method 204 describes the criteria for and verification of a PE. Also, not all cleaning is conducted in the booth and so in this way does not qualify as for 100% capture efficiency as required in 63.3965. According to AQD file, the spray booths do not qualify for a PE designation. The facility failed to properly establish the emission capture system operating limit.

The facility is required to meet the operating limits specified in Table 1 of Mmmm. Table 1 specifies that for the thermal oxidizer, the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established and that the data is to be reduced to 3-hour block averages. As indicated above, the facility has established this limit as 1,550 °F. The combustion temperature set point at the time of the inspection was 1,500 °F, and the unit was operating at a reading of 1,519 °F. The facility is in violation of failure to maintain the proper temperature and failure to calculate the temperature on a 3-hour block average. Additionally, the startup, shutdown, and malfunction plan states that an interlock will prevent coating operations unless the temperature of the RTO is at 1,550 °F. This SSMP is dated August 24, 2012 and is currently not being met. Therefore, the facility did take action consistent with the SSMP, nor following that did not submit a SSM report as required.

The facility is required to install, operate and maintain a Continuous Parameter Monitoring System (CPMS) for each coating operation. This would mean that the COE, and each of the four silver lines would each have its own CPMS. As Mr. Niesen and I conducted the physical inspection, he showed me where on each booth a pressure drop gauge has been installed. None of the gauges were properly sized for the booths, and either were pegged high or low on the gauge. Additionally, there has been no monitoring/recordkeeping of the data nor is it being reduced to 3-hour block averages. The facility is in violation for failure to establish emission capture system operating limits, failure to determine emission capture system efficiency and failure to install and operate properly the CPMS for the emission capture systems. The facility is required to develop work practice standards for the capture system. The facility has failed to implement a work practice plan for the capture system. Furthermore, 63.3963(c) states that the facility must demonstrate continuous compliance with each operating limit as specified in Table 1. 63.3963(c)(2) states, if an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Since the facility did not even establish or operate CPMS for each coating operation, they must assume zero capture and control. Based on the records, if zero capture and control is taken into account for the operations, the facility is in violation of the emission limit established in 63.3890(4). Additionally, if a facility deviates from an emission limitation, the semi-annual report must contain specific information, including the beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in 63.3890. The facility failed to report this as a deviation.

The facility was in non-compliance with FGMMMM at the time of the inspection.

FGRULE290

This flexible group includes EURUBBERMIX2, the torit baghouse. Records were requested and the emission unit was found to be in compliance with Rule 290. Emissions recorded in May 2014 were the highest of the year at 64.17 pounds.

FGCOLDCLEANERS

The two facility cold cleaners were verbally discussed during the facility inspection. They are currently serviced by Safety Kleen.

The facility also operates one boiler that is not included in the ROP. Two boilers are present in the boiler room, but one has been decommissioned. Documentation in the ROP application indicates that both the boilers are exempt per Rule 282. The operational boiler is from the 50's and is likely actually grandfathered. Staff also inspected the natural gas fired emergency generator. It has a faceplate manufacture date of 1-30-2007 and it is unlikely to have been ordered before June 2006 since it was installed in May 2007. Therefore, the current status of subject to the NSPS with no requirements is acceptable.

EVALUATION SUMMARY

During the closing meeting, I outlined a couple concerns I had with Mr. Niesen regarding the compliance status. I indicated that there will likely be a Violation Notice, and as confirmed in the report narrative violations were identified. Mr. Niesen asked if there would be fines associated with the violations, and I indicated that there may

be.

On December 10th, I discussed the violation notice with Mr. Niesen over the phone. He voiced concern over the fact that the previous AQD inspector never identified these issues before, and he stated he was surprised that there were so many issues. Mr. Niesen has shown a good faith effort to immediately address the items that were possible to correct already, and plans to continue to do so.

Based on the information obtained, and detailed above, the facility was in non-compliance at the time of the inspection.

NAME 

DATE 12-12-14

SUPERVISOR PAB