

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

E509464175

FACILITY: Hutchinson Antivibration Systems, Inc.		SRN / ID: E5094
LOCATION: 460 Fuller Ave. NE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Kaitlyn Laug , Health Safety and Environmental		ACTIVITY DATE: 07/19/2022
STAFF: Michael Cox	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Unannounced Inspection		
RESOLVED COMPLAINTS:		

At 1:00pm on July 19, 2022, Air Quality Division (AQD) staff Michael Cox, (MTC) accompanied by United States Environmental Protection Agency (US-EPA) staff David Sutlin and Valeria Apolinario, conducted a scheduled unannounced inspection of Hutchinson Antivibration Systems Inc. (HAVS), located at 460 Fuller Avenue in Grand Rapids. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations as well as Renewable Operating Permit (ROP) No. ROP-MI-E5094-2018 and Permit to Install (PTI) number 49-18A. Accompanying AQD and US-EPA staff on the inspection was Kaitlyn Laug, Health Safety and Environmental Coordinator, Jim Niesen, maintenance manager, and Mirek Pruzzell, Mixing and Cementing Process Engineer. Records were provided by Kaitlyn Laug of HAVS, and Sue Kuieck of Fishbeck provided follow-up information.

FACILITY DESCRIPTION

Hutchinson Antivibration Systems, Inc. (HAVS) manufactures rubber molded, metal automotive parts. The facility consists of natural and synthetic rubber manufacturing using mixing and milling machines and spray booths to apply primer and adhesive to parts. 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. Metal (and some plastic) parts are coated with a primer (#207) mixed with methyl ethyl ketone (MEK) and an adhesive (#6411) mixed with toluene.

Following the coating process, the rubber and metal parts meet in a molding cell where they are joined together under heat and pressure in a vulcanization process. The coating operations consist of two, two-booth, chain-on-edge COE machines (EUcoe01) and (EUcoe02), one turbo spray machine (EUSIL02), two silver booths (EUSIL01, EUSIL03), a plastic overlay booth (EUAMS02), and four new robotic spray adhesive booths (EUADHESIVE 1-4) which are all controlled by a regenerative thermal oxidizer (RTO). (EUcoe02) is in the construction process and will be addressed under PTI No. 49-18A below. There is also a booth used to clean gun tips that is also exhausted to the RTO.

The facility is a major source of hazardous air pollutants (HAPs) and is also subject to: 40 CFR Part 63, Subpart Mmmm - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products; 40 CFR Part 63, Subpart Pppp - NESHAP for Surface Coating of Miscellaneous Plastic Parts; 40 CFR Part 63, Subpart Zzzz - NESHAP for Reciprocating Internal

Combustion Engines; 40 CFR Part 63, Subpart DDDDD - NESHAP for Industrial Boilers; and 40 CFR Part 64 - Compliance Assurance Monitoring (CAM) (for VOC).

COMPLIANCE EVALUATION

EUCARBON:

This emission unit consists of the carbon black transport system, which includes four silos for different size/grades of carbon black with each silo controlled by a fabric filter baghouse having an insertable cartridge filter. The unloading area is enclosed within a building and the baghouse vents into this building. Material unloading was observed during the inspection, and fugitive dust was not detected. 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 collectors, depending on how much equipment is in operation at any one time. Each baghouse/silo has a particulate matter (PM) limit of 0.10 lbs/1,000 lbs corrected to 50% excess air. Compliance with this limit should be met by proper operation of the control device as well as preventative maintenance. Maintenance records were requested and provided for the time period of August 1, 2021, through July 19, 2022. After a review of the records, HAVS appears to be operating and maintaining the control equipment as required. The company is monitoring and recording non-certified visible emission observations when loading is occurring; there have been no documented visible emission problems.

EUMIX:

This EU consists of four rubber mills and one mixer controlled by a baghouse. The baghouse is referred to as the "Fuller" baghouse. There was some carbon black staining on the baghouse inlet duct work and around the collection room which Ms. Laug attributed to when the collection totes are changed out. Ms. Laug stated that HAVS has changed the collection room procedure from using totes to using supersacks to avoid fugitive carbon black dust. At the time of the inspection, no visible emissions were observed coming from the baghouse exhaust stack.

HAVS is limited to PM emissions of 1.44 lbs/hr on a monthly average basis and 6.29 tons per year on a 12-month rolling basis, respectively. In addition, PM emissions are limited to 0.01 lb/1,000 lbs exhaust gas calculated on a dry gas basis. Compliance with these limits is met by proper operation of the control device as well as preventative maintenance. HAVS conducts weekly preventative maintenance checks, which are more frequent to the required quarterly maintenance checks required by MI-ROP-E5094-2018. In addition, the company is conducting weekly observations of the equipment and documenting any findings. The company should continue to specify and record whether visible emissions were observed from the process. HAVS is recording the daily pressure drop of the baghouse and maintaining the records at the unit. At the time of the inspection the unit was operating around 3.0 psi. Pressure Drop and Maintenance records were requested

and provided for EUMIX for the time period of August 1, 2021, through July 19, 2022. After a review of the records provided, there have been no visible emissions observed from the unit and HAVS is adequately operating a maintaining the control equipment.

EUWHEEL:

This emission unit consists of a wheelabrator tumblast (shot blast) unit controlled by a baghouse (located inside the building, but exhausted out). This unit is limited to PM emissions of 0.10 lbs/1,000 lbs of exhaust gas on a dry gas basis. Compliance with this limit is assured by proper operation of the control device as well as preventative maintenance. The process was not operating at the time of the inspection and therefore no visible emissions were noted coming from the process. The company is maintaining daily pressure drop readings and weekly maintenance records as required by MI-ROP-E5094-2018. The pressure drop is typically around 1.0 to 1.2 psi for this unit according to records. In addition, the company is conducting weekly observations of the equipment and documenting any findings. Pressure Drop and Maintenance records were requested and provided for EUMIX for the time period of August 1, 2021, through July 19, 2022. After a review of the records provided, there have been no visible emissions observed from the unit and HAVS is adequately operating a maintaining the control equipment. The company should continue to specify and record whether visible emissions were observed from the process. Records indicate there have been no visible emissions from the unit.

FGRTO:

During the inspection, the coating equipment and the RTO were visually inspected. The RTO was operating at a temperature around 1,652°F which is above the permitted limit of 1,475°F minimum operating temperature that was established during the most recent performance test. The facility continuously monitors the temperature of the RTO with a thermocouple. The facility also relies on an interlock that shuts down the spray booths should the RTO temperature drop below 1,475°F. According to the company's malfunction abatement plan (MAP), "In the event of an RTO system fault, the system will shut down and sound an alarm. The RTO temperature fault will automatically shut down cementing operations. The fault should be examined to determine the cause of the out-of-range reading and a repair determined. After the problem has been fixed, the RTO system must be restarted as per the Start-up, Shutdown, and Malfunction Plan (SSMP) to return the unit to operation before coating operations can resume."

Under ROP No. MI-ROP-E5094-2018, Special Condition V.3 the company is required to verify every two years the operational integrity of the interlock system that shuts down spray booth operations when the temperature of the RTO drops below the minimum temperature requirement. Verification of the interlock system is to be conducted using methods, plans and procedures approved by the AQD prior to

testing and with prior notification to AQD of the test. The facility conducted this test on December 17, 2021, in response to a cited violation during the August 4, 2021 inspection. It was noted during the inspection that the RTO “High Temperature” thermocouple and subsequent “High Temperature” alarm were not operating properly and was in the process of being fixed. HAVS staff stated that during a high temperature alarm, protocol is for a phone call and email be sent to Mr. Jim Niesen to prevent the RTO from overheating. It should also be noted that this issue is not a compliance issue and does not constitute a violation, but rather could lead to a safety issue.

All coating booths had fabric filters that appeared to be installed and maintained properly. Each booth uses Binks Mach 1 high volume low pressure (HVLP) applicators except for the new booths EUADHESIVE 1-4, which use Graco Air EFX-HVLP guns.

AQD staff observed faint solvent odors in the coating booth area. Faint solvent odors were observed in the general area around EUSIL02 and EUSIL03 and additional faint solvent odors were noted specifically near paint pots to EUSIL01, EUSIL02, EUSIL03 and EUCOE. Solvent odors have been an ongoing problem at HAVS. Since the August 4, 2021, inspection which cited a violation of fugitive emissions due to solvent odors, HAVS has implemented an adaptor module that encloses the seals around cement pots where most of the solvent odors were coming from. During this inspection the adaptor modules were observed on the cement pots and were noted to have reduced fugitive emissions significantly.

EUSIL01 is not considered a Permanent Total Enclosure (PTE) so the company is monitoring airflow as a compliance monitoring parameter. The operating gas flow rate for EUSIL01 was determined to be approximately 3,600 cubic feet per minute (cfm) during the inspection. The facility’s MAP identifies a minimum value of 2,396 cfm. PTI No. 49-18A has been issued for a new chain on edge booth to replace EUSIL01. PTI No. 49-18A will be addressed further below.

EUSIL02 is considered a PTE. The facility is monitoring exhaust airflow and calculating facial velocity using the natural draft opening (NDO) area determined during the last capture test.

EUSIL03 is considered a PTE and was operating. The facility is monitoring exhaust airflow and calculating facial velocity using the natural draft opening (NDO) area determined during the last capture test.

EUCOE1 is considered a PTE and was operating. The facility is monitoring exhaust airflow and calculating facial velocity using the natural draft opening (NDO) area determined during the last capture test.

EUAMS2 small volume overlay booth has been removed from the facility but is still referenced in MI-ROP-E5094-2018.

In April 2019, the company evaluated EUADHESIVE1-4 under Method 204 for permanent total enclosure. These booths were determined to be permanent total enclosures with a 100% capture efficiency. Also, the capture efficiency and destruction efficiency of the RTO was determined. The control efficiency was calculated to be 96.86% which is above the minimum overall control efficiency requirement of 85%. Capture efficiency and destruction efficiency of the RTO will again be determined per PTI No. 49-18A once EUCOE2 is brought on-line.

The facility has a malfunction abatement plan (MAP) which identifies process operating values and a response to malfunctions. If the parameters are out of range, then the entire system will shut down in accordance with the company's MAP.

FGRTO has a volatile organic compound (VOC) limit of 50.4 tons per year (tpy) per 12-month rolling time period. EUADHESIVE 1-4 has a collective VOC limit of 23.6 tpy per 12-month rolling time period, as well as 2.3 tpy of Ethylbenzene and 11.0 tpy of Methyl isobutyl ketone per 12-month rolling time period. The facility is maintaining VOC emission and material usage records in accordance with MI-ROP-E5094-2018. Records of VOC, Ethylbenzene, and Methyl isobutyl ketone emissions were requested and provided for the time period of August 1, 2021, through July 19, 2022. The highest 12-consecutive month VOC emission from FGRTO occurred during the 12-month period ending in July 2022, when 27.55 tons of VOC was emitted from FGRTO. The highest 12-consecutive month combined VOC emissions from EUADHESIVE 1-4 occurred during the 12-month period ending in September 2021, when 0.64 ton of VOC was emitted. The highest 12-consecutive month combined Ethylbenzene emissions from EUADHESIVE 1-4 was 0.04 ton of Ethylbenzene over multiple 12-month periods.. The highest 12-consecutive month combined Methyl isobutyl ketone emissions from EUADHESIVE 1-4 occurred during the 12-month period ending in September 2021, when 0.26 ton of Methyl isobutyl ketone was emitted.

It is noted under FGMMMM, the capture and control efficiency of the RTO is assumed to be zero when deviations of process operating parameter limits occur.

Also, based on the most recent Method 24 analysis conducted in December 2020, the #207 primer has a VOC content of 6.07 pounds per gallon and the #6411 adhesive has a VOC content of 6.58 pounds per gallon. The facility is using the highest VOC content from Method 24 analysis and Air Quality Data Sheets to calculate VOC emissions.

FGMMMM:

This flexible group consists of FGRT0 and associated coating booths subject to 40 CFR Part 63, Subpart M. It is considered an existing affected source and had an initial compliance date of January 2, 2007. The facility utilizes the emission rate with add-on controls option.

The facility is required to install, operate and maintain a Continuous Parameter Monitoring System (CPMS) for each coating emission unit. Under Subpart M, the company is required to monitor the temperature of the RTO, pressure drop or face velocity of booths that are PTE, and the volumetric flow rate for booths that are not PTE. Monitoring parameter values are to be established during performance testing. Through the CPMS the company is recording the RTO temperature, the air flow to the RTO, the air flow for each booth, and the pressure drop at 15-minute intervals. Due to the large data set of the CPMS, records were requested for the time period of January 2022 through June 2022 and were provided including 3-hour block averages. Under 40 CFR Part 63.3968(a), air flow can be determined on a 3-hour block average basis for a PTE.

The facility is monitoring airflow at the two natural draft openings to each booth to verify face velocity to ensure compliance with PTE requirements. Because of the design and configuration of the booths, AQD has determined that these are appropriate monitoring points for airflow.

Below is a summary of facility monitoring parameters. The company is maintaining 3-hr block averages of the data below. Records were reviewed and no issues were found with the operating values.

Emission Unit	Booth	Monitoring Parameter	Minimum Operating Value ft³/min	Compliance Point (based upon a 3-hour block average)
EUCOE1	COENorth	Air flow	296	200 ft/min
	COESouth	Air flow	296	200 ft/min
EUSIL01		Air flow	3,229	2,054 ft³/min
EUSIL02	SIL2East	Air flow	236	200 ft/min
	SIL2West	Air flow	236	200 ft/min

EUSIL03	Air flow	554	200 ft/min
EUADHESIVE1 (PR1)	Air flow	232* (175)	200 ft/min
EUADHESIVE2 (RC1)	Air flow	593* (175)	200 ft/min
EUADHESIVE3 (RC2)	Air flow	349* (175)	200 ft/min
EUADHESIVE4 (RC4)	Air flow	556* (175)	200 ft/min
FGRTO	Temperature	1,475°F	1,475°F

* These flows were determined during the most recent Method 204, permanent total enclosure evaluation.

The facility is maintaining the 3-hour block average based on guidance by USEPA.

Deviations identified are based on facility records identifying “Reportable Deviations”. On May 8, 2018, Jason Schenandoah of USEPA, Region V, provided the following clarification on calculating a 3-hour block average:

- A 3-hour block average does not necessarily need to begin at midnight. However, whichever hour is chosen to start the 3-hour block average should be consistent throughout all monitoring periods and should not change.
- Any data that is recorded during periods of start-up, shutdown, and malfunction (SSM) should not be considered in any averaging.
- All readings that are recorded that do not occur during SSM, should be used to produce the 3-hour average. There is no requirement for percentage of readings, the readings just need to be weighted properly while calculating the average.
- Only weight the average by the number of readings that are not part of SSM. (Example: If you have ten 15-minute readings that occurred during the 3-hour block that are not during SSM, you would sum the ten readings and divide by 10 while calculating the average).

The organic HAP limit under Subpart M MMM is 37.7 lbs/gal of coating solids per 12-month rolling time period. However, since the facility is also subject to Subpart P PPP for coating plastic parts, a facility specific emission limit was established to meet both Subpart M MMM and Subpart P PPP. Under 40 CFR 60.3890(2) the site specific limit

for HAPs has been determined to be 2.52 lbs/lbs of coating solids (or 26.5 lbs/gallon of solids). Records for the time period of August 1, 2021 through July 19, 2022 were requested and reviewed. The highest controlled HAP emissions show controlled HAPs to be 0.49 lbs/lbs of coating solids which is below the established limit.

40 CFR Part 63, Subpart PPPP:

The facility is also subject to Subpart PPPP, but compliance is established through meeting the facility specific emission limit of 2.52 lbs/lbs of coating solids (or 26.5 lbs/gallon of solids).

FGCAM:

The company is conducting all the Compliance Assurance Monitoring (CAM) requirements as outlined in MI-ROP-E5094-2018 and maintaining required records and documentation. Monitoring under CAM includes the proper operation of temperature monitoring device in the combustion chamber of the RTO. No issues were noted with this monitoring device during the inspection. Any exceedances or excursions have been reported and submitted to the AQD in accordance with the permit. No Quality Improvement Plan (QIP) is required at this time.

FGCOLDCLEANERS:

MI-ROP-E5094-2018 has six units identified but there are only three at the facility. The three cold cleaners at the facility that are exempt from Rule 201 permitting per Rule 281(2)(h).

FGDDDDD (Boilers):

The facility has two active natural gas-fired boilers. Boiler2 is a Wickes model that was manufactured and installed in 1956 and has a heat input capacity of 25.9 MMBtu/hr. This boiler is operated on a limited basis to provide backup to Boiler 4. Boiler4 is a Johnson model that was manufactured in 1985 and installed on January 22, 2018, which has a heat input capacity of 12.55 MMBtu/hr. Both boilers are exempt from Rule 201 permitting under Rule 282(2)(b)(i), however both boilers are subject to the requirements of 40 CFR Part 63, Subpart DDDDD. EUBOILER4 is not subject to NSPS for Industrial Steam Generating Units under 40 CFR Part 60, Subpart Dc because the unit was operating prior to the 1989 applicability date. Relocation or change in ownership does not affect the rule applicability to an "existing facility".

Both boilers require annual tune-ups. Boiler 4 was last tuned-up on November 13, 2021 and Boiler 2 on October 29, 2021 in accordance with Subpart DDDDD requirements. These tune-ups included inspection, cleaning and maintenance in accordance with manufacturer specifications as well as carbon monoxide emission optimization through carbon monoxide concentration measurements and tuning. All reports were submitted in accordance with Subpart DDDDD and MI-ROP-E5094-2018.

FGRULE290:

This flexible group includes EURUBBERMIX2, which includes dry mix compounding, a small rubber mixing, and milling process all controlled by a Torit baghouse (located outside the building). This process is not used very often and did not operate during the time period covered by this inspection. HAVS staff stated that this equipment has not operated in years but could run if needed. HAVS is still maintaining the Torit

baghouse. The baghouse operates at around 1.0 psi when the process is operating. Weekly preventative maintenance and visible emission observations are also conducted when the process is operational, however since the process has not operated during the time period covered by this inspection, no records were reviewed or provided.

EUGENERATOR:

The facility has one small natural gas fired emergency generator that is exempt from Rule 201 permitting per Rule 285(2)(g). The generator is subject to NESHAP for Reciprocating Internal Combustion Engines under 40 CFR Part 63, Subparts A and ZZZZ. The generator is a 70-horsepower natural gas spark ignition (SI) reciprocating internal combustion engine (RICE) used for emergency purposes and was installed in May 2007 (it has a faceplate manufacture date of 1-30-2007 and it is unlikely to have been ordered before June 2006). Due to the installation date, it is considered a new source. A new source is considered to be in compliance with the RICE NESHAP by complying with the New Source Performance Standard (NSPS) for Spark Ignition Internal Combustion Engines under 40 CFR Part 60, Subpart JJJJ. Only engines installed after June 12, 2006, and manufactured after January 1, 2009 are subject to the NSPS. Due to the manufacture date of the generator there are no applicable requirements involved.

PTI No. 49-18A:

PTI No. 49-18A was issued on October 20, 2021 to the facility for the addition of a new chain-on-edge adhesive coating line (EUCOE02) to replace the existing emission unit EUSIL01. EUCOE02 is considered a permanent total enclosure (PTE) and consists of two automated spray booths for applying cement to metal and plastic parts. Prior to entering the booths, the parts first pass through a pre-heat oven. The chain-on-edge rotates the parts through the robot-mounted spray guns. VOC emissions from EUCOE02 are controlled by the existing regenerative thermal oxidizer (RTO) found in FGRT0. EUCOE02 is subject to 40 CFR Part 63, Subpart MMMM - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts.

During the July 19, 2022, inspection, EUCOE02 construction status was discussed with facility staff. Facility staff stated that construction of EUCOE02 was nearly complete, but still hasn't been brought on-line. It was noted during the facility walkthrough that EUCOE02 was in place, but not operational at the time of the inspection. Requirements of PTI No. 49-18A were discussed with facility staff for once EUCOE02 became operational. Since EUCOE02 is still in the construction phase, requirements of PTI No. 49-18A are not addressed further or have already been addressed above within the requirements of MI-ROP-E5094-2018. In future, the facility will notify AQD of the start-up of EUCOE02.

CONSENT ORDER AQD No. 25-2016:

Consent Order AQD No. 25-2016 is still referenced in the ROP but was terminated on October 8, 2019.

Conclusion:

Based on the review of the records provided and the facility walk through, Hutchinson Antivibration Systems Inc. appears to be in compliance with MI-ROP-E5094-2018 and

PTI No. 49-18A.

NAME Michael T. Cox

DATE 8/24/2022

SUPERVISOR MH