

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Other**

A936468486

<b>FACILITY:</b> Hutchinson Antivibration Systems, Inc		<b>SRN / ID:</b> A9364
<b>LOCATION:</b> 600 Seventh St., CADILLAC		<b>DISTRICT:</b> Cadillac
<b>CITY:</b> CADILLAC		<b>COUNTY:</b> WEXFORD
<b>CONTACT:</b> Al Gatt , HSE Coordinator		<b>ACTIVITY DATE:</b> 06/21/2023
<b>STAFF:</b> Rob Dickman	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> Records review of this major source.		
<b>RESOLVED COMPLAINTS:</b>		

Hutchinson Antivibration Systems produces a variety of automotive parts that consist of rubber and metal components. The rubber components are manufactured on site while the metal parts are manufactured elsewhere and shipped to the facility. Various adhesives are used to bond rubber and metal together. The facility includes processes for cleaning the various metal components, molding of rubber components, and applying various adhesives to each.

Recordkeeping requirements at this facility are extensive. Twelve months of required records were requested by the AQD on May 1, 2023 and were received on June 7, 2023. The time period requested was from April 2022 through March 2023; referred to in this report as the review period. In the case where required record frequency was more than weekly, three random days were selected for review. The days were January 5, 2023, August 11, 2022, and March 31, 2022. Following is an evaluation of these records as required by Renewable Operating Permit Number MI-ROP-A9364-2022.

#### **SOURCE-WIDE CONDITIONS**

The facility is required to have an approved site-specific Malfunction Abatement Plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016.

#### **EUROLLCOAT**

A roll coat process with primer and adhesive application stations connected by a conveyor system. Volatile Organic Compound (VOC) emissions from the system are controlled by a regenerative thermal oxidizer (RTO).

The pressure drop for the enclosure for this unit is to be monitored and recorded once per shift. To meet the criteria of a Permanent Total Enclosure (PTE), the pressure drop must be greater than 0.007 inches of water, gauge. The facility monitors required pressure drop on all of its enclosures continuously. Three random days were reviewed.

EUROLLCOAT	3/31/2022	8/11/2022	1/5/2023
Pressure Drop Average	0.485	0.485	0.486

#### **EURBRMOLDING**

Rubber injection and compression presses; and post bond cure oven. Emissions from presses and oven are controlled by fabric filters. Air pollution control is by dry fabric filters.

Records of the amount of each rubber molding material processed are required to be kept. The facility is limited to 18,000,000 pounds of rubber molding material processed in EURBRMOLDING based on a 12-month rolling time period, as determined at the end of each calendar month. For the 12-month review period, the highest 12 month rolling average of rubber molding material used was in March of 2023 at 8,683,737 pounds.

A current record of the chemical composition of each rubber molding material and mold release agent, including the weight percent of each component is required. This information is being kept and appeared complete and up to date. Some of the information was reviewed on site and some was included in the records submission.

Monthly and 12-month rolling time period VOC emission calculation records shall be kept. VOC emissions are limited to 7.8 tons per year based on a 12-month rolling time period. The highest monthly VOC value during the reporting period was in March of 2023 at 424 pounds. The highest annual VOC emissions during the reporting period was also in March of 2023 with 2.17 tons per year based on a 12-month rolling time period.

Monthly and 12-month rolling time period Particulate Matter (PM), Particulate Matter less than 10 microns (PM-10), and Particulate Matter less than 2.5 microns (PM-2.5) emission calculations are required to be performed and reported. PM, PM-10, and PM-2.5 emissions are limited to 1.35 tons per year for each based on a 12-month rolling time period. The highest monthly PM value was in March of 2023 at 127.4 pounds. The highest PM emissions during the reporting period was also in March of 2023 with 0.65 tons per year based on a 12-month rolling time period.

**EURBRCUREOVEN**

This emission unit is a post-bond cure oven. Dry, cured rubber parts from the cementing lines are pushed into metal cans to form an assembly. An oil is used for lubrication to form the assembly and the parts are placed into the cure oven. Control is through dry fabric filters. This unit began operation in February of 2021.

A current record of the chemical composition of each material used in this emission unit, including the weight percent of each component is required. This information is being kept and appeared complete and up to date. It was included in the records submission.

The following information for EURBRCUREOVEN is being kept:

- Pounds of each material used, on both an 8-hour time period and on a monthly basis. This is limited to 3.44 pounds per 8-hour period. The maximum used in an 8-hour period was in January of 2023 at 2.11 pounds.
- VOC mass emission calculations determining the monthly emission rate in tons per calendar month. The highest monthly emissions were in August of 2022 at 0.02 tons.
- VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. VOC emissions are limited to 1.89 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. The highest emissions were in March of 2023 at 0.16 tons per year.

**FGAUTODIP**

Two automatic dip systems for applying cement to metal and plastic parts. Processes also include conveyor systems for drying the dipped parts. The cements are dried by an electric dryer. VOC emissions from both lines are controlled by a regenerative thermal oxidizer.

The pressure drop (Delta P) for each enclosure for this group is to be monitored and recorded once per shift. To meet the criteria of a Permanent Total Enclosure (PTE), the pressure drop must be greater than 0.007 inches of water, gauge. The facility monitors required pressure drop on all of its enclosures continuously. Three random days were reviewed.

FGAUTODIP	3/31/2022	8/11/2022	1/5/2023
Delta P Average, Line 1	0.485	0.485	0.486
Delta P Average, Line 2	0.031	0.035	0.031

**FGSPRAYMACHINES**

Chain-on-edge numbers 1 and 2 are two automated booths each for applying cement to parts. Prior to entering the booths, the parts first pass through a pre-heat oven. The chain-on-edge rotates the parts through spray guns. Chain-on-edge number 3 is also an automated booth for applying cement to parts. Parts do not pass through a pre-heat oven. Cement is applied to the parts by spray guns and then the cement is dried in an oven. Chain-on-edge number 4 is two automated booths for applying cement to parts. Prior to entering the booths, the parts first pass through a pre-heat oven. EUROTSTRAY1 is a rotary spray adhesive line used to apply adhesive to. VOC emissions are controlled by the RTO.

The pressure drop (Delta P) for each enclosure for this group is to be monitored and recorded once per shift. To meet the criteria of a Permanent Total Enclosure (PTE), the pressure drop must be greater than 0.007 inches of water, gauge. The facility monitors required pressure drop on all of its enclosures continuously. Three random days were reviewed.

FGSPRAYMACHINES	3/31/2022	8/11/2022	1/5/2023
Delta P Average, Line 1, Primer	0.455	0.021	0.018
Delta P Average, Line 1, Topcoat	0.100	0.075	0.080

Delta P Average, Line 2, Primer	0.045	0.017	0.032
Delta P Average, Line 2, Topcoat	0.031	0.050	0.077
Delta P Average, Line 3, Primer	0.036	0.035	0.077
Delta P Average, Line 3, Topcoat	0.055	0.036	0.055
Delta P Average, Line 4, Primer	0.255	0.065	0.145
Delta P Average, Line 4, Topcoat	0.012	0.015	0.014

### FGRTO

This group consists of two automatic dip spin lines, four automated chain-on-edge lines, a rotary spray adhesive line, and a roll coater all used to coat metal and plastic parts. VOC emissions from this group are all controlled by a common RTO.

The facility is to maintain a current listing from the manufacturer of the chemical composition of each cement, adhesive, coating, thinner, solvent, additive and catalyst, including the weight percent of each component. This information is being kept by the facility. Information relating to this was included in the records submission.

The following are required to be kept on a monthly basis:

- Gallons (with water) of each cement, adhesive, coating, thinner, solvent, additive and catalyst used. These usage records are being kept and appeared complete and up to date. Usage of each material for each unit is tracked and totals for each material for this group are summarized. As an example, the most used material is number 6411 and its highest usage for the reporting period was in January of 2023 with 1340 gallons used across all lines contained in FG-RTO.
- Where applicable, gallons (with water) of each material reclaimed. No materials are reclaimed at this facility.
- VOC content (with water) of each material as applied. The content of each material used is listed in the facility records and appeared complete. The VOC, HAP, and Ethylbenzene content of each material used at the facility is being recorded. As an example, the most used material is number 6411, the VOC content of it is 72.7%, all of which is considered Hazardous Air Pollutants (HAP). Ethylbenzene content of this material is 15.1%.
- VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. Records for each month are being kept and appeared complete and up to date. The highest VOC emissions for this group during the reporting period was in April of 2022 with 2.37 tons per year based on a 12-month rolling time period. VOC emission in pounds per month are also calculated and recorded for each emission unit in FG-RTO.
- Gallons (with water) of each ethylbenzene containing material used. This information for each material used is being tracked. As an example, the most used material is number 6411 and its highest usage for the reporting period was in January of 2023 with 1340 gallons used across all lines contained in FG-RTO.
- Where applicable, gallons (with water) of each ethylbenzene containing material reclaimed. No materials are reclaimed at this facility.
- The ethylbenzene content (with water) in pounds per gallon of each material used. This information is being tracked. As an example, the most used material is number 6411. Ethylbenzene content of this material is 15.1%.
- Ethylbenzene mass emission calculations determining the monthly emission rate in tons per calendar year. These records are being kept and appeared complete and up to date. The highest ethylbenzene emissions during the reporting period were in April of 2022 with 0.21 tons per year based on a 12-month rolling time period.

The temperature in the combustion chamber of the RTO is required to be monitored and recorded on a continuous basis. The facility does monitor RTO temperature continuously. Records of this are kept electronically. A review of three random days of continuous monitoring indicated the following:

RTO	3/31/2022	8/11/2022	1/5/2023
Average Temperature	1590	1593	1643

The pressure differential between each Permanent Total Enclosure (PTE) in FGRT0 and the outside area must be monitored and recorded on a continuous basis to verify that each PTE is under negative pressure. Pressure differential data is monitored and recorded continuously at each required booth. A review of three random days of this data indicated compliance with the pressure drop requirement of greater than 0.007 inches of water, gauge.

### **FGMACT MMMM**

This group consists of the same units as FGRT0 (two automatic dip spin lines, four automated chain-on-edge lines, a rotary spray adhesive line, and a roll coater). This table summarizes the requirements of 40 CFR Part 63, Subpart MMMM for this group as it relates to each unit.

The following compliance determinations must be made per Subparts MMMM and PPPP:

- The organic HAP emission rate for each compliance period must be equal to or less than the applicable emission limits. The facility has established specific emissions limits based on coating plastic and metal parts as allowed by 40 CFR 63, Subparts MMMM and PPPP. This limit is established monthly. Records of this monthly calculated limit are being kept. In March of 2023, the emissions limit was calculated at 29.42 pounds of HAPs per gallon of solids. Emissions for that month were 1.86 pounds of HAPs per gallon of solids.
- Demonstrate continuous compliance with each operating limit that applies. Records indicate the facility is in compliance with all applicable operating limits including pressure drop and RTO combustion chamber temperature requirements.
- Demonstrate continuous compliance with the work practice plan. The Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016. The WPP part of this plan consists of minimization of VOC and HAP emissions when storing and mixing materials containing these and when using them to clean equipment. Inspection of the facility indicated that these plans are being followed.

Demonstration of compliance with the applicable emission limits on a 12-month rolling time period basis must be performed using the following:

- Calculate the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month and, if applicable, calculate the mass of organic HAP in waste materials. These records are being kept. The highest HAPS emissions during the reporting period was calculated in March of 2023 at 1.86 pounds per gallon of coating solids based on a 12-month rolling time period.
- Calculate the total volume of coating solids used each month. These records are being kept. The highest HAPS coating solids used during the reporting period was in March of 2023 with 42,659 pounds of coating solids based on a 12-month rolling time period.
- Calculate the mass of organic HAP emission reduction by emission capture systems and add-on control devices. Emission reduction by the RTO is 97% based on testing performed in June of 2023. These records are being kept and appeared complete and up to date.
- Calculate each month's organic HAP emission rate. These records are being kept. The highest HAPS emissions during the reporting period for uncontrolled HAPS was in November of 2022 at 4.44 pounds per pound of solids, controlled emissions were 0.12 pounds per pound of solids.
- Calculate each 12-month rolling time period organic HAP emission rate. These records are being kept. The highest average HAPS emissions during the reporting period with uncontrolled HAPS of 68.41 pounds per gallon of solids calculated in July of 2022, controlled emissions were 1.86 pounds per gallon of solids, both based on a 12-month rolling time period.

The following records are also required to be maintained for this group. The material most used at the facility is noted as number 6411. Where applicable, details concerning this material are cited.

- A copy of each notification and report that is submitted to comply with Subpart MMMM, and the documentation supporting each notification and report. The facility keeps copies of all reporting sent to the AQD. This reporting has been reviewed and documented by AQD staff.

- A current copy of information provided by materials suppliers or manufacturers. These records are being kept and appeared complete and up to date. Material information is summarized in the records submitted by the facility.
- The calculations specified for HAPs for each compliance period. HAPs calculations are kept electronically. This information is contained in the records submitted including specific calculations used.
- The name and mass or volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period. These records are being kept and a summary of each material is included electronically with the submitted records.
- The mass fraction of organic HAP for each coating, thinner and/or additive, and cleaning material used during each compliance period unless the material is tracked by weight. These records are being kept and a summary of each material is included electronically with the submitted records. For 6411 the HAP content is 76%.
- The volume fraction of coating solids for each coating used during each compliance period. These records are being kept and a summary of each material is included electronically with the submitted records. The volume fraction of coating solids for 6411 is 23.9%.
- The density of each coating, thinner and/or other additive, and cleaning material used during each compliance period. These records are being kept and a summary of each material is included electronically with the submitted records. The density of 6411 is 8.02 pounds per gallon.
- The date, time, and duration of each deviation. This information is reported to the AQD semiannually. These reports have been previously reviewed and documented.
- For each deviation, whether it occurred during startup, shutdown, or malfunction. This information is reported to the AQD semiannually. These reports have been previously reviewed and documented.
- Records relating to startup, shutdown, or malfunction. This information is reported to the AQD semiannually. These reports have been previously reviewed and documented.
- Records demonstrating continuous compliance with each operating limit in Table 1 of Subpart M that applies. By maintaining PTE and minimum combustion temperature for the RTO, the facility demonstrates compliance with operating limits listed in the Subpart.
- For each capture system that is a PTE, the data and documentation used to support a determination that the capture system meets the criteria in Method 204 of Appendix M to 40 CFR 51 for a PTE and has a capture efficiency of 100 percent. The facility keeps records of pressure drop on each coating booth continuously to ensure that it meets the criteria listed in Method 204 of greater than 0.007 inches of water, gauge. Any deviations from this have been previously reported, reviewed, and documented.
- Records of organic HAP capture and destruction efficiency testing. Destruction Efficiency (DE) testing was last performed in May of 2018 and demonstrated a DE of 97%. Testing is scheduled for July of 2023.
- Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions. Performance testing was last performed in May of 2018 and testing was conducted under representative operating conditions. Testing was performed in July of 2023 and initial results indicate compliance and a Destruction Efficiency of 97%.
- Records of the data and calculations used to establish the emission capture and add-on control device operating limits. The RTO has a set temperature limit of greater than 1500 degrees. Testing to establish an alternate limit was not performed.
- Records of the leak checks and audits for the RTO temperature sensor, and emission capture system pressure drop measuring device. Checks of the accuracy of the RTO temperature sensor are performed monthly. A spot check of these audits indicates error at less than 0.2%.

Monitoring and recording of the RTO combustion chamber temperature shall be performed as follows:

- The temperature monitor must complete a minimum of one cycle of operation for each successive 15-minute period. This criterion is the federal definition of continuous monitoring. Monitoring frequency of RTO temperature at this facility exceeds this criterion.

- Determine the average of all recorded temperature readings for each successive 3-hour period of the RTO operation. The data acquisition system recording RTO temperature performs this calculation.

The pressure drop across each natural draft opening of each PTE is to be monitored and recorded as follows:

- The pressure drop monitor must complete a minimum of one cycle of operation for each successive 15-minute period. This criterion is the definition of continuous monitoring. Monitoring frequency of pressure drop in each booth exceeds this criterion.
- Determine the average of all recorded pressure drop readings for each successive 3-hour period of the PTE operation. The data acquisition system collecting pressure drop data performs this calculation.

When relocating or replacing the RTO temperature sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature. No sensors have been relocated or replaced during the reporting period.

#### **FG-RULE 287(c)**

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 287(c).

This group consists of one small, rarely used service booth. This booth has not been used in the last 12 months.

#### **FG-COLDCLEANERS**

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

A total of two cold cleaners are on site and are both in the maintenance department. These cleaners are serviced by an outside contractor. Material information and any records of maintenance performed are supplied by this contractor to the facility.

Recordkeeping for this facility is in compliance with the conditions of their Renewable Operating Permit.

NAME 

DATE 11-15-23

SUPERVISOR 