

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

FCE Summary Report

Facility : AAR Mobility Systems	SRN : B4197
Location : 201 Haynes St.	District : Gaylord
	County : WEXFORD
City : CADILLAC State: MI Zip Code : 49601	Compliance Status : Non Compliance
Source Class : MAJOR	Staff : Bill Rogers
FCE Begin Date : 1/9/2017	FCE Completion Date : 1/9/2018
Comments : Operational and MAP deficiencies identified by the permittee. Correction is in progress.	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
01/09/2018	Scheduled Inspection	Non Compliance	Scheduled Inspection
09/06/2017	ROP Semi 1 Cert	Compliance	Properly certified. Claims 25 deviations; 1 recorder failure only, 9 RTO problems while operating, 15 RTO problems but during time the coating lines weren't operating, so there would be no effect on VOC emissions.
09/06/2017	MACT (Part 63)	Compliance	MMMM Semi-annual compliance report. Properly certified. Compliance method is add-on control device. Claims compliance with emission standards.
05/12/2017	ROP Annual Cert	Compliance	Report supplied in response to VN. Company claims they sent it on time but it must have been lost. The attached documents and the company's history of being on time support this, so I will accept it this time.
05/12/2017	ROP SEMI 2 CERT	Compliance	Report supplied in response to VN. Company claims they sent it on time but it must have been lost. The attached documents and the company's history of being on time support this, so I will accept it this time.
05/12/2017	ROP Other	Compliance	Itemized annual compliance checklist and report.
03/03/2017	MAERS		2016 MAERS, Check MAERS for any review comments

Name: William J. Rogers Date: 1/28/18 Supervisor: SN

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

B419743150

FACILITY: AAR Mobility Systems		SRN / ID: B4197
LOCATION: 201 Haynes St., CADILLAC		DISTRICT: Gaylord
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT: Greg Shay, Environmental Health and Safety		ACTIVITY DATE: 01/09/2018
STAFF: Bill Rogers	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On January 9, 2018, Chance Collins and I inspected AAR Mobility in Cadillac. Mr. Greg Shay showed us around the facility. After our inspection, Mr. Shay also provided me with electronic copies of example pages of the records required by Renewable Operating Permit MI-ROP-B4197-2016.

Although I did not find any violations of the permit during my inspection, Mr. Shay did report one to me. EUSKINONRAIL, a conveyor-equipped glue booth and curing oven system, has operated without exhausting its emissions to the Regenerative Thermal Oxidizer, as it is required to do by MI-ROP-B4197-2016, Table FGCOATINGS, Condition III.2. This Condition states "The permittee shall not operate FGCOATINGS unless the RTO is installed and operating properly."

EUSKINONRAIL is supposed to shut down automatically shortly after the RTO goes down. It does not shut down immediately because it is a conveyorized system; half-finished components may proceed from the spray booth to the curing oven so they may be completed even after the RTO shuts down, but no new components are supposed to be fed into the spray booth. AAR has discovered that this Emission Unit doesn't always shut down at all when the RTO goes offline. They are investigating why.

In addition, Mr. Shay reports that the recordkeeping for RTO operation is not adequate. Operators record that the RTO is operating or not operating each day, but the existing system does not record whether the RTO shuts down for part of a day. Many RTO shutdowns are less than a day, and these aren't being recorded.

AAR personnel are investigating the failure of the automated system to shut down spray operations when the RTO shuts down. AAR is working on modifications to their recordkeeping and their Startup, Shutdown, and Malfunction Plans to address the issues they have identified.

As AAR reported this to me, and as AAR is undertaking action to correct the problems, I plan to exercise enforcement discretion and not start a formal enforcement case against the company. This assumes the problems are addressed promptly and effectively; if not we can institute enforcement later.

INSPECTION and RECORDS REVIEW:

Table EUAIRSTRIPPER

The air stripper, originally permitted in 1988, is still on site and operating.

Table EUAIRSTRIPPER, Condition VI.1, requires recording 1,2 dichloroethane (1, 2 DCA), 1,1,2,2 tetrachlorethylene (PCE), trichloroethane (TCE) and total VOC concentrations in water influent and effluent. Condition VI.2 and VI.3 require calculating and recording emissions of these substances per calendar month. This information is being kept as required.

Mr. Shay provided me with several influent and effluent concentration test results. As an example, the October 2017 results show all values below detection limits for the stripper effluent. The stripper influent had values below the detection limit for two of the three substances tested for, while TCE concentration was 14 micrograms/liter.

Emission calculations for all of 2017 were provided. For December, 2017 as an example, the results were:

1,2 DCA limit	1,2 DCA emissions	PCE limit	PCE emissions	TCE limit	TCE emissions	VOC limit	VOC emissions
3.69 ug/m**3	0	2.58 ug/m**3	0.03	15.8 ug/m**3	0.27	0.19 lb/hr	0.0000246

These results meet the emission limits. In addition, recordkeeping appears adequate to satisfy the recordkeeping requirements of the permit.

Condition VIII.1 requires the stack to have maximum 8" diameter and minimum 50' height. I saw the stack. While I was not able to estimate its dimensions with any precision, it appeared to meet its permit requirements.

Table EU197LINENOCTRL. One dry filter paint booth. Emissions from this booth are routed to RTO for more standard high VOC coatings. "Compliant coatings" are allowed without the RTO. Also burning fumes from coatings containing PCBTF using the RTO is prohibited. Burning PCBTF produces dioxins, and so should be avoided.

Condition III.1 requires capturing waste materials in closed containers. All waste containers I saw seemed to be properly closed.

Condition III.2 requires disposing of spent filters in a way to minimize introduction of pollutants to the outside air. I didn't see any used filters out in the open. Keeping them contained would meet this requirement.

Condition III.3 requires keeping VOC and HAP containing materials in closed containers whenever possible. All coating, thinner, and solvent containers I saw seemed to be closed properly.

Condition III.4 requires cleanup and purge activities to be inside the booth. Mr. Shay showed me where this was done inside the booth. There are containers provided to capture purging solvents.

Conditions VI.2, VI.3 and VI.4 require keeping track of amounts and chemical composition of coatings used, VOC content, daily use rates, PCBTF and other HAP use, and associated information. All this information is being kept by their automated "ACIMS System."

Conditions VIII.1 and VIII.2 set stack dimensions. SV197BTHSTK has maximum diameter 34", minimum height 60'. SV197OVNSTK has maximum diameter 8", minimum height 60'. I saw these from outside the facility. Although I was not able to estimate height and diameter with any accuracy, they looked as if they met their permit requirements.

Table EUCONTNRNOCTRL. One paint booth with dry filter control. "Compliant coatings" are allowed without the RTO. Also burning fumes from coatings containing PCBTF using the RTO is prohibited. Burning PCBTF produces dioxins, and so should be avoided.

Condition VI.1 requires a list of composition of each coating. Mr. Shay provided records which appear to meet this requirement.

Condition VI.2 requires keeping track of VOC content of coatings, amount used, hours of operation, daily hourly average VOC emissions, monthly and 12 month total VOC emissions. All information was on file as required. Example records for October, 2017, report 3.40 pounds per VOC per hour as a typical average. During February the equipment, when operating in this mode, emitted 3.07 pounds per hour VOC as a typical average. They emitted 0.21 tons during the month. 12 month rolling total limit is 17.1 tons.

Condition VI.3 requires keeping track of materials containing PCBTF and calculating emissions. None of this was used in October.

Conditions VIII.1 and 2 set stack dimensions. SVBOOTHSTACK should have maximum diameter of 24" and minimum height of 60'. SVOVENSTACK should have maximum diameter of 8" and minimum height of 60'. I saw these from outside. I was not able to estimate height with any accuracy, but they appeared to meet their permit conditions.

Table EUCLEANUP- Cleanup and purge activities

Condition III.1 requires all purge activities to be conducted within one of the spray booths. I didn't see any stains or spills which would be evidence of any purging outside the booths.

Condition IV.1 require the RTO be installed and operating properly when the equipment is not in one of its "no control" modes. The RTO was installed and appeared to be operating properly.

Condition VI.1 and VI.2 require identification of all cleanup solvents, amounts used, and associated information. Based on past information, AAR uses acetone as a purge solvent. Acetone usage records report

that in many months they don't use any. The only use recorded in 2017 was 58.5 pounds in February and 97.5 pounds in March.

Table EUGRIND/PAINT- processes associated with rebuilding pallets and containers in the Lakeside Building.

Condition V.1 requires keeping VOC content of each coating. The company keeps formulation information on all coatings used in the facility.

Condition VI.1 requires keeping records of coatings used, reducer used, VOC content of each, and monthly VOC emissions. Mr. Shay provided a spreadsheet showing they had used only an adhesive with 5.6 pounds VOC per gallon and a thinner with 7.8 pounds per gallon. They used 2.07 tons of thinner and 1.29 tons adhesive in 2017.

Table FGCOATINGS

Condition III.1 requires all spray booth exhaust filters to be installed and operating properly. I checked both booths. All filters were installed properly as required.

Condition III.2 requires the RTO be installed and operating properly. It was installed and appeared to be operating properly as required.

Condition III.3 requires an approved Malfunction Abatement Plan. The company does have one, although as Mr. Shay reported the facility plans do require revising. AAR is preparing revisions to submit to us.

Condition VI.1 requires keeping composition information for all coatings and reducers. The company maintains composition information on all coatings, reducers, and similar materials on site. Mr. Shay provided me electronic copies of examples of this.

Condition VI.2 requires monitoring and recording RTO chamber temperature. They record this continuously on circular charts. They have an alarm if the temperature drops. Mr. Shay told me they have an alarm and a red light that notify workers if the RTO shuts down. Temperature on the circular charts was a bit above 1400 degrees f.

Mr. Shay provided me with a copy of a spreadsheet where they record a summary of RTO temperature excursions. It lists perhaps 20 excursions but most occurred while the paint booths were not operating, so should not count. Two others were during planned maintenance shutdowns. During 2017 they had the following excursions which did occur, apparently, during scheduled production hours:

- 1/10, RTO down 8 hours, a storm caused a manual restart
- 1/11, RTO down 4 hours, "gas valve ramp loose"
- 4/12, RTO did not shut down but data was lost due to incorrectly installed chart
- 5/11, RTO down 1.5 hours, production shut down, damper cylinder leak
- 5/13, RTO down 2 hours, production shut down, exhaust damper failure
- 6/23, RTO down 2 hours, production shut down, PLC program had to be restarted after power failure.

Condition VI.3 requires recording pressure drop across the dry filters once per shift. Each baghouse has a Magnehelic gauge, which allows this to be done. Pressure drop on the container booth was 2.0" w.g. I saw the pressure drop on the 197 booth, but apparently did not note it down.

Condition VI.6 requires records of coatings and reducers used, VOC content, daily usage rate, daily hours of operation, daily VOC, monthly VOC, and 12 month VOC emissions. Mr. Shay provided me with a copy of a spreadsheet showing this. For October they emitted 0.36 tons VOC. The annual limit is 122.3 tons and monthly is 13 tons.

Condition VIII.1 requires the RTO stack to have maximum diameter of 54 inches and minimum height of 60 feet. I couldn't estimate this with much accuracy but it appeared to meet the permit requirements.

Table FGMACT

Condition I.1 requires no more than 2.6 pounds of organic HAP per gallon of coating solids. Mr. Shay provided me with their results for 2017. For October, they averaged 0.46 pounds per gallon of coating solids.

Condition III.7 requires average 3 hour RTO chamber temperature not fall below the temperature established in Federal regs, which is 1400 degrees f. According to AAR's circular charts, the RTO is staying at or above this temperature.

Condition VI.1 requires, among other things, calculating total mass of organic HAP per month. AAR is doing this. For October 2017 this was 313.4 pounds. They are also required to record gallons of coating solids per month. For October 2017, this was 603.56 gallons.

Condition VI.2 requires, among other things, collecting RTO combustion chamber temperature data. The company is doing this continuously, using circular charts.

Table FGPARTICULATES: Saws, router, sander, etc. with baghouse.

Condition III.1 requires the baghouse be installed and operating properly. It was installed and appeared to be operating properly, based on lack of fallout near its exhaust..

Condition III.2 requires the cyclone to be installed and operating properly. It was installed and appears to be operating properly, based on lack of fallout near its exhaust.

Conditions III.3 and 4 require operating within acceptable pressure drop ranges. Condition IV.1 requires pressure drop instruments be installed. I saw pressure drop gauges. Pressure drop was 1.6 inches w.g. for the baghouse. I did not note the pressure drop for the cyclone.

Condition IV.1 requires pressure drop instruments on the baghouse and cyclone. These were installed and operating at the time of my inspection, although I didn't note the pressure drop.

Condition VI.1 requires recording pressure drop once per day. These records are being kept. In January 2017 the pressure drop was generally running around 2.5" w.g.

Condition VIII.1 requires the cyclone exhaust have a maximum diameter of 8.02" and minimum height of 7.32'. The exhaust appeared to meet these requirements.

Table FG-RULE 287(c)

This is for general minor coating use, of under 200 gallons per month. I am not aware of any equipment in the facility which would fall under this table.

Table FGCOLDCLEANERS

This is for "small" cold cleaners. I saw two of these during my inspection. They were small, sink-sized units where solvent is pumped from a drum beneath the cleaner up onto the part and then drains down into the drum again. The cleaners I saw all had lids and the lids were closed when I got there.

NAME William J Rogers Jr.

DATE 1/28/2018

SUPERVISOR SN