

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

B419755306

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|---|--------------------------------------|----------------------------------|
| 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: 09/23/2020 |
| STAFF: Bill Rogers | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MAJOR |
| SUBJECT: Inspection and record review for FCE | | |
| RESOLVED COMPLAINTS: | | |

On September 23, 2020, I reviewed records, photographs, and statements from AAR Mobility to determine compliance with their Renewable Operating Permit MI-ROP-B4197-2016c. Due to the covid-19 pandemic I chose not to inspect the site in person. However, Mr. Greg Shay provided me with records, statements, and photographs sufficient to determine compliance with this permit.

AQD issued this ROP November 21, 2016. It was revised August 29, 2017; June 18, 2018; and April 22, 2019.

Table EUAIRSTRIPPER

Conditions II.1 through II.4 set the following limits, all based on an average over each calendar month:

| Substance | Limit | Actual | Compliance? |
|---------------------------|------------------------|-----------------------------------|-------------|
| 1,2 Dichloroethane | 3.69 mg/m ³ | 0.00 (non detect) | Yes |
| 1,1,2,2 Tetrachloroethane | 2.58 mg/m ³ | 0.03 | Yes |
| Trichloroethylene | 15.8 mg/m ³ | 0.23 | Yes |
| Total VOC | 0.19 lb/hr | about 1.05x10 ⁻⁴ lb/hr | Yes |

I picked October 2019 for the examples above, as emissions seemed generally higher that month than most. All reported emissions comply with the permit conditions.

Conditions VI.1 through VI.3 require recording the materials listed in the table above and keeping adequate records of them. The records appear to be adequate to determine compliance. This complies with the permit conditions.

Condition VIII.1 sets stack dimensions of a maximum diameter of 8 inches at a minimum elevation of 50 feet above ground. In previous inspections I estimated by eye that the stack appeared to meet these requirements. AAR provided us a photograph of the stack. They say it has not been changed, and it appears in the photograph that it has not been changed. This is sufficient to show compliance with the permit condition.

COMMENTS:

AAR provided us with lab analysis sheets for the scrubber influent and effluent, in support of their emissions and removal efficiency calculations. AAR also provided photographs taken during repairs of the air stripper during 2019. Various plumbing was cleaned and repaired and the packing materials in the stripping tower were replaced.

TABLE EU197LINENOCTRL

Condition II.1 limits VOCs to 3.1 tons per year, based on a 12 month rolling time period. Actual emissions are about 0.1 tons per year. This complies with the permit condition.

Condition II.2 limits p-chloro-benzotrifluoride to 12.3 tons per year based on a 12 month rolling time period. Actual emissions are about 60 pounds per year. This complies with the permit condition.

Condition III.1, III.2, and III.3 require waste materials, spent solvents, VOC and HAP containing materials to be handled in a way so as to minimize introduction of VOCs and HAPs to the air. AAR provided photographs for the various containers and receipts for waste disposal. They also provided analysis of spent filters that are disposed of as general waste, demonstrating that the HAP and VOC content of these filters is negligible. The containers appear to properly contain materials as specified by the Permit Conditions.

Condition III.4 requires that cleanup and purge operations should be performed inside the paint booths so that emissions can be routed to the RTO. AAR provided a photograph of the station where these operations are done. It is located inside one of the paint booths as required.

Condition IV.1 requires all exhaust filters to be installed and operating properly. AAR provided photographs of the filters in place. They appear to be installed and operating properly. In addition, photos of pressure drop meters on the spray booths show a pressure drop within the acceptable range, indicating proper operation.

Conditions VI.2, VI.3, and VI.4 require detailed recordkeeping of names, VOC content, HAP content, and water content of all coatings used. AAR provided lists and spreadsheets which appear to contain all the required information, in compliance with these permit conditions.

Conditions VIII.1 and VIII.2 set stack dimensions for the 197 Booth Exhaust and 197 Oven Exhaust as: for booth, maximum 34 inches diameter at a minimum of 60 feet above ground, for oven maximum of 8 inches diameter at 60 feet above ground. AAR provided a photograph of the stacks. In previous inspections I determined they appeared to meet their permit specifications. They appear not to have changed, so they still meet permit specifications.

TABLE EUCONTNRNOCTRL

Conditions I.1 through I.4 set the following emission limits: VOC 10.5 pounds/hr, 17.1 tons/yr; actual emissions about 1 pound per hour and 3.35 tons per year. p-chlorobenzotrifluoride 24.3 tons per year and 256 pounds per day, actual emissions approximately zero as the company does not report using any of it recently. This complies with the permit limits.

Condition II.1 limits coatings to 3.5 pounds VOC per gallon, less water, or less. AAR provided a list of coatings used in this equipment, with their VOC contents. All coatings listed complied with this permit condition.

Conditions VI.1 through VI.3 require detailed record of coating names, VOC, HAP and water content of all coatings used. The list of coatings provided appears to comply with these permit conditions.

Conditions VIII.1 and VIII.2 set the same stack dimensions as the previous table, as this is the same equipment used with different coatings. As above, the booth and oven stacks appear to meet the permit requirements.

TABLE EUCLEANUP

Condition I.1 limits Acetone to 1.7 tons per year. Company records claim they haven't used any in several months. This complies with the permit condition.

Condition III.1 requires cleanup and purge be done inside the spray booths. AAR provided a photograph of the purge drum, which is located inside the spray booth. This complies with the permit condition.

Condition IV.1 requires the RTO be installed and operating properly. Photographs of booth magnehelic gauges show the booths are under suction. Photos of the RTO temperature chart show a temperature of 1400 degrees at the time of the photograph, and a circular chart showing that the temperature had been holding steady that week. These indicate the system is operating properly as required by the permit condition.

Condition VI.1 and 2 require keeping names and composition data for all cleanup and purge solvents. Records provided by AAR appear to be adequate, in compliance with this permit condition.

TABLE EUGRIND/PAINT

Conditions I.1 and I.2 set VOC limits of 2000 pounds per month and 10 tons per year. Records provided show VOC emissions varying between 38 and 400 pounds per month, for a total of about 1.1 tons per year. This complies with the permit conditions.

Condition V.1 requires determining VOC content of any coating used. What is actually used is one adhesive and one thinner. VOC on the adhesive used is 5.6 pounds per gallon, for the thinner 7.3 pounds per gallon.

Condition VI.1 requires detailed records of what coatings are used and how much. Records are sufficient to comply with this permit condition.

TABLE EU500HPBOILER

Requirements for this boiler are mainly various notifications and a maintenance tune-up required prior to my previous inspection. I did not check into the boiler as part of this inspection.

TABLE FGCOATINGS

Condition I.1 sets a VOC limit of 122.3 tons per year for FGCOATINGS. Actual emissions are about 1 ton per month over 2019. This complies with the permit condition.

Condition I.2 sets a VOC limit of 8.2 tons per year on EUCONTAINERLINE. Emissions were about 1.5 tons in 2019. This complies with the permit condition.

Condition I.3 sets a limit of 0.9 tons per year diglycidyl ether of bisphenol a . Actual use was about 1.5 pounds in 2019. This complies with the permit condition.

Condition III.1, 2, and 3 require storing coatings, solvents, waste materials, and disposing of waste materials in a way to minimize introduction to the ambient air. AAR provided photographs of coating containers and waste containers which show closed containers that should comply with this permit condition. In addition, they provided an analysis of dry paint booth filters, which are disposed of as general waste and not as hazardous waste. The analysis showed that the VOC and HAP content of the used paint booth filters were negligible. This complies with the permit condition.

Condition III.4 requires a Malfunction Abatement Plan. AAR has a MAP. It is currently in Revision 6, approved 4/24/2018.

Condition IV.1 requires all booth exhaust filters be installed and operating properly. Photographs of the filters show them in place properly. Photographs of the pressure gauges on the paint booths show a proper pressure drop into the booth. It appears the filters are operating properly, in compliance with this permit condition.

Condition IV.3 and IV.4 require the RTO be installed and operating properly. Photographs of the temperature readout show a temperature of 1400 degrees, and the circular chart shows the temperature remaining steady over the past week. This indicates the RTO is operating in compliance with the permit conditions.

Condition IV.5 requires a temperature monitor for the RTO. It also requires visible and audible alarms. AAR provided us a photograph of the monitor. They provided photographs of the lights which will flash as visible alarms if the RTO goes out of temperature. These comply with the permit condition; of course I was not able to hear the audible alarm.

Conditions VI.2, 3, and 4 require detailed recordkeeping of the names of coatings, their VOC content, water content, and HAP content. Records provided by AAR appear to be adequate to comply with this permit condition.

Condition VI.5 requires monitoring pressure drop in the paint booths. AAR provided photographs of the magnehelic gauges that are used to do this. This complies with the permit condition.

Condition VI.6 requires monitoring and recording RTO temperature. AAR provided photographs of the digital temperature readout and the circular chart that automatically records RTO temperature. This complies with the permit condition.

Condition VIII.1 sets the RTO stack dimensions as a maximum diameter of 65.25 inches at an elevation of 60 feet above ground. In previous inspections I estimated that the stack met these specifications. AAR provided a photograph. AAR states the stack has not been changed. The stack, in the photograph, appears not to have changed. This complies with the permit condition.

TABLE FGMACT

Condition I.1 sets a limit of 2.6 pounds of organic solvents per gallon of solids. The current coatings list runs in most cases about 0.5 pounds VOC per gallon. This complies with the permit condition.

TABLE FGPARTICULATES

Condition I.1, 2, and 3 set particulate limits and PM-10 limits for the wood room, balsa core, and other woodworking operations. We have no data on emissions, as these units have never been stack tested. They are relatively small operations.

Conditions III.1 and 2 require that the baghouse and cyclone be installed and operating properly. AAR is checking pressure drop on these devices daily, according to check sheets they provided us. AAR provided photographs of the magnehelic gauges on the baghouse and cyclone. In the photo and chart, baghouse pressure drop was about 1.5 inches w.g. and cyclone pressure drop about 4 inches w.g. These pressure drops are reasonable for the equipment involved.

Condition VIII.1 sets dimensions on the cyclone stack as a maximum diameter of 8 inches at a minimum elevation of 7.3 feet above ground level. AAR provided photographs of the cyclone. Its stack appears to meet these specifications.

FGCOLDCLEANERS

Mr. Shay reports AAR still has 6 mineral spirits type small cold cleaners. Each has less than 10 square feet surface area. Each has a lid which was closed in the photographs AAR provided.

COMMENTS

In my previous inspection Mr. Shay reported that one of the production lines was not shutting down every time when the RTO went below temperature. They have tracked this problem down and claim that it has not recurred.

In addition, Mr. Shay reported that recordkeeping of RTO operation vs. production was not adequate because it did not list part days; on most days when the RTO has problems, it will be operating properly for part of the day and not operating properly for part of the day. The paint booth operators now keep track of hours of operation of the paint booths, not just days. Therefore it is possible to compare hours when the RTO was operating with hours of production, to make sure they match up.

NAME _____

DATE _____

SUPERVISOR _____