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

B419733993

FACILITY: AAR Mobility Systems		SRN / ID: B4197
LOCATION: 201 Haynes St., CADILLAC		DISTRICT: Cadillac
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT: Ed Connell , Environmental Specialist		ACTIVITY DATE: 03/18/2016
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection and meeting regarding ROP renewal		
RESOLVED COMPLAINTS:		

On March 18, 2016, I inspected AAR Mobility in Cadillac. I also met with the facility environmental expert, Mr. Ed Connell. This was an announced inspection to allow the company to line up the information I wanted to check, as part of writing the facility's ROP Renewal.

I did not find any violations during my inspection.

Changes to the facility since the last ROP Renewal are minor.

ROP Meeting:

We discussed the draft ROP. I supplied Mr. Connell with a working draft ROP and staff report, and asked him (if possible) to review them and notify me of any errors.

While there, Mr. Connell explained that due to changes in coatings to the new "Type 9" series, AAR's emissions have changed. The Type 9 coatings arrived during April 2014. HAP use and emissions dropped sharply with the new coatings.

In particular, AAR has special "No Control" flexible group conditions. They operate under these when using coatings which contain p-chlorobenzotrifluoride (which they call PCBTF in self-defense). This solvent forms dioxins when incinerated in their Regenerative Thermal Oxidizer, therefore AAR is prohibited from so incinerating them. Mr. Connell reports that PCBTF usage has dropped greatly because the Type 9 coatings use less of it and less HAP generally. Type 9 does use more ordinary VOCs, but the RTO is good at controlling those.

I explained that I could not remove AAR's acetone limit or change pounds per gallon VOC limits in the coating. AAR could ask for these changes in a Permit to Install Application. Mr. Connell said he would check whether AAR intended to pursue this. If they do they will try to have a permit application in soon enough that the change might possibly be incorporated into the renewal ROP. I emphasized the time is short for this and it may not be possible, but we could try.

We checked the "Exempt Equipment Not in the ROP" table on the draft staff report. Later, Mr. Connell reported to me via email that the saws listed as exempt equipment were actually the ones in EUWOODROOM, which has conditions in the ROP. The smaller of the two boilers listed has been removed. Therefore, the only equipment which should be listed in this table of the Staff Report is their 500 HP boiler. They use the 500 HP natural gas boiler for building heat and service hot water.

INSPECTION:

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, 1,1,2,2 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. I saw influent and effluent concentrations. For February calculated emissions of 1,2 dichloroethane were 0 as none was detected. PCE and TCE should be reported in mg per cubic meter; in February PCE was 0.0156 and TCE was 0.25 mg per cubic meter. VOC is to be calculated in pounds per hour; for February it was 0.0000157 pounds per hour.

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. I was not able to see this happening. Mr. Connell said the workers know they should do this.

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." However, because the equipment hasn't operated in "no control" mode recently, the most recent values for these usage rates and emission rates are all zero.

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. Connell showed me this information. They have it as required.

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. During February the equipment, when operating in this mode, emitted 3.07 pounds per hour VOC as a typical average. They emitted 0.24 tons during the month and 3.13 tons per 12 months ending in February.

Condition VI.3 requires keeping track of materials containing PCBTF and calculating emissions. None of this was used in February. For the past 12 months ending in February they emitted 0.01 tons of it.

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. Mr. Connell told me they have only been using pure acetone over the past several months. In February they operated the booths for 96 hours but didn't use any acetone (or other cleanup/purge solvents) at all.

Table EUGRING/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. Connell showed me this information being kept on a separate spreadsheet. In February 2016 VOC emissions from this process were 0.09 tons.

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. They are proposing revisions to it, which Mr. Connell discussed with me at the time of our meeting.

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.

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. Connell told me they also have an alarm that goes off at once if the burners shut down. Since it takes some time for the RTO internal temperature to drop, this allows them to shut down production before they have any excess emissions. Temperature on the circular charts was a bit above 1400 degrees f.

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. The booths were not operating at the time of my inspection but the fans were on. Pressure drop on the container booth was 2.4" w.g. Pressure drop on the 197 booth was 0.7 w.g.

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. Connell showed me the spreadsheet where they keep all this information. For February they averaged 2.3 pounds VOC per hour of operation. February total was 0.46 tons VOC. 12 month total was 3.70 tons VOC.

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. Connell showed me their calculations for the 12 month period ending February 2016. They averaged 0.47 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 February 2016 this was 204.19 pounds. The condition also requires calculating total volume of coating solids each month. AAR is doing this. For February 2016, this was 439.48 gallons.

Condition VI.2 requires, among other things, collecting RTO combustion chamber temperature data. The company is doing this continuously, using circular charts. They are to reduce this data to 3 hour averages and maintain a 3 hour average temperature above 1400 degrees f. The company is recording the required temperatures and making the required calculations. However, they have chosen to report any drop below 1400 degrees f as a deviation and take corrective action at once. This is more stringent than waiting for a 3 hour average, so I consider it acceptable.

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 off 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. The equipment was not operating at the time of my inspection.

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 V.1 requires non-certified weekly opacity observations. Mr. Connell showed me the forms where workers record having performed these observations. They appear to be doing it on schedule.

Condition VI.1 requires recording pressure drop once per day. These records are being kept. In February 2016 the pressure drop was generally running a bit above 1.4" w.g. on both.

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.

This equipment is CAM subject in the ROP. Therefore it must be assumed to have potential to emit more than 100 tons of particulate matter per year. I was curious whether the equipment really did have emissions that large.

Mr. Connell told me that the dust they collect is sent to American Waste, so he does have records on how much of it there is. Lately they have been sending about a ton a month. He has seen amounts as high as 3.8 tons per month. Therefore it is not impossible that emissions could be major for PM operating at full rates, full time, with no control.

Table FG-RULE 287(c)

This is for general minor coating use, of under 200 gallons per month. Mr. Connell could not think of any equipment on site that fit under this table. Their coating use is inside the booths, as far as he knows. However, he thought there might be some maintenance and touch-up painting from time to time.

Table FGCOLDCLEANERS

This is for "small" cold cleaners. In their most recent ROP Renewal Application, AAR listed six of these. I saw three of them and Mr. Connell told me the others were similar. The cold cleaners I saw 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 3/31/2016 SUPERVISOR