

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

A936554898

FACILITY: Akwel Cadillac USA, Inc.		SRN / ID: A9365
LOCATION: 603 7th St., CADILLAC		DISTRICT: Gaylord
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT:		ACTIVITY DATE: 01/09/2020
STAFF: Becky Radulski	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: fy20 inspection and records review		
RESOLVED COMPLAINTS:		

On January 9, 2020, AQD performed a full compliance evaluation (FCE) at A9365 Avon Automotive, Wexford County. The evaluation included a scheduled inspection and records review to determine compliance with MI-ROP-A9365-2012 and Air Pollution Control Rules.

The source is located at 603 West 7th Street in Cadillac, at the intersection of 4th Avenue and 7th Street.

EQUIPMENT/OPERATIONS

Avon Automotive manufactures various sizes and types of rubber hose and tubing for automotive and the small engine industry. Over 400 variations of tubes are produced onsite. Examples of hoses included fuel, break, windshield fluid and air intake. The manufacturing process starts with two mixers where raw material is combined and emissions are controlled by a baghouse. The rubber is mixed into a ball then cut into thin belts. The belts are extruded through a die into the appropriate diameter hose. Knit, additional rubber or plastic, and adhesive solvents are added to the hose as required for each end product. Emissions from the solvents are controlled by a catalytic oxidizer. The finished rubber parts are cured in either autoclaves, liquid cure media (LCM), by microwave or in a natural gas fired cure oven - each of these processes are vented directly to atmosphere with no control. Avon Automotive employees approximately 520 people. Currently Avon Automotive operates 3 shifts 24 hrs/day M-F, with occasional Saturdays and rare Sundays.

REGULATORY DISCUSSION

The current ROP was issued October 9, 2012, MI-ROP-A9365-2012.

Following the issuance of the ROP:

PTI 37-17A was issued 12/19/17 and remains active. The permit was for additional stacks for the cooling booths for post cure ovens.

PTI 37-17 was issued 6/1/17, and voided 12-19/17, for the addition of 3 extruder lines, addition of two autoclaves, addition of curing ovens.

PTI 207-16 was issued 6/1/17 and remains active. The permit was for a gas cure oven, electric cure oven, change materials used in curing ovens, rearrange autoclave tables.

PTI 175-16 (application withdrawn 4/4/17).

PTI 87-16A was issued 10/20/16 and remains active. The permit was for replacement of autoclaves.

PTI 87-16 was issued 7/14/16, and voided 10/20/16, for the replacement of autoclaves.

The source is major for VOCs and HAPs.

EU-LINE138, EU-CTRPKnitline, EU-CADBAR148, EU-CADBAR152, EU-CADBAR153, EU-CADBAR154, EU-CADBAR156 and EU-CADBAR161 are all Compliance Assurance Monitoring (CAM) subject due to potential pre-control emissions of VOCs greater than the major threshold limit. These lines share a catalytic oxidizer for the control of VOCs, inlet temperature is the method to demonstrate proper operation of the control. In addition, the lines will automatically shut down immediately if the inlet temperature of the catalytic oxidizer falls below the minimum set point of 650 degrees F.

EUMIXER1 and EUMIXER2 are CAM subject due to the potential pre-control emissions of Particulate Matter (PM) greater than 100 tons. The emissions from the mixers are controlled by a baghouse that is monitored by visible emissions observations and differential pressure monitoring equipment. The differential pressure is required to be between 1"-4" operating range.

EU-BOILER1 and EUBOILER2 are both exempt emission units under Rule 282(b)(i), however they are both under the Boiler MACT, Part 63, Subpart DDDDD.

RECORDS REVIEW

Catalytic Oxidizer: EU-Line 138, EU-CTRPknitline and FGCADBAR VOCs emissions all go to the catalytic oxidizer, therefore the same requirements are in each EU/FG table. The requirements will be addressed as follows and not repeated in each EU/FG section.

III.3, III.4, IV.5, V.1 - Destruction efficiency testing is required once every 5 years. Testing for destruction efficiency of the catalytic oxidizer occurred on 10/6/15, with preliminary results indicating an average of 97% destruction over 3 runs. Previous testing that occurred in 2010 resulted in 99% efficiency. The ROP requires the destruction efficiency to be at least 95%. The catalytic oxidizer must maintain a minimum catalysts bed inlet temperature of 650 degrees F. The temperature is monitored and recorded continuously, and a digital display is located on the wall inside the plant near the catalytic oxidizer. During the inspection, the inlet temperature was viewed - 660F inlet temp, 918F exit stack temp. If the inlet temperature falls below 650F, the production lines connected to the catalytic oxidizer will shut down immediately.

III.6 - The catalyst is tested annually to determine quality and life - the last analysis was February of 2015. The catalyst inside the oxidizer is located in 3 trays. The entire catalyst was replaced in 2014.

VIII.1 - the stack (SV-Oxidizer) is required to have a minimum height of 24 feet and maximum diameter of 20 inches. The testers onsite confirmed the diameter of the stack to be 20 inches. The height of the stack appeared to meet the 24 feet requirement based on visual judgment.

The catalyst temperature is maintained at 650F or above even on days with no line production (most Saturdays and Sundays).

EU-CTRPknitline - CTRP process center with 3 rubber/plastic extruders and 1 surface preparation adhesion promoter/solvent applicator. This process incorporates knit fiber reinforcements into the hose.

I.1, I.2 - VOC limits of 2,000 lbs/calendar month; 10 tons/year based on 12 month rolling. Avon submits monthly VOC records. Based on records provided, both within the permitted limits 0.22 t/yr, 439 lb/yr).

III.1 - All waste adhesion promoters/solvents are being stored and collected in closed containers.

VI.1 - MSDS information at the facility is readily available for all the chemicals used. The MSDS for toluene was viewed.

VI.2, VI.3 - The VOC content, material usage, VOC emissions and HAPS emissions are being recorded and maintained monthly. Material usage is recorded when the materials leave storage. Usage records are attached.

IX.1 - The facility has an approved PM/MAP for the catalytic oxidizer. The facility has a copy and is following the plan.

EU-LINE138 - has been removed from the facility. Last reported emissions were September 2017, resulting in 151 lb/month, 0.08 tpy being emitted. Both of these reported emissions are well below limits of 2000 lb/mo and 10 tpy.

EU-MW1 - Microwave and hot air oven rubber curing operations.

I.1, I.2 - VOC emission limits for this process are 1.4 lb/hr and 4.6 tons per year based on a 12-month rolling time period. Records provided demonstrate compliance with these limits.

II.1 - Material limit on EPDM for this line is 2,900,014 pounds based on a 12-month rolling time period. Records provided demonstrate compliance with these limits

II.2 - Material limit on NEOPRENE for this line is 691,156 pounds based on a 12-month rolling time period. Records provided demonstrate compliance with these limits.

III.1, VI.2 - No visible emissions were noted from this process. Records of monthly non-certified readings are maintained and available. Review of these records indicates no visible emissions were observed.

VI.1 - Records of the hours of operation, amount of rubber used, and VOC emissions calculations are being kept and recorded on the material throughput spreadsheet.

VIII - Stack parameters appear to meet conditions as required based on visual observation.

FGCUREOVENS – six natural gas fired and one electric post cure ovens used for vulcanizing molded and extruded rubber products. This FG group was updated in PTI 37-17A.

I.1, I.2 - VOC emission limits for this FG are limited to 8.9 tons per year based on a 12-month rolling time period. Aggregate HAP emission limits for this process are 2.0 tons per year based on a 12-month rolling time period. 12 month rolling time period calculations of tons per year were 0.0796 tons per year and 0.0086 tons per year respectively for VOC and HAPs based on a 12-month rolling time period.

II.1 - Material limits the uncured rubber materials in FGCUREOVENS, but not the volume of rubber processed. Records indicate the materials were limited as required.

VI.1,2 - All records were up to date and available.

VIII - Stack parameters appear to meet conditions as required based on visual observation.

FGMIXERS - two rubber mixers at Plant 1, each with an associated rubber mill and cooling conveyor. Material loading to the mixer is controlled by one large baghouse and particulate emissions from the drop mills of each mixer are controlled by two smaller baghouses. There is also one fan and large stack that used to serve to vent heat and fumes from the drop mill. This equipment is no longer in use and the hoods and ductwork have been removed.

I.1-3 - Particulate emission limits are 0.01 pounds per 1000 lbs. exhaust gas, 1.22 pounds per hour, 5.3 tons per year. The pounds per 1000 lb emissions are determined through stack testing upon request. Current records show emission compliance with these limits

I.4-5 - VOC emission limits are 2.2 pounds per hour and 4.9 tons per year based on a 12-month rolling time period. Current records show compliance with these limits.

III.1 - The Mixer A baghouse was in operation at the time of the inspection, no visible emissions were noted.

VI.2 - No visible emissions were noted from this process. Records of monthly non-certified readings were available upon request.

VIII.1 - Stack parameters appear to meet conditions as required based on visual observation.

IX.1 - A PM/MAP covering the baghouses was approved by AQD on 2-19-04. The facility had a copy and was following the plan.

FGCADBAR: Six low perm CADbar process centers at Plant 1. Includes EU-CADBAR148, EU-CADBAR152, EU-CADBAR153, EU-CADBAR154, EU-CADBAR156, EU-CADBAR161. Changes to this table took place in PTI 207-16.

I.1 - VOC emissions from FGCADBAR are limited to 35.4 tons per 12 month rolling. Rubber curing operations for FGCADBAR are included in the throughput spreadsheet and the current records list VOC emissions at 17.4 tons based on 12 month rolling.

I.2 - Annual Toluene emissions from EU-CADBAR161 are limited to 9.0 tons based on a 12-month rolling time period. EU-CADBAR161 emissions are tracked on the monthly mass emissions record, toluene emissions were 2.09 tons per year based on a 12-month rolling time period.

II.1-6 - This condition limits the material usage by this group. Throughput records indicate usage of each material was below the respective permit limits.

III.1- All waste adhesion promoters/solvents are being stored and collected in closed containers

VI.1. - MSDS information at the facility is readily available for all chemicals used.

VI.2-5 - The VOC content, material usage, VOC emissions, Toluene content, and Toluene emissions are all being recorded monthly.

VIII.1-11 - Stack parameters appear to meet conditions as required based on visual observation.

IX.1 - Requires notification to the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). There has been no change in the land use or property classification of the facility

FG-AOS - Alternative Operating Scenario for the facility in the event that the catalytic oxidizer malfunctions.

This scenario was discussed previously with Greg Shay (former EHHS) and Jamie Pritchard. To their knowledge, this table had never been used. As mentioned earlier, the lines that are ducted to the catalytic oxidizer will shut down if the catalytic oxidizer goes down below 650 degrees F.

FGAUTOCLAVE - twelve autoclave steam pressure vessels for the curing of unvulcanized rubber. Includes EUAUTOCLAVE1-12. This FG was changed in PTI 37-17A.

I.1, I.2, I.3 - VOC emissions from this group are limited to 2.6 pounds per hour and 8.6 tons per year based on a 12-month rolling time period for both VOCs and HAPs. Emissions were under the permitted limits.

VI.1 - Records of the process hours of operation, material processed, and VOC emissions are all being kept.

VIII.1-14 - Stack parameters appear to meet conditions as required based on visual observation.

FG-LCM - three liquid cure media (also referred to as salt bath) rubber-curing operations at Plant 1 (city plant).

I.1 - VOC emissions from this group are limited to 29.6 tons per year based on a 12-month rolling time period. V Emissions were under the permitted limits.

II.1-6 - This condition limits the material usage by this group. Throughput records indicate usage of each material was below the permit limits. Records are attached.

III.1- All waste adhesion promoters/solvents are being stored and collected in closed containers

VI.1 - Records of the amount of material processed and VOC emissions are all being kept.

VIII.1-12 - Stack parameters appear to meet conditions as required based on visual observation.

FGRULE290 - any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission units covered by this flex group include the print wheel cleaner and the pre/post cure oven. The print pan cleaner is used to clean the print wheels that label the hose during production. VOC emissions reported on the current monthly mass emissions record were 0.12 tons per year on a 12-month rolling time period. The cure oven is used for pre and post treatment of certain parts that are primarily cured in the autoclaves.

MAERS

MAERS was submitted on time and reviewed. See MAERS for any comments.

MACES

Facility and Regulatory Info screens were reviewed.

COMPLIANCE DETERMINATION

Based on the inspection and records review, the facility appears to currently be in compliance with MI-ROP-A9365-2012, currently issued PTIs, and Air Pollution Control Rules.

NAME _____

DATE _____

SUPERVISOR _____