

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

A936531729

FACILITY: Avon Automotive Cadillac Division		SRN / ID: A9365
LOCATION: 603 West Seventh St., CADILLAC		DISTRICT: Gaylord
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT: Greg Shay , Environmental Health and Safety		ACTIVITY DATE: 10/14/2015
STAFF: Becky Radulski	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: scheduled inspection and records review		
RESOLVED COMPLAINTS:		

On October 6 and 8, 2015, 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.

Greg Shay is the new HSE (Health, Safety, Environmental) Engineer for the plant (cell 231-429-9785; office 231-876-1496; gshay@avonauto.com). Greg started on September 14, 2015. Greg was formerly the environmental contact at AAR in Cadillac. Former environmental contact, Bill Somers, retired in 2015.

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.

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 EU-BOILER2 are both exempt emission units under Rule 282(b)(i), however they are both under the Boiler MACT, Part 63, Subpart DDDDD. Avon has submitted initial notification for these boilers. The compliance date for these boilers is January 31, 2016. An email with the link to the Boiler navigation tool was sent to Greg. The template that the navigation tool indicates (Template: FG-Major

Source - Boiler/Process Heater - Existing Natural Gas Only) indicates a one-time energy assessment must be done by 1/31/16, discusses required tune ups and compliance requirements.

INSPECTION NOTES

Greg provided a tour of the facility and each emission unit. During the inspection the catalytic oxidizer was operating. The inlet temperature was 662F and the outlet stack temperature was 920F. No VE or odors noted from stack. Spoke to Ruben Peterson in the city building, who explained the EUMW1 line and the FG-LCM lines (salt bath) that are located there. The mixing area was reviewed, only 1 mixer was being utilized at the time. While in the mixer room EUMIXER1 was loaded with raw material and sent to the mixing drum. No fugitive dust was noted inside the mixing room during the inspection. After the drum the rubber is run between 2 large cylinders and flattened then cut to the correct width before being sent to each line. Emissions from the mixers are controlled by a baghouse. Near the mixers is a small ingredients area where materials, many of which are powders, are removed from bins to create mixer charges. Fugitive emissions were noted in this area. Currently fugitive emissions created in this area are captured by filters attached to carts used to gather the ingredients, however the material loading is uncontrolled and emits to plant environment. The facility has considered plans to install a baghouse and duct system that would control the emissions from bin loading. The baghouse would discharge into the plant atmosphere and possibly utilize the Rule 285(f) exemption. Plans for the baghouse controlling fugitive dust have stalled at this time.

The ROP and miscellaneous records were reviewed in Greg's office and discussed below.

RECORDS REVIEW

VII. 1-4 - Avon Automotive is required to submit Semi-Annual and Annual ROP Report Certification to AQD per R 366.1213. Semi-Annual reporting for January-June of 2015 was due to AQD by 9/15/15. AQD did not receive the reporting, and a VN was sent on 10/7/15. Avon subsequently submitted the report signed 10/7/15, received 10/14/15. Avon's response to the VN indicated that late submittal was due to the transition of the environmental responsibilities at Avon to a new HSE person (Bill Somers retired in 2015, the person hired to replace him quit shortly after). Avon will utilize an Environmental Task Calendar which will now send an internal electronic notification to the HSE person as well as 2 managers each time reporting is due.

Catalytic Oxidizer: EU-Line 138, EU-CTRPknitline and FGCADBAR VOCs emissions all to 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 - 662F inlet temp, 920F exit stack temp. If the inlet temperature falls below 650F, the production lines connected to the catalytic oxidizer will shut down immediately. During the inspection it was noted there was a 12 hour period where the link between the recorder and the computer was down, however data was still collected in the recorded and downloaded. No records were lost.

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 August 2015, this line produced 147 lbs VOC and 0.72 tons/year based on 12 month rolling, both within the permitted 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 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 - rubber parts process line, two rubber/plastic extruders, one solvent to promote adhesion. During the inspection the line was operating at 43.8 feet/minute.

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 August 2015, this line produced 90 lbs VOC and 0.76 tons/year based on 12 month rolling, both within the permitted limits.

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

VI - Monitoring and record keeping requirements for EU-LINE138 are identical to EU-CTRPknitline and were covered in that EU review. All records were available and up to date.

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. Current calculations of lb/hr are 0.197 lb/hr and 0.25 tons per year based on a 12-month rolling.

II.1 - Material limit on EPDM for this line is 2,900,014 pounds based on a 12-month rolling time period. The facility used 604,814 lbs. in the last 12 months.

II.2 - Material limit on NEOPRENE for this line is 691,156 pounds based on a 12-month rolling time period. EUMW1 did not use neoprene in the last 12 months.

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.

EU-CUREOVEN - a natural gas fired post cure oven used for vulcanizing molded and extruded rubber products.

I.1, I.2 - VOC emission limits for this process are 5.0 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.1,2,3 - Material usage limits for ECO, EPDM and Vamac respectively are 100,000 pounds, 1,800,000 pounds and 1,800,000 pounds respectively. Most recent records indicate 17,739 lbs. of ECO, 1,008 lbs. of EPDM and 27,915 lbs of Vamac were used in the last 12 months.

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. Records showing the most recent baghouse readings by the facility are attached.

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 rates of 0.624 pounds per hour and 1.19 tons per year.

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 an average emission rate of 1.68 pounds per hour and 3.39 tons per year.

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

VI.1 - Records of the hours of operation, rubber processed, and VOC and Particulate emissions calculations are included in the throughput spreadsheet and were up to date and available on request.

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

I.1 - VOC emissions from FGCADBAR are limited to 39.2 tons per 12 month rolling for the rubber/plastic curing processes. Rubber curing operations for FGCADBAR are included in the throughput spreadsheet and the current records list VOC emissions at 22.0 tons based on 12 month rolling.

I.2 - VOC emissions from FGCADBAR are limited to 35.4 tons per 12 month rolling for the surface preparation adhesion promoter/solvent applicator processes. FGCADBAR surface preparation VOC emissions are included in the monthly mass emissions records and were 27.06 tons per year, based on 12 month rolling.

I.3 - 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 3.411 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 with Greg. To his knowledge (he spoke with previous HSE Bill Somers), 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 - Nine autoclave steam pressure vessels for the curing of unvulcanized rubber. Includes EUAUTOCLAVE1-9.

I.1, I.2 - 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. FGAUTOCLAVE VOC emissions are identified as "conventional" on the compound throughput spreadsheet. FGAUTOCLAVE VOC emissions were a monthly average of 0.421 pounds per hour and 0.467 tons per year based on a 12-month rolling time period.

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. VOC emissions were 5.15 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 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 1.75 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 in 2015 and reviewed by Kurt Childs. See MAERS for details. 2015 emissions data will be reviewed and any concerns addressed during the 2016 MAERS season.

MACES

Facility and Regulatory Info screens were reviewed. Information for Greg Shay was added as new MACES contact.

COMPLIANCE DETERMINATION

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

NAME Becky Radulski

DATE 10/16/15

SUPERVISOR 