

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

B196037731

FACILITY: Cadillac Asphalt LLC		SRN / ID: B1960
LOCATION: 51777 W 12 MILE RD, WIXOM		DISTRICT: Southeast Michigan
CITY: WIXOM		COUNTY: OAKLAND
CONTACT: Mike Zelenock , Division Manager		ACTIVITY DATE: 10/28/2016
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Permit Evaluation and complaint investigation.		
RESOLVED COMPLAINTS: C-17-00146, C-17-00147, C-17-00150, C-17-00194		

Background

Cadillac Asphalt (Cadillac) SRN: B1960 is a hot mix asphalt (HMA) plant located at 51777 W 12 Mile Road, Wixom Michigan. Cadillac Asphalt is located in a primarily rural to suburban area. The nearest residential area is located approximately 1,700 feet E of the facility. Cadillac Asphalt was inspected on October 28th, 2016 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The intent of the inspection was to determine Cadillac Asphalt's compliance of permit number 476-94F, and the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended; Michigan's Air Pollution Control Rules. AQD staff also investigated odor complaints C-17-00194, C-17-00150, C-17-00147 and C-17-00146.

Odor observations

At 12:10 pm I arrived at the facility entrance. I parked across the street from Cadillac Asphalt and observed visible emissions/water vapor being emitted from the asphalt plants stack. After determining the facility was in operation, I drove around the perimeter of the facility starting on 12 Mile road going to Johns road, to 11 Mile road to Napier road back to the plant entrance. At approximately 12:16 pm I did observe level 2-3 burning leaf odor. The golf course maintenance crew was burning a large pile of sticks, tree limbs and leaves. I did not observe asphalt odors upwind or downwind of Cadillac Asphalt during my odor observations. The odors detected were not long enough in duration, intensity or frequency to constitute a violation of the MDEQ's Air Quality Rules and Regulations. After the odor observations I went to Cadillac Asphalt's plant located at 51777 W 12 Mile Road, Wixom Michigan to perform a compliance evaluation.

Inspection

After arriving on site I spoke with Kevin Zimmerly in the office. I informed him that I was performing a compliance evaluation and showed him my State of Michigan identification. Kevin permitted me to go to the control room and speak with the operator. At the control room Plant Operator Mike Sekan assisted in my compliance evaluation. He showed me the current operating parameters as well as the gauge readings. After discussing the permit and recording the gauges Mike Mickus the Loader Operator assisted me in inspecting the conveyor system and well as the top of the storage silos for leaks. The conveyor system appeared to be sealed, effectively preventing fugitive emissions as required by Appendix A Fugitive Dust Control Plan part 6. I did not observe staining on the top of the silos which would signify fugitive emissions from the top of the silos. After inspecting the conveyor system and the associated asphalt silos I returned to the control room and finished my compliance evaluation. Mike Zelenock, Division Manager and Susanne Hanf, P.E. Environmental Engineer provided me with the records electronically on November 3rd, 2016.

Compliance Evaluation of permit to install number 476-94F

EUHMAPLANT

SC.I. Emission Limits

1. Cadillac showed compliance with the particulate matter emission limit of 0.04gr/dscf in 2002 with a stack test performed by Derenzo. The actual emissions were 0.006gr/dscf at 591 tons/hour and 30% RAP

content. This is at 98.5% of the facilities maximum production rate allowed by the permit.

2. Requires the facility meet a limit of 0.032 lbs of PM/ton of HMA produced. The stack test indicates a rate of 0.0045 lbs of PM/ton of HMA produced. This is a compliant emission rate.

SC.VI 6 states in part...

If stack test results for EUHMAPLANT exist for any of the aforementioned pollutants, those stack test results may be used to estimate pollutant emissions subject to the approval of the AQD. In the event that stack test results do not exist for a specific pollutant, the applicable emission factor listed in the Emission Limit Table shall be used to estimate the emissions of a pollutant from EUHMAPLANT. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702)**

Per the requirements of SC. VI 6 testing for CO, SO₂, and NO_x was not conducted. Instead the facility used the emission factors to calculate total emission per ton of HMA produced. Cadillac Asphalt's calculations appear to use the Natural Gas Emission Factor AP-42. These emission factors are not in the permit emission limit table. The permit requires the use of worst case emission factors, which are the emission factors for RUO. When calculated using the worst case values (RUO emission factors) Cadillac Asphalt still appears to be in compliance with 12 month rolling tons for CO, SO₂, and NO_x. The emission factor for CO is 0.201 lb per ton, SO₂ is 0.169 lb per ton, and NO_x is 0.18 lb per ton. October 2015 had the highest HMA production rolling 12 month total at 432749 tons of HMA produced. I spoke with Cadillac Asphalt's environmental engineer Susanne Hanf and she has corrected the calculation in the spread sheet. The three calculations demonstrate compliance with the permit 12 month rolling limit. Below is the calculation

CO Emissions (Permit limit is 89.9 tpy)

SC.II. Material Limits

1. The permittee shall not burn any fuel other than natural gas, propane, #2 fuel oil through #6 fuel-oil or recycled used oil (RUO) in EUHMAPLANT. **(R 336.1224, R 336.1225, R 336.1702)**. While on site Mike Sekan informed me that the facility has only been using natural gas.

2. Since the facility only uses natural gas they also appear to meet condition 2 of the material limits that states that they shall not burn any hazardous waste as defined in State or Federal law.

3. The permittee shall not use any asbestos tailings or waste materials containing asbestos in EUHMAPLANT pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **(R 336.1225, R 336.1901, 40 CFR Part 61 Subparts A & M)**. The facility meets this requirement by not receiving or using asbestos containing materials.

4. The permittee shall limit the asphalt mixture processed in EUHMAPLANT to a maximum of 50 percent RAP material based on a monthly average. **(R 336.1224, R 336.1225, R 336.1702)**. The highest recorded RAP material was 50%. The three days (NOT monthly average) this limit was matched was on 4/18/2016, 7/31/2016 and 10/9/2016. The highest monthly average was May 2016 at 44.45992%. The records show compliance with RAP material limits.

5. The permittee shall not process more than 895,000 tons of HMA paving materials in EUHMAPLANT per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3))**. Facility records indicate the month with highest hot mix asphalt (HMA) produced per 12 month rolling was October of 2016. The records indicate a total of 43,749 tons of HMA produced. This value is well below the permitted 895,000 tons.

6. The permittee shall not process more than 600 tons of HMA paving materials in EUHMAPLANT per hour based on a daily average, which shall be determined by dividing the daily HMA production by the daily production hours. **(R 336.1224, R 336.1225, R 336.1702)**. During my inspection the facility was operating between 355 tons per hour and 400 tons per hour. Mike showed me the operator's display that indicates the production rate. Mike also informed me that most mixes cannot be produced at a rate higher than 500 tons per

hour. The records indicate that on 6/7/2016 the facility produced 5195 tons over a period of 13.3 hours. This averages to 390.6 tons/hour. The records did not appear to indicate a day that had a production rate above 600 tons of HMA per hour.

7. The sulfur content of any fuel used in EUHMAPLANT shall not exceed 1.0 by weight. **(R 336.1224, R 336.1225, R 336.1702, R 336.1901)**. Mike Sekan informed me that the facility only uses pipeline quality natural gas. Pipeline quality natural gas has a low sulfur content and appears to meet the permit condition. Cadillac Asphalts records also indicate that the facility has not received any shipments of recycled used oil (RUO) in the year 2016. The facility does not accept fuel that exceeds 4000ppm/ greater than 1%, sulfur.

SC.III. Process/Operational Restrictions

1. The permittee shall not operate EUHMAPLANT unless the Fugitive Dust Control Plan specified in Appendix A has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5524)**. Appendix A for the fugitive dust plan is intended to provide strategies for areas adjacent to the facilities associate equipment and operations. During my inspection the lot was damp and relatively free of fugitive dust. I did not observe excessive drop distances at the stock pile, nor did I see emissions from the piles. The areas for HMA trucks were paved and swept. I observed a truck cover its load prior to leaving the facility as required by the dust control plan. Records keeping requires the facility to keep a file on dust control activity. This condition is met in the daily production log section of Cadillac's Air Records. These records indicate that the facility applied chloride five times this year and swept and watered regularly. Cadillac appears complying with the Fugitive Dust Plan as specified by Appendix A.

2. The permittee shall not operate EUHMAPLANT unless the Preventative Maintenance Program specified in Appendix B has been implemented and is maintained. **(R 336.1910, R 336.1911)**.

Appendix B Preventative Maintenance Program for the Fabric Filter Dust Collector

1. FABRIC FILTER DUST COLLECTOR OPERATING PRESSURE DROP.

a. The pressure drop shall be maintained at a minimum of 2 inches, water gauge. During the time of my inspection they were operating at approximately 3.2 inches and Mike informed me that they average around 3 inches. Mike showed me daily records for the pressure drop on his computer and I did not observe any records of a pressure below 2 inches water.

b. The pressure drop across the fabric filter dust collector shall be recorded at least once per day. Cadillac appears to be in compliance with this requirement.

2. FABRIC FILTER DUST COLLECTOR /PLANT ALARM SYSTEM.

The fabric filter dust collector shall be equipped with a high temperature sensor and alarm system. The alarm system shall be designed to set off an alarm when the high temperature set-point has been violated, and, to begin a sequential shut-down of the plant if the situation is not resolved within a very short period of time after the alarm sounds. To comply with this condition Mike informed me that the burner system will automatically shut down if the temperature reaches 350F. During my inspection the inlet temperature was 280F and the outlet temperature was 246F.

3. HANDLING AND STORAGE OF FABRIC FILTER DUST.

Accumulated fabric filter dust (particulate) shall be stored and/or be disposed of in a manner which minimizes the introduction of the air contaminants to the outer air. This dust is reintroduced to the mix and is incorporated into the product. Cadillac appears to be in compliance with this requirement.

4. PIPING AND SEALS MAINTENANCE.

Piping and seals shall be replaced as needed. Mike informed me that this is normal maintenance procedure.

5. VISIBLE EMISSIONS AND ACTIONS TO BE TAKEN IN THE EVENT OF.

In the event visible emissions, which appear to exceed the standard allowed in General Condition No. 11

of this Permit to Install, are observed at the discharge point of the stack, the following actions shall be taken- If no certified visible emissions reader can be on-site within 60 minutes of observing the visible emissions to verify the emission density, operations shall be ceased immediately and the cause of the visible emissions determined and corrected prior to operating the plant again. Mike cannot recall ever exceeding visible emission requirements. He did state that if they were to have visible emissions they would shut down and inspect the bag house and equipment for damages or failure. This appears to be in compliance with the permit condition.

6. BLACK LIGHT INSPECTIONS.

A black light test shall be conducted at least once per year - before operations begin for a paving season. Black light inspection equipment and materials shall be available for use at the facility and used as needed during the paving season. Records indicate that this is done upon plant start-up. This year's record shows that the first black light test was conducted on 5/21/2016. The records also show that a black light test was conducted seven times with the last maintenance record on 6/17/2016.

7. INVENTORY OF FILTER BAGS.

An inventory of fabric filter bags shall be maintained by the facility owner or operator so that filter bags will be available to this site within four hours of requesting the filter bags. In addition, a minimum of 15 filter bags shall be kept on-site at all times. An inventory of other replacement parts for the fabric filter dust collector shall be maintained at all times. Mike told me there were at least 25 to 30 filters on site in a storage area. I did not confirm this.

8. FABRIC FILTER DUST COLLECTOR INSPECTION RECORD.

A written or electronic record of the following shall be maintained by the owner or operator of the facility:
- Cadillac Asphalt appears to be in compliance with the following record requirements as indicated in the 2016 air records Maintenance and Baghouse section.

- Visual inspections of the interior components of the fabric filter dust collector, including date, time, and findings;
- Black light inspections, including date, time, and findings;
- Number of filter bags installed as a result of each inspection to replace filter bags already in use in the fabric filter dust collector, including date, time, location, and whether the replacement filter bag was brand new or a cleaned, previously used filter bag;
- An explanation (i.e., a description of the damage found) for each filter bag removed from the fabric filter dust collector and confirmation that another filter bag was installed to replace it;
- Each observation of visible emissions at the stack discharge point and description of response to the observed visible emission, including date and time of visible emission occurrence and results of EPA Method 9 observation, if any. Any such visible emission shall be recorded and made available upon request to the AQD.
- All significant maintenance activities performed on the fabric filter dust collector.

It appears that Cadillac Asphalt is in compliance with Appendix B Preventative Maintenance Program for the Fabric Filter Dust Collector.

Process/Operational Restrictions Continued

3. The permittee shall not operate EUHMAPLANT unless the Emission Abatement Plan for Startup, Shutdown and Malfunctions specified in Appendix C has been implemented and is maintained. (**R 336.1911, R 336.1912**). Cadillac Asphalt appears to be in compliance with Appendix C.

4. The permittee shall not operate EUHMAPLANT unless the Compliance Monitoring Plan (CMP) for RUO specified in Appendix D, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. (**R 336.1201(3), R 336.1225, R 336.1371, R 336.1372, R 336.1910, R 336.1911, Act 451 324.5521, 40 CFR 279.55**). The facility does not use RUO. Cadillac appears to be in compliance with Appendix D.

5. The permittee shall maintain the efficiency of the EUHMAPLANT drum mix burners, to control CO

emissions, by fine tuning the burners for proper burner operation and performance. This shall be done at the start of each paving season or upon a malfunction of EUHMAPLANT as shown by the CO emission monitoring data. (R 336.1205, R 336.1901). Cadillac Asphalt had records of initial tune-up of the equipment on 6/23/2016. The highest CO record indicated a level of 426ppm which is under the 500ppm permit limit.

SC.IV Design/Equipment Parameter

1. The permittee shall not operate EUHMAPLANT unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the fabric filter dust collector requires a pressure drop range between 2 and 8 inches of water column. The minimum pressure drop shall not be less than 2 inches, water gauge, except when a large number of filter bags have been replaced or other reason acceptable to the AQD. (R 336.1910). This has previously been addressed under Appendix B. When I read the pressure drop again it was at 2.8 inches of water. That complies with the minimum pressure drop required by this condition.

SC.VI Monitoring and Recordkeeping

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1201, R 336.1205(3)). Compliance

2. The permittee shall monitor, in a satisfactory manner, the virgin aggregate feed rate and the RAP feed rate to EUHMAPLANT on a continuous basis. (R 336.1224, R 336.1225, R 336.1702). During my inspection the facility was operating at 173 tons per hour. The monitor was reading continuously.

3. The permittee shall monitor emissions and operating information in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and I for EUHMAPLANT. The permittee shall keep records of all source emissions data and operating information on file at the facility and make them available upon request. (40 CFR Part 60 Subparts A & I). Cadillac Asphalt does not currently store or use RUO at the facility therefore appears to be in compliance with federal fuel standards of Subpart I.

4. The permittee shall keep the following records for each calendar month that EUHMAPLANT is operated:

- a) Identification, type and the amounts (in gallons) of all fuel oils combusted.
- b) Sulfur content (percent by weight), specific gravity, flash point, and higher heating value (Btu/lb) of all fuel oils being combusted.
- c) Tons of hot mix asphalt containing RAP produced, including the average percent of RAP per ton of hot mix asphalt produced containing RAP.

Cadillacs Air Records- Daily fuel log meets this permit requirement.

5. The permittee shall keep intermittent daily records of the following production information for EUHMAPLANT:

- a) The virgin aggregate feed rate.
- b) The RAP feed rate.
- c) The asphalt paving material product temperature.
- d) Information sufficient to identify all components of the asphalt paving material mixture.

Upon start-up, the initial mix design and time shall be recorded. When a new mix design is activated after start-up, the time and new mix design shall be recorded. All records shall be kept on file until the end of the paving season in which they were recorded and made available to the Department upon request. (R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.1901). Cadillac Asphalt appears to demonstrate compliance with this condition of the permit with the Air Records- Daily Batch Sheets. Mike Zelenock provided

