

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

B196045649

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: 08/01/2018
STAFF: Robert Joseph	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Inspection of facility for Opt-Out PTI 476-94F		
RESOLVED COMPLAINTS:		

On August 1, 2018, I, Michigan Department Environmental Quality-Air Quality Division staff Robert Joseph, conducted an unannounced inspection of Cadillac Asphalt, LLC located at 51777 West 12 Mile Rd. Wixom, MI 48393. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) Administrative Rules and conditions of the facility's Permit to Install (PTI) 446-94F.

This was a return visit to the facility as I attempted to inspect the facility on Thursday, July 12, 2018. I was asked that day by Division Manager, Mike Zelenock, if I could please reschedule my inspection due to the unavailability of facility staff to assist me in the inspection. I told Mike since this was my first inspection visit to the facility I would reschedule my inspection as a courtesy, however, going forward all future inspections will be unannounced and that facility personnel must always be made available to assist me. Mike said he understood.

Opening Introduction

I arrived at the facility shortly before 11am and again met with Plant Manager, Mike Zelenock. I introduced myself and presented my identification and credentials and stated the purpose of my visit. I asked Mike to provide me some general information regarding the facility. He indicated Cadillac Asphalt is owned by Levy Company and they own several other plants in the Detroit Metro area. He indicated their hours of operation to be Monday through Friday from 6am to 5pm. In addition, work is also sometimes performed on the weekends during the season. There are approximately 45 employees employed by the facility and roughly over 70 trucks owned by the facility to haul materials.

Facility Tour

Mike accompanied me on a tour of the facility where I observed the 5 liquid silo tanks which hold 35,000 gallons of liquid emulsion. This is sprayed onto the surface before the placement of hot-mix asphalt (HMA) to aid in adhesion. The facility formulates over 180 mix designs and begins processing the materials every morning after 6am. Once the HMA is produced, it is stored in 8 finished silo tanks with each holding roughly 2,000 tons. The HMA mix is maintained around 300 degrees °F for ease of placement and compaction in-place.

The facility has approximately 15 to 20 aggregate types of sand and stone depending on the mix design. The materials available today in bins for mixing were the following; 3CS buno, 20AA, athletic meal, 3/8 x ray road, 3/4 x 1/2 slag chips, #9 agg. 1/2 x 0, Moscow mansand, mansand buno, 1/2 x 3/8 slag chips, #3 buno, wyandotte sand, 31A drummin. Gap Graded material serves as their virgin material.

The aggregate material and mix is fueled through the usage of natural gas only. Once the

appropriate aggregate is chosen for a specific mix design, the aggregate falls from its bin onto the main conveyor belt. It then moves up to the hopper and into a counter flow design where the exhaust gases through the dryer flame, combusting the fumes, and exit the drum at the opposite end from the paving material. Dust and particulates from the aggregate are mixed back into the final product. Air pollution control equipment include jet pulse baghouses which are used to control emissions. There approximately 862 baghouses used in each mix process. A stack with an exhaust dimension of 72 inches emits the emissions into the atmosphere.

Environmental Compliance per PTI 476-94F: The AQD's most recent inspection was Oct. 28, 2016. Unless otherwise stated, records were reviewed from that date forward.

EUHMAPLANT

I. EMISSION LIMITS

1. **PM**: Stack test records show actual emissions to 0.006 gr/dscf which is below the limit of 0.04 gr/dscf.

2. **PM**: Stack test records show a rate of 0.0045 lbs of PM per ton of HMA material produced. This is below the 0.032 lb per ton limit.

3 and 4. **CO**: Per PTI condition VI. 6 Monitoring/Recordkeeping, "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."

No stack results exist. The applicable CO emission factor used is 0.201 lb/ton for an 89.9 tons/yr limit for a 12-month rolling time period as determined at the end of each calendar month. Per facility records, 2016 produced 24.8 tons (emission factor 4.98 lb/yr) , 2017 produced 37.7 tons (emission factor 7.58 lb/yr), and 2018 thus far has produced approximately 17.4 tons (emission factor 3.50 lb/yr).

5. and 6. **SO₂**: Per PTI condition VI. 6 Monitoring/Recordkeeping, "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."

No stack results exist. The applicable SO₂ emission factor used is 0.169 lb/ton for a 75.5 tons/yr limit for a 12-month rolling time period as determined at the end of each calendar month. Per facility records, 2016 produced 64.8 tons (emission factor 11.0 lb/yr), 2017 produced 31.3 tons (emission factor 5.29 lb/yr), and 2018 thus far has produced approximately 14.5 tons (2.40 lb/yr).

7. and 8. NO_x: Per PTI condition VI. 6 Monitoring/Recordkeeping, "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."

No stack results exist. The applicable NO_x emission factor used is 0.18 lb/ton for an 80.6 tons/yr limit for a 12-month rolling time period as determined at the end of each calendar month. Per facility records, 2016 produced 5.0 tons (emission factor 0.9 lb/yr), 2017 produced 33.4 tons (emission factor 6.01 lb/yr), and 2018 thus far has produced approximately 15.5 tons (emission factor 2.79 lb/yr).

II. MATERIAL LIMITS

1. Facility only burns natural gas. It does not burn any propane, #2 fuel oil through #6 fuel oil or recycled used oil.
2. Facility does not burn any hazardous waste, blended fuel oil or specification recycled used oil (RUO).
3. Facility does not use any asbestos tailings or asbestos containing waste.
4. The facility's maximum RAP in 2016 was 44%, 2017 was 42%, and thus far in 2018 has been 41%. The maximum RAP allowed is 50% material based on a monthly average.
5. Permit limit is 895,000 tons of HMA paving materials in EUHMAPLANT per 12-month rolling time period as determined at the end of each calendar month. The following was produced;

2016: 380,945
2017: 368,755
2018: 366,494 (current 12 month rolling total)
6. Permit limit is not 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. The following are the maximum daily averages achieved for each year;

2016: 463 tons/hr
2017: 447 tons/hr
2018: 479 tons/hr (current maximum average achieved)
7. The facility does not burn any fuels containing sulfur. Only natural gas is burned.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The fugitive dust plan (Appendix A) is being implemented and maintained by the facility for site maintenance, on-site roadways, on-site management of haul vehicles (loads covered), management of front-end loader operations, and fugitive emissions from process equipment.

Records show routine applications occurring at least twice a month at minimum.

2. The preventive maintenance program (Appendix B) is being implemented and maintained by the facility. The pressure drop across the fabric filter dust collector is recorded at least once per day. Daily pressure drops vary between 2 and 3.5 in H₂O during each year in 2016, 2017, and currently in 2018. The pressure drop gauge read 2.0 in H₂O during the inspection.

Black lights tests were performed at least once before every paving season in 2016 (April 15), 2017 (April 14) and 2018 (April 26). A review of facility records indicate documentation was noted for activities related to the fabric filters.

3. The emission abatement plan (Appendix C) for startup, shutdown, and malfunctions is being implemented and maintained by the facility. Normal startup and shutdown procedures are performed by the facility. Scales are calibrated and alarms sound when the plant gets close to the total tons of HMA produced near permit limit. Maintenance logs and procedures are documented for malfunctions and items of inspection documented.

4. The facility has not used Recycled Used Oil, so the compliance monitoring plan (Appendix D) has not been needed.

5. Maintenance logs indicate efficiency checks for drum mix burners each year at the start and the end of each season. Random checks also occur. 2016 (April 19), 2017 (July 7).

IV. DESIGN/EQUIPMENT PARAMETERS

1. As previously stated, the pressure drop across the fabric filter dust collector is recorded at least once per day as noted in facility records.

VI. MONITORING/RECORDKEEPING

2. Both the virgin aggregate feed rate and the RAP feed rate to EUHMAPLANT are monitored on a continuous basis via controls by the plant operator.

3. All source emissions are tracked and documented in the facility's records.

4a and 4b. No fuel oils or fuels with a sulfur content is used.

4c. Tons of hot mix asphalt containing RAP produced, including the average percent of RAP per ton of hot mix asphalt produced containing RAP was recorded.

-Tons of hot mix asphalt containing RAP produced in 2016 peaked on (10/05/6) with over 4,800 tons with a RAP average ranging from 31 to 47% throughout the year.

-Tons of hot mix asphalt containing RAP produced in 2017 peaked on (07/05/6) with over 4,700 tons with a RAP average ranging from 30 to 48% throughout the year.

-Tons of hot mix asphalt containing RAP produced in 2018 peaked on (07/30/18) with over 4,700 tons with a RAP average ranging from 28 to 48% thus far.

5a. Virgin aggregate feed rate varied in 2016 between 600 and 46,000 tons per month. The

virgin aggregate feed rate varied in 2017 between 2,900 and 35,000 tons per month. The virgin aggregate feed rate in 2018 has varied between 25,000 and 35,000 tons.

5b. The RAP feed rate varies between 28% and 48% for the facility.

5c. Daily HMA product temperature per records indicated 300 °F.

5d. All bins are labeled and identified for all components of the asphalt paving material mixture. The facility currently has over 180 mixes.

6. See Discussion on Section I. Emission Limits

7a-c. The facility monitors CO emissions; < 500 ppmv

The facility records indicate at least 8 readings were taken in 2016 on April 19, June 17, September 6, and November 16. All readings averaged between 119 and 169 ppm.

The facility records indicate at least 8 readings were taken in 2017 on April 22, May 23, July 7, September 12, and October 26. All readings averaged between 59 and 200 ppm.

The facility records indicate at least 8 readings have been taken in 2018 on May 5 and July 10. All readings averaged between 82 and 104 ppm.

8. Dates and times were recorded when taking the CO measurements.

9. Average daily, monthly and 12-month rolling time period records of the amount of HMA paving materials produced were recorded.

2016:

-Average daily total varies between 297 and 463 tons

-Monthly total varies between 1,300 and 63,000 tons

-12-month rolling total: 380,495 tons

2017:

-Average daily total varies between 245 and 447 tons

-Monthly varies between 5,000 and 61,000 tons

-12-month rolling total: 370, 852 tons

2018:

Average daily total varies between 280 and 480 tons

Monthly varies between 50,000 and 67,000 tons

12-month rolling total thus far: 382, 256 tons

10. Daily records of hours during which HMA produced varies between 1 to 13 hours in 2016; between 0.5 to 11 hours in 2017; between 0.75 and 11 hours thus far in 2018.

VIII. STACK/VENT RESTRICTIONS

Stack and vent were unobstructed and opacity readings were consistently between 0 and 5%.

EUYARD

III. PROCESS/OPERATIONAL RESTRICTIONS

Fugitive emissions control in appendix B is implemented and maintained.

-Fabric filter pressure gauges are continuously monitored and recorded daily.

-Alarm system sounds when temperature is too high around 300 °F

-Fabric filters are collected and shipped off for disposal.

-Black light inspections occur before each paving season and during baghouse inspection as previously described.

-An inventory of filter bags is monitored by the facility to ensure at least 15 filter bags are kept on site.

-Fabric filter dust collector inspection record collector is maintained on a spreadsheet by the facility.

VI. MONITORING/RECORDKEEPING

1. Format is acceptable

2. The facility reports their annual emissions of particulate matter for EUYARD through MAERS. The facility used the U.S. EPA Air Pollutant Emission Factors (AP-42) in their latest MAERS 2018 submittal.

VII. REPORTING

1. See MAERS Emission Calculations for storage piles and roadways.

FGFACILITY (EUHMAPLANT, EUYARD, EUTANKS, EUSILOS)

I. Emission Limits

1. Each individual HAP;

Less than 9.0 tons/yr with for 12-month rolling time period as determined at the end of each calendar month. The following are the HAPs with the highest emission limits for each year;

2016: Formaldehyde, 0.590 tons/yr

2017: Formaldehyde, 0.575 tons/yr

2018: Formaldehyde, 0.592 tons/yr

All within the permit limit.

2. Aggregate HAPs

Less than 22.5 tons/yr with for 12-month rolling time period as determined at the end of each

calendar month. The following are the aggregate HAP totals each year per facility records;

2016: 0.808 tons/yr

2017: 0.787 tons/yr

2018: 0.811 tons/yr

All within the permit limit.

VI. MONITORING/RECORDKEEPING

1. Format acceptable

2a. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month were maintained through facility record keeping and reported in MAERS.

2b. Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month were maintained through facility record keeping and reported in MAERS..

Conclusion

Based on the AQD inspection and records review, it appears that Cadillac Asphalt is in compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) Administrative Rules and conditions of the facility's Permit to Install (PTI) 446-94F.

NAME Robert Joseph DATE 08/08/18 SUPERVISOR SK