

B2174
Mawra

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B217459252

FACILITY: CADILLAC ASPHALT, LLC, Romulus		SRN / ID: B2174
LOCATION: 13501 HURON RIVER RD, ROMULUS		DISTRICT: Detroit
CITY: ROMULUS		COUNTY: WAYNE
CONTACT: Susanne Hanf, Environmental Engineer		ACTIVITY DATE: 07/28/2021
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	
SUBJECT: Scheduled inspection.		SOURCE CLASS: SM OPT OUT
RESOLVED COMPLAINTS:		

On July 28, 2021, AQD staff (Sam Liveson) conducted an announced, scheduled inspection of Cadillac Asphalt, LLC, Romulus (Cadillac Asphalt) located at 13501 Huron River Road in Romulus, Michigan. The purpose of this inspection was to determine the facility’s compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the Michigan Air Pollution Control Rules; the conditions of Permit to Install (PTI) No. 98-96E; and New Source Performance Standard Subpart I – Standards of Performance for Hot Mix Asphalt Facilities (40 CFR Part 60 Subpart I).

The temperature was 80 °F. Wind was calm according to wunderground.com from the Detroit Metropolitan Airport weather station. Weather was partly cloudy.

Announced Inspection

Due to health and safety concerns related to the COVID-19 pandemic, scheduled inspections from the AQD are announced for the time being. On July 8, 2021, AQD emailed Ms. Hanf regarding an inspection. The inspection was scheduled for July 28, 2021.

Opening Meeting

On July 28, AQD met with Ms. Sue Hanf, Environmental Engineer, Mr. Ryan Osenroth, Plant Operator, and Mr. Dave Gaedcke. AQD showed their employee ID as identification and explained the purpose of their visit. We visited the control room to discuss the facility before walking through the site.

General Facility Information

Cadillac Asphalt is a dual drum counterflow asphalt facility. In the first drum, aggregate is heated as it flows towards the burner. In the second drum, asphalt cement and recycled asphalt product (RAP) are added to the superheated aggregate. Asphalt is then loaded into one of four 300-ton asphalt storage silos for truck load-out.

Control Room Parameters

The facility was operating during the inspection. The following parameters were observed from the control room:

Baghouse outlet temperature	162 °F
Baghouse inlet temperature	173 °F
Mix temperature (into dryer)	277 °F
Baghouse differential pressure	3 inches water

PTI No. 98-96E Changes (Issued August of 2018)

PTI 98-96E was issued in August of 2018. The permit was for a new burner in the first drum; the replacement of three asphalt storage silos; and the addition of a 300 ton asphalt storage silo. The PTI application from the facility states, “This modification will result an increase in the rated capacity to 400 TPH.” From Mr. Osenroth’s recollection, the burner in the dual drums was replaced in the 2019 season. Four new asphalt storage silos were visible at the facility.

Stack Testing Per SC V.4 and 40 CFR Part 60 Subpart I

Regarding stack testing in PTI 98-96E special condition (SC) V.4, AQD determined that the facility conducted its initial testing requirement during its stack test performed September 16-19 and 23, 2003.

Total particulate emission rate was 0.030 gr/dscf. Stack testing for the changes associated with PTI 98-96E does not appear to be required. Additional discussion is below.

Modification determination

40 CFR 60.90(b) discusses how any facility that commences construction or modification after June 11, 1973 is subject to the requirements of this subpart, which includes testing. The permit changes that resulted in PTI 98-96E don't appear to be a modification as defined in 40 CFR 60.2. The definition is below.

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Cadillac Asphalt isn't an existing facility as defined in 40 CFR 60.2. The definition is below.

Existing facility means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.

The facility appears to have been subject to this subpart from its initial construction, and to have completed its performance test on September 16-19 and 23, 2003.

Throughput capacity

It appears that, if testing isn't conducted at the desired maximum throughput, and the facility is able to operate at an increased throughput at a later date, the facility will be required to conduct another performance test at the increased throughput. This consideration comes from an applicability determination for an industrial sand dryer (applicability determination index control number 1600037), which gives insight into performance testing at NSPS-subject facilities.

Cadillac Asphalt's original determination of an increase in the rated capacity to 400 tph seems to be an error. The rated capacity did not appear to increase from the changes associated with PTI 98-96E. The maximum throughput rate was below 250 tons per hour in 2019, 2020, and 2021. The facility plans to apply for a PTI modification limiting its production rate to 250 tons per hour instead of 400 tons per hour to accurately reflect its production rate. Stack testing in 2003 took place at a throughput rate of 196.5 tons per hour, which was appropriate for the facility's 250 ton per hour limit at that time.

Contrary to the permit file evaluation discussion on Subpart I applicability, the facility did not operate in Indiana and complete an initial performance test in 2016. This appears to be an error in the permit file evaluation.

Laboratory

A laboratory on site tests mixes and aggregates for quality of material. This ensures that outgoing asphalt will likely pass tests during road paving. While on site, some material was removed from a drop chute and a sample gathered to be analyzed at the laboratory. AQD did not visit the laboratory on site. It appears this would be exempt from needing a permit per Michigan Air Pollution Control Rule 283(2)(b) for laboratory equipment.

Diesel tank

An above-ground diesel tank is on site to fuel the front loader. The tank is double-walled. It appears to be exempt from obtaining a PTI per rule 284(2)(d) for storage of diesel fuel.

Emission Units and Compliance Status

EUHMAPLANT – PTI No. 98-96E - Special Conditions (SCs) and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
I.1	Emission limit of 0.04 PM gr/dscf	Compliance	

SC(s)	Brief Condition Summary	Determination	Discussion
			The stack test for this emission limit, conducted September 16-19 and 23, 2003, measured an emission rate of 0.030 gr/dscf.
I.2, I.4, I.6, I.8, I.10-22, VI.8	Emission limits of various pollutants in units of pounds of pollutant emitted per ton of asphalt produced	Compliance	A stack test conducted September 16-19 and 23, 2003, found that emission rates of these pollutants were below these emission limits.
I.3, VI.8	PM emission limit of 17.9 tpy; keep monthly and 12-month rolling records	Compliance	Records provided July 21, 2021 indicate the maximum 12-month rolling PM emission rate was 3.03 tpy PM in June of 2021. This is below the facility limit of 17.9 tpy PM.
I.5, VI.8	CO emission limit of 89.5 tpy; keep monthly and 12-month rolling records	Compliance	Records provided July 21, 2021 indicate the maximum 12-month rolling CO emission rate was 12.4 tpy CO in June of 2021. This is below the facility limit of 89.5 tpy CO.
I.7, VI.8	SO ₂ emission limit of 89.5 tpy; keep monthly and 12-month rolling records	Compliance	Records provided July 21, 2021 indicate the maximum 12-month rolling SO ₂ emission rate was 0.27 tpy SO ₂ in June of 2021. This is below the facility limit of 89.5 tpy SO ₂ .
I.9, VI.8	NO _x emission limit of 80.6 tpy; keep monthly and 12-month rolling records	Compliance	Records provided July 21, 2021 indicate the maximum 12-month rolling NO _x emission rate was 3.35 tpy NO _x in June of 2021. This is below the facility limit of 80.6 tpy NO _x .
II.1	Only burn propane, natural gas, fuel oil, or RUO	Compliance	Cadillac Asphalt hasn't used RUO since they purchased the plant from Barrett Paving (in March of 2015, per Ms. Hanf). The drum burner is fired using natural gas.
II.2, VI.6 (b)	Sulfur of fuel oil shall be <1.0% by weight; keep records of sulfur content of fuel.	Not applicable	Records (provided July 21, 2021) and a discussion with Ms. Hanf indicate that the asphalt plant doesn't use fuel oil.
II.3	Do not use materials containing asbestos	Compliance	Because the facility's recycled asphalt product (RAP) doesn't contain recycled shingle material, the facility is not concerned about asbestos being in their RAP. The concern for asbestos would be from using recycled shingles. The facility's RAP is from road paving and crumb rubber.
II.4, VI.2, VI.6(b), VI.7	Limit monthly RAP average to < 50%; keep monthly and daily RAP records	Compliance	Monthly RAP records were provided from January of 2020 through June of 2021. Daily records were provided from January of 2021 through July 14, 2021. Monthly RAP feed rate has not exceeded 50%. The max RAP feed rate was 45.9% in June of 2020.
II.5, VI.10	Limit 12-month rolling paving material processing to ≤ 895,000 tons; keep monthly records	Compliance	Daily HMA production records were provided from January of 2021 through July 14, 2021. Monthly and 12-month rolling HMA production records were provided from January of 2020 through June of 2021. The max 12-month HMA produced was 178,888 tons in June of 2021. This is below the facility limit of 895,000 tons.
II.6	Limit asphalt production below 400 tons per hour based on a 24-hour	Compliance	The facility provided daily production records for the 2021 season. Daily records indicate the highest production rate was 220.9 tons per hour

SC(s)	Brief Condition Summary	Determination	Discussion
	rolling time period as determined at the end of each hour		on April 27, 2021. This is below the facility limit of 400 tons per hour. PTI 98-96E requires that records be based on a 24-hour rolling time period as determined at the end of each hour. Ms. Hanf explained that the continuous production rate is available on site. AQD did not request hourly 24-hour rolling asphalt production records.
II.7, VI.6 (a)	Fuel oil burning limits and monthly records of fuel oils combusted.	Compliance	Records (provided July 21, 2021) and a discussion with Ms. Hanf indicate that the asphalt plant doesn't use fuel oil.
II.8	Limits of contaminants in RUO and hazardous waste	Not applicable	The HMA plant doesn't use fuel oil or hazardous waste. The drum burner uses natural gas.
III.1	Implement Fugitive Dust Control Plan in Appendix A	Compliance	Appendix A is implemented. See further discussion below.
III.2	Implement Preventative Maintenance Program in Appendix B	Compliance	Appendix B is implemented. See further discussion below.
III.3	Implement Emission Abatement Plan for SSM in Appendix C	Compliance	Appendix C is implemented. See further discussion below.
III.4	Fine tune burners each season or upon malfunction shown by CO emission monitoring data	Compliance	Burner fine tuning was not required at the start of the paving season as shown by CO emission monitoring data taken May 10, 2021.
III.5	Implement Compliance Monitoring Plan for RUO in Appendix D	Not applicable	Cadillac Asphalt hasn't used RUO since purchasing the plant from Barrett Paving (in March of 2015).
III.6	Crumb rubber should only be added to mixing area.	Compliance	Crumb rubber may be used if an asphalt mix specification calls for it. If used, crumb rubber is added into the same area as RAP, which is the secondary drum mixing area. This is past the burner in the primary drum.
IV.1	Maintain pressure drop on fabric filter dust collector between 2 and 8 inches of water.	Compliance	From observing high and low marks in red on the pressure gauge and from talking with the plant operator, the facility maintains the dust collector pressure drop between 2 to 5.5 inches. During the inspection, AQD observed the pressure drop was about 3 inches of water.
IV.2	Maintain a device to monitor the feed rates of virgin aggregate and RAP.	Compliance	Two weighbridges were observed during the inspection, one along the virgin aggregate conveyor measuring virgin aggregate, and one along the RAP conveyor measuring RAP. A computer controls the feed from each conveyor based on weighbridges. Weighbridges are calibrated once at the beginning of each year. The laboratory analysis would also indicate if the mix did not meet its specifications.
V.1	Stack test odors upon notification of AQD	Not evaluated	AQD did not request odor emission stack testing.
V.2	Stack test for listed TACs upon notification of AQD	Not evaluated	AQD did not request stack testing.

SC(s)	Brief Condition Summary	Determination	Discussion
V.3	RUO stack testing	Not evaluated	Cadillac Asphalt hasn't used RUO since purchasing the plant from Barrett Paving (in March of 2015).
V.4	PM stack testing	Compliance	It appears the facility complied with the NSPS I stack testing during its initial stack test performed September 16-19 and 23, 2003. Total particulate emission rate was 0.030 gr/dscf.
VI.1	Complete previous month's records by 15 th	Compliance	Ms. Hanf provided records on July 21, 2021. Records included the previous calendar month of June 2021.
VI.3, VI.9	Periodically take eight handheld CO readings below 500 ppmv for over 30 minutes; keep records of results, dates and times, and related production data.	Compliance	Ms. Hanf explained that CO measurements are taken through a port built into the stack. Per records provided July 21, 2021, the most-recent CO handheld monitoring was conducted on May 10, 2021 from 11:22 AM to 11:54 AM. Records indicate this measurement was for facility start-up this season. The highest CO reading was 226 ppm. Additional CO monitoring was conducted July 28, 2020 and May 15, 2020 (for start-up of last season).
VI.4	Monitor emissions and operating information in accordance with 40 CFR Part 60 Subparts A and I.	Compliance	Operating information and emissions records were provided.
VI.5	Conduct maintenance according to Appendix B and keep a log.	Compliance	Ms. Hanf provided the log of baghouse and plant maintenance on July 21, 2021. 640 bags were replaced at the start of the 2019 season, which is all the bags, per our on-site discussion. A black light test at the start of the 2021 paving season indicated no bag changes were needed. The log indicates additional maintenance conducted at the beginning of the 2021 season.
VII.1	Notification of completion of installation authorized by PTI 98-96E.	Compliance	Ms. Hanf notified AQD that installation of new silos and the burner was completed August 1, 2018. AQD will use discretion to avoid issuing a violation notice for the notification being received more than 30 days after this modification was complete.
VIII.1	Stack parameters	Not evaluated	AQD did not evaluate parameters of the baghouse stack. The stack appeared to exhaust unobstructed vertically to ambient air.
gr/dscf: Grains per dry standard cubic foot tpy: tons per year PM: particulate matter RUO: recycled used oil SSM: Startup, shutdown, and malfunctions		CO: carbon monoxide SO ₂ : sulfur dioxide NO _x : oxides of nitrogen RAP: recycled asphalt product TACs: toxic air contaminants	

EUYARD – PTI No. 98-96E - Special Conditions (SCs) and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
III.1	Maintain and implement the fugitive dust control plan in Appendix A	Compliance	Appendix A is implemented. See further discussion below.
VI.1		Compliance	

	Complete previous month's records by 15 th		Ms. Hanf provided records on July 21, 2021. Records included the previous calendar month of June 2021.
VI.2	Calculate and report annual fugitive dust emissions in MAERS	Compliance	From a review of the facility's MAERS 2020 emissions report, the facility calculates annual fugitive dust emissions in a satisfactory manner.

EUACTANKS – PTI No. 98-96E - Special Conditions (SCs) and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
III.1	Install, maintain, and operate the vapor condensation and recovery system.	Not evaluated	Three asphalt cement storage tanks are on site. Tanks are kept at temperature to ensure cement is liquid. AQD did not observe asphalt cement delivery in process.

EUSILOS - PTI No. 98-96E - Special Conditions (SCs) and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
III.1	Install, maintain, and operate the storage silo emission capture system.	Compliance	The facility has piping from silos that leads to a filter system on ground level. No opacity was observed from this filter system.
III.2	Control truck load-out area with venting to burning zone or equivalent means.	Compliance	Talking with Ms. Hanf and observing the loadout area, there appears to be a pipe with suction at the top of the truck loading area. Additionally, Ms. Hanf provided an image of the partial loadout tunnel. The partial enclosure helps control the truck load-out area.

Appendix A - Fugitive Dust Control Plan – Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
1.a, 2.b, 2.c, 5	Control road dust at least twice a month, and keep records of dust control activities.	Compliance	Records provided for the 2021 season through July 14 indicate which days had dust control. Sweeping occurs at least twice a month, and often weekly. Calcium chloride was applied May 21, 2021.
1.b	Limit speed to 10 mph or less.	Compliance	AQD observed a 5 mph speed limit sign at the facility entrance gate.
1.c	Minimize drop distance to stock piles.	Not evaluated	AQD did not observe stock pile loading.
1.d	Prevent fugitive dust on piles.	Compliance	AQD did not observe dust from stock piles.
2.a	Roadways paved.	Compliance	AQD observed roadways are paved.
2.d	Clean aggregate spillage.	Not evaluated	No aggregate spillage was observed on roadways.
3.a, b	Aggregate trucks entering, and HMA filled trucks exiting, shall be covered.	Not evaluated	Trucks observed on site were uncovered to allow material loading and unloading. AQD did not observe trucks at the entrance and exit, or check for a posted sign at the facility gate.
4	Front loader should avoid overfilling and minimize drop distance	Not evaluated	AQD did not observe the front loader in operation.
6	Immediately correct fugitive leaks at the facility.	Not evaluated	ADQ did not observe fugitive leaks.

Appendix B - Preventative Maintenance Program – Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Discussion
1.a	Monitor fabric filter pressure drop; minimum 2 in H ₂ O	Compliance	From the control room, AQD observed an instantaneous pressure reading of 3 inches H ₂ O. The facility has a low range indicator of 2 inches H ₂ O.
1.b	Daily record of pressure drop	Compliance	Facility records provide a record of a daily pressure drop reading.
2	High temperature sensor and alarm	Compliance	Baghouse inlet and outlet are monitored. AQD observed an outlet temperature of 162 °F and inlet of 173 °F. A high temperature set point of 375/400 °F at the inlet is in place.
3	Minimize fabric filter dust	Compliance	According to discussions during the inspection, dust collected in the baghouse is recycled back into the mix.
4	Replace piping and seals as needed	Compliance	Ductwork and valves were inspected at the beginning of the season. Baghouse bearings were replaced based on that inspection.
5	Take action if visible emissions exceed 20 (or 27%)	Not evaluated	AQD did not observe visible emissions exceeding 20% during the facility inspection.
6	Black light inspection before seasonal operations	Compliance	A black light test was conducted within 2 weeks of startup.
7	15 bags kept on site	Compliance	According to discussions during the inspection, bags are kept on site.
8	Records of fabric filter replacements and maintenance	Compliance	Ms. Hanf provided records of baghouse maintenance and fabric filter replacements from 2015 through 2021.

Appendix C - Emissions Abatement Plan for Startup, Shutdown, and Malfunctions – Conditions and Compliance Status

Plan Section	Determination	Discussion
Normal Startup Procedure	Compliance	The facility appears to follow this startup procedure. If material isn't hot at startup, it is discharged in the drop chute. Waste mix material is recycled to be reused.
Normal Shutdown Procedures	Compliance	The facility appears to follow this shutdown procedure. Waste mix material is recycled to be reused.
Hot Stops – Hot Starts	Compliance	The hot stop/start procedure is a good option for saving material if a brief issue causes a delay.
Identification of Supervisory and Maintenance Personnel	Not Evaluated	AQD did not request or review the list of facility personnel and their responsibilities.
Description of Inspected Items	Compliance	On July 21, 2021, Ms. Hanf provided records of daily walk around inspection, winter shutdown inspection, and baghouse annual inspection.
Replacement Parts	Compliance	According to discussions during the inspection, replacement parts are kept on site.
Baghouse Variables and Monitoring	Compliance	From the control room, AQD observed an instantaneous pressure reading of 3 inches H ₂ O. The facility has a low range indicator of 2 inches H ₂ O. A high temperature set point of 375/400 °F at the inlet is in place.
	Not Evaluated	

Corrective Procedures and Responsible Persons		Compliance limits were not exceeded during the facility inspection.
Drum Mix and Batch Normal Startup Procedures	Compliance	AQD observed the baghouse inlet and outlet temperature, mix temperature, and differential pressure were monitored continuously.

Appendix D – Compliance Monitoring Plan (CMP) for Facilities Burning Recycled Used Oil (RUO)
 This appendix is not applicable because, according to Ms. Hanf, recycled used oil has not been used at the facility since Cadillac Asphalt took the plant over from Barrett Paving more than 5 years ago (in March of 2015).

Conclusion

Cadillac Asphalt appears to be operating in compliance with PTI No. 98-96E and applicable state and federal regulations. The facility plans to apply for a permit to limit the facility's processing rate to 250 tons per hour.

NAME *AR*

DATE 10/27/21

SUPERVISOR *JK*