

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

P120969273

FACILITY: Asphalt Paving, Inc.		SRN / ID: P1209
LOCATION: 45 South Getty Street, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Ryan Johnson , Plant Manager		ACTIVITY DATE: 06/20/2023
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Synthetic Minor
SUBJECT: On site inspection to assess compliance with permit requirements and air quality rules and regulations.		
RESOLVED COMPLAINTS:		

Introduction

On June 20, 2023 State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an on-site inspection of the new Asphalt Paving facility located at 45 S Getty St. in Muskegon, Michigan, to assess compliance with the requirements of Permit to Install (PTI) No. 75-22 as well as all other applicable air quality rules and regulations. At the time of this inspection, the facility was conducting required stack testing to assess compliance with multiple emissions limits. The results of this testing were submitted as hard copies to the AQD on August 23, 2023. The results indicate compliance with permitted requirements and other applicable rules and regulations.

Asphalt Paving is a Hot Mix Asphalt (HMA) manufacturing facility that was newly constructed in 2022 and 2023. It utilizes a counterflow drum system along with multiple storage components and emissions control equipment to produce asphalt. PTI No. 75-22 was issued on June 13, 2022 and, in addition, the facility is subject to the conditions of New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart I. On the day of the inspection, SE arrived at the facility early to observe the preparations for the stack testing scheduled to commence that day. Upon arrival there were no visible emissions seen on site and only minor odors of asphalt while within the boundaries of the facility property. SE was greeted by site manager Ryan Johnson. After a conversation to discuss the intent of the inspection, an on-site inspection was conducted. Records were provided in July of 2023 after discussing with the facility that this would be acceptable to include the full month of June, 2023, in emissions calculations as this is a new facility with limited records to provide. Records were seen on-site as being maintained daily and more operating time for records analysis would help paint a clearer picture of facility operations and emissions.

PTI No. 75-22

This PTI contains requirements for four emissions units (EUs):

- EUHMAPLANT
- EUYARD
- EUACTANKS
- EUSILOS

EUHMAPLANT

This EU consists of HMA manufacturing equipment including aggregate conveyors, cold feed aggregate bins, and a 310 tph counter-flow drum with a 75 MMBtu/hr heat input burner. Emissions from this EU are controlled by a 55,407 cfm baghouse.

This EU has the following emission limits:

The compliance determinations in the table above were determined using the records provided per the recordkeeping requirements for this EU within the permit, as discussed further below, as well as the results of stack testing where applicable. Compliance determination for emission rate limits regarding PM, PM10, PM2.5, NO_x, CO, formaldehyde, and nickel are dependent upon the results of the stack testing being conducted during this inspection. For this inspection and report, annual emissions for those pollutants were calculated using the permitted limit values combined with production values. As discussed in the testing section of this report, the facility may be required to test emission rates for other pollutants. At this time, it is not felt that further testing is required as the newly installed equipment was properly installed and appeared fully operational. If issues are uncovered in stack testing results this may be revisited.

This EU has the following material limits:

- Only natural gas may be used as fuel at the facility.
- No asbestos containing materials may be used in the manufacturing process.
- No more than 50% RAP material may be used for asphalt manufacturing.
- No more than 300,000 tons of HMA may be produced per 12-month rolling period.
- No more than 310 tons of HMA may be produced per hour (daily average).

During the inspection it was discussed that the facility only uses natural gas for fuel and that no asbestos containing materials are used in manufacturing. Batch records are maintained by the facility and were provided upon request. Review of these records confirmed compliance with RAP limitations for product batches. These records are discussed later in this report. This facility has not operated for a full year and so annual production levels cannot be determined at this point, though through the currently recorded operational months beginning in September of 2022, a total of 85,061 tons of RAP containing mixes have been produced. Daily and monthly records were provided and demonstrated that the highest production rate was an average of 130 tons per hour through the month of June, 2023. This is compliant with the permitted limit.

This EU has the following process restrictions:

- The facility must adhere to the fugitive dust control plan listed as Appendix A.
- The facility must adhere to the preventative maintenance plan listed as Appendix B.
- The facility must adhere to the Emission Abatement Plan for Startup, Shutdown, and malfunctions listed as Appendix C.
- The facility must fine tune burners to control CO emissions during startup for each production season and every 500 hours of operation.
- The facility must be installed and operated in accordance with the submitted permit application.

During the inspection, Appendix A was assessed, and it was determined that all necessary dust control measures were properly implemented including vehicle and road dust control and cleaning, load coverings on vehicles, minimized drop distances, contained loading and storage locations, and baghouse operation. Appendix B was assessed, and it was determined that the baghouse was installed and operated appropriately, as discussed later in this report. It was discussed that the

facility follows Appendix C procedures for startup and shutdown. Appendix C contains parameters for what to do in the event of malfunctions which, though they have not been used by the facility, are in place and appear sufficient for proper handling of such events. It was discussed that the facility did tune the burners upon startup and that maintenance tuning is conducted appropriately. Records of these operations are included with this report. Through inspection of all equipment throughout the facility, it appears that the facility has appropriately followed the application for installation of all equipment.

This EU is required to have an installed baghouse with appropriate monitoring equipment including a pressure drop monitor to ensure proper function and an alarm system to alert staff to malfunctions, and monitoring equipment to track virgin aggregate and RAP feed rates in manufacturing. As discussed below, records regarding feed rates were provided that demonstrated installation and use of feed rate monitors. When inspecting the baghouse, a pressure drop monitor was observed and had a reading of 1.79 inH₂O. This is below the permitted range of 2-10 inH₂O. When discussed with the facility it was determined that this was a likely result of the baghouse being of larger capacity than necessary for the operational throughput of the facility combined with it being a new machine, resulting in less of a dust cake on the bags, which is known to increase the pressure drop. Other observations of the baghouse including a lack of any visible opacity and stack testing appear to demonstrate proper function despite a reading lower than the permitted value for pressure drop. The facility also provided manufacturer literature discussing this issue and acknowledging the possibility of lower pressure drop despite proper function. At this time a violation will not be issued. The facility will be monitored to observe if the pressure drop adjusts as further use results in a heavier dust cake. If this does not occur, further discussion on operational standards and parameters will occur. It was discussed that an alarm system was installed as required.

This EU has multiple testing requirements. The facility may be required to verify odor emissions if requested by the AQD. At the time of inspection there was no observed cause to require odor testing at this time. The facility may be required to verify any emission rate as outlined in the above emission limit table if requested by the AQD. During the inspection, no cause was observed to require stack testing beyond what was being actively conducted during the inspection. The facility is required, after initial startup, to conduct stack testing to verify PM, PM₁₀, PM_{2.5}, NO_x, CO, VOCs, formaldehyde, and nickel. This testing was being actively conducted during this inspection and results have since been submitted. The facility is also required to observe the equipment for presence of visible emissions (VEs) during start-up of operations. The facility maintains records of these observations, which are discussed further below and, upon arrival, VE evaluations were being conducted while the facility was beginning its daily runs.

This EU has the following recordkeeping requirements as outlined below:

- Virgin aggregate and RAP feed rates.
- Handheld CO monitor records during startup, malfunction, and every 500 hours of operation to verify emission of less than 500 ppmv.
- Maintenance procedures for burners and baghouses.
- Tons of hot mix asphalt containing RAP produced, including the average percent of RAP per ton of hot mix asphalt produced containing RAP records for each calendar month.
- Daily records of the following production information:

- Virgin Aggregate feed rate
- RAP feed rate.
- Material Product Temp.
- Identification of all ingredients.
- Monthly and 12-month rolling time period emission calculation records of all criteria pollutants listed in the Emission Limit Table above.
- Daily, monthly, and 12- month rolling time period records of the amount of HMA paving materials produced.
- Daily records of the hours of operation of EUHMAPLANT.
- The pressure drop for the fabric filter controlling EUHMAPLANT emissions once per day.
- Parameter alarm instances for the EUHMAPLANT fabric filter system including the reason the alarm was activated and the actions taken.
- Monthly records of the average percent of RAP per ton of hot mix asphalt containing RAP produced.
- The following daily records:
 - Hours of operation.
 - Total tons produced.
 - Average ton/hour production rate for based on the total throughput for the day and hours of operation.

All records were provided and analysis yielded the following compliance determinations:

- RAP feed rates were appropriately recorded and provided.
- CO monitoring results were provided with all recordings reading at or below 322 ppmv.
- Maintenance logs were maintained on site and provided for review.
- RAP production rates were recorded and provided, as discussed above.
- Feed rates, temperatures, and batch recipes for all produced batches were recorded and provided.
- Monthly and 12-month rolling emissions data was provided, as discussed above.
- Daily, monthly, and 12-month rolling HMA production rates were recorded and provided.
- Operational hours were provided and used to calculate daily and hourly average production values as discussed above.
- Daily pressure drop readings were observed on site and records were maintained and provided.
- Alarm system was observed on site and all recorded instances were maintained.
- %RAP data was provided along with other required batch data as discussed above.
- Daily operations and production records were provided as discussed above.

The facility is required to have reported to the AQD within 30 days after the completion of the installation of all permitted equipment. Though no unique communication was sent regarding solely the completion of construction, the facility did appropriately submit an acceptable stack test procedure that complied with startup requirements as discussed above. This can be considered sufficient notification that installation of the facility is completed and so no violation will be issued.

This EU has one stack requirement. During the inspection the newly installed stack was measured using a range-finder device. The stack was found to be approximately 60 ft in height, which is

compliant with the permitted height requirement of 60'. The required structures for three aggregate piles were also installed and aggregate piles were observed entirely within the buildings.

EUYARD

This EU consists of all fugitive dust sources at the facility including roadways, plant yard, storage piles, and material handling operations.

This EU is limited to only allowing 5% opacity of VEs. During the inspection it was observed that any VEs present were intermittent and within the 5% opacity limit. The facility could also provide record of VE observations conducted by staff that demonstrated compliance with the limit as well as VE observations being conducted during the inspection.

This EU is restricted to only being used while the fugitive dust plan labeled Appendix A is being adhered to. As discussed above, the facility appeared to be following all parameters outlined in Appendix A and could provide any necessary documentation.

The facility is required to calculate and report fugitive dust emissions to the AQD. As this facility has only operated during this operating season, no reports have been submitted yet. This is acceptable. As discussed, the facility is appropriately maintaining records of compliance with Appendix A. Though the facility may be required to verify silt content for stored aggregates, at this time it is not felt that such verification is necessary.

EUACTANKS

This EU consists of two 20,000 gallon liquid asphalt cement storage tanks and one 3 MMBtu/hr hot oil heater. This EU has a vapor condensation and recovery system installed for pollution control.

The facility may only operate this EU if the pollution control equipment is installed and operational. During the inspection it could be seen that the equipment was installed and operational. Proper operation was demonstrated through the facility's adherence to manufacturer requirements as well as provided records of emissions.

EUSILOS

This EU consists of three 200-ton HMA storage silos and the associated emissions and loadout controls.

This EU may not be operated unless the emissions and loadout controls are properly installed. The emissions controls could be seen as installed at the top of each silo, as required in the permit. Loadout controls and enclosures with sides greater than 5 feet in height and with installed roofs could be observed as properly controlling fugitive emissions during the dispensing of product into trucks. The facility is required to have an appropriate preventative maintenance plan submitted. An appropriate plan was submitted and appears to appropriately address necessary protocols.

Conclusion

At this time, the facility appears to be in compliance with permit requirements as well as all applicable air quality rules and regulations. Results of the stack test were submitted as required and appeared to confirm compliance with permitted requirements.

NAME Scott Evans

DATE 9/28/2023

SUPERVISOR HH