

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

N727167989

FACILITY: PYRAMID PAVING & CONTRACTING		SRN / ID: N7271
LOCATION: 325 N. FAIRVIEW, WEST BRANCH		DISTRICT: Bay City
CITY: WEST BRANCH		COUNTY: OGEMAW
CONTACT: Alicia Kreiger , Controller		ACTIVITY DATE: 06/06/2023
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Onsite Inspection FY2023		
RESOLVED COMPLAINTS:		

On June 6, 2023, AQD staff conducted a scheduled onsite inspection at Pyramid Paving and Contracting- West Branch, SRN N7271. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) and to determine compliance with the facility's Permit to Install (PTI), PTI No. 149-03G. AQD staff were assisted onsite by Ms. Alicia Kreiger, CPA, Controller, and Mr. David Chaffin, QA/QC Certified Technician. At the time of inspection on 6/6/2023 the plant was not operating. Onsite staff reported a drive shaft broke earlier that morning. Personnel were observed working to repair the equipment. At the time of inspection, the facility was found to be in compliance.

Facility Description and History

Pyramid Paving and Contracting- West Branch is a hot mix asphalt (HMA) plant located at the Glancy Sand & Gravel Pit (SRN N6355), approximately three miles north of West Branch, MI. The address submitted with the original PTI application is listed as 325 North Fairview Road. However, the facility is located near the end of Number 250 Road. GPS coordinates for the facility are 44.331045, -84.205578. It should be noted an additional HMA plant is located at the Glancy Sand and Gravel Pit. The second HMA plant is located adjacent, to the east, of the Pyramid Paving and Contracting – West Branch facility and is owned and operated by Bolen Asphalt Paving, Inc (SRN B4164).

Pyramid Paving and Contracting-West Branch is a permanent hot mix asphalt plant. The facility is equipped with a counter flow drum mix asphalt plant rated at 300 tons per hour. The plant consists of a counter flow, dual-drum system, control house, fabric filter dust collector, two HMA silos, a partially enclosed truck load-out, two asphaltic concrete storage tanks, fuel tanks, and aggregate feeders and their associated conveyors.

Pyramid Paving and Contracting- West Branch is a synthetic minor source. One active Permit to Install is associated with the facility, PTI No. 149-03G. PTI No. 149-03G was issued on 1/5/2021. The facility's previous PTI was modified to remove language regarding the facility being a portable plant, as well as references to testing conditions in the emissions limit table that did not exist. The facility was last inspected on 9/30/2020. At the time of the 2020 inspection, the facility was determined to be in compliance and had resolved violations cited during an inspection completed at the facility on 8/7/2019.

No recent complaints are on record for the facility since 2006. As a synthetic minor source, the facility is required to report emissions annually to the Michigan Air Emissions Reporting System (MAERS). Emission reports for the facility have historically been submitted on time and complete.

Compliance Evaluation

EUHMAPLANT

Emission unit HMAPLANT incorporates the 300 tph counter flow drum hot mix asphalt plant including the aggregate conveyors and fabric filter dust collector. EUHMAPLANT is permitted to burn a variety of fuels including no. 2 through no. 4 fuel oils, natural gas, propane, Marathon Petroleum Company slurry oil (or equivalent fuel), and recycled used oil (RUO), Special Condition (S.C.) II.2. While the facility is permitted to utilize a variety of fuels, staff report the facility only operates using propane fuel.

To ensure proper burner operation and performance, drum mix burners are to be fine tuned at the beginning of each paving season or upon a malfunction of EUHMAPLANT as shown by the CO emission monitoring data, S.C.III.5. Staff report fine tuning of the drum mix burners is completed every spring at the beginning of the paving season by an external contractor. Records of the most recent tune-up were provided and reviewed. The most recent burner tune up was completed on April 27, 2023.

In addition to fine tuning the drum mix burners, the permittee shall monitor, with a handheld CO monitor, the CO emissions from EUHMAPLANT and the production data associated with the time emissions data were collected, S.C.VI.3. The CO emissions should be less than 500 ppmv to ensure the plant is operating properly. PTI No. 149-03G states monitoring of CO is to be performed upon start-up each paving season, upon malfunction of the drum dryer or its associated burner, and every 500 hours/ two weeks of operation. The permit reads as though monitoring should be completed every 500 hours or every two weeks, whichever occurs first. However, there are only 336 hours in two weeks. District staff reached out to AQD permits section and confirmed this was likely an oversight during the permit writing. Records of CO monitoring completed by the facility were provided and reviewed for the 2022 operating season and those completed so far in the 2023 operating season. CO emission monitoring is performed once a month by the facility. Hours the facility operated each month during the period of records reviewed ranged from 14.35 to 162.98 hours. Production rates were recorded during CO readings. Production rates ranged from 180 to 200 tons/hr. CO readings ranged from 176 to 248 ppm, well below 500 ppm. During each CO monitoring event, a total of 8 readings were obtained at 5-minute intervals over a 30-minute time span.

Section I. of EUHMAPLANT establishes emission limits for criteria pollutants and toxic air contaminants (TACs). Testing to verify and quantify odor emissions from EUHMAPLANT may be required at the request of the AQD district supervisor, S.C.V.1. Testing to determine emission rates was required in previous permits. Emission rate testing was performed by Network Environmental, Inc on August 24-27, 2004, as part of compliance with then PTI No. 149-03A. At the time of testing in 2004, the plant was reported to be operating at approximately 210 tons per hour HMA and was firing RUO. Results from the testing appeared to be in compliance with permitted emission limits. No other testing has been requested of the facility.

Monthly and 12-month rolling emission calculation records are to be maintained for all criteria and TACs listed in the Emission Limit Table for EUHMAPLANT, S.C.VI.8. Records were provided and reviewed for calendar year 2022 through May 2023. The facility calculates emissions in a spreadsheet based on the amount of hot mix asphalt produced. Emission factors used in the spreadsheet are MAERS emission factors for criteria pollutants and emissions factors determined during stack testing for TACs.

Calculations and records of CO emissions are maintained. During the period of records reviewed, the highest monthly emissions occurred during October 2022 with 3,993.83 lbs of CO emitted. The highest 12-month rolling period occurred at the end of November 2022 with 19,573.94 lbs, or 9.79 tons, well below the permitted limit of 25 tpy, S.C.I.4.

Onsite staff monitor the stack from EUHMAPLANT for opacity to ensure compliance with PM emission limits, S.C. VI.4. The facility has staff who are Method 9 certified. EUHMAPLANT is equipped with a fabric filter dust collector, S.C.IV.1. The fabric filter consists of 932 bags. Facility staff report a minimum of 15 spare bags are kept onsite. Dust collected in the fabric filter is fed back to the burner of the plant. The system is equipped with a pressure drop sensor. As previously mentioned, the plant was not operating at the time of inspection. As a result, the pressure drop sensor was observed to read 0" W.C. Staff report the target pressure drop range during operation is 2-6" W.C. with an average pressure drop of 2.5" W.C. Staff record the pressure drop at least once per operating day. A thorough inspection of the fabric filter system is completed at the beginning of each paving season. The facility rotates sections of bags to be changed out. Additionally, staff report both pressure drop, and stack opacity are observed throughout the operating season and bags are changed as needed to ensure proper control of PM emissions.

The permittee shall keep average daily, monthly, and 12-month rolling records of the amount of HMA paving materials produced from EUHMAPLANT, S.C.VI.10. The plant is equipped with a software system capable of automatically tabulating daily amounts of HMA produced. Staff tabulate the daily amounts of HMA produced and add it to a spreadsheet. Records of HMA produced were provided and reviewed for calendar year 2022 through May 2023. Daily hours and daily tonnage are summed for each month. The monthly tonnage is divided by monthly hours to determine average hourly production rates for each month. During the period of records reviewed the month with the highest production rate was September 2022 with a production rate of 199.51 tons/hr. Daily average tons of HMA per hour during the period of records reviewed were all well below the 300 tons/ hour limit, S.C.II.7. The plant is rated for 300 tons/hr; however, staff report the plant is never operated at that capacity.

During the period of records reviewed, the month with highest production was October 2022 with 30,721.73 tons HMA produced. Records of 12-month rolling HMA produced are maintained. During the period of records reviewed, the highest 12 month rolling total occurred at the end of May 2023 with 163,923.38 tons, well below the limit of 250,000 tons per 12-month rolling time period, S.C.II.6.

Records are maintained detailing the components of each asphalt paving mixture at the facility, S.C.VI.7. Daily records were provided and reviewed for the period of calendar year 2022 through May 2023. Records are maintained detailing the daily mass of each virgin aggregate component and reclaimed asphalt pavement (RAP). In mixtures containing RAP, the RAP percentage of the

mixture ranged from 10-20%, below the permitted limit of 30% RAP material based on a monthly average, S.C.II.5. Staff report mix designs are specified by the client based on the surface in which the asphalt will be used to pave. No material containing asbestos is used in EUHMAPLANT, S.C.II.4. Staff report the facility does not use shingles in their process.

Frequent maintenance is conducted on EUHMAPLANT including weekly and monthly lubrication and maintenance. Records of maintenance are maintained and were provided for the most recent 12-month period, S.C.VI.5. A checklist is utilized at the beginning of each week detailing process points looked at. Process points inspected each week include, checking the last top door nearest the exhaust fan on the clean air plenum for evidence of dust. If dust is present black light testing of the baghouse is completed. Fabric filter bags are inspected from the hopper door to assure that all rows are cleaning. Screw conveyors or drag slat bars are checked for wear. Exhaust fan damper linkage is checked for slippage. Air lines are made sure to be clean and open. The thermocouple at the baghouse inlet is inspected. Solenoids, diaphragm vales, air hoses and fittings are all checked for leaks or cracks. Belts on the exhaust fan are checked. All chain drives are oiled. Fan bearings, air compressor bearings and gear boxes are lubricated. A checklist is utilized at the beginning of each month. The most recent monthly maintenance checklist was conducted on 6/5/2023. The monthly maintenance checklist includes checking the conditions of intake and discharge points, flight thickness at outer edges, bearing condition, coupling bolts for hole widening or wear, excessive wear, damaged components, duct work, and baghouse black light leak test.

Operation of EUHMAPLANT shall only occur between April 15 and November 30, S.C.III.7. Records of operating days were provided for calendar year 2022 through May 2023. During calendar year 2022, EUHMAPLANT began operation on May 10, 2022. The last day of operation in calendar year 2022 occurred on December 3, 2022. Process records provided indicated the facility operated past November 30, by operating on both December 2 and December 3, 2022. AQD was not previously notified by the facility of operating past the permitted date. AQD staff inquired as to why the plant was operated past November 30 in 2022. Pyramid Paving staff explained the facility was finishing up a job paving a parking lot. Staff said they thought this condition was removed during the most recent permit modification. AQD staff informed Pyramid Paving staff that S.C.III.7 in the current PTI limits operation of the plant to occur between April 15 and November 30. At this time a violation notice is not being issued. However future violations of S.C.III.7. may result in issuance of violation notice to the facility. Operation of the plant in 2023 began on April 24, 2023.

EUSILOS

EUSILOS includes the hot mix asphalt (HMA) paving material product storage silos. EUSILOS is equipped with an emission capture system, S.C. III.1. Staff report the emission capture system is on when the plant is operating and when load out is occurring. The silo load area is permanently enclosed except for the truck entrance and exit points. Emissions collected from the truck load out and emission capture system are fed into the burning zone of EUHMAPLANT, S.C.III.2. While the plant was not operating at the time of inspection, staff turned on the emission capture system to demonstrate the system was operational.

FGTANKS

FGTANKS includes all storage tanks onsite. Storage tanks are equipped with a vapor condensation and recovery systems, S.C.III.1. Vapors condense within filters and run back down into the tanks. The condensed filters are equipped with pressure gauges. Staff report the pressure gauges are monitored periodically to ensure proper operation. The condensation filters are changed as needed, typically once a year.

FGFACILITY

Special Condition I.1. establishes a source wide emission limit for aggregate hazardous air pollutants (HAPs) of 22.5 tpy. Monthly and 12-month rolling HAP emission records are maintained by the facility, S.C.VI.2. Records were reviewed for the period of calendar year 2022 through May 2023. During the period of records reviewed, aggregate HAP emissions were well below 22.5 tpy. HAP emissions are calculated based on tons of HMA produced using emission factors derived from stack testing.

Fugitive Dust Control Plan

Appendix A of PTI 149-03G details the facility's fugitive dust control plan. As part of the onsite inspection, compliance with Appendix A was evaluated. Site personnel report site roadways are monitored for fugitive dust. Staff water site roadways as needed by filling a loader bucket with water. Brine treatments are applied as needed during extended dry periods. Records of dust control activities are maintained. The speed of vehicles onsite is limited to 10 miles per hour. Signs notifying drivers of the speed limit were verified to be posted. Roadways onsite in which HMA haul vehicles travel are paved with HMA.

Summary

On June 6, 2023, AQD staff conducted a scheduled onsite inspection at Pyramid Paving and Contracting - West Branch, SRN N7271. Pyramid Paving and Contracting - West Branch is located near the end of Number 250 Road. GPS coordinates for the facility are 44.331045, -84.205578. The facility is a permanent hot mix asphalt plant. Pyramid Paving and Contracting- West Branch is a synthetic minor source. One active Permit to Install is associated with the facility, PTI No. 149-03G. At the time of inspection, the facility was found to be in compliance.



DATE 7/17/2023

SUPERVISOR 

NAME