

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

P020665399

FACILITY: Molon Asphalt Inc.		SRN / ID: P0206
LOCATION: 18695 HONOR HWY, INTERLOCHEN		DISTRICT: Cadillac
CITY: INTERLOCHEN		COUNTY: BENZIE
CONTACT: Mike Foster ,		ACTIVITY DATE: 10/21/2022
STAFF: Caryn Owens	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site inspection and Records Review		
RESOLVED COMPLAINTS:		

On Friday, October 21, 2022 Caryn Owens of the Department of Environment, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted a scheduled, unannounced, on-site field inspection and records review of Molon Asphalt (SRN: P0206) located at 18695 Honor Highway, Interlochen, Benzie County, Michigan. The field inspection and records review were conducted to determine compliance with permit to install (PTI) No. 19-11B. The facility has opted out of major source applicability by limiting operational and production potential to emit (PTE) below major source thresholds, and is considered an opt-out source. The facility is subject to New Source Performance Standards (NSPS) of Performance for Hot Mix Asphalt Facilities under 40 CFR, Part 60, Subpart I. AQD was accompanied by Mike Foster, the Plant Operator, during the inspection.

Summary:

The activities covered during the field inspection and records review for the facility indicate the facility is **Non-Compliant** with PTI 19-11B. Specific permit conditions that were reviewed are discussed below.

On-site Inspection:

During the field inspection the weather conditions were sunny, with variable-gusty winds from the south about 10-15 miles per hour, and approximately 48 degrees Fahrenheit. The facility is a hot mix asphalt (HMA) batch plant that was producing approximately 110 tons of asphalt per hour. The asphalt plant consisted of a counter flow asphalt drum, two liquid asphalt tanks on the western portion of the plant, 4 aggregate bins on the southern portion of the plant, and one bin of reclaimed asphalt pavement (RAP) on the northeast portion of the plant. The remainder of the plant consisted of aggregate storage piles, RAP storage piles, an operator's shed, and two product storage piles and associated conveyors.

The aggregate material enters the counter flow drying drum from the south side of the plant. Then liquid asphalt and RAP are introduced in northern portion of the drum and mixed with the aggregate material. The weather was recently cold and wet, so the RAP material was wet when entering the drum so there was a lot of steam observed where the RAP entered the drum. Additionally, a steam plume was observed from the baghouse stack and above the two silos. According to Mr. Foster, the plant typically operates 5 days a week, with occasional Saturdays during the summer months. The plant shuts down during the winter months. The plant can shut down intermittently during the spring, summer, and fall if the demand is low. According to Mr. Foster, the solids collected from the baghouse are re-introduced to the process back to the drum, and fuel oil is not used at the plant. During the inspection, the following information was recorded:

- HMA Production Rate: 110 tph
- Mix temperature in the drum was 335 degrees Fahrenheit,
- Pressure drop of the baghouse was at 3.8 inches water column,
- RAP was 15 percent,
- Asphalt Tank Temperature was 266 degrees Fahrenheit,
- Inventory, one silo at 16.4 tons and the other silo at 55.8 tons.

PTI Records Review

EUHMAPLANT: This Emission Unit is for a Hot mix asphalt (HMA) facility including: Aggregate conveyors, 170 ton per hour counterflow drum dryer with a RAP collar. Binder (liquid asphalt cement) is added in a pugmill which empties into a drag conveyor prior to the silos or directly to a load out bin when the plant is portable. Fuels: natural gas, propane, No. 1 through No. 6 fuel oils, recycled used oil (RUO). The Emission Unit is controlled by a fabric filter dust collector.

- **Emission Limits:** The facility was within the carbon monoxide (CO) emission limits of 30 tons per year. Based on the records reviewed, the highest CO emissions were reported as 2.14 tons per year from October 2021 through September 2022. Particulate Matter (PM) emissions limits are based on Stack testing which was completed May 25, 2021. Based on stack testing PM emissions were at 0.0011 dr/dscf, and 0.0012 lb/ton which were below the permitted limits of 0.04 gr/dscf and 0.04 lb/ton.

Additionally, the facility has emission limits based on emission factors determined by the amount of asphalt produced. Based on the records reviewed, the amount of asphalt total produced per month was 55,473 tons per year. Since the highest amount of asphalt produced was less than 300,000 tons per year, the facility was within the permitted emission factors.

- **Materials/Fuels:** The facility only burns natural gas at the facility. According to the PTI, the facility is approved to use propane No. 1 through No. 6 fuel oil, or specification RUO in EUHMAPLANT, however, this facility does not burn any oil at this time. Additionally, the facility is allowed to use a maximum of 50 percent RAP while making asphalt, during the inspection the facility was using 15 percent RAP. The facility does not use any asbestos tailings or waste materials containing asbestos, including recycled asphalt shingles (RAS). The facility appears to be in compliance with the material limits of the PTI.
- **Process/Operational Parameters:** All necessary maintenance conducted at the facility is logged into a computer system once performed. The facility follows a Fugitive Dust Control Plan, a Preventative Maintenance Program, and an Emission Abatement Plan for Startup, Shutdown and Malfunctions to maintain proper operation at the facility. Through discussions with Mr. Foster, the temperature and pressure drop of the baghouse are closely monitored while the plant is operating. During normal operation, if the temperature of the baghouse begins operating greater than 300 degrees Fahrenheit then the plant would begin to shut down to protect the bags in the baghouse. This is a small plant where the gauges are closely monitored and the plant operates with minimal issues.

As previously stated, this plant currently operates using natural gas only. RUO has not been used at this Plant. The facility performed a preseason inspection of the baghouse and plant for proper operation and performance during the 2022 paving season. According to Mr. Foster, the plant uses natural gas to gauge that the plant is operating properly, and the drum mix burners are fine-tuned. However, the CO was not monitored to determine the drum mix burners were fine-tuned for proper burner operation and performance. This is in violation of PTI 19-11B.

- **Design/Equipment Parameters:** Proper operation of the baghouse requires a pressure drop range between 2 to 8 inches water column ("wc). Based on the records reviewed, the baghouse pressure drops ranged between 3.4 to 4.6"wc.
- **Testing Sampling Equipment:** Performance testing was completed May 25, 2021 for PM and CO. AQD received the results in July 2021 and the results indicated the emissions from each pollutant were below permitted limits. The stack testing parameters recorded were:

Fuel: natural gas only

Asphalt Mix: RAP (15%)

Production Rate: 117 Tons per Hour.

Baghouse Differential Pressure: 4.1" during test.

Currently, the facility uses only natural gas, RAP is at 15, and no RAS, and the differential pressure of the baghouse was at 3.8"wc during the inspection, and the production rate was at 110 tons per hour.

- **Monitoring/Recordkeeping:** Based on the records reviewed, the facility monitors and records the virgin aggregate feed rate on a continuous basis. According to Mr. Foster, a monitor to collect CO emissions was not accessible to obtain this information for the operation at the beginning of the 2022 season and after 500 hours of operation to verify the plant was still operating properly. The facility records the type and amount of fuel used (currently only natural gas), the amount of HMA containing RAP, the percentage of RAP, the virgin aggregate feed rate, and the asphalt paving material temperature. The facility currently uses 2 different asphalt mix designs, which use a maximum RAP of 15 percent. The emissions are already discussed above. Fugitive dust emissions are calculated using EPA emission factors and are included in the PM emissions already discussed above.

Additionally, the facility electronically logs daily activities of the baghouse. The dust from the baghouse is rerouted back into the drum to mix with the HMA. According to the records, no bags from the baghouse needed to be replaced at the beginning of the paving season. During the inspection EGLE didn't observe any pipes or seals that needed to be replaced. And the facility completed a blacklight inspection in the preseason (in April 2022) prior to start-up of the paving season.

As previously stated, the facility did not monitor the CO emissions from a handheld monitor in accordance with PTI 19-11B upon startup of the paving season nor after 500 hours of plant operation, which is in violation of PTI 19-11B.

- **Reporting:** The facility reports annual emissions to EGLE. Based on the most recent Michigan Air Emissions Reporting System (MAERS), the facility was in compliance.

- **Stack/Vent Restrictions:** Based on visible observations during the field inspection, the stack appeared to be in compliance with permitted limits. However, AQD used a range finder to check the stack height, and after triple checking, the stack appeared to be around 38 feet above ground service. Based on the estimates of the range finder, AQD requested Mr. Foster to confirm the stack height was minimum 40 feet above surface as required by PTI 19-11B.
- **Other Requirements:** The facility shall comply with all applicable provisions of the New Source Performance Standards, Standards of Performance for Hot Mix Asphalt Facilities, as specified in 40 CFR Part 60, Subpart A and Subpart I, as they apply to EUHMAPLANT. Based on records reviewed, it appears the facility is in compliance with 40 CFR Part 60, Subpart A and Subpart I.

The plant has not relocated since issuance of PTI 19-11B.

EUAYARD: This Emission Unit is for the fugitive dust sources including: Plant roadways, Plant yard, Material storage piles, and Material handling operations (excluding cold feed aggregate bins)

- **Emission Limits:** There are no applicable emission limits for EUAYARD.
- **Materials/Fuels:** There are no applicable material limits for EUAYARD.
- **Process/Operational Parameters:** All necessary maintenance conducted at the facility is logged into a computer system once it's performed. Based on the records reviewed, fugitive dust is monitored and recorded on a daily basis when the plant is operating.
- **Design/Equipment Parameters:** There are no applicable design/equipment parameters for EUAYARD.
- **Testing/Sampling:** There are no applicable testing/sampling requirements for EUAYARD.
- **Monitoring/Recordkeeping:** Based on the records reviewed, the facility calculates the particulate fugitive dust emissions on a monthly and annual basis, based on a 12-month rolling time period.
- **Reporting:** As previously stated, the facility reports annual emissions to EGLE. Based on the most recent MAERS and records reviewed, the facility was in compliance.
- **Stack/Vent Restrictions:** There are no applicable stack/vent restrictions for EUAYARD.
- **Other Requirements:** There are no applicable "Other Requirements" required for EUAYARD.

EUACTANKS: This Emission Unit is for the liquid asphalt cement storage tanks, which are controlled by a vapor condensation and recovery system.

- **Emission Limits:** There are no applicable emission limits for EUACTANKS.
- **Materials/Fuels:** There are no applicable material limits for EUACTANKS.
- **Process/Operational Parameters:** According to Mr. Foster, a vapor condensation and recovery system is installed, operated, and maintained on the liquid asphalt storage tank systems.
- **Design/Equipment Parameters:** There are no applicable design/equipment parameters for EUACTANKS.
- **Testing/Sampling:** There are no applicable testing/sampling requirements for EUACTANKS.
- **Monitoring/Recordkeeping:** There are no applicable monitoring/recordkeeping requirements for EUACTANKS.
- **Reporting:** There are no applicable reporting requirements for EUACTANKS.
- **Stack/Vent Restrictions:** There are no applicable stack/vent restrictions for EUACTANKS.
- **Other Requirements:** There are no applicable "Other Requirements" required for EUACTANKS.

EUSILOS: This Emission Unit is for the HMA paving material product storage silo after the pugmill and conveyor that is installed at 18695 Honor Highway, Interlochen, Michigan.

- **Emission Limits:** There are no applicable emission limits for EUSILOS.
- **Materials/Fuels:** There are no applicable material limits for EUSILOS.
- **Process/Operational Parameters:** During the inspection, AQD observed visible emissions and a steam plume at the top of the silos. If there was an emission top control capture system installed, the emissions would be drawn towards the silos, which was not observed. Therefore, there is either no top silo control capture system or it is not operating in a satisfactory manner, which is in violation of PTI 19-11B.

The silo load-out activities are in a permanently enclosed area, except for the truck entrance. The emissions are captured and routed back to the burn zone of the drum.

- **Design/Equipment Parameters:** There are no applicable design/equipment parameters for EUSILOS.
- **Testing/Sampling:** There are no applicable testing/sampling requirements for EUSILOS.
- **Monitoring/Recordkeeping:** There are no applicable monitoring/recordkeeping requirements for EUSILOS.
- **Reporting:** There are no applicable reporting requirements for EUSILOS.
- **Stack/Vent Restrictions:** There are no applicable stack/vent restrictions for EUSILOS.
- **Other Requirements:** There are no applicable "Other Requirements" required for EUSILOS.

FGFACILITY: This Flexible Group is for all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

- **Emission Limits:** The emissions Carbon monoxide (CO) at the entire facility should not exceed 90 tons per year. Additionally, hazardous air pollutants (HAPs) are limited below 9.0 tons per 12-month rolling time period for individual HAPs, and 22.5 tons per 12-month rolling time period for aggregate HAPs. Based on the records reviewed, the highest CO emissions were 2.14 tons per year, and the highest HAP emissions combined were 0.0411 tons per 12-month rolling time period. The facility was within the permitted emission limits.
- **Materials/Fuels:** The plant is limited to 300,000 tons of HMA per 12-month rolling time period. Based on the records reviewed, the total amount of asphalt produced was 55,473 tons per year in 2021. And based on the records reviewed from April through September 2022 the total amount of asphalt produced was 33,949 tons per year. The facility was within the permitted limits.
- **Process/Operational Parameters:** There are no applicable process/operational parameters for FGFACILITY.
- **Design/Equipment Parameters:** There are no applicable design/equipment parameters for FGFACILITY.
- **Testing/Sampling:** There are no applicable testing/sampling requirements for FGFACILITY.
- **Monitoring/Recordkeeping:** The facility calculates CO and both individual and aggregate HAP emissions which are compiled on a monthly basis. The emissions are calculated in an acceptable manner and discussed above.
- **Reporting:** There are no applicable reporting requirements for FGFACILITY.
- **Stack/Vent Restrictions:** There are no applicable stack/vent restrictions for FGFACILITY.
- **Other Requirements:** There are no applicable "Other Requirements" required for FGFACILITY.

NAME



DATE

SUPERVISOR