

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

N043668384

FACILITY: PAYNE & DOLAN INC C22		SRN / ID: N0436
LOCATION: 1135 Thumm Rd, ALBA		DISTRICT: Cadillac
CITY: ALBA		COUNTY: ANTRIM
CONTACT: James Mertes ,		ACTIVITY DATE: 07/18/2023
STAFF: Caryn Owens	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-Site Inspection & Records Review		
RESOLVED COMPLAINTS:		

On Wednesday, July 18, 2023 Caryn Owens of the Department of Environment, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted a scheduled field inspection and records review of Payne & Dolan Inc. C22 (SRN: N0436) located at 1135 Thumm Road in Alba, Otsego County, Michigan. The field inspection and records review were conducted to determine compliance with permit to install (PTI) No. 274-82BP. The facility has opted out of major source applicability by limiting operational and production potential to emit (PTE) below major source thresholds. 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 met with Matthew McLeod of Payne & Dolan Inc. during the inspection.

Summary:

The activities covered during the field inspection and records review for the facility indicate the facility is in compliance with PTI 274-82BP. Specific permit conditions that were reviewed are discussed below.

On-site Inspection:

During the field inspection the weather conditions were sunny, with wind from the west-southwest and about 5 miles per hour, and approximately 62 degrees Fahrenheit. The facility is a hot mix asphalt (HMA) batch plant that produced approximately 564 tons so far this day. The asphalt plant consisted of a parallel flow asphalt drum, three liquid asphalt tanks on the southern portion of the plant that are kept between 300 to 350 degrees Fahrenheit, eight aggregate bins on the north side of the plant, three reclaimed asphalt pavement (RAP) bins, but only one is currently in use. Only two of the three liquid asphalt tanks were in use, one of them remains empty. The asphalt material is stored in two HMA silos that stay at a temperature between 300 to 315 degrees Fahrenheit, and only one silo was in use during the inspection, the other silo was empty. The remainder of the plant consisted of aggregate storage piles, RAP storage piles, an operator's shed, two product storage piles and associated conveyors, a tack storage tank that is kept at approximately 110 degrees Fahrenheit, and a screening facility located north and northwest of the plant that is contracted out and operated by another company.

The aggregate material enters the parallel flow drying drum from the north side of the plant. Then liquid asphalt and RAP are introduced in southern portion of the drum and mixed with the dry aggregate material, and then the asphalt material is conveyed into the silos. The facility is not in operation all year long and shuts down during the winter months. It is able to shut down intermittently during the spring, summer, and fall if the demand is low. The facility tries to operate 5 days a week and was operating during the inspection. During the inspection, AQD could see intermittent visible emissions coming from the stack of the baghouse due to the batch process operations. According to Mr. McLeod, the facility uses a fan system that collects emissions from the HMA processes that feeds to the baghouse. The solids collected from the baghouse are re-introduced to the process back to the rotating drum before the liquid asphalt cement enters the drum. Mr. McLeod stated that fuel oil hasn't been used at the facility in years, and recycled asphalt shingles (RAS) haven't been used in this past year. The facility does not accept asbestos containing materials (ACMs). The facility was using one mix design for the day of the inspection but has up to 6 different mix designs for this year's paving season. During the inspection, the following information was recorded:

- HMA Production Rate: 212 tph
- Mix temperature in the drum was 309 degrees Fahrenheit,
- Pressure drop of the baghouse was at 2.0 inches water column ("wc), and the pressure drop of the drum was at 0.5"wc,
- Aggregate feed rate was 158 tph,
- RAP feed Rate was 38 tph,
- RAP was between 8.4 to 8.9 percent,
- Asphalt Tank Temperatures were 318 degrees Fahrenheit for tank B, and 303 degrees Fahrenheit for Tank C,
- Silo material temperature was at 269 degrees Fahrenheit.

PTI Records Review

EU001: This Emission Unit is for a Hot mix asphalt (HMA) facility including: Aggregate conveyors, 350 ton per hour parallel flow drum mix asphalt plant that is controlled by a fabric filter dust collector baghouse.

- **Emission Limits:** The facility was within the carbon monoxide (CO) emission limits of 50.3 tons per year. Based on the records reviewed, the CO emissions were reported as 6.33 tons per year. 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 101,061 tons per year. Since the highest amount of asphalt produced was less than 500,000 tons per year, the facility was within the permitted emission factors.
- **Materials/Fuels:** The facility burns natural gas at the facility. According to the PTI, the facility is approved to use No. 2 fuel oil, No. 4 fuel oil, blended fuel oil, recycled used oil (RUO), however, this facility does not burn any oil at this time. Additionally, the facility is allowed to use a maximum of 40 percent RAP. According to the records, the facility typically uses between 12 to 21 percent RAP in the HMA. As previously stated under Emission+ Limits, the facility produces around 101,061 tons of HMA per year, which is within permitted the 500,000 tons per year amount. According to the records reviewed, highest amount the facility produced was 276.26 tons per hour based on 24-hr rolling time period, which is within the permitted limits of 350 tons of HMA produced per hour.

Additionally, the facility does not use any asbestos tailings or waste materials containing asbestos, including recycled asphalt shingles. The facility appears to be in compliance with the material limits of the PTI.

- **Process/Operational Parameters:** The facility fine tunes the drum burners to control CO emission and determine proper burner operation and performance at the beginning of each paving season.

All necessary maintenance conducted at the facility is logged into a computer system once performed. Based on the records reviewed, there were 84 bags changed from the baghouse during repairs made in the spring and a blacklight inspection was performed. The maintenance records are properly maintained. The facility follows their 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.

- **Design/Equipment Parameters:** Proper operation of the baghouse requires a pressure drop range between 1 and 8 inches. Based on the records reviewed, the baghouse pressure drop ranged between 2.0 to 2.6. During the onsite inspection the baghouse pressure drop was recorded at 2.0"wc.
- **Testing Sampling Equipment:** Performance testing was completed in September 2010 for PM, NOx, SO₂, H₂SO₄, CO, metals (lead, nickel, arsenic, and manganese), HCl, BTEX, acrolein, naphthalene, and formaldehyde. AQD received the results in November 2010 and the results indicated the emissions from each pollutant were below permitted limits. The stack testing parameters recorded were:

Fuel: recycled used oil.

Asphalt Mix: 4E1 including RAP (21%) and RAS (recycled asphalt shingles)(5%)

Production Rate: Around 240 Tons per Hour.

Baghouse Differential Pressure: Varied from 3.8" to 4.5" during test.

Currently, the facility uses only natural gas, RAP is between 8 to 20 percent, and no RAS, and the differential pressure of the baghouse was at 2.0"wc. Based on the records, the highest production rate was highest amount the facility produced was 276 tons per hour.

- **Monitoring/Recordkeeping:** Based on the records reviewed, the facility monitors and records the virgin aggregate feed rate, the RAP feed rate, and RAS (when used), on a continuous basis. The records indicated that at the start of the paving season began May 23, 2023 and CO emissions were evaluated on June 20, 2023 which indicated CO emissions were 202 ppmv which was below the permitted 500 ppmv. The facility records the type and amount of fuel used, currently it is only natural gas, and the amount of HMA containing RAP, the percentage of RAP, the virgin aggregate feed rate, and the asphalt paving material temperature. The facility has six different asphalt mix designs for this paving season. The facility calculates PM, NOx, SO₂, H₂SO₄, CO, metals (lead, nickel, arsenic, and manganese), HCl, BTEX, acrolein, naphthalene, and formaldehyde emissions compiled on a monthly basis, using the specified emission factors in the PTI. 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 aggregate prior to introducing the asphalt cement mixture. During the inspection EGLE didn't observe any pipes or seals that needed to be replaced. And the facility completed blacklight inspections on the baghouse upon start-up of the paving season (May 23, 2023). According to the records, 84 bags were replaced in the beginning of the paving season.

- **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:** I used the Nikon Forestry Pro II to verify the permitted stack heights, and the Stack measurements for EU001 were above the required 26 feet above ground surface.
- **Other Requirements:** Although the PTI does not state it, 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 EU001. Based on records reviewed, it appears the facility is in compliance with 40 CFR Part 60, Subpart A and Subpart I.

EUYARD: 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 EUYARD.
- **Materials/Fuels:** There are no applicable material limits for EUYARD.
- **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 EUYARD.
- **Testing/Sampling:** There are no applicable testing/sampling requirements for EUYARD.
- **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, the facility was in compliance.
- **Stack/Vent Restrictions:** There are no applicable stack/vent restrictions for EUYARD.
- **Other Requirements:** There are no applicable "Other Requirements" required for EUYARD.

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:** During the inspection AQD observed the vapor condensation and recovery system and it appeared to be installed, operated, and maintained properly.
- **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 silos, which are controlled by emission capture system for the top of each storage silo and load-out areas.

- **Emission Limits:** There are no applicable emission limits for EUSILOS.
- **Materials/Fuels:** There are no applicable material limits for EUSILOS.
- **Process/Operational Parameters:** According to Mr. McLeod, the emission capture system at the top of each storage silo and load-out area is installed, operated, and maintained properly.

All the silo load-out activities are in a permanently enclosed area, except for the truck entrance and exit. The emissions are captured and routed back to the burn zone of the asphalt 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 equipment and processes associated with the Asphalt Plant. The plant contains various pollution control throughout the facility.

- **Emission Limits:** The emissions of hazardous air pollutants (HAPs) are limited below 8.9 tons per 12-month rolling time period for individual HAPs, and 22.4 tons per 12-month rolling time period for all HAPs combined. Based on the records reviewed, the total HAP emissions combined were 0.26 tons per 12-month rolling time period. The facility was within the permitted emission limits.
- **Materials/Fuels:** There are no applicable material limits for FGFACILITY.
- **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 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 Camp OwensDATE 11-6-2023SUPERVISOR Shane Nixon