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

P120469014

FACILITY: Payne and Dolan Inc. Control 40 Asphalt Plant		**SRN / ID:** P1204
LOCATION: E 1/2 SE 1/4 S18 T47N R25W, SANDS TWP		**DISTRICT:** Marquette
CITY: SANDS TWP		**COUNTY:** MARQUETTE
CONTACT: Jim Mertes , Envionmental Manager		**ACTIVITY DATE:** 09/05/2023
STAFF: Lauren Luce	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: On-site Inspection FY23		
RESOLVED COMPLAINTS:		

Facility: Payne & Dolan Inc. C40 (SRN: P1204)

Location: County Road NC, Sands Township, MI 49855

Contact(s): Zach Leitner, Environmental Coordinator; James Mertes, Environmental Manager

Regulatory Authority

Under the Authority of Section 5526 of Part 55 of NREPA, the Department of Environment, Great Lakes, and Energy may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

Facility Description

Payne & Dolan, Inc. (P&D) is an asphalt material producer and pavement contractor based out of Waukesha, WI. P&D is one of several companies that make up the Walbec Group, which is a collection of companies that provides construction and engineering services. The company owns and operates several portable and stationary asphalt plants in Wisconsin and Michigan, primarily producing hot mix asphalt (HMA).

Plant C40 is a stationary HMA plant located in Sands Township, Marquette County, MI. The plant is located in a rural setting off County Road 480, southwest of the City of Marquette. The plant operates under Permit to Install (PTI) No. 33-21. The HMA plant consists of aggregate and reclaimed asphalt pavement (RAP) storage piles, cold feed bins, conveyors, screens, drum dryer, fabric filter, asphalt cement storage tanks, silos, loaders, and haul trucks.

Process Description

HMA is produced by the drying and mixing of aggregate, RAP, and liquid asphalt cement. HMA plants can be categorized as either batch or continuous mix. Continuous mix plants are further subdivided based on the type of dryer, which can be either a parallel-flow drum or counter-flow drum.

The HMA process begins with the transfer of aggregate, consisting of sand and crushed rock, from storage piles into cold aggregate feed bins. From the bins, material is dispensed onto conveyors that transport the material into screens and then into the drum dryer. The quantities of the type and size of aggregate are determined from the control room. The virgin aggregate is heated by a

natural gas-fired burner to remove moisture. Once the virgin aggregate reaches a certain length of the dryer, RAP is dispensed from a separate bin and added to the dryer. The RAP and aggregate continue to be heated and are then mixed with asphalt cement prior to exiting the dryer. After exiting the dryer, HMA is conveyed to storage silos where it is loaded into trucks to be hauled off-site.

Emissions

The primary source of emissions from the plant is the dryer. Air contaminants emitted include PM from aggregate drying and gaseous pollutants from the combustion process of the dryer. The gaseous pollutants consist of sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). The quantities of gaseous pollutants emitted varies based on the type of fuel being burned and operating parameters. A fabric filter collector is primarily used as PM control for the dryer. Other sources of emissions at HMA plants include fugitive emissions of PM and VOCs from storage silos, truck load-out operations, liquid asphalt cement storage tanks, aggregate storage and handling, and vehicle traffic. Dust suppressants, such as water or calcium chloride, can be used to control fugitive PM emissions.

Emissions Reporting

P&D C40 is a synthetic minor source and is subject to the New Source Performance Standards (NSPS), Subpart I – Standards of Performance for Hot Mix Asphalt Facilities. This facility is required to report its annual emissions to the Michigan Air Emissions Reporting System (MAERS). The following table lists the source total emissions for the reporting year 2022.

Pollutant	Pounds per Year (PPY)
NOx	2139.50
PM10	1827.72
SO2	9.17
VOC	42.78

Compliance History

The facility has not received any violation notices in the past five years.

Regulatory Analysis

P&D C40 is subject to PTI No. 33-21. The source is subject to 40 CFR Part 60 Subpart I, NSPS for Hot Mix Asphalt Facilities, because the source is defined as a hot mix asphalt facility that commenced construction after June 11, 1973.

Inspection

On September 5, 2023, AQD Staff (Lauren Luce) conducted an on-site inspection of the Payne & Dolan C40 plant in Marquette, MI. Weather conditions at the time were clear with winds at approximately 12mph out of the south and a temperature of 82 degrees Fahrenheit. This is a new plant that has not been previously inspected. The initial startup date of the plant was 08/15/2022. The 2023 startup date was 05/31/2023. The plant was operating during the inspection. Observations of the plant and yard were taken to inspect for fugitive emissions and opacity limits. No visible emissions were detected, and the plant roadways were well saturated.

EUHMAPLANT

This emission unit consists of one Hot Mix Asphalt (HMA) facility, consisting of aggregate conveyors and a 400 tons per hour counterflow drum mixer with a 70,000 cfm fabric filter dust collector baghouse.

SC II. 1-7

This plant operates on natural gas. The plant is not currently operating on recycled used oil (RUO) or fuel oil. No asbestos containing material is processed through the plant. The plant used on average 18% RAP in 2023 and 20% to date in 2023. At the time of inspection, the plant was operating with 21% RAP. The plant produced 59,495.36 tons of HMA in 2022. To date in 2023, the plant has produced 49,880 tons of HMA.

SC III.1-4

The plant is operating in compliance with the fugitive dust control plan, preventative maintenance program, emission abatement plan, and compliance monitoring plan.

SC III.5

A burner check was completed at the plant on 08/31/2022 and 07/06/2023.
SC III.6

The baghouse is installed and operating properly. Additional bags are located on-site. At the date of inspection at 1:53PM, the pressure drop was 4.83 inches.

SC IV. 1-2

The plant is equipped with a belt scale to measure virgin aggregate and RAP feed rate on a continuous basis. On the date of inspection at 1:53PM, the RAP feed rate was approximately 53 tons per hour and the virgin aggregate was 200 tons per hour. The pressure drop of the baghouse was 4.83 inches of water.

SC V. 1-4

The plant is only operating on natural gas. Stack testing was completed on 08/04/2023 to determine compliance with 40 CFR Part 60 Subpart I and PTI No. 33-21. At the time of this report, the stack test results were not yet available.
SC VI. 1-2

The plant is permitted to run at 400 tph, however, it typically operates at approximately 240 tph. On the date of inspection at 1:58pm, the plant was operating at 270 tph. The plant is equipped

with belt scales and a control room with a continuous readout of the virgin aggregate and RAP feed rate.

SC VI.3

A burner check was completed at the plant on 08/31/2022 and also 07/06/2023.The 07/06/2023 was the initial check for the 2023 season. CO emissions were 400ppm after the 07/06/2023 burner check.

SC VI.4

Maintenance records were provided for the baghouse. Inspections were completed on the baghouse on 6/1/23, 6/26/23, and 7/26/23.

SC VI.5

Records were provided on fuel use at the plant. The plant is only operating on natural gas. In 2022, usage was 195,354 therms. From startup to July 2023, usage was 78,960 therms. The plant used on average 18% RAP in 2023 and 20% to date in 2023. At the time of inspection, the plant was operating with 21% RAP.

SC VI.6

Daily records are kept showing virgin aggregate feed rate, RAP feed rate, asphalt paving material product temperature, components of mix, pressure drops, and hours of operation. On 8/10/23, the plant operated for 7.4 hours. The virgin aggregate feed rate was 240 tph, the RAP feed rate was 41 tph. The mix temp was 300 degrees Fahrenheit. The baghouse pressure drop was 4.4 inches.

SC VI. 7-12

Records are kept and were provided on 12-month rolling emissions. On 9/9/2023, the rolling average for CO was 1290.4lbs, SO2 was 1155.6lbs, and HMA produced was 6420 tons. Burner check records were provided. Daily productions records were provided for all days in August 2023.

SC VII.1

This plant is semi-permanent. The AQD was notified of initial startup of this plant on 08/24/2022.

SC VIII

The stack measured 75 feet. The measurement was taken using the range finder in 2-point mode from the ground to the east of the stack.

EUYARD

This emission units consists of fugitive dust sources associated with the HMA facility, consisting of all plant roadways, the plant yard, all material storage piles, and all material handling operations except cold feed aggregate bins.

During the inspection, it was sunny with a moderate wind. The yard and roadways were well saturated. No visible emissions were present. Records of chloride application were provided. The yard and roadways had brined applied on 08/02/2023. The source did report fugitive dust from hauling in their 2022 MAERS reporting.

EUACTANKS

This emission unit consists of Two Asphalt Cement tanks with a 30,000 gallon and 20,000 gallon capacity and associated heater with a 2 MMBtu/hr capacity.

During the inspection, it was observed there that were three asphalt cements tanks on-site that are all approximately the same size. The company is aware of the discrepancy between what is permitted and what is on-site. A rule 201 violation will be issued for unpermitted equipment.

EUSILOS

This emission unit consists of two permanent Hot Mix Asphalt (HMA) paving material product storage silos, each with a capacity of 260 tons.

The load out area on the silos is adequately enclosed and equipped with an emission capture system. The silos are operated in accordance with the preventative maintenance program.

Compliance

Based on the site inspection and records reviewed, Payne & Dolan C40 does not appear to be in compliance with PTI No. 33-21 and a Rule 201 violation notice will be issued for having unpermitted equipment.

Image 1: Three AC tanks

Image 2: Plant roadways

Image 3: Plant/Drum Dryer

Image 4: Baghouse

NAME _____ DATE 9-19-2023 SUPERVISOR _____