

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N351250284

FACILITY: PAYNE & DOLAN INC C21	SRN / ID: N3512
LOCATION: C21 PORTABLE ASPHALT PLANT #336-92R, GLADSTONE	DISTRICT: Upper Peninsula
CITY: GLADSTONE	COUNTY: DELTA
CONTACT: JAMES MERTES, ENVIRONMENTAL COORDINATOR	ACTIVITY DATE: 08/19/2019
STAFF: Michael Conklin	COMPLIANCE STATUS: Non Compliance
SUBJECT: Targeted inspection for FY 19.	SOURCE CLASS: SM OPT OUT
RESOLVED COMPLAINTS:	

Facility: Payne & Dolan Inc. C21 (SRN: N3512)
Location: PO Box 781, N3W23650 Badinger Rd, Waukesha, WI 53187
Contact(s): James Mertes, Environmental Manager, 262-524-1849
Ryan Thorbahn, Plant 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 C21 is a portable drum mixer HMA plant with a rated capacity of 300 ton/hr operating under Permit To Install (PTI) No. 336-92T. For 2019, to-date, the plant has operated in Germfask, Shingleton, and is currently operating in Naubinway.

Emissions

HMA is produced by the drying and mixing of aggregate, recycled asphalt pavement (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 primary source of emissions from all three types of plants is the dryer. Air contaminants emitted include PM from aggregate and gaseous pollutants from the combustion process of the dryer, consisting of sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). 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 C21 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 Michigan Air Emissions Reporting System (MAERS). For 2018, the plant reported producing 79,346 tons of asphalt and operated in Delta and Marquette County. The table below shows the facility's 2018 MAERS submittal.

Pollutant	Pounds per Year (PPY)	Tons per Year (TPY)
CO		
NO _x		
PM ₁₀	5157.50	2.58
PM _{2.5}	1190.19	<1
SO ₂		
VOC		

Compliance History

The facility has not received any violation notices in the past five years. The facility was last inspected in 2015 and was found to be in compliance with all applicable air quality rules and federal regulations at that time.

Regulatory Analysis

P&D C21 is subject to PTI No. 336-92T for a portable HMA plant and fugitive emissions. The facility is considered a synthetic minor for HAPs because the source took emission limits to restrict its potential-to-emit (PTE) to below major source thresholds of 10 tpy for individual HAPS and 25 tpy for combined HAP emissions. The source is subject to NSPS, Subpart I, because the source is defined as a hot mix asphalt facility that commenced construction after June 11, 1973.

Inspection

On August 19, 2019, I conducted an unannounced inspection on P&D C21 at 6799 Hiawatha Trail Naubinway, MI. I arrived at the site and met with plant manager, Ryan Thorbahn. I explained to Mr. Thorbahn that the purpose of the inspection was to ensure compliance with PTI No. 336-92T and all other applicable air pollution control rules and federal regulations. At the time of the inspection, the plant was not operating as they were still in preparation to begin production at the new site.

The inspection began by reviewing records that were stored on file in the control room. Mr. Thorbahn provided environmental tracking forms for the weeks of 5/26/19 and 7/21/2019. The environmental tracking forms record daily operations data, daily fuel data, daily fugitive emissions checks and control, along with a weekly maintenance checklist. Under the daily operations data, the tons of HMA produced per day is recorded, along with the tons of virgin aggregate in the mix, tons of RAP in the mix, percent RAP in the mix, the hours of operation each day, and the mix temperature (SC 1.15 and SC 1.16). The records indicate that the highest amount of RAP in the mix for a given day of the week was 23% (SC 1.2). The tons of HMA produced per hour is also recorded on the environmental tracking form based on taking the total production for the day and averaging it over the total hours of operation for the day. On 06/01/2019, records indicate that 306 tons of HMA was produced per hour. The 300 ton per hour limit stated in SC 1.4 is based on a 24-hour rolling average, however. Summing the total HMA production over a two-day period and averaging it over 24 hours (conservative approach), still results in the plant staying below the 300 ton per hour limit of HMA production based on a 24-hour rolling average.

The amount of fuel used in gallons is recorded each day of operation. A checklist is provided to make sure a specification sheet is attached with the fuel being fired in the dryer. The specific gravity of the fuel, sulfur content, and heating value are also being recorded. Mr. Thorbahn provided a used oil shipment invoice and analysis sheet. The invoice was for one 12,000 gallon tank truck, Tank No. 16, and a laboratory report from Summit Environmental Technologies, Inc. The report showed that the contents of the used oil were within the limits provided below (SC 1.5, 1.6, 1.13, and 1.14).

Content	Limit
Arsenic	5.0 ppm by weight
Cadmium	2.0 ppm by weight
Chromium	10.0 ppm by weight
Lead	100.0 ppm by weight
PCBs	1.0 ppm by weight
Total Halogens	4000.0 ppm by weight
Sulfur	1.0 % by weight
Minimum Flash Point	100 degrees F
Maximum Ash Content	1.0 % by weight
Acidity	Minimum pH = 4; maximum pH = 10

Mr. Mertes provided records of an independent laboratory RUO analysis that was performed by Summit Environmental Technologies to verify the information provided by the supplier analytical reports. According to the chain of custody document, a sample was collected on 7/27/2019 and received by the laboratory on 8/23/2019. The analytical results contained in the report show that all contents of the used oil are within the limits shown in the table above. The records also contain the quality control data.

Fugitive dust emissions on plant roadways are checked daily. If visible emissions are over 5% opacity, a

third-party source comes to the plant and sprays calcium chloride down on the roadways (SC 2.1). During the time of the inspection, the plant was not operating, and the roadways were saturated from rain the prior day.

A weekly checklist of monitoring and maintenance on the dryer and baghouse is provided on the environmental tracking forms. The baghouse and associated ductwork are inspected weekly for leaks (SC 1.7). The baghouse is equipped with a Magnehlic gauge that records the pressure drop across the fabric filters (SC 1.8). The pressure drop gauge is monitored from the control room and is automatically recorded on the environmental tracking forms every 8 hours. Records indicate the pressure drop during operation is at 3.0 inches of water, which is above the minimum required pressure drop of 2.0 inches of water (SC 1.9). A baghouse maintenance record, dated 6/18/2019, was provided. A blacklight inspection was performed along with the replacement of 10 bags (SC 1.7). Mr. Thorbahn confirmed that at least 15 filter bags are kept on-site at all times (SC 1.7).

To date the plant has produced 56,133 tons of HMA (SC 1.4) and has used 9,702 tons of RAP in the HMA mix for 2019. This equates to roughly 17% of RAP material in the mix (SC 1.2). Emissions of NO_x, SO₂, CO, and PM were calculated and resulted in 6,736 lbs, 8,981 lbs, 11,282 lbs, and 2,245 lbs respectively, to date for 2019 (SC 1.17). The emissions rates are within the limits contained in PTI No. 336-92T. A baghouse control efficiency of 99.8% is used in calculating PM emissions rates.

A burner report was provided, dated 5/14/2019, for the season check and maintenance. The report states that the burner mechanicals, flights and drum seals are in good condition, and that no repairs were made. At the time of the check, the dryer was operating at 330 TPH, and the stack CO concentration was 1329 ppm and CO₂ percent was 7.1 (SC 1.11). This equates to a combustion efficiency of 35%. The report states that no adjustments were made to the burner even though the combustion efficiency was low, and the CO concentration was above 500 ppm. Also, a stack flow rate was not provided in the report and thus no emissions of CO per ton of asphalt produced were calculated as required in SC 1.11(b)(ii).

After reviewing records, we next went outside to review the plant and equipment. All ductwork appeared to be connected and installed properly. The high temperature deactivation switch, associated with the baghouse, was observed. Particles that are collected at the bottom of the baghouse in the hopper are then augured back into the drum. The stack from the baghouse appeared to be 30 ft from the ground. A sign at the plant was observed that stated all truck loads are required to be covered.

Before the inspection ended, I discussed with Mr. Thorbahn areas that need improvement to show compliance with PTI No. 336-92T. Improvements to recordkeeping can be made for the following:

1. Calculation of the pounds of CO emitted per ton of asphalt from the production data associated with the date and time the burner check occurred.
2. Date, time, and findings of all visual inspections on the interior components of the baghouse.
3. A logbook or sheet that includes the date and time of any visual emissions observed from the baghouse stack, along with corrective actions that followed.
4. Under the daily operations data in the environmental tracking forms, the type and quantity of any additives that are used in the mix other than RAP, asphalt cement, and virgin aggregate.
5. Under the daily fuel data in the environmental tracking forms, the type of fuel combusted (used oil, fuel oil, natural gas, propane, etc..).

Compliance

Based on this inspection, Payne & Dolan C21 is not in compliance with PTI No. 336-92T and a Violation Notice (VN) will be issued requesting the company to come back into compliance.



Image 1(P&D C21) : Portable asphalt plant C21.





Image 3(Duct Work) : Duct work from dryer to baghouse.

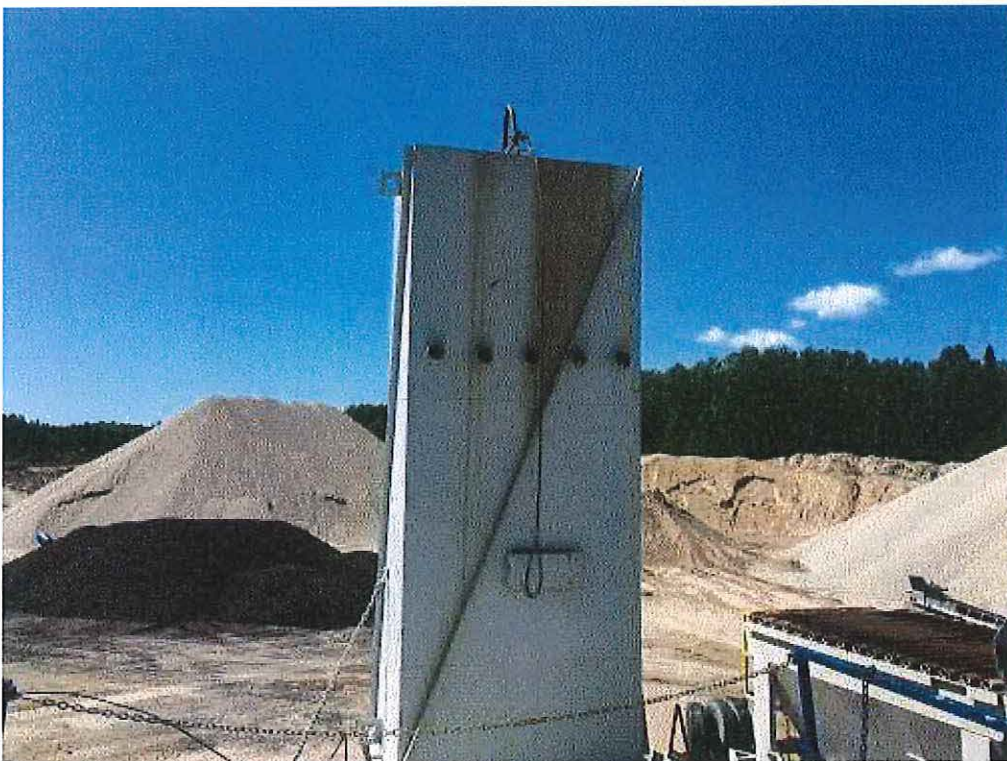


Image 4(Stack) : Baghouse stack.

NAME Michael Klein

DATE 9/9/2019

SUPERVISOR EDL