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

P078169565

FACILITY: BACCO CONSTRUCTION CO PLANT PUC-10250		**SRN / ID:** P0781
LOCATION: N3676 US 2, IRON MOUNTAIN		**DISTRICT:** Marquette
CITY: IRON MOUNTAIN		**COUNTY:** DICKINSON
CONTACT: Kyle Fortier , Project Superintendent		**ACTIVITY DATE:** 09/20/2023
STAFF: Lauren Luce	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: On-site Inspection FY23		
RESOLVED COMPLAINTS:		

Facility: Bacco Construction Company (SRN: P0781)

Location: Loretto Township, Dickinson County, MI

Contact(s): Kyle Fortier, President; Kyle Albrecht, Foreman

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

Bacco Construction Company is a general contractor, asphalt material producer, and pavement contractor based out of Iron Mountain, MI.

Plant PUC-10250 is a portable HMA plant located in Loretto Township, Dickinson County, MI. The plant is located in a rural area off US Highway 2 between Loretto and Waucedah in Dickinson County, MI. The plant operates under Permit to Install (PTI) No. 4-17. 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

Bacco Plant PUC-10250 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)	Tons per Year (TPY)
NOx	7138.50	3.57
CO	16872.8	8.44
PM2.5 FLTRBLE	1946.87	<1
PM10 FLTRBLE	4539.74	2.27
SO2	7527.88	3.76
VOC	4153.31	2.08

Compliance History

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

Regulatory Analysis

Bacco Plant PUC-10250 is subject to PTI No. 4-17. 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 20, 2023, AQD Staff (Lauren Luce) conducted an on-site inspection of the Bacco Plant PUC-10250 plant in Loretto Township, MI. Weather conditions at the time were overcast with winds at approximately 5mph out of the southwest and a temperature of 70 degrees Fahrenheit. 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 counterflow drum mixer with a fabric filter dust collector baghouse.

SC II. 1-6

This plant is permitted to operate on fuel oil #2 and recycled used oil (RUO). The plant typically operates at approximately 215 tons/hr. At the time of inspection, the plant was operating on RUO. A fuel analysis completed by Summit Environmental Technologies dated 8/23/23 was provided that shows all RUO contaminants within permissible limits. No asbestos containing material is processed through the plant. The plant uses on average 15% RAP in 2023. At the time of inspection, the plant was operating with 15% RAP. The plant produced 143,283.77 tons of HMA in 2022. From May-September 2023, the plant has produced 99,066.59 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 05/09/23, 06/14/23, and 08/17/23.
SC IV.1

The baghouse is installed and operating properly. Additional bags are located on-site. At the date of inspection at 12:12PM, the pressure drop was 3.94 inches WC.

SC V.1-2

Stack testing was completed on 08/17/2017 to determine compliance with 40 CFR Part 60 Subpart I and PTI No. 4-17. PM results were within allowable limits. No additional testing has been requested by AQD.

SC VI. 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 12:12PM, the RAP feed rate was approximately 34

tons per hour and the virgin aggregate was 200 tons per hour. The pressure drop of the baghouse was 3.94 inches of water.

SC VI. 3-4

Burner checks were completed at the plant on 05/09/23, 06/14/23, 08/17/23. CO readings were below 500 ppmv. Stack testing was completed on 08/17/2017 to determine compliance with 40 CFR Part 60 Subpart I and PTI No. 4-17. PM results were within allowable limits. No additional testing has been requested by AQD.

SC VI.5

Maintenance records were provided for the baghouse. Approximately 500 bags were replaced in the baghouse in 2023. Black light inspections are done annually in the Spring.

SC VI. 6

Records are kept of type? and fuel combusted. The plant burns approximately 1.5-1.7 gallons of RUO per ton produced. Fuel analyses were provided for all deliveries in 2023. The analyses show all RUO contaminants within permissible limits. Throughput records were provided showing percent RAP. The plant averages approximately 15% RAP.

SC VI.7-12

Records were provided on 12 month rolling time period of HMA provided and CO emissions. In September 2023, the 12 month rolling total of HMA produced was 19,338.84 tons and CO emissions were 1.26 tons. Daily records are kept showing virgin aggregate feed rate, RAP feed rate, asphalt paving material product temperature, components of mix. On 8/15/23, there was 1026.08 tons of HMA produced and 144.60 tons of RAP used. On the date of inspection at 12:12pm, the mix temp was 324 degrees Fahrenheit, HMA being produced was at 250 tons/hr. CO emissions measurements were provided showing test dates, intervals, and readings. The readings were all below 500 ppmv. Fuel analyses were provided for all deliveries in 2023.

SC VII.1

Stack height was not verified but appeared to be at least 22 feet above ground.

SC IX.1

Relocations notices have been submitted and the plant has not been located at one site for longer than 24 consecutive months.

<u>EUYARD</u>

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 overcast with a slight wind. The yard and roadways were well saturated. No visible emissions were present. Records of chloride application were provided.

Water application is performed with a truck daily unless there is adequate precipitation. The yard and roadways had brined applied on 09/19/2023. The source did report fugitive dust in their 2022 MAERS reporting.

EUACTANKS

The were two tanks on site that were equipped with condensers.

Compliance

Based on the site inspection and records reviewed, Bacco Plant PUC-10250 appears to be in compliance with PTI No. 4-17 and all other state air pollution control rules and federal regulations. It was conveyed to the facility that no violations were observed during the on-site inspection.

Image 1: EUHMAPLANT

Image 2: Baghouse and stack

NAME _____ DATE 10-12-23 SUPERVISOR _____