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

B645174132

FACILITY: BACCO CONSTRUCTION CO PLANT 12		**SRN / ID:** B6451
LOCATION: N 3676 US 2, IRON MOUNTAIN		**DISTRICT:** Marquette
CITY: IRON MOUNTAIN		**COUNTY:** DICKINSON
CONTACT: Kalvin Wiltse , Operator		**ACTIVITY DATE:** 10/08/2024
STAFF: Drew Yesmunt	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY25 Targeted Inspection; Complaint investigation in response to complaints of opacity and odor from plant baghouse stack		
RESOLVED COMPLAINTS:		

Facility: Bacco Construction Co Plant 12 (SRN: B6451)

Location: N3676 US-2, Iron Mountain, MI 49801

Contact(s): Kalvin Wiltse, Plant Operator; Kyle Fortier, President

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 12 is a portable hot mix asphalt (HMA) plant that operates throughout the Upper Peninsula of Michigan. The HMA plant consists of a drum dryer, fabric filter baghouse, aggregate and reclaimed asphalt pavement (RAP) storage piles, cold feed bins, conveyors, screens, asphalt cement storage tanks, silos, loaders, and haul trucks. The plant operates under Permit to Install (PTI) No. 547-78BG.

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 counterflow 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 an oil-fired burner to remove moisture. As the virgin aggregate moves through 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 drum dryer. The primary pollutants emitted include sulfur dioxide (SO2), nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) from the combustion of fuel oil in the burner, and particulate matter (PM) from drying aggregate in the drum. The quantities of these pollutants emitted varies based on the composition of the 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 Construction Co Plant 12 is a synthetic minor source for PM, CO, and NOx. The facility is also subject to the New Source Performance Standards (NSPS), Subpart I – Standards of Performance for Hot Mix Asphalt Facilities as the source is a hot mix asphalt facility that commenced construction after June 11, 1973. This facility is therefore required to report its annual emissions to the MiEnviro. The following table lists the source total emissions for the reporting year 2023.

Pollutant	Emissions (TPY)
CO	4.79
NOx	2.03
PM10 PRI	3.92
PM10 FIL	3.89

PM2.5 PRI	**1.27**
PM2.5 FIL	**<1**
SO2	**2.14**
VOC	**1.18**

Compliance History

The facility has not received any violation notices in the past five years. The facility was last inspected on September 2, 2022, and was found to be in compliance with all applicable air pollution control rules and federal regulations. On August 29, 2024, AQD received an odor and opacity complaint from a residence near the facility. Upon investigation, there appeared to be opacity above 20% from the baghouse but AQD staff were unable to conduct a Method 9 test before the plant shut down for the day. AQD noted that further inspection would be necessary to determine the facility's compliance status.

Inspection

On September 24, 2024, AQD Staff (Drew Yesmunt, Joseph Scanlan, and Jarod Maggio) conducted an unannounced inspection of Bacco Construction Co Plant 12. The plant was located at the Great Lakes Mineral Pit near Dodgeville, MI. Weather conditions at the time were fair with southeast winds at 8 mph and a temperature of 60 degrees Fahrenheit. The plant was not operating at the time of inspection. AQD staff arrived onsite and met with Kalvin Wiltse, the plant operator. It was explained that the purpose of the inspection was to ensure compliance with PTI No. 547-78BG and all other applicable air pollution control rules and federal regulations. A tour of the facility was then provided.

The facility operates a CMI Unitized Drum Mix asphalt plant. AQD staff observed that the facility's baghouse was properly installed and connected to the drum dryer. The baghouse was also equipped with a high temp alarm. The main exhaust duct from the dryer to the baghouse appeared to be in good condition with no gaps in the structure. No excess material was observed around transfer points of the collected material from the baghouse, and no holes were observed in the structure. The collection system appeared to be well sealed. Areas around the feed bins were inspected for excess spillage of aggregate material. AQD staff also did not observe any excess fugitive dust from the plant yard or roadways during the inspection. The facility stated that water is applied during each operating day to control dust.

The facility is restricted to not process more than 360,000 tons of asphalt per calendar year, and the maximum RAP content cannot exceed 50% of the asphalt mixture at any time. Records of the daily amount and composition of asphalt produced at the plant were provided on-site for January 2024 through September 2024. For 2023, the plant reported to MiEnviro a production total of 73,760 tons of asphalt. For January 2024 through September 2024, approximately 25,000 tons of asphalt had been produced, under the 360,000-ton limit. The records also demonstrated that RAP content had not exceeded 50% during operation in 2023 and 2024.

AQD staff asked the facility about the replacement schedule for the fabric filter bags. The facility stated that the baghouse uses a total of 720 bags, and 180 bags are replaced each year, or more as needed. AQD staff also verified that spare fabric filter bags for the baghouse were kept on-site. Daily baghouse pressure drop readings were provided alongside the production records for 2024. From the record reviewed, the differential pressure of the baghouse has remained at approximately 4 inches WC during operation throughout 2024.

Bacco Construction Co Plant 12 is not permitted to remain at any geographical site for longer than 12 consecutive months. The facility has not remained in a geographical location longer than 12 consecutive months since the facility was last inspected in 2022. The facility has been consistent in providing relocation notices as the plant moves throughout the Upper Peninsula of Michigan.

Plant 12 is permitted to use recycled used oil (RUO) as fuel in the drum dryer. The RUO specification is not allowed to exceed the maximum concentration of the contaminants listed in Special Condition 23. The facility maintains records of delivery receipts and fuel oil analysis certifications on-site. The most recent record provided, showing an analysis of a tank of used lubricant oil. Samples from the tank were taken on 7/17/2024 and analyzed by Summit Environmental Technologies. Results of the analysis were provided on 8/14/2024 and show the RUO composition to be within the material limits of Special Condition 23.

It was conveyed to the facility that no violations were observed during the inspection.

Following the initial inspection, on October 2, 2024, AQD received an odor and opacity complaint from a resident in Houghton, MI. The complainant stated that an asphalt plant operating near their residence was producing a smoke plume and a burning odor during operation throughout the summer. The facility was identified to be Bacco Construction Co. Plant 12, and a site inspection was conducted on October 8, 2024.

AQD staff (Drew Yesmunt) arrived onsite at 10:30 AM while the plant had paused operation and met with Kevin Wiltse, the plant operator. It was explained to the facility that AQD had received further complaints of opacity and odor from the facility. The facility responded stating that there should not be any smoke or particulate coming from the baghouse stack, only steam from the

drying aggregate. The facility then resumed operation. As the plant began start-up, large amounts of steam were observed being emitted from the baghouse stack.

AQD staff then conducted a Method 9 visible emissions observation on the baghouse stack. Particulate emissions were detected during operation, but the emissions remained below the facility's permitted limit of 20 percent opacity. During the observation, a visible haze was briefly observed downwind of the stack before dissipating. Following the Method 9 observation, AQD staff alerted the facility to the presence of the visible emissions as a potential indicator of baghouse malfunction or failure. The facility responded stating that the plant foreman would be coming to the site in the coming days and would inspect the baghouse for any malfunctions.

During the site visit, AQD staff did not observe any burning odors while at the plant or downwind from the facility.

Following the visit, AQD staff requested records of baghouse maintenance for the 2024 season. The record provided stated that blacklight testing occurred in April 2024, and 125 bags were replaced at the start of the season. Following the blacklight testing, smoke testing for leak detection occurred on 6/10/2024 and 6/12/2024, and 25 bags were replaced as a result of testing. The facility also stated in their response that further testing would occur as the season ends, and bags would be ordered for the following season. AQD staff requested that the results from testing be forwarded to AQD.

On November 12, 2024, AQD received results from smoke testing conducted on October 21, 2024. From the testing, three bags were found to have seal leakage and were replaced. In the response, the facility also noted that the plant is now dormant until the next paving season.

During the second inspection, AQD staff did not observe visible emissions or odors in any capacity, frequency, or intensity that would constitute a violation of Rule 901 or the conditions of Permit to Install 547-78BG. Additional information or complaints will be necessary before further action is taken.

Compliance

Based on the inspection performed and records reviewed, Bacco Construction Co. Plant 12 appears to be in compliance with PTI No. 547-78BG and all other applicable air pollution control rules and federal regulations. It was conveyed to the facility that no violations were observed during the two site visits.

Baghouse and stack connected to Bacco Construction Co. Plant 12

Drum dryer

Cold feed aggregate storage

NAME _____ DATE 11-25-24 SUPERVISOR _____