

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

A253440447

FACILITY: Michigan Paving and Materials- Woodland		SRN / ID: A2534
LOCATION: 3566 Millcreek Ave., COMSTOCK PARK		DISTRICT: Grand Rapids
CITY: COMSTOCK PARK		COUNTY: KENT
CONTACT: Josh Nellis , Plant Manager		ACTIVITY DATE: 06/28/2017
STAFF: Adam Shaffer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Following up on observations by AQD staff of excessive fugitive dust leaving the facility. Completing a self-initiated inspection		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) and Chris Robinson (CR) arrived at the Michigan Paving & Materials Company Woodland Paving Division (MP) facility at 1:55 pm on June 28, 2017 to follow up on previous observations by AQD staff of excessive fugitive dust leaving the facility. Following the offsite opacity emissions a self-initiated inspection was completed. The weather conditions were partly cloudy, approximately 70°F and winds to the east/southeast at 10 miles per hour (mph) with wind gusts up to 28 mph.

Facility Description

Prior to entering the facility, odor and opacity observations were completed. No odors were identified leaving the facility. While observing the yard of MP fugitive dust was observed; however, it was not leaving the facility with the exception of during gusts of wind. The weather history on June 28, 2017 identified for that area wind gusts of up to 28 mph. Based on the weather conditions observed it was concluded by AQD staff that prevention of all fugitive emissions from leaving the facility perimeter would be difficult to maintain; therefore no violation was issued. The Fugitive Dust Control Plan was later discussed with MP staff during the inspection.

MP is a parallel flow asphalt production plant. They are a synthetic minor source for Hazardous Air Pollutants (HAPs) and are in operation with Opt out permit to install (PTI) No.990-90B. The facility is also subject to New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities (40 CFR Part 60, Subpart I); and the requirements associated with these standards are included in PTI No.990-90B. The facility layout included an office building, an observation building and asphalt production equipment. Upon arrival, AQD staff met with Mr. Jeff Reed, Division Manager. MP at the time of the inspection was in the process of shutting down operations for the day. During the initial discussion the purpose of this inspection was presented which included a facility walk through and closing discussion. The PTI No.990-90B was discussed between AQD staff and Mr. Reed who was unfamiliar with the permit. A copy of the permit was requested and later submitted for MP's records. The fugitive dust was also discussed with Mr. Reed including potential solutions to help mitigate excessive dust. The remaining portions of the inspection consisted of meeting with Mr. Josh Nellis, Plant Manager, in the observation building and a walk through of select portions of the yard. Additionally, on site at the time of the inspection was a portable asphalt crusher from Thompson Recycling.

EUHMAPLANT

Various pollutant emission limits are identified for this emission unit and are provided below.

Pollutant	Limit	Time Period
PM	0.04 gr/dscf	Test Protocol ³
PM	0.04 lb per ton ²	Test Protocol ³
CO	0.201 lb per ton ²	1 hour
CO	78.75 tpy	12-month rolling time period as determined at the end of each calendar month
SO ₂	0.14 lb per ton ²	1 hour
NO _x	0.12 lb per ton ²	1 hour
Lead	1.5x10 ⁻⁵ lb per ton ²	Test Protocol ³

Benzene	0.001 lb per ton ²	Test Protocol ³
Toluene	0.006 lb per ton ²	Test Protocol ³
Ethylbenzene	0.005 lb per ton ²	Test Protocol ³
Xylene	0.001 lb per ton ²	Test Protocol ³
Naphthalene	0.001 lb per ton ²	Test Protocol ³
Formaldehyde	0.01 lb per ton ²	Test Protocol ³
Acrolein	0.0008 lb per ton ²	Test Protocol ³
Arsenic	1.5×10 ⁻⁶ lb per ton ²	Test Protocol ³
Nickel	1.5×10 ⁻⁴ lb per ton ²	Test Protocol ³
H ₂ SO ₄	0.015 lb per ton ²	Test Protocol ³
Manganese	5.0×10 ⁻⁵ lb per ton ²	Test Protocol ³
Hydrogen Chloride	0.006 lb per ton ²	Test Protocol ³
¹ Annual limits based on 750,000 tons HMA paving material production. ² Pound pollutant per ton of HMA paving material produced. ³ Test Protocol shall specify averaging time.		

Emission limits for all toxic air contaminants (TACs) and particulate matter (PM) identified above were verified during the most recent testing in 2008. MP uses natural gas emission factors (AP-42) to determine their CO, SO₂, and NO_x hourly emission limits which are well within the permitted limits. Monthly and 12-month rolling calculated emissions were requested and reviewed for all criteria pollutants and TACs previously listed. As of May 2017 the 12-month rolling total for CO is 23.7 tons per year (tpy) which is well within the limit of 78.75 tpy. After further review it appears MP is keeping adequate track of all monthly and 12-month rolling calculated emissions of all required criteria pollutants and TACs. Additionally, MP appears to be keeping track of all CO emissions and production data in order to calculate the pounds of CO emitted per ton of hot mix asphalt (HMA) paving materials produced. MP is keeping track of daily, monthly and 12-monthly HMA paving materials produced.

While speaking with Mr. Reed it was concluded that MP only burns natural gas and does not utilize asbestos containing materials in EUHMAPLANT. No recycled used oil (RUO) is used on site.

EUHMAPLANT is subject to a maximum limit of 50 percent reclaimed asphalt pavement (RAP) based on a monthly average. MP had wrapped up production activities at the time of the inspection and records showing the RAP content for June 28, 2017 were reviewed which showed a maximum RAP content of 40 percent for that day. The highest monthly average RAP since May 2016 is 38.124932% which is well within MP's 50 percent limit of RAP.

EUHMAPLANT is also subject to process limits of 750,000 tons of HMA per 12-month rolling time period and 650 tons of HMA per hour based on a daily average. On June 28, 2017 MP was running at a maximum of 400 tons per hour of HMA being produced which is well below the permitted limit. Records were requested and provided by MP staff showing daily, monthly, and 12-month rolling process totals of HMA materials since May

2016. The total HMA produced as of May 2017 per 12-month rolling time period was 364,770 tons of HMA paving materials. The highest daily HMA produced for May 2017 was 459 tons. After reviewing previous daily and 12-month rolling HMA production totals, it was concluded that MP was within the limits for HMA production totals.

While on site and speaking with MP staff it appeared that all plans including the fugitive dust control plan, preventative maintenance plan for the fabric dust collector, and emission abatement plan for startup shutdown and malfunctions were being implemented and maintained.

Per Special Condition (SC) 1.12 and 1.18 MP shall maintain the efficiency of the EUHMAPLANT drum mix burners, to control CO emissions, by fine tuning the burners for proper burner operation and maintenance. MP is to monitor and conduct CO readings for the initial startup of each paving season, upon a malfunction of the drum dryer or its associated burner, and/or after every 500 hours of service; whichever happens first. The CO readings will then verify if the drum mix burners are operating in a satisfactory manner. Records were provided for all CO monitoring events. During each monitoring event eight CO readings are recorded. The most recent CO monitoring event was on May 7, 2017. The monitoring took approximately one hour and the highest CO reading was 35 ppm. This is below the action level stated on MP records of 500 ppm, and based on this it appears that MP is in compliance. After further review, it appears that MP has adequately completed CO readings for the 2016 paving season and so far for the 2017 paving season. All CO readings during that specified time period were also all below the action level of 500 ppm.

To achieve satisfactory operation of the fabric filter dust collector, the pressure drop range must be between 2 and 10 inches of water column. Since daily operations had ceased at the time of the inspection this value was not collected at the time of the inspection. Daily production reports for the day of the inspection (June 28, 2017) and select days for the 2017 paving season were requested and reviewed. Several instances were noted where the pressure drop was below 2 inches of water column. This was brought up and concluded by MP personnel to have been condensation in the plastic line which affected the pressure drop readings. Records were requested of pressure drop readings since May 2016 and verified to be within the satisfactory range of 2 and 10 inches of water column.

The virgin aggregate feed rates and RAP feed rates were reviewed to verify this is being monitored and recorded in a satisfactory manner. The day of the inspection (June 28, 2017), the virgin aggregate and RAP feed rates were 2,047 tons-wet and 892 tons-wet respectively. Daily records of virgin aggregate feed rates and RAP feed rates were requested since May 2016. After review it was concluded MP is keeping track of their feed rates; and therefore, appears to be in compliance.

MP appears to be adequately complying with all NSPS 40 CFR Part 60 Subparts A and I requirements.

Per SC.1.20, MP shall monitor and record the drum mix temperature and the drum exhaust temperature on a continuous basis. However, it was concluded that this SC falls under the monitoring requirement and not the recordkeeping requirement. While speaking with MP staff it was concluded that the current system in place shows the temperatures; however, at the end of each day it is not recorded and this has occurred since 2015. MP is in the process of updating the current system so that it will record these temperatures. A QD staff suggested taking daily photos of the temperature readings for the day to verify temperature readings moving forward until the automatic recording system is installed. It was stated by MP staff that setpoints are in place for the mixing temperature, baghouse inlet temperature and stack exhaust temperature at 340°F, 360°F and 280°F respectively. If an exceedance were to occur than the burner is automatically shut off. At the time of the inspection, the mixing temperature, baghouse inlet temperature and stack exhaust temperature were at 110°F, 126°F and 124°F respectively. Daily production report records for the day of the inspection (June 28, 2017) and select days for the month of May 2017 were requested and verified that MP is monitoring the drum mix temperatures and drum exhaust temperatures. Based on the records reviewed, it was concluded that MP is adequately monitoring the drum mix temperatures and drum exhaust temperatures.

Maintenance logs of significant activities completed for the fabric filter dust collector since May 2016 were requested and provided. Activities that were logged included black light inspections of the baghouse bags, replacing bags, and baghouse pulsers being changed. MP appears to be adequately keeping track of all maintenance activities for the fabric filter dust collectors and drum mixer/burner. While speaking with MP staff it was identified that 200-300 bags for the dust collector are stored on site for replacement.

Daily records since May 2016 were provided of tons of HMA containing RAP produced, including the average percent RAP per ton of HMA produced containing RAP, and the asphalt paving material product temperature. For the day of the inspection (June 28, 2017) the HMA product temperature was identified to be 315°F. A total of

3,033 tons of RAP containing HMA were produced with an average RAP content of 29.30%. After further review of the remaining records it appears that MP is adequately keeping track and monitoring the HMA temperatures and RAP contents in HMA produced.

Daily records of the components of the asphalt paving material mixture were requested for May 2017. After further review, MP is adequately keeping track of components going into each asphalt paving material mixture.

Per SC.1.24 MP shall record the initial startup time and mix design. Additionally, MP shall record each new mix design when it is introduced and the time. A copy of the daily production report for June 28, 2017 was provided during the inspection. The reports are handwritten and include the startup time, each mixture type and when a new mixture was introduced. Select days were requested for the month of May 2017 to verify that this is being done on a daily basis. After review of the records provided, it was concluded that MP is adequately recording times and mix designs.

EUYARD and Appendix A (Fugitive Dust Control Plan)

The Fugitive Dust Control Plan at the time of the inspection was being implemented and maintained. The plan was discussed at length with Mr. Reed during the inspection and the process is ongoing with possible solutions discussed to help mitigate excessive fugitive dust. It was verified that MP is now applying brine to mitigate dust and that they water as much as they can during operations. The annual fugitive dust emissions for PM are calculated and included in the yearly MAERS Report. Additionally, emissions for the month of May 2017 were provided. Based on the 2016 MAERS Report and records provided, MP is keeping track of all fugitive emissions.

EUACTANKS

The vapor condensation and recovery system for the associated five horizontal tanks and one standing tank appeared to be working in a satisfactory manner. Additionally, one empty tank was observed that was verified by MP staff to previously have been used for alternative fuel used on site.

EUSILOS

The new silo that was previously determined to be exempt per Rule 284(2)(k) was observed during the facility walk. Upgrades to the ductwork were in the process of being completed for the fourth silo. The emission capture system at the top of each active storage silo appeared to be working in a satisfactory manner.

FGFacility

MP is subject to an emission limit of less than 8.9 tpy of individual HAPs per a 12-month rolling time period and less than 22.4 tpy of aggregate HAPs per a 12-month rolling time period. Records were requested and reviewed since May 2016 of individual and aggregate HAPs. As of May 2017 the highest individual HAP total was Formaldehyde at 0.565 tpy per a 12-month rolling time period. As of May 2017 the total aggregate HAPs was 0.774 tpy per a 12-month rolling time period. Both individual and total aggregate HAPs are within the permit allowed limits.

Conclusion

A final discussion was completed with AQD staff, Mr. Nellis, and Mr. Reed. Based on the review of the records provided and the facility walk through, MP appears to be in compliance with PTI No. 990-90B and all applicable air quality rules and regulations.

NAME

Adam F. [Signature]

DATE

08/02/17

SUPERVISOR

[Signature]