

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

A253454518

FACILITY: Michigan Paving and Materials- Woodland		SRN / ID: A2534
LOCATION: 3566 Millcreek Ave., COMSTOCK PARK		DISTRICT: Grand Rapids
CITY: COMSTOCK PARK		COUNTY: KENT
CONTACT: Ken Termeer , Plant Operator		ACTIVITY DATE: 07/23/2020
STAFF: Adam Shaffer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled unannounced inspection. Remaining Partial Compliance Evaluation.		
RESOLVED COMPLAINTS:		

An inspection was conducted by Air Quality Division (AQD) staff Adam Shaffer (AS) at Michigan Paving and Materials – Woodland Facility (MP) on July 23, 2020, and a subsequent records review to verify compliance with Permit to Install (PTI) No. 990-90B and applicable air pollution control rules.

Facility Description

MP is an asphalt production facility located in Comstock Park, MI. MP is an opt out source for hazardous air pollutants (HAPs) and is in operation under PTI No. 990-90B. Additionally, the facility is subject to the New Source Performance Standards Subpart I – Standards of Performance for Hot Mix Asphalt Facilities.

Offsite Compliance Evaluation

Due to the timing of the inspection, the 2019 Michigan Air Emissions Reporting System (MAERS) Report was reviewed. Upon review it was determined that emissions were calculated using the previous stack testing data and AP-42 calculations that have been historically used. It was noted when reviewing the AP-42 calculations used that more current AP-42 calculations are available. Using the more current AP-42 calculations for the unpaved roadways resulted in an additional 741 lbs of PM10. It will be discussed with Michigan Paving staff on updating applicable records and utilizing the updated applicable AP-42 emission factors for next year's MAERS. The 2019 MAERS Report was determined to be acceptable.

The 2019 paving season records were reviewed in a previous report dated June 2, 2020. Based on a review of the records provided, MP appeared to be in compliance with PTI No. 990-90B for the 2019 paving season for select recordkeeping items.

Compliance Evaluation

Prior to entering the facility, offsite odor and visible emission observations were completed. Weather conditions at the time of the inspection were partly cloudy skies, temperatures in the high 60's°F, and winds from the northeast at 0-5mph. During the initial drive by of the facility along US-131 Northbound it did not appear that the facility was in operation. Following this AS drove to and observed the MP facility in areas downwind of the site. No emissions were observed, and only minor and brief asphalt odors were noted downwind of the facility. Several trucks, while observing from offsite, were noted going onsite and being loaded with asphalt. It was later determined that the plant had just started operation when AS had arrived and asphalt made the day prior was being used to load up trucks.

AQD staff AS contacted Mr. Ken Termeer, Plant Operator, at 9:15 am to verify that an inspection was possible that day despite the current coronavirus pandemic. No issues

were identified.

Upon entering the site at 9:24 am, AQD staff AS spoke with the front office staff who directed AS to head over to the control room onsite. There AS met with Mr. Josh Nellis, Plant Manager. Proper PPE and social distancing were maintained whenever possible. Throughout the course of the inspection, AS also met with Mr. Termeer and John, Loader Operator, who provided select records, answered site specific questions, and/or accompanied AS on the inspection of the facility. A records request was later submitted to Ms. Sue Hanf, Environmental Engineer, who handles the recordkeeping once provided by plant personnel. All records reviewed are related to the 2020 paving season.

Opt Out PTI No. 990-90B

EUHMAPLANT – This emission unit is for the hot mix asphalt (HMA) facility including: aggregate conveyors, 650 tons per hour parallel flow drum dryer/mixer, and a fabric filter dust collector.

Natural gas was the only fuel burned thus far during the 2020 paving season by MP. No hazardous waste, blended fuel oil, recycled used oil or asbestos / waste materials containing asbestos were used thus far during the 2020 paving season.

This emission unit is subject to various emission limits that are listed in the Emission Limit Table for EUHMAPLANT. Compliance with the majority of the emission units listed in the table are determined through testing. MP demonstrated compliance with these emission limits with the most recent testing in 2008. The remaining pollutants listed in the Emission Limit Table are identified and discussed further below.

Pollutant	Limit	Time Period	Natural Gas AP-42 Emission Factors
CO	0.201 lb per ton	1 hour	0.13 lb per ton
SO ₂	0.14 lb per ton	1 hour	0.0034 lb per ton
NO _x	0.12 lb per ton	1 hour	0.026 lb per ton

MP uses natural gas AP-42 emission factors to determine compliance with hourly CO, SO₂, and NO_x emission limits listed above. Per Special Condition (SC) 1.25, MP shall keep track of monthly and 12-month rolling time periods of all criteria pollutants and toxic air contaminants (TACs) listed in the Emission Limit Table for EUHMAPLANT. Records were requested and reviewed back through the 2020 paving season to date. Based on the records reviewed, MP appears to be keeping track of monthly / 12-month rolling time period records of all criteria pollutants and TACs emitted for EUHMAPLANT. This emission unit is also subject to a CO emission limit of 78.75 tons per year (tpy) per a 12-month rolling time period. Records were requested and reviewed back through the 2020 paving season thus far. Based on the records reviewed, the highest 12-month rolling time period of CO emissions was 28.6 tpy as of July 2020, which is well within the permitted limit.

Per SC 1.20, MP shall install and operate devices in order to monitor and record the drum mix temperature and the drum exhaust gas temperature on a continuous basis. It

was previously determined that this was a monitoring requirement and not required to be recorded. However, to demonstrate that MP was adequately monitoring the temperature since the setup would not record, AQD staff had recommended during the previous inspection in June 2017 to take a daily picture of the readings. Daily pictures appeared to be being done as recommended. At the time of the inspection, the drum mix temperature and drum exhaust gas temperature were 305°F and 268°F, respectively. Alarms are in place for both monitors as stated by MP staff. Daily records for select days for the 2020 paving season were requested and reviewed. Based on the records reviewed, it appears that MP is adequately monitoring the drum mix temperature and drum exhaust gas temperature.

A list of significant maintenance activities that were completed for the 2020 paving season was provided. Additionally, a daily list of items to be inspected and examples of plant repairs was provided. Based on conversations with MP staff on maintenance completed and a review of the items listed, it appears that overall MP is keeping track of maintenance activities completed for EUMAPLANT

Daily records consisting of the virgin aggregate feed rate, recycled asphalt product (RAP) feed rate, HMA produced containing RAP, the average percent of RAP per ton of HMA produced containing RAP, and asphalt paving material product temperature were requested for various items per PTI No 990-90B for the 2020 paving season and reviewed. Based on the records reviewed, MP appears to be keeping track of feed rates, HMA containing RAP, average RAP percent per ton of HMA material produced containing RAP, and the asphalt paving material product temperatures. Per SC. 1.5, MP has a 50% monthly average limit of RAP material used during process operations. The highest monthly average percent of RAP material used during process operations for the 2020 paving season thus far is 27.09% for July 2020, which is within the permitted limit.

Additionally, MP is required to keep daily logs of information sufficient to identify all components of the asphalt paving material mixture as well as times and mix designs made. Daily records were requested and provided for select dates and after further review appeared to be acceptable.

Per SC 1.26 MP shall keep daily emission records of hydrogen chloride and SO₂. Additionally, control efficiencies described in SC. 1.26 may be used when calculating emissions depending on if RAP is used during asphalt production or if it is virgin aggregate. As previously identified, this condition for PTI No. 990-90B was based on the company's previous usage of recycled used oil (RUO). MP has not used RUO during the 2020 paving season, but instead uses natural gas. The AP-42 emission factors are used to calculate daily pounds of SO₂ emissions and there appears to be no hydrogen chloride emissions when using natural gas. After further review this appears to be acceptable and MP appears to be keeping track of daily hydrogen chloride and SO₂ emissions.

Per SC 1.27, MP shall keep records of all CO emissions and related production data including dates and times emissions were monitored which is then used to calculate pounds of CO emitted per ton of HMA paving materials produced. Dates and times of each event that CO emissions were monitored was requested for the 2020 paving season thus far. Two CO monitoring events were completed in 2020 with a startup check done on April 15, 2020. A second CO monitoring event was completed for the

500-hour check and was done on July 15, 2020. Based on the records reviewed, it appears that MP operated about 100 hours over the 500-hour limit before completing the second CO monitoring event. Results for both monitoring events appeared to show that no additional action was necessary. This was discussed at length with the company and moving forward MP shall complete CO monitoring events in a timelier manner as required per PTI No. 990-90B.

Per SC 1.28, MP shall keep track of daily monthly and 12-month rolling time periods of total HMA paving materials produced. Records were provided for the 2020 paving season thus far. The highest daily amount of HMA paving materials produced in 2020 thus far was 459 tons / hour over a daily average on July 11, 2020, which is well within the material usage limit identified in SC 1.7 of 650 tons / hour over a daily average. The highest monthly production amount was 91,727 tons of paving material in June 2020. The highest 12-month rolling total of HMA paving materials produced was 440,112 tons of HMA paving materials as of July 2020. This is within the material usage limit identified in SC 1.6 of 750,000 tons of material per a 12-month rolling time period. After further review, it appears that overall MP is keeping adequate track of daily, monthly and 12-month rolling time periods of HMA paving materials being produced.

One stack is listed in associated with this emission unit. Though the exact dimensions were not measured there appeared to have been no changes made to the one stack identified in PTI No. 990-90B.

EUYARD

This emission unit applies to fugitive dust sources including plant roadways, plant yard, material storage piles, and material handling operations (excluding cold feed aggregate bins).

Throughout the inspection, observations were made to verify that MP was adequately following the Dust Control Plan, per Appendix A of PTI No. 990-90B.

- While offsite, some fugitive dust was noted along the northern entryway to the site. This was discussed with MP staff while onsite and company staff proceeded to water the site. It also appeared that areas around the remaining entrances along the west side of the facility had been watered that morning. The remaining western gates are used by asphalt loading vehicles. Further discussion with MP staff identified that the northern entrance is used by vehicles unloading aggregate and for operations with the tank farm. When that area is watered, the material is collected in the tire treads and carried off site and dries. Potential solutions were discussed with MP staff and following the inspection, MP staff stated that during watering of that area, the gate to that entryway will be closed. Additionally, MP utilizes Sanisweep to address any track out fugitive dust. At the time of the inspection they were scheduled for once a week. Following the inspection, they are now scheduled for twice a week.
- Trucks were observed entering and leaving the site. Vehicles entering and exiting the site appeared to be following proper speed limits on site and at least one speed limit sign was observed. Trucks entering and exiting the site also appeared to be following the top covering requirements.
- Stockpiles of materials were observed during the inspection and appeared to be completed in a manner that reduces free drop distance. Additionally, no fugitive dust was noted coming from the piles when onsite. MP staff stated that the

stockpiles do have some moisture prior to being processed.

- All roadways that are utilized by HMA vehicles are paved. MP staff stated that the roadways are watered twice, sometimes three times a day. MP has a 3,000-gallon watering truck with a front-end sprayer. Additionally, MP has tried to use a new material this paving season to replace brine due to its corrosivity to the vehicles.
- A front-end loader was observed in operation onsite filling what appeared to be the feed hoppers. MP staff mentioned they try not to overfill to prevent spillage.
- Records of dust control activities were requested and provided for the 2020 paving season thus far. MP keeps track of all rain events and whether dust control was applied on a daily basis.

During the walk through of the site operations, there appeared to be no apparent problems with the transfer system, storage bins, mixer, hopper, or fabric filter dust collector.

EUACTANKS

This emission unit applies to the liquid asphalt tanks. Between the end of the 2017 and start of the 2018 paving season the former liquid asphalt cement (AC) tank farm was replaced. The new tank farm consists of five new 35,000-gallon AC tanks, one 15,000-gallon asphalt emulsion tank a diesel fuel tank and an old recycled RUO tank. A demonstration was submitted to the AQD in December 2017, with MP stating the new AC and emulsion tanks are exempt per Rule 284(2)(i). The demonstration had appeared acceptable at the time of submittal. While speaking with MP staff, the reasoning behind the replacement of tanks appeared to be for easier efficiency / operation when loading / unloading of material. During the 2020 paving season, the AQD had received several complaints with the AC tanks being potentially identified as a source of the odors. Thus, the tank farm and associated vapor recovery system were thoroughly reviewed during the inspection to verify compliance as well as understand the design of the system. The five AC tanks are currently connected to a vapor condensation and recovery system. When the recovery system is in operation, a fan pulls vapors from the five AC tanks into a smaller single recovery tank. The recovery tank contains several charcoal filters that are used to collect the vapors before the cleaned air is emitted out the top of the tank. Each tank is separately connected and when a tank is in use during site operations, the remaining tanks are sealed shut. A monitor was noted in the control room that identified the components for the tank farm. While inspecting the recovery system, asphalt odors were noted that appeared to be coming from the vapor condensation and recovery system. MP staff stated that the manufacturer recommends replacing the charcoal filters for the unit every five years (this would be year three of operation). Following the inspection, MP staff were looking into having the vapor condensation and recovery system serviced and potentially having the filters replaced. Upon review of the vapor recovery lines from the tank to the recovery system, emergency overfill piping in the event the tank is overfilled was noted. After further discussion with MP staff it was determined that the overfill vents are not sealed, which could potentially cause emissions during loading. Additionally, upon review of the emulsion tank, it was noted that the tank vent is not connected to the vapor condensation and recovery system. Prior to leaving the site, MP staff had contacted and scheduled the manufacturer to address the two potential sources of emissions. Following the site inspection, Safety Data Sheets (SDS) were requested for the AC and emulsion materials. Based on discussion between AQD AS and AQD Toxics Unit staff,

it was determined that based on the composition of the materials, there are carcinogenic components in both materials, thus the 284(2)(i) exemption cannot be used. Following this determination, MP staff were informed who then chose to use the Rule 289(2)(b) exemption for the six new tanks (the emulsion tank was connected to the vapor condensation and recovery system following the inspection), which appears to be applicable at this time.

EUSILOS

This emission unit is for the six silos located onsite that are used to store HMA prior to loading out into vehicles. Per SC 4.1, MP shall not operate the EUSILOS unless the emission capture system for the top of each storage silo is installed, maintained, and operated in a satisfactory manner. The silos were observed during the inspection and discussed with MP staff. After further review, the emission capture system appeared to be operating satisfactorily.

FGFACILITY

This flexible group is for all process equipment at the stationary source including equipment covered by other permits, grand-fathered equipment and exempt equipment.

MP is subject to individual / aggregate HAP emission limits of 8.9 tpy and 22.4 tpy respectively per a 12-month rolling time period. Individual and aggregate HAP emission records were requested and reviewed for the 2020 paving season. The highest 12-month rolling time period of aggregate HAPs emitted was 0.933 tpy as of July 2020, which is well within the permitted limit for both individual and aggregate HAPs. The most emitted HAP for 2020 appears to be formaldehyde. MP appears to be keeping track of individual and aggregate HAP emission records.

Appendix B – Preventative Maintenance Program For the Fabric Filter Dust Collector

The fabric filter dust collector was observed during the inspection with minor amounts of particulate noted along the bottom of the dust collector. A monitoring device showing the pressure drop for the dust collector was noted in the control room. While speaking with MP staff it was noted that the pressure drop reading was negative. When brought to the attention of MP staff this appeared to have occurred today and is due to condensation getting into the line. MP staff went out with an air compressor and cleared the line. Once cleared the pressure drop read 3.8 inch of water column which was considered acceptable. Per Appendix B of PTI No. 990-90B, MP shall keep daily records of the pressure drop readings across the fabric filter dust collector. Records were requested and reviewed thus far for the 2020 paving season. Upon review, the pressure drop daily records for the 2020 paving season show a range of 2.9 – 4.6 inch of water column. Normal operation range for the pressure drop is 2.0 – 6.0 inch of water column. Based on the onsite observations and review of the records provided, MP appears to be keeping track of daily pressure drop readings and the fabric filter dust collector appears to be operating in a satisfactory manner.

A black light test was completed on April 15, 2020. Maintenance records were requested for the 2020 paving season which indicated that all bags and the cage holding them together had been replaced. This was discussed with MP staff during the inspection and had been based on easier access when changing of bags. MP staff store a few hundred bags onsite for the fabric filter dust collector in case of an

emergency. After further review of the remaining records, MP appears to be keeping track of maintenance records for the fabric filter dust collector. During the inspection, it was verified there is an inlet temperature and mix temperature alarm in place for the fabric filter dust collector to maintain satisfactory operation. MP staff stated there were no visible emissions observed that would require visible emissions readings to be taken during the 2020 paving season thus far. Daily records provided appeared to show an inspection of the baghouse stack for opacity is completed when the plant is starting up in the morning.

Additional Observations

- The loadout control for when vehicles are loaded up with HMA was observed for several trucks while onsite. Plastic hanging strips were noted on the loadout control which had been installed earlier this year in order to better control asphalt emissions. Minor amounts of steam were observed coming out and MP staff stated that the trucks are sprayed with water before loading of HMA materials. Additionally, MP staff have been working on completely sealing the sides of the loadout control in order to better contain emissions when loading. No blue smoke that would be associated with HMA was observed. Based on the observations made at the time of the inspection, it appeared that the loadout control was operating in a satisfactory manner.

Conclusion

Based on an inspection of the facility and records reviewed thus far for the 2020 paving season associated with PTI No. 990-90B, MP appears to be in compliance with PTI No. 990-90B and applicable air pollution control rules.

NAME Adam Shaffer

DATE 09/30/2020

SUPERVISOR HH