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

B428754691

FACILITY: CADILLAC ASPHALT, L.L.C.		**SRN / ID:** B4287
LOCATION: 4751 WHITE LAKE RD, CLARKSTON		**DISTRICT:** Warren
CITY: CLARKSTON		**COUNTY:** OAKLAND
CONTACT: Sue Hanf , Environmental Engineer		**ACTIVITY DATE:** 07/09/2020
STAFF: Kaitlyn Leffert	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY2020 Scheduled Inspection. Facility was found to have operated while the blue smoke control system was not operating, which is a violation of PTI. No. 443-82H, S.C. 4.2.		
RESOLVED COMPLAINTS:		

On July 9, 2020, I, Kaitlyn Leffert, Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff, conducted a scheduled inspection of Cadillac Asphalt, located at 4751 White Lake Road, Clarkston, Michigan. The facility is identified by the Source Registration Number (SRN) of B4287. The purpose of this inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); AQD administrative rules; 40 CFR, part 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities; and Permits to Install (PTI) Number 443-82H.

Overview
Cadillac Asphalt is a hot-mix asphalt (HMA) facility that produces asphalt products used for paving roads, construction, and non-roadway applications. Cadillac Asphalt is permitted to operate a hot mix asphalt plant, which includes a 650 tons per hour counterflow drum dryer/mixer, aggregate conveyors, and a fabric filter dust collector. The facility is also permitted to operate liquid asphalt cement storage tanks, HMA paving material product storage silos, and fugitive dust sources, including the plant yard and roadways.

The operating schedule at the plant is driven by demand for asphalt products. The facility typically operates 6-7 days per week, April through December. The first day of operation this year was April 21, 2020. However, according to the provided records and conversations on site during the inspection, the plant had been operating at a reduced capacity throughout April and May. The facility has been producing at typical levels throughout June and the beginning of July.

Records Review
Due to ongoing concerns related to COVID-19, I collected the required records prior to my on-site inspection. I requested digital copies of the records from Sue Hanf, Environmental Engineer, Cadillac Asphalt, via email on May 28, 2020 and Ms. Hanf provided the records on June 8, 2020. Records were provided through the end of May for monthly data and through June 6th for daily data.

The facility is required to maintain daily records of the type and amount of all fuel oils used, as well as the sulfur content, specific gravity, flash point, and higher heating value of the fuels (1.23(a) and (b)). The facility provided daily and monthly records of fuel use, which indicate that natural gas is the only fuel burned at the plant. Due to the relatively low cost of natural gas, the facility has not used fuel oils in many years and does not plan to in the future. Since fuel oils are not currently used, compliance with material limits and recordkeeping requirements associated with fuel oils and recycled used oil (RUO) does not need to be evaluated.

The permit also requires Cadillac Asphalt to maintain daily records of the tons of HMA containing RAP produced, including the average percent of RAP per ton of HMA produced. The facility provided daily records of RAP content, as well as monthly average RAP content. Daily records for the 2020 season so far indicate that the daily RAP content was typically around 19-30%. The average monthly RAP content in May 2020 was 26.5%, which demonstrates compliance with the maximum allowed percent RAP of 50% (SC 1.5). The highest monthly average RAP content in 2019 was 31.0%, in June 2019.

Cadillac Asphalt is required to maintain records of handheld carbon monoxide (CO) measurements taken at the start of each paving season, after every 500 hours of operation, and upon malfunction of the drum dryer or associated burner (1.18, 1.27). Based on the records, the most recent set of handheld CO measurements were collected at the start of the season, on April 21, 2020. Eight measurements were taken over a timeframe of 32 minutes. The measured CO concentrations ranged from 149 to 163 ppm, which is well below the CO emissions

limit in the permit of 500 ppm.

The facility provided records of maintenance activities conducted at the plant, including annual baghouse checks, annual plant inspections, and daily walk around inspections. The daily inspection includes a check of plant roadways, cold feed bins, aggregate feed belts, checking seals for leaks, and opacity. Based on the records, a variety of maintenance activities took place at the beginning of the 2020 season. These included the replacement of a scale belt, cold feed bins 1 through 7, a truck scale, a dust auger bearing dust screw, the bottom bearings of the elevator chain, and the blue smoke system. I asked for more information on the replacement of the blue smoke system during my inspection, which is discussed later in the report.

The facility is required to continuously monitor and maintain records of the virgin aggregate feed rate and the reclaimed asphalt pavement (RAP) feed rate (SC 1.17, 1.24). The provided records included a daily print sheet for June 6, 2020, as well as a monthly sheet for the month of May. Based on the monthly print sheet, the total virgin aggregate feed used was 32,830 tons and the total RAP used was 12,656 tons in the month of May.

Material Limits
The facility provided records of HMA paving materials produced on a daily, monthly, and 12-month rolling basis, as is required by SC 1.28. The daily production records for the 2020 season so far show total HMA produced has ranged from 941 to 4,294 tons daily, with hours of operation ranging from 0.5 hour to 12 hours per day. These values correspond to hourly production rates that range from 260 to 384 tons/hour. These hourly production rates demonstrate compliance with the permit limit of 650 tons/hour (SC 1.7).

In addition to daily and hourly production limits, the permit also limits annual HMA produced to 895,000 tons of HMA per 12-month rolling time period (SC 1.6). The 12-month rolling average HMA produced at the end of May 2020 was 276,071 tons. Based on the records from the previous two seasons (2019 and 2020), the highest 12-month rolling average was recorded in December 2019, at 392,532 tons. Based on the monthly production records, the facility appears to be in compliance with SC 1.6.

Emission Records
The permit limits emissions of particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxide (NOx), lead, benzene, toluene, ethylbenzene, xylene, naphthalene, formaldehyde, acrolein, arsenic, nickel, H_2SO_4, manganese, and hydrogen chloride (SC 1.1a through 1.1s). Compliance with these emissions limits are to be determined via stack testing, as well as emissions calculations and recordkeeping. Stack testing to determine emission rates of CO, PM and all TACS was done in August 2007, per the requirements in SC 1.15 and SC 1.16. The 2007 PM Stack Test also satisfied the requirement to verify PM emission rates in 40 CFR, Part 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities.

Ms. Hanf provided records of monthly emission calculation summaries for all pollutants listed in the permit, as is required per SC 1.25. The permit sets annual limits of 89.9 tpy for both CO and SO2, as determined on a rolling 12-month basis. The provided emission calculations indicate that 12-month rolling emissions at the end of May 2020 are 25.8 tpy for CO and 0.68 tpy for SO2. These values are well under the permitted limits and appear to demonstrate compliance.

The permit also sets facility-wide limits of 8.9 tpy for any individual HAP and 22.4 tpy for aggregate HAPs, as determined on a 12-month rolling basis. The provided emissions calculations indicate that the 12-month rolling emissions of all individual HAPs were under 1.0 tpy and that most were under 0.1 tpy, as of May 2020. The individual HAP with the highest 12-month rolling emissions was formaldehyde at 0.62 tpy. The provided records indicate that aggregate HAP emissions were calculated to be 0.84 tpy at the end of May. Therefore, the facility appears to be in compliance with the permitted HAP emission limits.

Facility Walk Through
Following records review, I visited the facility to conduct a walk through and visual inspection of the plant. I arrived at the facility around 9:00am on July 9th, 2020 and was greeted by Sue Hanf and Mike Sekan, Plant Manager. We first discussed some overview questions and then did a walking tour of the facility. Due to ongoing concerns regarding COVID-19, additional safety precautions were taken while on-site. The entire inspection took place outdoors and we maintained a six-foot distance and wore masks when in proximity to each other throughout the entire inspection.

The plant was operating throughout the duration of my inspection. The plant consists of five AC tanks, 12 cold feed bins, a counterflow drum, and four storage silos. One of the five AC tanks is new and is not yet operating.

The AQD Warren District Office was notified of the installation of the new 35,000-gallon AC tank in January 2020. The facility also has a baghouse to control emissions from the HMA plant.

While I did the entirety of my inspection outdoors, the plant supervisor took a picture from inside the control room of the screen that display production information, as well as the pressure gauge associated with the baghouse. At the time of my inspection, the plant was producing 353 tons per hour. This is consistent with the production records provided prior to the inspection.

Fabric Filter Dust Collector
During the inspection, I observed that the fabric filter dust collector was installed and operating. Appendix B of PTI No. 443-82H sets requirements for maintenance of the fabric filter dust collector used for particulate matter control. During my inspection, I did not observe any leaks from the baghouse, dust accumulation in the area surrounding the baghouse, or any visible emissions from the baghouse stack. I was also informed that the facility collects the dust from the fabric filter and reuses it in the asphalt production process.

Appendix B requires that the pressure drop of the fabric filter be monitored continuously and recorded at least once per day. The provided records indicate that the pressure drop is recorded once per day on every day that the plant operates. Based on the records, the pressure drop typically ranges from 3.5 to 4.0 inches of water. The pictures taken from the control room on the day of the inspection indicate that the pressure drop was at 3.8 inches of water. The recorded values, as well as those observed during the inspection indicate compliance with the allowed pressure drop range in the permit of 2.0 to 10.0 inches of water (SC 1.13; Appendix B).

The facility is also required to conduct an annual black light inspection, maintain an inventory of fabric filter bags, and an inspection record of daily and annual baghouse inspections. Records of all of these activities were provided by the facility during records review. According to the records, the most recent blacklight inspection was done on April 7, 2020. The records also indicate that the most recent of replacement of baghouse bags occurred in 2013 and that a total of 22 pulse valves in the baghouse were during the 2018 and 2019 seasons.
Fugitive Dust
The facility is required to implement and maintain a fugitive dust plan, as specified in Appendix A of PTI 443-82H. The roadways on the site were paved and appeared to be well maintained to prevent fugitive dust. I asked about site and roadway maintenance and Mr. Sekan explained that the site is swept once per week, with chloride application as needed. The daily production log provided during records review also show that some type of fugitive dust control, such as chloride application, water application and/or sweeping the site, occurs nearly every day that the plant is operated. During my inspection, I noted that part of the site was still wet from recent chloride application. I also noted that there was a speed limit of 9 mph, as indicated by a sign on-site.

The material piles located throughout the site appeared to be at an appropriate height. For the most part, material was moved around the site by heavy duty trucks, instead of conveyors and therefore drop distances were effectively minimized or eliminated. I did not observe any opacity or visible emissions during my inspection. Overall, the facility appears to be complying the fugitive dust plan contained in Appendix A of their permit.

Blue Smoke System
During records review, I noticed the facility was currently in the process of replacing the blue smoke system. I asked for clarification on this during my inspection. Ms. Hanf and Mr. Sekan explained that the blue smoke system had just been fully taken offline over the Fourth of July weekend and the replacement is in progress. During the period over which the system is being replaced, the facility is operating without a blue smoke system.

Following the inspection, I identified that the permit does not allow for the operation of the storage silos unless the emission capture system on the top of each storage silo is installed an operated (SC 4.2). I followed up with Ms. Hanf on September 11, 2020 regarding the blue smoke system and asked whether any other control was installed on the silos while the blue smoke system was not operating. She informed me that the replacement of the blue smoke system had been completed and that the new system was fully operational. She also stated that there was not any other form of emission capture on the silos while the blue smoke system was down. I informed her that the operation of the plant without the control appears to have been a violation of the permit.

On September 22, 2020, I spoke with Sue Hanf regarding the operation of the plant without the control. She informed me that the plant had operated for most of the month of July and into August while the blue smoke system was being replaced. She stated that she would send me exact dates after the call. She also informed me that the enclosures and emission control on the loadout area were still installed and in use throughout the replacement of the blue smoke system, as is required per SC 4.2.

Following that call, Ms. Hanf emailed to provide specific dates for how long the system was offline. She informed me that the old blue smoke system was taken offline on July 3rd and that the replacement system began operation on August 4th. During that time, the plant operated a total of 24 days. Although the violation has already been a resolved, a violation notice will be sent to the facility to ensure that maintenance on the blue smoke system does not occur during plant operation in the future.

2019 Odor Complaints

During the 2019 operating season, five complaints were filed against the Cadillac Asphalt Clarkston plant alleging strong asphalt odors in a neighboring residential area. These complaints were received in May, June, and July of 2019. I conducted multiple complaint investigations but did not observe odors at a level or duration that warranted a violation. During the inspection, facility explained that they think the cause of these complaints was truck departing the facility, since they had been driving a different route than usual and that the alternate route went through the nearby residential area. As far as they know, the trucks have not been driving the alternate route this year. There have not been any odor complaints received against Cadillac Asphalt during the 2020 season so far.

Conclusion

Based on my on-site inspection and review of the required recordkeeping, the Cadillac Asphalt Clarkston plant was found to be in violation of PTI No. 443-82H, Condition 4.1. While the violation is no longer occurring, a violation notice will be sent to the facility to ensure that action is taken to prevent this violation occurring in the future.

NAME Kaitlyn Jeffett DATE 09/29/2020 SUPERVISOR Sebastian Kallemkal