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

N657954689

FACILITY: AJAX MATERIALS CORPORATION		**SRN / ID:** N6579
LOCATION: 57895 IAFRATE DRIVE, NEW HAVEN		**DISTRICT:** Warren
CITY: NEW HAVEN		**COUNTY:** MACOMB
CONTACT: David Grabowski , Operation/Maintenance Manager		**ACTIVITY DATE:** 08/18/2020
STAFF: Kaitlyn Leffert	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY2020 Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 18th, 2020, Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff Kaitlyn Leffert conducted a scheduled inspection of Ajax Materials, located at 57295 Iafrate Drive, New Haven, Michigan. The source is identified by the Source Registration Number (SRN) of N6579. The purpose of the 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; and Permit to Install (PTI) Number 93-99.

The Ajax Materials New Haven facility is a hot mix asphalt (HMA) plant that produces asphalt for a range of end uses, from state-managed highways to driveways at individual residences. The hours of operation at the plant varies based on demand, but generally the plant operates from approximately 5:00 am to 5:00 pm, 5-6 days/week. The facility has at most six staff on site operating the plant at any given time.

Records Review

On July 31, I contacted Kathleen Anderson, Environmental Consultant for Ajax, to request the required records and schedule the inspection. Ms. Anderson responded on August 6th with the required records and to schedule the inspection for August 18th. While air quality inspections are not typically scheduled ahead of time, this is current department policy due to ongoing concerns related to COVID-19.

The permit requires Ajax materials to conduct handheld carbon monoxide (CO) monitor readings at the start of each paving season, upon malfunction of the plant, and/or after every 500 hours of operation. The facility provided records of the CO readings taken during the 2019 and 2020 paving seasons. The dates of the readings were April 24, 2019, September 9, 2019, and May 30, 2020. The plant did not begin operating until mid-May 2020 and therefore the May 30th date does correspond with the start of the 2020 paving season. On May 30th, there were 8 readings taken over the course of 30 minutes. The CO readings ranged from 308 to 490 ppm. The provided records appear to demonstrate compliance with SC 1.16 and 1.20.

The facility is required to maintain records of virgin aggregate feed rate and RAP feed rate on an hourly basis (SC 1.24a and b). In addition, Ajax is required to maintain records of information sufficient to identify all components of the liquid asphalt cement and the asphalt paving product temperature on an intermittent basis (SC 1.24c and d). Hourly information is recorded on daily print sheets that are collected for each day the plant is operated. I was provided a sample daily print sheet for July 29, 2020. The daily records indicate the name of each mix, the time that that mix started, the numbers of the feeder bins being used to make that mix, as well as the virgin aggregate and RAP feed rates. These daily print sheets appear to satisfy all conditions of SC 1.24.

Ajax is required to maintain records of all of the following information on a daily basis: the type and amount of all fuels combusted, tons of virgin hot mix asphalt (HMA) produced, tons of HMA containing RAP produced (including the average RAP per ton), hours of operation, quantity of RAP uses in HMA each calendar month, and the amount of asphalt paving materials processed (SC 1.25). Ajax provided all of the required records for the 2019 season and the 2020 season so far. Where applicable, these records are further discussed in the sections below.

The permit contains recordkeeping requirements specific to fuel oil and recycled used oil (RUO) (SC 1.8, SC 1.21, SC 1.22, SC 1.23, SC 1.25f, and Appendix B). The facility submitted records of daily natural gas fuel usage, as required by SC 1.25a. Based on these records and information provided by the facility, natural gas is the only fuel burned at the plant. Since fuel oils and RUO are not currently used, compliance with the fuel oil specific requirements was not assessed at this time.

Material Limits
The permit sets a limit of a maximum of 50% RAP material in the asphalt mixture, based on a monthly average (SC 1.2). The provided records included both daily RAP tons used, as well as monthly RAP usage and the monthly percent of RAP. During the 2019 season, the monthly percent RAP ranged from 12 – 44%. In the 2020 season so far, the monthly percent RAP was 42% in May, 29% in June, and 32% in July. The provided records indicate that Ajax is in compliance with SC 1.2.

The facility is also required to maintain records of the activated tire rubber (ATR) content of the asphalt produced at the facility (SC 1.25h) and is limited to having a maximum of 15% ATR content in the liquid asphalt cement (SC 1.3). ATR is no longer used and therefore these requirements are not applicable.

Process/Operational Limits
Ajax is limited to maximum production of 680,000 tons of HMA per 12-month rolling time period (SC 1.5). Monthly production records from the 2019 and 2020 seasons indicate that monthly production has ranged from 3,299 tons to 38,292 tons during the operating months. The total 12-month rolling production at the end of July 2020 was 148,241 tons. The highest 12-month month production over the past two years was observed at the end of October 2019, at 202,260 tons. The plant therefore appears to be in compliance with the annual limit on tons of HMA produced.

The permit also sets a limit on the hourly amount of HMA produced of 500 tons/hour (SC 1.6). The provided records indicate that hourly HMA production typically ranged from around 205 to 380 tons/hour, and therefore is operating below the permitted hourly production limit.

SC 1.7 sets limits on the quantity of toxic pollutants that can be present in any hazardous waste or fuels burned at the plant. Ajax does not burn any hazardous waste materials, fuel oils, or RUO, and therefore S.C. 1.7 is not applicable.

Emission Calculations
The permit contains emissions limits for particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NOx), lead, benzene, toluene, ethylbenzene, xylene, naphthalene, formaldehyde, acrolein, arsenic, nickel, sulfuric acid, manganese, and hydrogen chloride. Compliance with these emission limits is to be determined via stack testing and through emissions calculations and recordkeeping (SC 1.13, SC 1.14, and SC 1.26). All required emissions calculations were provided during record review (1.26)

The permit contains annual emission limits for SO_2 and CO, which are 89.4 tpy and 68.3 tpy, respectively. Annual emission rates were calculated using the annual production data and the emission factors used in permitting for SO_2 and CO, which are 0.0033 lb/ton and 0.056 lb/ton, respectively. The provided records indicate that the 12-month rolling emissions at the end of July 2020 were 0.24 tpy SO_2 and 4.15 tpy CO. The highest 12-month rolling emissions over the last two years occurred at the end of October 2019, with 0.33 tpy SO_2 and 5.67 tpy CO. The facility therefore appears to be operating in compliance with the annual SO_2 and CO emission limits.

Ajax also provided records of HAP emission calculations on a monthly and 12-month rolling basis. The permit contains HAP emission limits of 22.49 tons per 12-month rolling time period for all HAPs combined, and 8.9 tons per 12-month rolling time period for each individual HAP. The 12-month rolling emissions for all HAPs combined at the end of July 2020 were 1.61 tpy. The individual HAP with the highest emissions was sulfuric acid, at 0.46 tpy. The 12-month rolling period with the highest emissions was the one ending in October 2019, with 2.2 tpy of emissions for total HAPs. Sulfuric acid was also the highest individual HAP at that time, at 0.63 tpy. The calculated HAP emissions are below the permitted limits and Ajax therefore appears to be in compliance with the HAP emission limits in SC 5.1.

Facility Walk Through
On August 18th, I arrived at the facility around 8:00 am and was greeted by David Grabowski, Operation/Maintenance Manager, Ajax Materials Corporation. Mr. Grabowski informed me that Ms. Anderson would be unable to make it to the inspection today and that he would assist me during my inspection instead. We first discussed some general questions about the plant and then did a walking tour of the facility. Due to ongoing concerns related to COVID-19, masks were worn, and safe social distancing practices were followed throughout the duration of the inspection.

The plant was operating on the day of my inspection. Ajax operates a counterflow drum and burner, 11 virgin aggregate feed bins, 3 RAP feed bins, 6 asphalt storage silos, 5 liquid asphalt feedstock storage tanks, a diesel storage tank, and a natural gas fired heater at this location. All the above listed equipment is permitted, except for the diesel storage tank and the natural gas fired heater, which are exempt per Rules 284(d) and 282(2)(b)(i), respectively. The facility also has a baghouse to control emissions from the HMA plant, as well as an emission capture system on the loadout area.

The site does have a paved road and parking area for where the trucks travel, while the remainder of the site is unpaved. The facility has many piles of various aggregate materials across the site, including recycled asphalt product. Appendix C of PTI No. 93-99C contains the fugitive dust control plan requirements for the facility. I observed that the site had a posted speed limit sign of 10mph, as is required. I asked about site maintenance, including water or chloride application, and sweeping activities. Mr. Grabowski informed me that that chloride is applied on an as needed basis and that the site is swept regularly. Drop distances at the facility also appeared to be minimized and I did not observe visible dust generation from the movement of aggregate materials around the site.

The facility is not allowed to use any asbestos containing materials as raw materials in the asphalt production process. Mr. Grabowski informed that they do not use any of asbestos-containing materials in the process and I did not observe any usual materials in the RAP piles at the facility. He also stated that the plant stopped using shingles as a raw material.

I observed that the fabric filter dust collector was installed and operating during my inspection. I did not observe any leaks or visible emissions and the area around the baghouse appeared to be well maintained and free of excessive particulate dust. The dust collected from the baghouse is collected and re-used in asphalt production.

During my inspection, I also briefly entered the control room to observe production information and the pressure differential reading on the baghouse. I noted that the asphalt plant was producing at 280 tons per hour, which is consistent with the production records provided by the facility. The baghouse differential pressure was at 3.4 inches of water at the time of the inspection, which is incompliance with the acceptable permitted range of 2 to 8 inches of water (Appendix A).

I also observed that the facility had a vapor condensation and recovery system installed on the asphalt storage tanks, as well as emission capture on top of each storage silo, as required by SC 3.1, 4.1, and 4.2.

Conclusion
Based on my review of the required records and my on-site inspection of the facility, Ajax Materials appears to be in compliance with all conditions of PTI No. 93-99C and all applicable air quality rules and regulations.

NAME Kaitlyn Leffler DATE 09/30/2020 SUPERVISOR Sebastian Kallenkal