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

B413726524

FACILITY: AJAX MATERIALS CORPORATION		**SRN / ID:** B4137
LOCATION: 2240 AVON INDUSTRIAL DR, ROCHESTER HLS		**DISTRICT:** Southeast Michigan
CITY: ROCHESTER HLS		**COUNTY:** OAKLAND
CONTACT: MARK BODEN , VICE PRESIDENT		**ACTIVITY DATE:** 08/12/2014
STAFF: Erik Gurshaw	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: 2014 FCE Inspection		
RESOLVED COMPLAINTS:		

SRN: B4137
COMPANY: Ajax Materials Corporation
COMPANY ADDRESS: 2240 Avon Industrial Drive, Rochester Hills, MI 48309
PURPOSE OF INSPECTION: Targeted
CONTACT PERSON: Mr. Mark Boden, Vice-President Materials Corporation (Ph: 248-244-3327; Cell: 248-388-5639; Fax: 248-244-0800; Email: mboden@ajaxpaving.com)
COMPANY PHONE NUMBER: 248-244-3355

On August 12, 2014, AQD staff, Erik Gurshaw, conducted a targeted, announced inspection of Ajax Materials Corporation located at 2240 Avon Industrial Drive in Rochester Hills, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department Environmental Quality, Air Quality Division (MDEQ-AQD) Rules; Permit To Install (PTI) Number 720-89D for a hot melt asphalt plant (HMA) and associated equipment; and NSPS Subpart I for Hot Mix Asphalt Facilities. NSPS Subpart I requirements have been incorporated into the plant's PTI.

Upon arriving at the site, AQD staff introduced themselves and stated the purpose of the visit to Ms. Kathleen Anderson, Environmental Consultant with Axis Environmental Consulting Corporation (Ph: 810-845-3925; Email: kanderson@ajaxpaving.com), and Mr. Mike Mirowski, Plant Manager (Ph: 248-388-1760). Ms. Anderson is Ajax's environmental consultant. Ms. Anderson and Mr. Mirowski assisted AQD staff on the inspection. Ajax Materials Corporation makes asphalt for commercial building and road contractors and for County and State agencies. The plant operates from 5:00 AM until 5:00 PM when operational, but operation is generally sporadic throughout the day. 3 people are employed to run the plant. Equipment at the plant includes the following: a drying drum and associated burner; a mixing drum and associated burner; 5 asphalt storage silos; 11 virgin aggregate bins; 3 recycled asphalt product (RAP) aggregate bins; a CAT 980H wheel loader; a skidsteer; a load truck; a water truck; a baghouse; a drag slat; 5 liquid asphalt storage tanks; a 1,000 gallon diesel storage tank; and a "Genoor Hy-Way" natural gas fired heater with a maximum rated heat capacity of 2 MBtu per hour. The heater is used to provide heat to the liquid asphalt storage tanks and the process lines within the plant. The liquid asphalt storage tanks and asphalt silos are permitted. The heater and diesel storage tanks are exempt from PTI requirements pursuant Rule 282(b)(i) and Rule 284(d), respectively. The plant was not operating at the time of the inspection.

Asphalt is produced by loading the desired aggregate mix into feed hoppers. From the feed hoppers, the aggregate is conveyed to a weigh bridge and then to a counter flow drying oven where the material is heated and dried at 700 degrees Fahrenheit for 3 minutes. The hot aggregate mix is then conveyed to a mixing drum where RAP and liquid asphalt is introduced into the mix. The resulting asphalt product is mixed in the mixing drum for approximately 3 minutes at 325 degrees Fahrenheit before being conveyed to a drag slat. From the drag slat, the final product is conveyed to the asphalt storage silos. From the storage silos, the final product is loaded into trucks in an enclosed load out area. Asphalt production occurs continuously while the plant is operating. The final asphalt product can be altered by changing the virgin aggregate and RAP mixture at the beginning of the process. Besides virgin aggregate and RAP, the plant also uses end cut shingles in its asphalt production process. End cut shingles are considered to be another source of RAP.

PTI #720-89D was issued to the company on May 20, 2005. The PTI contains the following Emission Units and Flexible Groups: EU-001 (the hot mix asphalt facility); EU-YARD; EU-ACTANKS (the liquid asphalt storage tanks); EU-SILOS; and FGFACILITY. EU-001 sets operating conditions for the hot mix asphalt plant. EUYARD sets conditions for the control of fugitive dust from the plant yard. EU-ACTANKS sets operating conditions for the liquid asphalt storage tanks; EU-SILOS sets operating conditions for the asphalt storage silos. FG-FACILITY sets 12-month rolling individual and aggregate hazardous air pollutant (HAP) limits for the entire facility. The inspection indicated the following with respect to compliance with the PTI:

EU-001 (hot melt asphalt plant)

The PTI sets emission limits for SO2, PM, CO, VOCs, lead and the following HAPs: benzene; toluene; ethybenzene; xylene; naphthalene; formaldehyde; acrolein; arsenic; nickel; manganese; sulfuric acid; and hydrogen chloride. Besides PM, all of the pollutants listed above have pound per ton of asphalt produced emission limits. PM has a grain per dry standard cubic foot of exhaust gas emission limit. The PTI also sets 12-month rolling emission limits of 89.4 tons and 68.3 tons for SO2 and CO, respectively. All of the emission limits established in the PTI are based on an annual production limit of 680,000 tons of asphalt. The PTI states that the emission limits may have to be verified upon request of the AQD, but the AQD has never requested stack testing to take place and the company uses MAERS emission factors to calculate emissions from the plant. MAERS emission factors for the pollutants listed in the PTI are below those established in the PTI.

No hazardous waste or asbestos containing materials are being burned by the plant as required by Special Conditions 1.7 and 1.4 of the PTI, respectively. No activated tire rubber (ATR) is being introduced into the asphalt mix. Therefore, Special Condition 1.3 of the PTI is not applicable to the plant's operation. RAP is being limited to a maximum of 50% of the total asphalt mixture per month as required by Special Condition 1.2 of the PTI. The plant is making less than 680,000 tons of asphalt per 12-month rolling time period and less than 400 tons per hour as required by Special Conditions 1.5 and 1.6 of its PTI. The company has not used anything besides natural gas to fuel the burners of the plant since 2008 so Special Condition 1.8 and the RUO Compliance Monitoring Plan in Appendix B of the PTI are not applicable to the plant's current operations. The plant is abiding by the Fugitive Dust Control Plan in Appendix C of its PTI as required by Special Condition 1.9 of its PTI. Specifically, the plant is employing the following measures to control fugitive dust: water is applied to the plant yard and roads when necessary; calcium chloride is applied to the plant yard and roadways occasionally; 10 MPH speed limit signs are posted around the plant yard to limit fugitive dust production from vehicle traffic; the drop distance is being minimized during the stockpiling of aggregate; paved roads are regularly scraped with the front loader to limit track out; aggregate spilled on roadways is immediately cleaned up; incoming trucks carrying aggregate are tarped; outgoing trucks carrying asphalt are tarped; the bucket of the wheel loader is loaded to avoid overfilling to prevent material spillage; records of applications of water and calcium chloride applications to the plant yard are being maintained; and malfunctions from the plant's process equipment and the baghouse are immediately corrected to prevent fugitive emissions. The plant's baghouse is equipped with a device to monitor pressure drop across it and the plant's baghouse is installed and is being properly operated and maintained as required by Special Conditions 1.10, 1.11 and Appendix A of the PTI, respectively. The plant is employing the following preventative maintenance measures on the baghouse as required by Appendix A of its PTI: the pressure drop across the baghouse is being recorded daily (the pressure drop needs to be between 2" and 8" of water column); a high temperature alarm is set to shut down the plant in the event that the temperature within the baghouse exceeds 390 degrees Fahrenheit; any particulate matter collected by the baghouse is recirculated back into the asphalt mix; a black light test on the bags within the baghouse is conducted at the start of each paving season; at least 15 new bags are kept on site at all times; and baghouse maintenance records are being recorded. The virgin aggregate and RAP feed rate are being continuously recorded as required by Special Condition 1.15 of the PTI. CO emissions are being monitored with a handheld monitor at the start of each paving season and after 500 hours of operation as required by Special Condition 1.16 of the PTI. CO emissions were measured with a handheld monitor on April 24, 2014. The plant is maintaining the

following daily records as required by Special Condition 1.24 and 1.25 of its PTI: the virgin aggregate feed rate; the RAP feed rate; the temperature of the asphalt while it is being produced; the physical makeup of the final asphalt product; the type and amount of fuel used; tons of hot mix asphalt produced; the total hours of operation; and the tons of asphalt produced containing RAP and the percentage of RAP in the asphalt. The plant is maintaining 12-month rolling CO, SO2, NOx, VOC, and PM emission records as required by Special Condition 1.26 of its PTI. 12-month rolling NOx, VOC, and PM emission limits are not established in the PTI, however. 12-month rolling SO2 and CO emission records from August 2013 through July 2014 indicate that the highest emissions of SO2 and CO were 26.525 tons and 20.272 tons, respectively, from September 1, 2012 through August 31, 2013. This is well below the 89.4 ton and 68.3 ton 12-month rolling emission limit established in the PTI for SO2 and CO, respectively. From August 2013 through July 2014, the highest 12-month rolling HMA production rate was 211,786 tons occurring from August 1, 2012 through July 31, 2014. This is well below the 680,000 ton HMA production limit established in the PTI. Even though the plant is required to maintain 12-month rolling fuel usage records, the PTI does not set a fuel usage limit. AQD staff verified that the stack from the plant exhausts unobstructed vertically to the ambient air and that it meets the dimensions specified in Special Condition 1.27 during the inspection.

EU-YARD

The plant is abiding by the Fugitive Dust Control Plan in Appendix C of its PTI to control fugitive dust from the plant yard. The plant is also reporting particulate matter emissions from the plant yard and roadways in its annual MAERS report.

EU-ACTANKS

The liquid asphalt storage tanks are equipped with a vapor condensation and recovery system as required by Special Condition 3.1 of the PTI.

EU-SILOS

Load out activities from the asphalt storage silos takes place in an enclosure and fugitive emissions from the load out area are vacuumed back into the drying drum as required by Special Condition 4.1 of the PTI.

FGFACILITY

The plant is maintaining 12-month rolling individual and aggregate HAP emission records. MAERS emission factors are used to calculate HAP emissions. 12-month rolling records from August 1, 2013, through July 31, 2014, indicate that the plant emitted 0.07651 combined HAPs during the time period. This is far below the 12-month rolling aggregate HAP emission limit established in the PTI. During the same time period, the highest emission of a single HAP was 0.0411 tons of formaldehyde.

COMPLIANCE DETERMINATION

Based on this inspection, it was determined that Ajax Materials Corporation's Rochester plant is in compliance with its PTI and all other applicable air rules and regulations. The following records are attached to this report in the following order: daily RAP usage reports from April 24, 2014, through August 10, 2014, including the average monthly percentage of RAP used in the asphalt mix; 12-month rolling individual and aggregate HAP emission calculations from August 1, 2013, through July 31, 2014; a magnehelic gauge calibration record on the device used to measure the pressure drop across the baghouse at the start of the 2014 construction season; daily asphalt production records and daily natural gas usage records from August 13, 2013, through August 11, 2014; records showing the components used to make particular asphalt mixes from August 8, 2014, through August 13, 2014; daily emission records for PM, SO2, NOx, CO, and VOC in pounds per hour from August 13, 2013, through August 11, 2014; daily records of the hours of operation, the tons of asphalt produced per

hour, and the tons of asphalt produced in total from August 13, 2013, through August 11, 2014; CO emission readings as recorded with a handheld device from April 24, 2014 (the start of the construction season); daily production records showing the type of asphalt mix produced from August 13, 2013, through August 11, 2014; daily differential pressure readings across the baghouse from August 3, 2014, through August 12, 2014; baghouse maintenance records from April 23, 2014; a calcium chloride application invoice from Suburban Oil on August 11, 2014; daily water application records for the plant yard, roadways, and aggregate piles from August 13, 2013, through August 11, 2014; and 12-month rolling emission records for CO and SO2 from August 2013 through July 2014.

NAME Erik Gurshaw DATE 8/21/14 SUPERVISOR CJE