

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

B413829450

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| FACILITY: AJAX MATERIALS CORPORATION | | SRN / ID: B4138 |
| LOCATION: 26400 SHERWOOD AVENUE, WARREN | | DISTRICT: Southeast Michigan |
| CITY: WARREN | | COUNTY: MACOMB |
| CONTACT: MARK BODEN, VICE PRESIDENT | | ACTIVITY DATE: 05/13/2015 |
| STAFF: Erik Gurshaw | COMPLIANCE STATUS: Compliance | SOURCE CLASS: SM OPT OUT |
| SUBJECT: 2015 FCE Inspection | | |
| RESOLVED COMPLAINTS: | | |

SRN: B4138

COMPANY: Ajax Materials Corporation Plant #7

COMPANY ADDRESS: 26400 Sherwood Ave., Warren, MI 48091

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 May 13, 2015, AQD staff, Erik Gurshaw, conducted a targeted, announced inspection of Ajax Materials Corporation Plant #7 located at 26400 Sherwood Ave. in Warren, 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; and Permit To Install (PTI) Number 50-96E for a hot melt asphalt plant (HMA), 5 liquid asphalt cement storage tanks, and six 300 ton asphalt storage silos.

Upon arriving at the site, AQD staff introduced themselves and stated the purpose of the visit to Ms. Kathleen Anderson (Ph: 810-845-3925; Email: kanderson@ajaxpaving.com) of Axis Environmental. Ms. Anderson is the company's environmental consultant and she assisted AQD staff during the inspection. Ajax Materials Corporation makes hot mix asphalt for commercial building and road contractors, MDOT, various county road commissions, and local municipalities. The plant operates 2 shifts 7 days a week, but operation is highly dependent upon demand. 4 people are employed to run the plant. Equipment at the plant includes the following: a counterflow mixing and drying drum and associated burners; 6 asphalt storage silos; 12 virgin aggregate bins; 3 recycled asphalt product (RAP) aggregate bins; 5 liquid asphalt storage tanks; a 1,000 gallon diesel storage tank; a 30,000 gallon recycled used oil (RUO) storage tank; a 500 gallon waste oil storage tank; an asphalt cement heater which is used to keep asphalt from hardening; a front end loader; a water truck; a baghouse; an asphalt elevator lift; and a quality control laboratory. The asphalt storage silos and liquid asphalt storage tanks are permitted. The diesel storage tanks, RUO storage tank, and waste oil storage tank are exempt from PTI requirements pursuant Rule 284(d). The plant was not operating at the time of the inspection because a bearing in the asphalt elevator broke at 7:38 AM on the day of the inspection. The asphalt elevator conveys finished asphalt product to the asphalt storage silos.

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 counterflow drying and mixing oven where the material is heated and dried at 300 degrees Fahrenheit for approximately 5 minutes. After the virgin aggregate is heated and dried, Recycled Asphalt Product (RAP), liquid asphalt, and dust recirculated from the baghouse are introduced into the mix. The resulting mixture is mixed in the drum for approximately 5 minutes before being conveyed to an asphalt elevator. From the asphalt elevator, the final product is conveyed to the asphalt storage silos. From the storage silos, the final product is loaded into trucks in a 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. According to Ms. Anderson, the plant can produce over 30 asphalt mix designs based on customer specifications. 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 #50-96E 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 and associated equipment); EU-YARD; EU-ACTANKS (the liquid asphalt storage tanks); EU-SILOS; and FG-FACILITY. EU-001 sets operating conditions for the hot mix asphalt plant. EU-YARD sets conditions for the control of fugitive dust from the plant yard and roadways. EU-ACTANKS sets operating conditions for the liquid asphalt storage tanks. EU-SILOS is for the asphalt storage silos, but the PTI contains no applicable conditions for the silos. FG-FACILITY sets 12-month rolling individual and aggregate hazardous air pollutant (HAP) emission 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 12-month rolling emission limits of 89.4 tons and 68.3 tons for SO₂ and CO, respectively. The plant uses MAERS emission factors to calculate 12-month rolling SO₂ and CO emissions and the 2014 MAERS report indicated that the facility emitted 0.57 tons of SO₂ and 21.9 tons of CO from the hot melt asphalt plant during the 2014 construction season. The EPA requested that the facility conduct a stack test for VOC emissions, reported as Total Gaseous Nonmethane Organic Emissions (TGNMO) and Total Gaseous Organic Compounds (TGOOC) on May 27, 2004. Air Compliance Testing, Inc. conducted stack testing on October 12, 2004 to fulfill this request. This stack test indicated that the facility is in compliance with the 0.058 lb/ton VOC emission limit established in its PTI. The PTI also sets lb/ton of asphalt produced emission limits for the following pollutants: SO₂; NO_x; CO; VOC; lead; benzene; toluene; ethylbenzene; xylene; naphthalene; formaldehyde; acrolein; arsenic; nickel; manganese; sulfuric acid; and hydrogen chloride. Stack testing conducted by Derenzo and Associates, Inc. from August 11, 2004, through August 18, 2004, indicated that the facility was in compliance with all of these emission limits with the exception of acrolein. As a result of the acrolein emission exceedance, the company requested a higher acrolein emission limit of 0.0008 lb/ton which was incorporated into PTI #50-96E issued on May 20, 2005. The AQD addressed the acrolein emission exceedance in a FCE Report on November 1, 2004. The new acrolein emission limit is higher than the 0.000716 lb/ton emission rate determined during the stack test. The August 11, 2004, through August 18, 2004, stack test also indicated that the facility was in compliance with the 0.04 grain/dry standard cubic foot of exhaust gas emission limit for particulate matter (PM) established in the PTI.

The plant has not used recycled used oil (RUO) to fuel its burners since 2006 so the contaminant limits established for RUO used by the plant set in Special Condition 1.7 of the PTI are not applicable to its current operations. No asbestos containing materials or activated tire rubber (ATR) are being used by the plant as stipulated by Special Condition 1.4 and Special Condition 1.3 of the PTI, respectively. 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 producing less than 680,000 tons of asphalt per 12-month rolling time period and less than 650 tons per hour per 24-hour rolling time period as required by Special Conditions 1.5 and 1.6 of its PTI. The company has not used anything besides natural gas to fuel its burners since 2006 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'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 and 1.11 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 380 degrees Fahrenheit; 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. Verification of the SO₂, naphthalene, formaldehyde, and acrolein emission limits were determined during the August 11, 2004, through August 18, 2004, stack

test. The virgin aggregate and RAP feed rate are being continuously recorded as required by Special Condition 1.13 of the PTI. CO emissions from the burners 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 1.14 of the PTI. The CO emission data set consisted of 8 separate CO readings taken over a time period of 30 minutes or longer as required by the PTI. CO emissions were measured with a handheld monitor on May 6, 2014, between 8:26 AM and 8:56 AM, on August 26, 2014, between 9:14 AM and 9:45 AM, and on April 23, 2015, from 9:30 AM until 10:01 AM. Natural gas usage rates are being recorded daily as required by Special Condition 1.17 of the PTI. The plant is maintaining the following daily records as required by Special Condition 1.22 and 1.23 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; the tons of asphalt produced containing RAP and the percentage of RAP in the asphalt; and total hours of operation. The plant is maintaining 12-month rolling CO, SO₂, NO_x, VOC, PM, and HCl emission records as required by Special Condition 1.22 of its PTI. The plant is calculating yearly emissions of PM, SO₂, NO_x, CO, and VOC in its MAERS Report as required by Special Condition 1.24 of its PTI. 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 1.25 during the inspection.

EUYARD

The plant is abiding by the Fugitive Dust Control Plan in Appendix C of its PTI as required by Special Condition 2.1 of its PTI. Specifically, the plant is employing the following measures to control fugitive dust: water is applied to the plant yard and roadways when necessary; 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 swept by Rolar Property Services when necessary to control 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 water applications to the plant yard and roadways are being maintained; and malfunctions from the plant's process equipment and the baghouse are immediately corrected to prevent fugitive emissions. The plant is also reporting particulate matter emissions from the plant yard and roadways in its annual MAERS report as required by Special Condition 2.2 of its PTI.

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

EU-SILOS is listed as an emission unit within the PTI, but no applicable conditions are listed in the PTI.

FG-FACILITY

The plant is maintaining 12-month rolling individual and aggregate HAP emission records. Emission factors determined from the August 11, 2004, through August 18, 2004, stack test are used to calculate HAP emissions. 12-month rolling emission records from May 2014 through April 2015 indicate that the plant is emitting far less than 8.9 tons of a single HAP and 22.4 tons of aggregate HAPs per 12-month rolling time period (the emission limits set in Special Conditions 4.1 of the PTI). The highest emission of aggregate HAPs during the aforementioned time period was 0.99427 tons occurring from June 2013 through May 2014. During the same time period, the highest emission of a single HAP was 0.42404 tons of sulfuric acid occurring from June 2013 through May 2014.

Physical Inspection and Odor Observations

After the recordkeeping portion of the inspection, AQD staff and Ms. Anderson walked around the plant yard. Mr. Anderson showed AQD staff of the equipment listed in the PTI and enumerated in this report. As previously mentioned, the plant was not operating at the time of the inspection so an evaluation of the plant's operating parameters could not be made. A Great Lakes Aggregates portable concrete crusher also operates at the location and the haul roads and plant yard were observed to have been wet and no fugitive dust was observed to have been produced from vehicular traffic during the inspection. A water truck was observed to be watering down the haul roads and the plant yard during the inspection. No fugitive dust emissions were observed to have been emanating from the crushing plant which was operating at the time of the inspection.

COMPLIANCE DETERMINATION

Based on this inspection, it was determined that Ajax Materials Corporation's Warren Plant (Plant #7) 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 May 1, 2014, through May 8, 2015; the average monthly percentage of RAP used in the asphalt mix from April 2014 through April 2015; daily asphalt production records from May 1, 2014, through May 8, 2015; 12-month rolling asphalt production records from May 2014 through April 2015; records of water applications to the plant yard and roadways from May 1, 2014, through May 8, 2015; paved road sweeping invoices from Rolar Property Services from April 2014 through April 2015 ; daily natural gas usage records from May 1, 2014, through May 8, 2015; monthly natural gas usage records for the 2014 construction season; 12-month rolling natural gas usage records from May 2014 through April 2015; daily pressure drop records across the baghouse from April 15, 2015, through May 12, 2015; monthly and 12-month rolling HAP emission records from May 2014 through April 2015; baghouse inspection records from April 13, 2015, and April 17, 2015; records of the CO emission evaluation performed on the plant's burners from May 6, 2014, August 26, 2014, and April 23, 2015; and calibration records for the magnehelic gauge used to measure the pressure drop across the baghouse from May 12, 2014, and April 20, 2015 (conducted by Vincent lafrate).

NAME Erik Hurshaw DATE 5/18/15 SUPERVISOR CJE