

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

B582340701

FACILITY: AJAX MATERIALS CORP		SRN / ID: B5823
LOCATION: 7392 KENSINGTON RD, BRIGHTON		DISTRICT: Lansing
CITY: BRIGHTON		COUNTY: LIVINGSTON
CONTACT: Mike Herzfeld, Plant Operator		ACTIVITY DATE: 07/14/2017
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Partial Compliance Evaluation activities conducted as part of a Full Compliance Evaluation: 1.) unannounced, scheduled inspection; and 2.) review of recordkeeping and operational logs.		
RESOLVED COMPLAINTS:		

On 7/14/2017, the Michigan DEQ, AQD conducted an unannounced, scheduled inspection of the Ajax Materials Plant 6, in Brighton, and reviewed the facility's recordkeeping and operational logs. These were Partial Compliance Evaluation (PCE) activities, conducted as part of a Full Compliance Evaluation (FEC).

Facility environmental contacts:

Mike Herzfeld, Plant Operator: 248-244-3448; mherzfeld@ajaxpaving.com

Kathleen Anderson: Environmental Consultant, Axis Environmental Consulting Corp.; 810-845-3925; kanderson@ajaxpaving.com

Facility description:

This facility is a Hot Mix Asphalt (HMA) plant. It consists of a cold aggregate handling system for both virgin aggregate and Recycled Asphalt Pavement (RAP), a parallel flow drum dryer, a baghouse, and product storage silos with a truck loadout area beneath them. Parallel flow drums are an older style of dryer, compared with newer counterflow designs. The truck loadout area and the silos are uncontrolled. The facility has a paved yard area, and paved roadways around the HMA plant. There are also aggregate storage piles onsite, and unpaved yard areas.

Emission units:

Emission Unit ID	Emission unit description	Permit or exemption	Operating status
EUHMAPLANT	HMA facility including aggregate conveyors, 400 ton per hour parallel flow drum mixer, and baghouse, with 70,000 ACFM	PTI No. 38-90C	Compliance
EUYARD	Fugitive dust sources including plant roadways, plant yard, material storage piles, and material handling operations (including cold feed aggregate bins).	PTI No. 38-90C	Compliance
EUACTANKS	Liquid asphalt cement (AC) tanks with vapor condensation and recovery system.	PTI No. 38-90C	Compliance
EUSILOS	6 HMA paving material product storage silos.	PTI No. 38-90C	Compliance
Flyash silo	Silo for storing flyash, as an ingredient of the paving mixture.	PTI No. 38-90C	Not in use
FGFACILITY	All process equipment at the stationary source, including equipment covered by other permits (if any), grandfathered equipment, and exempt equipment.	PTI No. 38-90C	Compliance

Regulatory overview:

This facility has an opt-out permit, Permit to Install (PTI) No. 38-90C, which limits the facility's potential to emit (PTE) for five of the criteria pollutants: carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxides (SO2), volatile organic compounds (VOC), and particulate matter (PM), to keep it from becoming a major source. The remaining criteria pollutant, lead, is limited by the PTI from an air toxics standpoint, because it does not have the PTE to reach major source levels. The facility is not considered to be a major source for Hazardous Air Pollutants (HAPs), because it does not have the PTE to emit 10 TPY or more of a single HAP, nor the PTE to emit 25 TPY or more of all HAPs combined.

The plant is subject to 40 CFR Part 60, Subpart I, the New Source Performance Standards (NSPS) for HMA plants. The plant successfully passed its NSPS particulate and opacity testing, on 9/11/1990.

Fee status:

This facility is not classified as a Category I fee source, because it is not a major source, for either criteria pollutants or HAPs. Because it is subject to an NSPS (Subpart I), the facility is classified as a Category II fee source. It is not subject to one of the National Emissions Standards for Hazardous Air Pollutants, and so is not classified as a Category III fee source. Each year, the company reports annual production and emissions through the Michigan Air Emission Reporting System (MAERS).

Plant history:

An HMA plant with a parallel flow drum dryer was permitted at this site in 1979, under PTI No. 254-79. The permit underwent minor revisions, to allow for use of RAP, to change a fan location, and a modification to a venture scrubber. The drum dryer was kept when the plant received a new PTI, No. 38-90, for replacement of the venturi scrubber and a demister with a baghouse. That PTI underwent revisions to allow for the use of Nos. 2 through 6 fuel oils and Recycled Used Oil (RUO) as fuels for the drum dryer, and to revise the Compliance Monitoring Plant for RUO.

Recent history:

During the years 2000 through 2012, no air pollution complaints were received, regarding this plant. Starting in 2013, AQD began to receive intermittent complaints, attributing odors, downwashing visible emissions from the exhaust stack, and fallout of particulate emissions to this plant. AQD has investigated these complaints. Fallout samples have been collected by AQD staff, but results have been inconclusive. Odors have been detected offsite, but the odor levels experienced by staff have not been sufficient to constitute a violation of Rule 901(b), which prohibits unreasonable interference with the comfortable enjoyment of life and property.

On 5/11/2017, AQD received PTI Application No. 76-17, to replace the existing HMA plant with a new, state-of-the-art HMA plant. This proposed plant would include a counterflow drum dryer, a drum design type which has proven effective at eliminating blue smoke emissions and reducing odor levels offsite, in AQD's experience, when replacing HMA plants equipped with parallel flow drum dryers. The proposed plant would also have a truck loadout and silo control system, to capture and control emissions from those areas of the plant. It would also have a larger baghouse, and have a 120 foot tall stack, whereas the current exhaust stack at the site is only 70 feet tall. The proposed plant's application is undergoing review by the AQD Permit Section, as mid-July, 2017.

On 6/5/2017, AQD conducted a complaint investigation in response to a complaint of odors and a downwashing exhaust plume. I was unable to confirm the presence of asphalt odors offsite. On 6/27/2017 and 7/6/2017, AQD attempted to conduct an unannounced, scheduled inspection of the HMA plant, but in both cases, the plant finished production for the day (other than night time production on 6/27), while I was still downwind, checking for odor impacts.

Odor evaluation, part 1 (arrival):

Please see attached odor evaluation form, map, and daily weather summary. Weather conditions were cloudy and 65 degrees F, with winds out of the northwest at 5 miles per hour. The only odors detected were as follows:

- 8:20 AM: A brief level 2 diesel exhaust odor was detected at the intersection of Ajax Drive and Kensington Road.
- 8:20 AM: A brief level 2 asphalt odor was detected 100 feet north of the intersection of Kensington Road with Silver Lake Road.
- 8:24 AM: A level 1 odor of vegetation was detected along Silver Lake Road, near the intersection with Bingham.

AQD odor scale:

Level	Description
0	Non-detect
1	Just barely detectable
2	Distinct and definite
3	Distinct and definite objectionable odor
4	Odor strong enough to cause a person attempt to avoid it completely
5	Odor so strong as to be overpowering and intolerable for any length of time

The asphalt odor detected at 8:20 AM was not sufficient to constitute a violation of Rule 901(b), which prohibits unreasonable interference with the comfortable enjoyment of life and property.

Arrival:

I met with Mr. Mike Herzfeld, plant operator. I advised him that I had briefly detected asphaltic odors downwind, but that the odors were insufficient to constitute a nuisance at this time. He and I agreed that the exhaust plume downwashing from the exhaust stack was most likely the source. It has been my experience in recent years that AQD is most likely to receive odor or visible emission complaints about this facility when the wind is out of the north northeast.

Replacement of this HMA plant, following the end of the 2017 paving season, will involve a new counterflow drum dryer, a larger baghouse, truck loadout and silo control, and a 120 foot tall exhaust stack. AQD's experience has been that replacing existing parallel flow HMA drum dryers with counterflow equipped plants reduces odor impacts offsite. The proposed stack being 50 feet taller than the existing stack onsite may reduce the chances of an exhaust plume downwashing.

Inspection:

EUHMAPLANT; EUYARD, EUACTANKS, EUSILOS; Flyash silo: PTI No. 38-90C, 40 CFR Part 60, Subparts A and I:

In this parallel mix drum, virgin aggregate enters the front of the drum, near the burner. The RAP enters the drum in the drum's midsection. It is my understanding that this is to avoid scorching the RAP, which could cause emissions of blue smoke. This drum will be replaced with a counterflow drum dryer when the proposed new plant is built, following the conclusion of this paving season. The new plant is expected to be operational in time for the start of the 2018 paving season. It has been AQD's experience that offsite odor impacts are reduced, when a parallel flow drum equipped HMA plant is replaced by a plant with a counterflow drum dryer.

Check for fugitive emissions:

1. Drum dryer: no visible emissions.
2. Burner: no visible emissions.
3. Virgin aggregate feed system: no visible emissions.
4. RAP/SHRAP feed system: no visible emissions.
5. Ductwork: no visible emissions.
6. Baghouse: no visible emissions.
7. Liquid AC storage tanks with condensers: no visible emissions.
8. RUO tank: no visible emissions.
9. Hot elevator: no visible emissions.
10. Top of silos: no visible emissions.
11. Truck loadout: steam or blue smoke visible from loading trucks.
12. Paved roadways: minimal fugitive dust.
13. Unpaved roadways: no fugitive dust.

There was water on the plant unpaved roadways, and some traces of water still on paved roadways. Additionally, the site has a posted speed limit of 5 miles per hour. Limiting speed at a site has been shown in AQD experience to be an effective means of reducing fugitive dust. We discussed

fugitive dust control efforts, and I was advised the site unpaved roadways/yard area have been treated with calcium chloride three times already, this season.

The flyash silo is not in use.

The drum dryer was running, at this time. The baghouse exhaust stack had a detached steam plume. There was no opacity between the exhaust stack and the start of the steam plume. Additionally, there was no sign of dust or condensable blue hydrocarbons after the steam plume breakoff point.

The operating data I collected throughout the morning was as follows:

Data:	8:32 AM	9:12 AM
Asphalt mix type	330-HMA Top Course	330-HMA Top Course
Liquid AC grade	PG 52-28	PG 52-28
Total AC content (virgin and RAP)%	6.9	6.9
Total aggregate TPH	165	168
Virgin AC TPH	13.8	13.6
Virgin AC degrees F	300	300
Production rate TPH	277	274
Mix temperature deg. F	301	302
Virgin aggregate TPH	169 Agg. Types: 169 MFS Moscow, 3/8 X 0 Stoneco Bur, 6.0 Man Sand OTK, 3/8 X 4 SYL and 2 NS	167 Agg. Types: 169 MFS Moscow, 3/8 X 0 Stoneco Bur, 6.0 Man Sand OTK, 3/8 X 4 SYL and 2 NS
Virgin aggregate ave.moisture content %	6.0	6.0
SHRAP content TPH	97 TPH RAP; 0 TPH shingle content	92 TPH RAP; 0 TPH shingle content
SHRAP content, % of mix	35% RAP content, 0% shingle content	35% RAP content, 0% shingle content
SHRAP moisture content %	4.0	4.0
Fuel for drum dryer	Natural gas only	Natural gas only
Baghouse pressure drop	5.2 inches water column (w.c.)	5.1 inches w.c.
Baghouse temperature deg. F	307	322
Draft on dryer	0.02 inches, w.c.	0.01 inches, w.c.
Fan damper	78.9% open	78.9% open

Compliance with PTI No. 38-90C Special Conditions:

The following conditions apply to: EUHMAPLANT:

Emission Limits:

Special Condition (SC) No. 1.1a through 1.1p limit emissions of particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC), lead, and hydrogen chloride. Compliance with particulate matter in units of grains/dry standard cubic feet was determined by stack testing pursuant to 40 CFR Part 60, Subpart I, in 1990. The average test results were 0.0047 grains per dry standard cubic foot (dscf), below the permitted limit of 0.04 grains per dscf. MAERS reporting for the most recent operating year (2015) for CO, SO₂, NO_x, VOC, and lead shows compliance with the permit limits. Please see SC No. 1.22 for further details on MAERS reporting.

Special Conditions related to material usage:

SC No. 1.2 of PTI No. 38-90C requires that the facility not burn any hazardous waste, blended fuel oil or specification recycled used oil containing any contaminant exceeding limits in a table for RUO. The facility does not burn hazardous waste. Furthermore, it has not burned RUO in a number of years. I asked if natural gas is the current fuel, and was informed that it is.

SC No. 1.3 requires the facility not use asbestos tailings or waste materials containing asbestos. Mr. Herzfeld indicated that they do not use such materials.

SC No. 1.4 limits RAP content to a maximum of 35% measured on a monthly average. The instantaneous values which I observed for RAP today combined were either at the 35% RAP limit, or slightly below it. The limit was not exceeded.

SC No. 1.5 limits the facility to no more than 895000 tons of HMA per 12-month rolling time period. According to the annual MAERS report for this facility, their 2016 production of paving material was 253,747.00 tons.

SC No. 1.6 limits the facility to processing no more than 400 tons of HMA per hour based on a daily average. During the inspection the plant was well below 400 TPH for production rate, as shown in the above table.

Special Conditions related to Process/Operational limits:

SC No. 1.7 requires the facility to implement and maintain the Compliance Monitoring Plan for RUO. The facility is not using any RUO, I have been informed.

SC No. 1.8 requires that the facility implement and maintain the program for fugitive dust control for EUYARD. The facility appears to be complying with this, based on my observations of onsite conditions, and their recordkeeping (please see SC No. 2.1, also). It is my understanding that they have already applied calcium chloride three times, so far this season. Mr. Herzfeld printed a copy for me of their Daily Road Maintenance log (please see attached), from 4/1/2017 through yesterday, 7/13/2017. This details their various fugitive dust control activities at the site, including applying calcium chloride to the yard and unpaved roadways on three different dates. This relates to SC Nos. 1.8 and 2.1.

SC No. 1.9 requires the drum mix burner(s) be maintained for efficiency by fine tuning the burners, to control CO emissions. At the start of each paving season, the facility is required to conduct CO readings. The purpose of the requirement is to maintain the efficiency of the burner for the drum dryer. The readings were recorded by Ms. Kathleen Anderson on 4/28/2017, and were documented in a binder of environmental recordkeeping. The readings are listed in the table, below.

CO Reading number	Time on 4/28/2017	CO reading in parts per million (ppm)
1	8:34 AM	153
2	8:38 AM	193
3	8:41 AM	229
4	8:44 AM	243
5	8:47 AM	247
6	9:05 AM	219
7	9:10 AM	230
8	9:13 AM	229
9	9:38 AM	193

Operating parameters reported at time of 4/28/2017 CO readings:

- Production rate: 300 TPH
- Mix type: 5 E3
- RAP content: 32%
- Fuel type: natural gas

SC No. 1.10 requires the fabric filter dust collector to be installed, maintained, and operated in a satisfactory manner, and states that satisfactory operation requires a pressure drop range between 2 and 10 inches water column (w.c.). During today's inspection, pressure drop ranged from 5.1 to 5.2 inches, w.c. This is higher than I am accustomed to seeing at this site, and I asked Mr. Herzfeld why this was the case. He explained that he has been asked to keep the pressure drop across the baghouse at a higher level, to maintain a coating of dust on the bags. He explained that the layer of dust on the surface of the bags helps protect the fabric bags from abrasion.

Special Conditions related to Monitoring:

SC No. 1.11 requires monitoring in a satisfactory manner of the virgin aggregate feed rate and RAP feed rate on a continuous basis. Instantaneous observations as I recorded operating data showed that they appear to be meeting this condition.

SC No. 1.12 (a) through (c) requires monitoring, with a handheld CO monitor of the CO emissions from the plant upon start-up of each paving season, upon a malfunction of the drum dryer or its burner, and after every 500 hours of operation. Mr. Herzfeld showed me their CO readings from the start of this paving season. These CO readings are listed above, in a table related to SC No. 1.9.

S.C. No. 1.13 requires monitoring emissions and operating information in accordance with 40 CFR Part 60, Subparts A and I, respectively titled *General Provisions*, and *Standards of Performance for Hot Mix Asphalt Facilities*. On 9/11/1990 the facility underwent stack testing for particulate emissions, pursuant Section 60.92(a)(1) of Subpart I. Results averaged 0.0047 grains per dry standard cubic feet, below the limit of 0.04 grains per dry standard cubic feet.

Section 60.92(a)(2) prohibits visible emissions of 20%, or greater. During the 9/11/1990 stack test, opacity readings conducted by the consulting firm Ramcon Environmental Corporation showed that opacity ranged from 0 to 5%. Mr. Herzfeld explained that he does daily visible emission checks of the baghouse exhaust stack, with the sun at his back, per the visible emission training and certification that he receives each year. He showed me a log form that he and other plant staff fill out each day for visible emission checks, and checks of such things as augers and fans. These reports are logged, he indicated.

SC No. 1.14 of PTI No. 38-90C requires a pressure drop gauge to be installed, maintained, calibrated, and operated in a satisfactory manner, and that it be calibrated on an annual basis. It is my understanding that the baghouse pressure drop gauge was calibrated in April, 2017, as was the damper for the drum dryer.

SC No. 1.15 requires the permittee to monitor fuel use in gallons per day. The facility is not burning RUO as fuel at this time, and so 0 gallons of RUO were burned year to date in 2017, or in calendar year 2016. It is burning natural gas, which is measured not in gallons, but in units of thousand or million cubic feet.

SC No. 1.16 requires that drum mix temperature and drum exhaust gas temperature be monitored and continuously recorded in a manner and with instrumentation acceptable to AQD. During today's inspection, I observed the mix temperature being measured on an ongoing basis, along with the baghouse/stack temperature, which represents drum exhaust gas temperature as the gas travels through the baghouse.

It is my understanding that every 15 minutes, a hard copy report is printed in the plant control trailer, which records numerous parameters, including product mix temperature. Mr. Herzfeld has previously explained to me that drum exhaust gas temperature, or stack temperature, is continuously monitored but is not recorded. However, he explained that the stack temperature is up to 10 degrees hotter than mix temperature for a stony HMA mix, and around several degrees hotter than mix temperature for a sandy mix. With this general observation in mind, it appears that the stack temperature may be estimated, within several degrees F, if one is looking at historical records.

Special Conditions related to recordkeeping/reporting/notification:

SC No. 1.17 requires all calculations to be completed in a manner acceptable to the AQD District Supervisor. Annual facility throughput/production and emissions calculations are reported to AQD via MAERS.

SC No. 1.18 requires records of emissions and operating information to comply with 40 CFR 60 Subpart A, *General Provisions*, and Subpart I, *Standards of Performance for Hot Mix Asphalt Facilities*. On 5/21/1990, the company informed AQD in writing that they had commenced trial operation as of 5/21. This was done to comply with their PTI, but also is within the time frame of 30 days required by Subpart

A. Pursuant to Subpart I, stack testing was done on 9/11/1990, and opacity testing was conducted as well. This testing was conducted within 180 days of initial startup, which is another requirement of Subpart A.

Note: It is not apparent from the records in AQD's files if the September 1990 testing was within 60 days of achieving maximum production rate. The AQD file does indicate that testing was not conducted sooner, though, because there were not enough production orders earlier in the season, to sustain running long enough to stack test.

SC No. 1.19 requires all necessary maintenance to keep all components of the HMA plant maintained and operating in a satisfactory manner at all times. Please see below for details.

- Mr. Herzfeld showed me their start of season baghouse maintenance checklist, which he completed on 4/19/2017. The record showed that they did an annual black light test of the baghouse, which was reported to have been found satisfactory. Visualite is the material that is used for the black light testing, he explained.
- Mr. Herzfeld explained that they replaced all the bags prior to startup this year with brand new bags, and that the new bags were coated with Neutralite® powder. This is a brand name conditioning powder for fabric filter bags, according to a manufacturer's webpage (please see attached).
- Mr. Herzfeld informed me that he always recommends that the bags be replaced every 2 years at this site, although competitors may try to get three years out of their bags. He explained that bags in their third year can start getting holes, which would result in visible emissions.

SC No. 1.20(c) of PTI No. 38-90C requires records be kept of tons of HMA produced, including the average % of RAP per ton of HMA produced containing RAP. I asked for the monthly production report for June 2017. Mr. Herzfeld printed a summary of daily production (attached) for the dates 6/1/2017 through the date of today's inspection, 7/14/2017. The records show not only daily tons of production and mix type, but provide a summary breakdown of virgin HMA mixes versus all mixes, which includes RAP/SHRAP mixes. For 6/1/2017 to 7/14/2017, 0 tons.00 tons of virgin mixes were produced. All other mixes, including RAP/SHRAP mixes, totaled 79,265.90 tons. The facility appears to be in compliance with this condition.

SC No. 1.21 (a) through (d) require records of the following production information:

- a.) Virgin aggregate feed rate (hourly). I have been informed that this is one of the parameters included in the report which is printed out every 15 minutes , in the plant control trailer.**
- b.) RAP feed rate (hourly). it is my understanding that this is include in the report which is printed every 15 minutes.**
- c.) Asphalt paving material product temperature (intermittent). it is my understanding that this is include in the report which is printed every 15 minutes.**
- d.) Information sufficient to identify all components of the asphalt paving material mixture (hourly). In 2016, Ms. Anderson e-mailed me records demonstrating that information is being kept sufficient to identify all components of the asphalt paving mixture.**

The production report also shows the company is keeping records of the tonnage of all product mixes made each day. This appears to be in keeping with SC No. 1.21 of PTI No. 38-90C, which requires that when a new mix design is activated after startup, the new mix design shall be recorded.

SC No. 1.22 requires monthly and 12-month rolling time period emission calculation records of all criteria pollutants and HAPs listed in the Emission Limit table for EUHMAPLANT.

On 8/9/2017, shortly after my 8/7/2017 request, Ms. Anderson sent me an e-mail (attached) with criteria pollutant emissions recordkeeping, for the month of July, 2017. recordkeeping, It shows hourly emissions, monthly averages, and 12-month rolling averages, for SO₂, NO_x, CO, HCl, and VOC. This appears to satisfy the criteria pollutant recordkeeping requirement of SC No. 1.22

Also on 8/9/2017, Ms. Anderson sent an e-mail (attached) with associated HAPs recordkeeping. It shows monthly and 12-month rolling HAPs calculations for the HAPs (hydrogen chloride and lead) and toxic air contaminants (sulfuric acid, benzene, toluene, ethylbenzene, xylenes, arsenic, nickel, manganese, naphthalene, formaldehyde, and acrolein from the Emission Limit table of the PTI. This appears to satisfy the HAPs recordkeeping requirement of SC No. 1.22.

It should also be noted that criteria pollutant emissions are reported annually by the company, via MAERS. Data reported to MAERS for the 2016 operating year shows that emissions for the 2016 operating year were:

Pollutant	Emissions in lbs	Emissions in tons	Permit limit in tons	Compliance?
CO	32,987.11	16.49	89.95	Yes
Lead	0.44	0.0002	2.02×10^{-6} lb/ton = 0.51 ton limit; a limit which varies, depending directly on the amount of production each year*	Yes
NOx	7,296.02	3.65	31.33	Yes
PM10, filterable	2,520.00	1.26	14.0	Yes
PM10, primary	17,457.56	8.73	14.0	Yes
PM2.5, filterable	3,806.20	1.90	14.0	Yes
SO2	865.73	0.43	74.78	Yes
VOC	8,133.87	4.07	48.87	Yes

*Lead: 2.02×10^{-6} lb/ton = 2.02×10^{-6} lb/ton X 253,747.00 tons produced = 0.51 tons would be the applicable limit for the amount of production done in 2016, 253,747.00 tons of HMA

According to the annual MAERS report for this facility, their 2016 production of paving material was 253,747.00 tons. This is below the 895,00 tons throughput allowed by PTI No. 38-90C. The MAERS report was audited, and passed, in May, 2017.

SC No. 1.23 requires the facility to keep records of CO emissions and related production data, including dates and times CO was monitored. This appears to have been done; please refer to SC No. 1.9, earlier in this report. The facility is required calculate the pounds of CO emitted per ton of HMA paving materials produced.

Ms. Anderson and I discussed by phone on 8/10/2017 the requirement to calculate pounds of CO emitted per ton of HMA materials, based upon the CO data. She explained that the CO values, measured in parts per million with a hand held CO monitor, are constantly in fluctuation, as is the airflow for a HMA plant, making it impractical and unfeasible to use this data to create an emission factor for calculating emissions. Additionally, she added, every time CO was measured, such as after every 500 hours of operation, spreadsheets would have to be updated.

She explained that they have found a more practical way to use the collected CO data to check compliance, because a CO value of 500 ppm would correspond to the CO limit in the PTI's Emission Limit table, of 0.201 lb/ton of HMA produced. She indicated that therefore, as long as instantaneous CO measurements for this plant would be below 500 ppm, they would be in compliance with their permitted limits. It is my understanding that this plant has never reached or exceeded 500 ppm for CO.

Ms. Anderson explained that parallel flow plants usually have relatively higher CO emissions, but this one is lower, and stays pretty stable. She discussed the ranges of representative CO readings collected over the years; such as 2014 CO values of 170-177 ppm, 2016 start up CO values of 163-260 ppm, and 2016 "500 hours of operation" CO values of 213-319 ppm. The 2017 start up CO values, discussed earlier in this report, ranged from 153-247 ppm. It appears that CO emissions, as measured instantaneously with a hand held monitor, are well below the 500 ppm threshold which corresponds to the permitted CO limit of 0.201 lb/ton of HMA produced.

It is apparent that Ajax is collecting and recording CO data, and is using it to track compliance with their permitted limit for CO emissions, albeit in a different manner than SC No. 1.23 specifies. It appears to

me that the facility is complying with the spirit, if not the letter, of the permit condition. Out of 6 Ajax Materials HMA plants, Ms. Anderson said, the above permit condition only exists in the permits for this plant, and their Auburn Hills plant. The proposed permit No. 76-17 for the new plant to be built here does not contain the above permit condition, she advised.

SC No. 1.24 requires the facility to keep average hourly, monthly, and 12-month rolling time period records of the amount of HMA materials produced from EUHMAPLANT. It is my understanding that the facility is keeping daily, monthly, and yearly records. Please refer to the attached daily record which is printed out every 15 minutes., and the Production Report - Detail for June-July 2017.

SC No. 1.25 requires the permittee to keep average hourly, monthly, and 12-month rolling time period records of the amounts of fuel used for all fuels combusted for EUHMA plant. The 8/9/2017 e-mail from Ms. Anderson with the criteria pollutant emissions recordkeeping also tracks hourly, monthly, and 12-month rolling usage of fuel (oil and natural gas). This appears to satisfy SC No. 1.25.

Condition related to stack/vent restriction:

SC No. 1.26 requires stack height for the baghouse exhaust stack to be a minimum of 70 feet and to have a maximum diameter of 60 inches. The stack visually appears to be in keeping with this requirement.

The following conditions apply to: EUYARD:

Conditions related to process/operational limits:

SC No. 2.1 requires the facility to implement and maintain the fugitive dust control program, from Appendix A of the PTI. They appeared to be doing this. It is my understanding that they have already applied calcium chloride three times, so far this season. The chloride still looked fresh on the unpaved roadways and yard areas. Water was visible on one of the unpaved roadways, and there is a sign posting a site speed limit of 5 miles per hour. Additionally, I was provided with a copy of their recordkeeping for fugitive dust control this season, which is attached to this report for reference. SC No. 2.1 is similar to SC No. 1.8.

Conditions related to recordkeeping/reporting/notification:

SC No. 2.2 requires that the permittee calculate annually the fugitive emissions of particulate matter.

MAERS emissions of fugitive dust for the 2016 operating year:

Emission source	Pollutant	Emissions in lbs	Emissions in tons
Aggregate storage	PM10, filterable	406.00	0.20
Hauling	PM10, filterable	2,114.00	1.06
Cold aggregate handling	PM10, primary	964.00	0.48

The following conditions apply to: EUACTANKS:

SC No. 3.1 requires the liquid AC storage tanks to not be operated unless the vapor condensation and recovery system is installed, maintained, and operated in a satisfactory manner. There were no visible emissions from the four liquid AC storage tanks, each of which is equipped with a condenser on top. This condition has been met.

The following conditions apply to: FGFACILITY:

Emission limits:

SC No. 4.1a limits each individual HAPS to less than 8.9 TPY. HAPS recordkeeping required by SC No.

1.22 showed that individual HAPs (benzene, toluene, ethylbenzene, xylenes, naphthalene, formaldehyde, and acrolein), were no more than 0.24 TPY, for formaldehyde, which had the highest emissions. Emissions were also calculated for the criteria pollutant lead and for the TACs sulfuric acid, arsenic, nickel, and manganese. The facility appears to be in compliance with this condition.

SC No. 4.1b limits aggregate HAPs, or total HAPs, to less than 22.4 TPY. HAPs recordkeeping required by SC No. 1.22 showed that combined HAPs were only 0.51 TPY, even when the criteria pollutant lead and TACs were combined with HAPs. The facility appears to be in compliance with this condition.

Recordkeeping/Reporting/Notification:

SC No. 4.2 requires all required calculations to be completed in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month for the previous calendar month. Records I requested on 8/7/2017 were provided, including data from July 2017, prior to 8/15/2017. The facility appears to be meeting this condition.

SC No. 4.3 requires calculating actual emission of HAPs from the facility, and notes that stack test results for the facility may be used to estimate emissions, subject to approval from AQD. This facility has never been required to stack test for HAPs. However, the facility does calculate HAP emissions, and provided HAPs recordkeeping to AQD, as discussed in regard to SC No. 1.22 and SC No. 4.1a and 4.1b.

Odor evaluation, part 2 (departure):

After leaving the site at 9:35 AM, I checked for odors in the downwind area. Please see attached odor evaluation form and map.

- 9:38 AM: A level 1 odor of vegetation was detected near the intersection of Silver Lake and Bingham.
- 9:42 AM: A level 2 asphalt odor was detected along Silver Lake Road, about 500 feet east of the railroad crossing.
- 9:45 AM: A level 1 asphalt odor was detected in the parking lot of a business along Silver Lake Road.
- 10:02 AM: A level 2 asphalt odor was detected at the intersection of Kensington and Silver Lake.

The asphalt odors I detected above showed an offsite impact, but the odors were not sufficient at this time to constitute a violation of Rule 901(b), which prohibits unreasonable interference with the comfortable enjoyment of life and property.

Conclusion:

I could not find any instances of noncompliance. The facility appears to be in compliance with PTI No. 38-90C.

NAME



DATE

8/10/2017

SUPERVISOR

