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

N540332772

FACILITY: ACE ASPHALT & PAVING CO INC PLANT 1		**SRN / ID:** N5403
LOCATION: 16255 TINDALL RD, DAVISBURG		**DISTRICT:** Southeast Michigan
CITY: DAVISBURG		**COUNTY:** OAKLAND
CONTACT: Tom Green , Manager, Environmental Services		**ACTIVITY DATE:** 11/02/2015
STAFF: Francis Lim	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled inspection		
RESOLVED COMPLAINTS:		

On November 2, 2015, AQD staff conducted an inspection at Ace Asphalt Plant No. 1 located at 16450 Tindall Road, Davisburg. 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 of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules; Permit-to-Install No. 194-85I and to investigate a black smoke from the asphalt plant exhaust stack. Plant operator for this plant is Rick Will, (248) 634-0879. Corporate contact is Tom Green, (313) 690-0139. Dave Gohn is the Plant Manager (810-614-4959).

This plant is a 600 tons/hr counter flow rotary dryer/drum mixer asphalt plant. It was installed in 1998, replacing a 400 tons-per-hour parallel flow drum mixer. Average maximum production rate is 300-350 tons per hour.

Counter flow drum mixers have less VOC and HAPs emissions because the mixing of liquid asphalt cement and aggregates occur behind the burner flame zone. Fuel tube extends about 20 ft. into the mid-section of the drum and the flame starts at this point, away from the mixing zone. The flame appearance is a "bush-type", and not a long flame. Facility uses the same burner for natural gas and fuel oil. Operations this year started on April 23, 2015.

The plant has 5 hot mix asphalt storage silos - four 200 tons and one 250 tons storage capacity. Natural gas and recycled used oil (RUO) is used for the drum burner. Natural gas is also used for other fuel burning equipment like liquid asphalt heaters. Facility just started reusing RUO as fuel last October.

PTI No. 194-85I was issued on April 13, 2006. This permit modification was issued because the plant requested a change in the compliance monitoring for the recycled used oil. Halogen content limit is 4,000 ppm. On a conversation with Dave Riddle on 08-05-2008, he said that the permit did not specify that the plant still needs to "rebutt' the assumption that used oil containing more than 1,000 ppm is hazardous waste. However, it is implied with the citation of 40 CFR 279.11 (Standards for the Management of Used Oil) that a rebuttal is necessary. Special Cond. 1.3 specifies that permittee shall not burn any hazardous waste (as defined in state or federal law). The permit modification also contained less frequent recycled used oil sampling/lab analysis frequency. The facility can prequalify a batch of recycled used oil or do a quarterly RUO analysis. This plant chose the quarterly RUO analysis.

In the permit, all emission limits are based on 985,000 tons of HMA production per year. The most recent stack tests were conducted July 11 to 26, 2006. Facility passed the tests.

Burner position (fuel opening) is manually adjusted, air position is automatically adjusted based on burner position and fuel used. Combustion air position is set approximately 65%,

burner position at 35%. Fuel oil needs more excess air than natural gas. During startup, the air dampers are tweaked a little until steady state conditions. This facility installed a CO monitor which continuously monitors CO concentration. The sensor is at the midway point of the baghouse stack. The CO monitor has been a great addition since the facility is now operating very efficiently, in addition to less CO emissions. The seals in the blue smoke system were replaced. The blue smoke system is the emission capture system for the top of the storage silos.

Prior to the inspection, I observed the baghouse exhaust and noticed white smoke. The white smoke did not appear to be mostly steam. I discussed my observation with Rick. The next day, Rick inspected the baghouse and identified and replaced 17 leaking bags. There were 30 bags in inventory, prior to the leaking bag replacement.

PTI No. 194-85I Special Conditions:

Cond 1.1. PM and CO emissions were verified through a stack test conducted July 11-26, 2006. NOx, lead, benzene, toluene, ethylbenzene, xylene, naphthalene, formaldehyde, acrolein, arsenic, nickel, manganese, sulfuric acid and hydrogen chloride emissions testing was also done during that time period. SO_2 emissions were verified through fuel oil sampling done during the tests. Facility passed the tests.

Cond. 1.2. In addition to natural gas, the drum dryer recently started using recycled used oil again. Sulfur content of recycled used oil is 0.29%, less than 1.5% limit.

Cond. 1.3. This plant is doing quarterly RUO analysis. Attached is a lab analysis for a RUO sample received by Summit Environmental on October 12, 2015. Analysis demonstrated that RUO sample did not exceed the limits specified in this condition. Prior to the recent deliveries, RUO was last delivered at this plant in 2010. NOTE: Sample sent was taken by supplier. Rick was advised that in order to keep the integrity of the sample, a representative of Ace Asphalt should be the one taking the sample. See attached email to David Gohn, Ace Asphalt Manager.

Cond. 1.4. The plant does not use any asbestos containing material as raw material.

Cond. 1.5. Recycled asphalt pavement (RAP) content of hot mix asphalt is less than 50%, as verified from daily production logs. Staff conducted a random review of daily production logs. Maximum RAP noticed was 36% for a Mix 1667 COMTOP. HMA products that are not delivered are recycled as RAP.

Cond. 1.6. Permittee does not process more than 985,000 tons of hot mix asphalt paving materials based on a 12-month rolling time period. For the 12 month rolling period ending in October 2015, facility produced 236,909 tons of hot mix asphalt product. See attached records.

Cond. 1.7. Permittee does not process more than 650 tons of hot mix asphalt paving materials per hour. Average hot mix asphalt production rate is 300-350 tons per hour.

Cond. 1.8. Compliance Monitoring Plan for recycled used oil is implemented. Facility conducted quarterly random sampling of RUO during the 4^{th} quarter of 2015.

Cond. 1.9. Records of dust control activities for the paved and unpaved roads were readily available. These activities are recorded in the daily logs. I reviewed daily logs from April to October and verified that a water truck waters the unpaved roadways at least weekly. A

sweeper sweeps the roadways at least weekly. 6000 gallons of calcium chloride was applied on June 13, 2015; 4000 gallons on August 1, 2015; 6000 gallons on October 2, 2015.

Cond. 1.10. This facility is operating more efficiently since a CO monitor was installed. The burner was tuned-up on April 23, 2015 before the season start-up.

Cond. 1.11. This facility has an acceptable plan to minimize emissions.

Cond. 1.12. Fabric filter dust collector is maintained properly. Baghouse has 2 compartments, 19 rows each (36 bags per row, for a total of 1368 bags) There are two rotors, one for each compartment. During the reverse air flow cleaning cycle, a compartment undergoes baghouse cleaning cycle while the other compartment is active. Then the other compartment undergoes the cleaning cycle and this process gets repeated. A blacklight inspection was conducted on April of this year. Another baghouse inspection was done October 27, 2015. NOTE: This was a recent inspection. It appears that the 17 leaking bags identified in November 3, were not noticed on October 27.

Cond. 1.13. Verification and quantification of odor emission rates were conducted on September 11, 2002. This modified permit did not require new odor testing.

Cond. 1.14. Verification and quantification of toxic air contaminants were conducted during the June 11-26, 2006 stack test.

Cond. 1.15. Carbon monoxide emission rate was verified through a stack test on July 11-26, 2006. Sulfur dioxide emission rate was verified through a fuel oil sampling done during the tests.

Cond. 1.16. Permittee monitors virgin aggregate feed rate and RAP feed rate. At the end of the day, amount is totaled and recorded in the daily log.

Cond. 1.17. Facility submitted a revised Malfunction Abatement Plan that includes three additional sets of handheld CO monitoring. The revision was done to respond to an LOV sent to the facility on December 12, 2006 for violations of CO emissions limit. Readings are taken from a sampling port at the exhaust stack, at ground level, and taken over a period of 30 minutes or longer, per data set. Since facility installed a CO monitor, CO emissions monitoring with a hand held monitor is no longer done. Facility still conducts and records CO emission readings at least 4 times a month.

Cond. 1.18 and 1.19. Records of CO, NOx and HAPs emissions are kept. Records of operating information are recorded in the daily operating log.

Cond. 1.20. Drum mixer and burner are maintained properly through regular CO readings and fine tuning. Facility keeps a maintenance log of all significant activities.

Cond. 1.21. Permittee keeps a record of recycled fuel oil used (recorded in the daily production log), sulfur content of fuel oil, and tons of hot mix asphalt containing RAP produced. RUO has just been recently used again as fuel starting on October 8, 2015.

Cond. 1.22. Permittee records the virgin aggregate feed rate, RAP feed rate and asphalt paving material temperature in the daily production log. The usage of the following components is also recorded in the daily log: liquid asphalt cement, RAP, different types of sand, and gravel. Hot mix asphalt products are sampled and analyzed and adjusted during manufacturing as necessary.

Cond. 1.23. Facility keeps emissions records of criteria pollutants and toxic air contaminants. Emission factor used is the emission limit specified in the Emission Limit table for PTI 194-85I. Attached to this report are the 12-month rolling emissions of criteria pollutants and HAPs for the period ending in October 2015. Emissions are below limits.

Cond. 1.24. Facility keeps a record of CO readings from the CO monitor, including related production data, dates and time CO emissions were monitored.

Cond. 1.25. Permittee keeps records of HMA paving products produced. Facility keeps a record of average daily, monthly and yearly amount of hot mix asphalt paving materials produced. As of October 31, 2015, facility has produced 236,909 tons of HMA products based on a rolling 12-month period.

Cond. 1.26. Exhaust stack dimensions appear to be as stated in permit condition.

Cond. 2.1. Facility has applied calcium chloride to the unpaved roads three times so far this year. A sweeper cleans the paved roads at least weekly. A water truck waters plant roadways at least weekly. Dust control activities are recorded in the daily production logs.

Cond. 2.2. Annual fugitive dust emissions are calculated using emission factors. In 2014, permittee calculated 4036 pounds of PM-10 as fugitive emissions resulting from truck traffic (as reported in MAERS). This is based on 3255 miles travelled (from truck traffic), emission factor of 6.2 and control efficiency of 80% (for watering).

Cond. 3.1. The vapor condensation and recovery system is installed for the liquid asphalt cement tank.

Cond. 4.1. The emission capture system for the top of each storage silo is installed. In the past inspections, staff noted some VEs from the top of the silo.

Cond. 4.2. Emissions from the silo loadout activities are ducted to the burning zone of the drum mixer.

Cond. 5.1 and 5.2. Individual and aggregate HAPs emissions records are available. Emission limits in the Emission Limit Table are used as emission factors for HAPs.

With the installation of a CO monitor, this facility has demonstrated that it can operate the asphalt plant efficiently while decreasing HAPs emissions.

NAME [signature] DATE 01-12-16 SUPERVISOR CJE