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

N176130572

FACILITY: SPARTAN ASPHALT PAVING CO.		**SRN / ID:** N1761
LOCATION: 16777 Wood Street, LANSING		**DISTRICT:** Lansing
CITY: LANSING		**COUNTY:** CLINTON
CONTACT: John Peters , Division Manager		**ACTIVITY DATE:** 07/08/2015
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled, unannounced partial compliance evaluation inspection for determining compliance with PTI 804-87H.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow
Personnel Present: Aaron Downing (adowning@mipmc.com), Area Manager
Other Relevant Personnel: John Peters (jpeters@mipmc.com), Division Manager
Sue Hanf (shanf@mipmc.com), Environmental Engineer
Jaired Sweet (jaired.sweet@mipmc.com)

Purpose: Conduct an unannounced, scheduled, partial compliance evaluation (PCE) inspection by determining compliance with Spartan Asphalt's Opt-Out Permit No. 804-87H. This inspection was done as part of a full compliance evaluation (FCE).

Facility Background/Regulatory Overview: Spartan Asphalt is a hot mix asphalt facility that uses both recycled asphalt (RAP) and virgin aggregate.

On March 24, 2014 AQD received a letter from Spartan Asphalt explaining that they were interested in using process equipment to produce Warm Mix Asphalt, under exemption 285(b). They provided documentation showing that installation of this new equipment would not produce a meaningful change in the quality and nature or meaningful increase in the quantity of emissions of the air contaminants released from the Warm Mix Asphalt process. The AQD has allowed exemption R 285(b) to be used for warm mix asphalt projects.

On July 17, 2014 AQD received a letter from Spartan Asphalt explaining that for the month of August 2014 they would be intending to use Crumb Rubber in their asphalt mix and operating under exemption R 283(1)(a)(vi), to conduct field testing for production of product. On October 18, 2014 a stack test was conducted at Spartan Asphalt to determine emissions/collect data on the use of crumb rubber in asphalt processes. Dan McGeen (AQD LDO) and Dave Riddle (AQD Permits) developed criteria for determining when crumb rubber use is no longer considered "field testing" that exemption Rule 283(1)(a)(vi) refers to. The following is a direct quote from the email Mary Ann Dolehanty sent out to inform industry of AQD's position regarding the use of crumb rubber:

"For 2015, RMA paving projects may proceed under Rule 283, the research and development exemption, provided that the liquid asphalt cement utilized has a tire rubber content of no greater than 12%, and the length of the paving project is no greater than 1 mile."

On 8/26/15 J. Peters said that the current crumb rubber project has started: the base and leveling has been completed, leaving only the top course to perform which he said will occur during the week of August 31st. This is the first crumb rubber project Spartan Asphalt has undertaken since the August 2014 project. S. Hanf said that the project length is 1 mile and that the percentage of crumb rubber allowed in the asphalt mix, per the bidding document set forth by Ingham County Road Department (attached), is 0.65+/-0.10% crumb rubber content by weight of the mixture. J. Peters said he would provide me with the actual content of crumb rubber in the mixture when the project is complete (projected completion date according to the bidding document is October 12, 2015. It appears at this time Spartan Asphalt meets the requirements of the R 283 exemption for research and development projects.

Aaron Downing said that Spartan Asphalt generally fires up the plant the 3rd or 4th week of April, with an operating season typically from May 1st through November 15th.

Spartan Asphalt is an opt-out facility for HAPs.

Inspection: At approximately 8:20 a.m. on July 8, 2015, I arrived at Spartan Asphalt and met with Aaron Downing, Area Manager. John Peters was not available. I provided A. Downing with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure.

EUHMAPLANT

Spartan Asphalt is only allowed to burn natural gas, propane, distillate oil, residual oil, blended fuel oil or recycled used oil (RUO) and the % sulfur, specific gravity, flash point, higher heating value of all fuel oils combusted must be recorded monthly;

FABRIC FILTER DUST COLLECTOR OPERATING PRESSURE DROP
The fabric filter dust collector pressure drop is required to be recorded once per day, but continuously measured. The acceptable pressure drop range should be no less than 2 in H2O and no greater than 10 in H2O. During the inspection, the pressure drop reading snapshot was 2.18 in H2O. In the electronic spreadsheet S. Hanf provided contains the pressure drop recorded on a daily basis that goes back to when production first started in mid-April. There have been no pressure drop readings from April 22 through July 11, 2015 that dropped below the 2.0 in H2O: the lowest pressure drop reading was 2.0 H2O. The pressure drop, as Jaired Sweet showed me, is monitored continuously via computer program.

FABRIC FILTER DUST COLLECTOR/PLANT ALARM SYSTEM
A high temperature sensor and alarm system should be equipped on the fabric filter dust collector that is designed to set off an alarm when the high temperature set-point has been violated, which should begin immediate sequential shut-down if the situation is not resolved in a short time period. J. Sweet told me that the set-point is 400°F and said that if the inlet temperature reaches 400°F, the system turns off. He said usually this only happens (set-point is triggered and system shuts down) when he's preheating to get the baghouse up to temperature.

HANDLING AND STORAGE OF FABRIC FILTER DUST
A. Downing said that all of the particulate that is captured in the fabric filter dust collector is collected and then put back into the process. They do not dispose of any particulate.

BLACK LIGHT INSPECTIONS
A black light test is required to be conducted at least once per year before operations for the paving season begin. A black light test is a test where black light-reactive dust is injected into the system, and using a black light, operators are able to determine if the black light-reactive dust is escaping the baghouse, thus detecting any baghouse leaks. J. Sweet said that Spartan had just replaced the bags in the baghouse prior to the start of this paving season. The black light test was conducted on April 25, 2015.

FABRIC FILTER DUST COLLECTOR INSPECTION RECORD
Spartan has an electronic spreadsheet of all maintenance activities that occur on the site. For the start of the paving season through the time of inspection, Spartan had conducted a black light test which resulted in all the baghouse bags being replaced, poppet valves replaced, and the bearings on the dust auger replaced. Maintenance work was also done on the gearboxes, bearings on the hot elevator, relining the silo and greasing the entire plant.

Spartan Asphalt is in compliance with the Preventative Maintenance Program at this time.

The Emission Abatement Plan for Startup, Shutdown, and Malfunctions (Appendix C in permit) is required to be implemented and maintained if Spartan Asphalt wishes to operate the plant.
Spartan keeps daily Mix Change spreadsheets where J. Sweet checks the box "Plant Walkthrough." Included in the plant walkthrough are all the items under "Description of Inspected Items" in Appendix C.

Spartan Asphalt is in compliance with the Emission Abatement Plan for SSM at this time.

The Compliance Monitoring Plan for RUO (Appendix D) does not apply because Spartan Asphalt does not burn RUO at this time. J. Sweet said they haven't used RUO in 4-5 years. All is run on natural gas now.

V. Testing/Sampling
In 2007 a stack test was conducted to verify and quantify emissions of various TACS and criteria air pollutants using recycled used oil as the fuel oil. See table below for the pollutant, emission limit, and stack test result as reported by Network Environmental Inc. All are in compliance and/or verified with their emission limits.

Table1: 2007 Stack Test Results

Pollutant/TAC	Stack Test Result (lb/ton)	Emission Limit (lb/ton)	Verified/Compliant?
Lead	1.21E-6	1.5E-5	Yes
Manganese	4.97E-6	5.0E-5	Yes
Nickel	1.48E-6	1.5E-4	Yes
Particulate Matter	0.006 (grains/dscf)	0.04 (grains/dscf)	Yes
Benzene	7.4E-4	0.001	Yes
Ethyl benzene	1.4E-4	0.005	Yes
Toluene	3.2E-4	0.006	Yes
Xylene	2.3E-4	0.001	Yes
Acrolein	3.8E-4	8.0E-4	Yes
Formaldehyde	2.96E-4	0.01	Yes
Naphthalene	1.0E-4	1.0E-4	Yes
Sulfuric Acid	14.4E-4	0.015	Yes
Hydrochloric Acid	3.0E-4	0.024	Yes
Carbon Monoxide	0.108	0.201	Yes

Spartan Asphalt is in compliance with all EUSILOS conditions at this time.

FGFACILITY

FGFACILITY takes into account all emissions sources and restricts HAP emissions to 9.0 tpy for each individual HAP and 22.5 tpy for aggregate HAPs. The HAPS regulated under this permit are all pollutants listed in the emission unit summary table, except for the criteria air pollutants. The 12-month rolling time period is from July 2014 – June 2015.

HAP	Individual (tpy, 12-month rolling)	Compliance with HAP limits?
Benzene	0.209	Yes
Ethyl benzene	1.04	Yes
Xylene	0.209	Yes
Toluene	1.25	Yes
Naphthalene	0.209	Yes
Formaldehyde	2.09	Yes
Acrolein	0.167	Yes
Arsenic	3.13E-4	Yes
Nickel	3.13E-2	Yes
Sulfuric acid	3.13	Yes
Hydrochloric acid	4.98	Yes
Manganese	1.04E-2	Yes
Total Aggregate HAPs (tpy, 12-month rolling)	**13.32**	**Yes**

Spartan Asphalt is in compliance with all conditions under FGFACILITY at this time.

As a result of this inspection and review of records Spartan Asphalt is found to be in compliance with all state and federal regulations at this time.

NAME _____ DATE 9-4-15 SUPERVISOR _____