

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

B189323490

FACILITY: ASPHALT PAVING, INC		SRN / ID: B1893
LOCATION: 1000 E SHERMAN BLVD, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Dave Miles , Plant manager		ACTIVITY DATE: 10/10/2013
STAFF: Jenifer Dixon	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The purpose of this inspection was to complete a scheduled inspection requirement and to determine the facility's compliance with Permit No. 12-96 and all other applicable Air Quality Rules and Regulations.		
RESOLVED COMPLAINTS:		

This was an unannounced inspection. The "Environmental Inspections" brochure was provided.

The purpose of this inspection was to complete a scheduled inspection requirement and to determine the facility's compliance with Permit No. 12-96 and all other applicable Air Quality Rules and Regulations.

JD arrived in the area of the facility at approximately 11:30AM and left at 12:45 PM. No visible emissions from the process were observed at this time. Slight asphalt odors were noted downwind on the facility grounds during the inspection. Mr. Dave Miles, Plant Manager, provided pertinent information about the facility and the operations contained therein.

Asphalt paving is a hot mix asphalt plant that typically runs from around March to November depending on orders. Asphalt Paving Inc. operates approximately 130-140 days per year, 12-14 hours per day and employees approximately 16 workers. The facility is allowed up to 585,000 rolling tpy of asphalt production based on a calculation required by its "General Permit Addendum for Hot Mix Asphalt Plants Special Conditions". This addendum allows the facility to opt-out of the renewable operating permit program and requires that they stay under specific pollutant limits.

PROCESS DESCRIPTION:

The facility had been operated as a batch plant prior to 1997. Currently the facility operates as a modified continuous process system using dual drums. All processes are computer controlled and monitored. A HMA blend is produced by the mixing of the various components including; aggregate, foundry sand, and RAP (recycled asphalt paving). Seven hoppers are used to dispense the aggregate that is then weighed in accordance to the mix specifications in route to the reverse flow rotary dryer. A screen deck is used to prevent oversized objects from entering the dryer. Once the aggregate is at the proper temperature, it is transferred to the mixing drum (pug mill) where the RAP and liquid asphalt are added. Next the HMA is transferred to one of three silos to wait for off-loading into vehicles. It takes approximately 3-5 hours to fill the storage silos. The moisture content of the aggregate entering the rotary kiln limits the facility's production. The kiln cannot dry faster, so residency time must increase to reach the proper temperature (450-500 degrees). The aggregate must be super heated due to the addition of ambient temperature RAP at the pug mill. The asphalt is then stored in one of three silos, each with a capacity of 150 tons.

Particulate matter captured at the rotary kiln, mixing drum, elevators and other transfer points is ducted to a large, single baghouse. The rotary kiln represents the bottleneck of the process. The baghouse is monitored by use of a static pressure drop gauge with indicators set at 2.4 and 4 inches of water pressure. At 4 inches the bags are air-pulsed until the lower level is achieved. All captured particulate is reintroduced to the process.

There is a daily observation sheet that is required for the pressure drop gauges and any maintenance done on the plant. The plant operator does the daily sheet in the control tower. Mr.

Miles stated that this is done at varying times of the day and that the pressure gauges are watched on a continuous basis when the plant is in operation.

FOUNDRY SAND:

In 1996 the permit was modified to include the use of foundry sand in the HMA mix. This allows the sand to be reused rather than placed in the landfill. Foundry sand taken from foundry operations is pre-qualified for low binder and hazardous material content. The sand is processed at the landfill by placing it into a rotary attrition lump crusher that operates at temperature of 250-300 degrees F. This removes most of the binder and metal pieces remaining in the sand. The sand is next trucked to Asphalt Paving Inc. and stored prior to use. HMA mixes are not to be greater than 40% foundry sand, and most are 10% to 15%. According to Mr. Miles, most foundry sand recipes are used for the county road commission. The facility feels that the foundry sand may present an odor problem; therefore the use of it has been greatly reduced to attempt to limit any potential complaints.

FUGITIVE DUST:

The facility has an eight-foot power broom mounted on a truck that is used to sweep the drive. The broom does not include a vacuum and works best if the drive is damp from rainfall. Weekly, or as needed, Sani-Sweep is employed to sweep and vacuum the drive. During extended periods of no rain, a company is contracted with to apply a brine mixture that helps to keep fugitives to a minimum. JD did not observe any fugitive emissions from the roadway as it had recently been brined. The conveyors are covered where ever possible to limit fugitive dust.

PERMIT NO. 12-96 - Hot Mix Asphalt Plant

Special Condition No. 13 - PM emissions are limited to 0.10 pounds per 1,000 pounds. Compliance with this limit is determined by properly operating the equipment or through a stack test. No stack test has been completed. The facility appeared to be properly operating their equipment.

Special Condition No. 14 - Visible emission may not exceed 20%. JD did not observe any opacity from the facility stack.

Special Condition No. 15 - AQD may request stack testing. No stack testing is requested at this time.

Special Condition No. 16 - Fabric filter must be installed and operating properly. Based on observations, the fabric filter was installed and operating properly.

Special Condition No. 17 - The stack must be at least 50 feet high. Based on visual operations, the stack appeared to be at least that high. The stack was not physically measured.

Special Condition No. 18 - RAP must be limited to 40% including foundry material. Based on an inspection of the aggregate recipes, the facility is in compliance with this limit. Mr. Miles also supplied recordkeeping that indicates the average RAP in the days mixes. This percentage is lower than 40% and is typically 20% or less.

Special Condition No. 19 - No asbestos containing materials (ACM) are allowed. According to Mr. Miles, the facility does not currently and has never in the past allowed ACM.

Special Condition No. 20 - Must comply with all the conditions in the Attachment. This attachment is the general permit for hot mix asphalt plants as it was at the time of permit issuance. This permit contains all the conditions for HAPS and criteria pollutant emissions limits, percentages of ingredients, and the amount of natural gas allowed.

Attachment A – General Permit Addendum for Hot mix Asphalt Plants Special Conditions

This portion of the permit contains conditions that are given to hot mix asphalt plants. Like all types of manufacturing, not all asphalt plants operate exactly the same. Therefore, not all of these conditions are specific to Asphalt Paving and some may not apply to this facility. If the condition does not apply, this is noted as "NA".

Condition 1 - States that any special conditions in the permit that conflict with conditions in the Attachment will supercede the permit. This is understood.

Condition 2 - Criteria pollutants annual emission rates shall not exceed 99 tons in a 12 month rolling time period. Compliance with this condition is determined by limiting the production rate and emission limitations based on fuel type. The facility uses only natural gas as a fuel source and complies with the limits. Please see attached records for exact emissions.

Condition 3 – Hazardous Air Pollutants (HAPs) shall be less than 10 tons per year and 25 tons per year based on a 12 month rolling time period. All of the individual HAPs calculated are well below 10 tons. The aggregate HAP emissions for October 2012 to September 2013 are well below 25 tons. Please see records for more information.

Condition 4 - The fabric filter must be installed and operating properly. This has been previously discussed.

Condition 5 - All maintenance records must be kept and maintenance must be performed as needed. This is being done. Please see maintenance records for an example of these records. These are attached to this report.

Condition 6 - Monitoring equipment for the air pollution control equipment shall be operated at all times that the plant is in operation. All gauges are in the plant operator's booth. This allows the operator to be in constant observance of the state of the plant at all times.

Condition 7 - The baghouse must have a pressure gauge. The baghouse has a pressure drop gauge that appeared to be operating properly at the time of the inspection. This gauge is in the operator's booth and easily accessible.

Condition 8 – NA, deals with a wet collector system, which the facility does not have.

Condition 9 - The following must be observed and recorded at least once per day: Pressure drop across the baghouse. This is being done as required.

Condition 10 - NA, deals with recycled used oil which the facility does not use.

Condition 11 - NA, deals with recycled used oil which the facility does not use.

Condition 12 - All necessary maintenance shall be completed and all necessary attempts shall be made to keep the manufacturing process operating properly at all times. Records of all maintenance activities shall be kept. This is being done as required by the permit condition.

Condition 13 - Monthly records shall be kept of fuel type, consumption, and emissions. This is being done as required by the permit condition.

Condition 14 - NA, deals with the use of multiple fuels. The facility only uses one type of fuel, as stated above.

Condition 15 - NA, deals with recycled used oil. Facility does not use this as a fuel source.

Condition 16 - NA, deals with recycled used oil. Facility does not use this as a fuel source.

Condition 17 - Daily production report shall be recorded and kept on file. This is being done as required by the permit condition. See example attached to this report.

Condition 18 - The facility shall keep records of the following.

- i) Quantity of RAP used for each month

- ii) NA, deals with fuel oil
- iii) Fuel usage
- iv) NA, deals with recycled used oil

All applicable records are being kept. Please see attached for more information.

Condition 19 - Actual emission levels for criteria pollutants shall be calculated on a calendar year basis. Based on the records received, the year-to-date emissions rates are well below the permitted limits.

Condition 20 - Fugitive emissions calculations must be done on a calendar year basis. This is being done as required by the permit condition.

Condition 21 - Must report actual emissions to MAERS on as yearly basis. This is being done as required by the permit condition.

RECORDKEEPING SPECIFICS:

The computer and weigh scales allow for accurate batch, daily, and monthly records of each ton of HMA produced and individual materials such as aggregate, foundry sand, and RAP used.


There are several emissions calculations that are required to be completed on a monthly and yearly basis. These records are for criteria pollutants and are completed and compiled by an outside consultant. The records are sent to Asphalt Paving on an as needed or yearly basis and are submitted with the MAERS report. Please see attached for some examples of the daily, monthly, and year to date reports.

NOTE: The emissions calculations are conducted for NOx, SOx, and CO which are each limited to 99 tons of emissions each.

CUTBACK ASPHALT:

Based on Rule 618, the facility is not allowed to manufacture, mix, store, use or apply cutback asphalt from May 1 to September 30. The facility had a pile of cut-back asphalt on site. According to Mr. Miles, this was purchased and on October 2, 2013.

Based on the observations made at the time of the inspection, Asphalt Paving appears to be in compliance with Permit No. 12-96 and all other applicable Air Quality Rules and Regulations.

NAME  DATE 10/29/13 SUPERVISOR PAB