

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

N727127026

FACILITY: PYRAMID PAVING & CONTRACTING		SRN / ID: N7271
LOCATION: 325 N. FAIRVIEW, WEST BRANCH		DISTRICT: Saginaw Bay
CITY: WEST BRANCH		COUNTY: OGEMAW
CONTACT: Dee Welchli, Controller		ACTIVITY DATE: 07/23/2014
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Field inspection 7/23/2014, records review 9/10/2014. sgl		
RESOLVED COMPLAINTS:		

On Wednesday, July 23, 2014 AQD District Staff arrived onsite to conduct a self-initiated, unannounced site inspection for Pyramid Paving and Contracting Company (Pyramid) West Branch Michigan Facility (N7271). The facility is a permitted Hot Mix Asphalt (HMA) plant operating under General Permit 149-03C which was approved on June 22, 2010.

This facility is a synthetic minor opt out facility located at the Glancy Sand & Gravel Pit (Glancy Pit) (N6355) off of Fairview Road, West Branch Michigan. (Map in file) The inspection of the Pyramid plant was conducted with the intent of confirming operational status as well as compliance with the referenced permit(s). The facility is subject to 40 CFR Part 60 Subpart I, Standards of Performance for Hot Mix Asphalt Facilities.

Upon arrival, District Staff met with Kevin Schalk, the plant operator regarding the plant operations. Record review was conducted with Ms. Dee Welchli at the Pyramid Paving Office in Bay City, Michigan on September 10, 2014.

FACILITY DESCRIPTION

As indicated above, the Pyramid HMA plant is located in the Glancy Pit (N6355) approximately three-miles north of West Branch Michigan. Based on readily available plat book maps for the area, it appears that the Glancy Pit consists of approximately 586 acres and is bounded to the south by smaller privately owned parcels and to the north and west by state and municipally owned lands. The facility is bounded to the east by both large and small privately owned tracts.

A fence and gate were noted at the entrance to the Glancy Pit, and the property had posted no trespassing signs. No signs of distressed vegetation were noted.

The Pyramid HMA plant is one of two HMA plants located in the Glancy Pit. The facility is a counter flow drum mix asphalt plant rated per the permit at 300 tons per hour. The plant consists of:

- Dillman counter flow, dual-drum system,
- Control house,
- Primary pollution control device (knock out pot),
- Bag house,
- Two HMA silos with partially enclosed truck load-outs,
- Two Liquid Asphalt cement ASTs
- One Fuel Oil Storage Tank
- One Slurry Oil Tank

- One Propane Tank
- Electric power drop for the facility (installed in May 2009),
- Aggregate feeders and associated conveyors, and assorted storage trailers.

Drives were noted to be paved and speed limits posted upon entry at the western property gate, though some of the paved roadways closer to the pit have been covered with pea-gravel from recent heavy rains due to the elevation differences onsite. (SC 1.10 fugitive dust plan, Appendix A)

During the site inspection, loads were observed to be tarped/covered prior to leaving the load out area. (SC 1.10 fugitive dust plan, Appendix A)

COMPLIANCE EVALUATION

The last scheduled site inspection for the referenced facility was conducted on July 1, 2010. The facility was reported to be in non-compliance at the time of the inspection based on failure to have a Startup Shutdown and Malfunction Plan for the plant. The required plan was prepared and submitted by the facility, bringing the facility into compliance with their permit.

No complaints are of record for the facility. Annual MAERS emission reports have been submitted in a timely manner.

Operational Status –

The facility was operating upon arrival. Plant operations are entirely dependent on product demand and is seasonal in nature. SC 1.8 limits plant operation to between the hours of 5:00 a.m. and 6:00 p.m. Pyramid staff confirmed that the referenced time frame reflected their normal operation hours, as did operational records reviewed for the season. This year the season began on May 12, 2014.

Total production for the year to date was reported to be apx. 52,000 tons, for 38 days of operation. Under the existing permits the facility is allowed to produce 250,000 tons per calendar year (SC 1.6).

Material Usage Rates –

At the time of the inspection Mr. Schalk reported that they were producing an ultra- thincoat at a rate of 228 tons per hour. The HMA mix was reported to consist of a liquid asphalt grade of 64/28P (Polymer) and a mix temp of 333 degrees. The feed rate for the virgin aggregate was reported to be 153 tons per hour, asphalt feed rate of apx. 13 tons/hour and the feed rate for the recycled asphalt (RAP) was 63 ton per hour (just under 30% of mix). SC 1.5 allows for a maximum of 30% RAP in HMA mix for this facility.

Feed rates and operational parameters are monitored continuously on the control screen, with summary printouts every 45 minutes or as determined by the operator. Records are also reported to be kept for all changes in production/mix. SC 1.15 and 1.24 require continuous monitoring of feed rates and operation parameters.

Materials for production consisted of stockpiles of various grades of sand and gravel, stored on site and produced/purchased onsite. No asbestos containing materials are reported to be used in asphalt production for the facility. (SC1.4) Materials are transported from onsite stockpiles to the aggregate feed bins and transported by conveyor to the HMA drum. Material usage rates were controlled from the control building, and daily production data/records are maintained onsite and were reviewed as part of this inspection.

The facility was reported to have operated on propane fuel for the past few years, at a rate of approximately 3 gallons per ton of HMA produced. (SC 1.2) Usage is monitored from a capacity gauge. Daily fuel use at the facility is reported to be estimated based on the daily tonnage produced. (SC 1.19)

Operational Parameters –

At the time of the inspection, the facility was operating at a rate of approximately 228 tons per hour. SC 1.7 allows for a maximum of 300 ton/hour based on daily averages.

The mix temperature was reported to be 333 °F, with an exhaust gas temperature of 221 °F. As previously indicated feed rates and operational parameters are monitored continuously on the control screen, with summary printouts every 45 minutes. Records are provided daily to the main office in Essexville.

The primary collector and bag house were installed and operating at the time of the inspection. (SC 1.13) Two 100 horse power fans were reported to be used to operate the pollution control devices, though no speed and operational data was available. The differential pressure for the bag house is measured with a Dwyer Photohelic gauge (SC 1.18). The differential pressure at the time of the site visit was within the 2 to 8 inches of water required by permit (SC 1.13).

Emission Point –

The primary emission points identified during the onsite inspection included the bag house stack and material silos/loading areas (volatiles). The stack was unobstructed, and estimated by the Pyramid staff to be approximately 75-ft high (50-ft height is specified in permit), and approximately 4.5 by 4.5-feet in diameter. (SC 1.28) The bag house is reported to contain approximately 954 fabric filter bags, with spares kept onsite for unscheduled repairs [Special Condition (SC) 1.22, fugitive dust plan Appendix B].

The plume coming from the bag house was white and slightly detached, and appeared to be steam associated with the hot asphalt production. No tail off or fall out was noted.

Some occasional, darker emissions (<5% opacity) were noted at the top of the silos and dissipated quickly. The referenced emissions were below limits set under General Condition 11. Pyramid staff confirmed that in fact emissions in the truck loading area are captured and vented into the burning zone. (SC 4.2) and that an emission capture system was in place for the silo/silo loading area (SC 4.1) The load out area was permanently enclosed on two sides. (SC 4.2).

Other minor emission points existing at the aggregate feed/conveyor location (dust). No fugitive dust from the aggregate feed or conveyors was noted during the short operation period during the site inspection. A fugitive emission control program (SC1.10) was specified in Appendix A of General Permit 149-03B and it's components are referenced in other sections of this report.

In addition, please note that no emissions were noted coming from the drums themselves. Dust collected from the bag house was reported to be returned to the drum mix using a screw auger system. (GC 12) No off site disposal is required.

Monitoring and Testing –

SC 1.14 “may require testing for CO, SO₂ or HAPs. District Files contain a copy of Source Emissions Test results for PM emissions for the facility in a report dated October 9, 2003. However, no testing for the referenced SC 1.14 parameters appears to have been required as no testing results or requests for testing were found in the files.

CO emissions are reported to be monitored with a hand help device by Facility Staff. However Pyramid staff reported that the information was used to fine tune the burners at the beginning of the paving season.(SC 1.11 and SC 1.16)

Prevention and Maintenance Plans –

General Permit 149-03B SC 1.10 requires implementation of fugitive emissions per the control plan prior to operating the plant. Components of the referenced plan (Appendix A of the referenced permit)

include: site maintenance, management of on-site roadways, onsite management of haul vehicles, management of front-end loader operations and record keeping. Pyramid staff reported that dust control was principally controlled by application of water to roadways and stockpiles and speed limits were clearly posted. HMA haul vehicles traveled on asphalt paved roadways. All out-going trucks were noted to cover their loads prior to leaving the site, and a sign stating the requirement was visible. No overfilling of aggregate feed hoppers was noted during the site inspection. A line item is present in the daily operation logs for staff to document fugitive dust activities completed.

The preventative maintenance plan for the fabric filter dust collector is outlined in Appendix B of the General permit. Activities outlined in the referenced appendix outline requirements for fabric filter dust collector operating pressures, alarm systems, handling and storage of fabric filter dust, piping and seals maintenance, black light inspections, filter bag inventories, bound log book requirements and actions required in the case of visible emissions. Pyramid staff indicated that there was an alarm system, and control equipment maintenance schedule. Maintenance activities are recorded on daily log sheets kept in a 3 ring binder, with copies of the permit, etc. Copies of all log sheets are sent to the corporate office, and records are maintained for a minimum of 5 years.

Under the present permit, the facility is required to submit an acceptable plan describing how emissions will be minimized during all startups, shutdowns and malfunctions (SC 1.12). The referenced plan was updated and submitted electronically to District AQD Staff on August 27, 2010.

Record Keeping and Reporting –

Under General Permit 149-03B requirements for record keeping and reporting included:

- Continuous records of 1) virgin aggregate feed rate, RAP feed rate, and information sufficient to identify all components of the asphalt paving mixture. (SC 1.24)
- Hourly, monthly and 12-month rolling time period records of the amount of HMA paving material produced from EUHPLANT. (SC 1.27)
- Intermittent records of asphalt paving material product temperature (SC 1.24), and
- HMA mix design and time of start-up for each mix shall be recorded and kept on file until the end of the paving season. (SC 1.24)
- Daily records of tons of HMA produced containing RAP and the average percent of RAP per ton produced for HMA containing RAP and hours of operation. (SC 1.23)

As previously indicated feed rates and operational parameters are monitored continuously on the control screen, with summary printouts every 45 minutes or as set up by the operator. A review of the onsite records indicates that the information required to meet the above referenced record keeping and recording requirements has been met. A minimum of three years of the referenced records are stored onsite, with copies and additional year's records reported to be available for review from the main office in Bay City.

The following record keeping and reporting requirements were not available onsite, and are maintained by staff at the Main Office in Bay City, Michigan.

- Monthly and 12-month rolling time period emission calculations of all criteria pollutants and HAPs listed in the Emission Limit Table for EUHMAPLANT (SC 1.25)
- Calculate the annual fugitive dust emissions of particulate matter for EUYARD (SC 2.2) and the actual emissions of HAPs from FGFACILITY (SC 5.2)

- Records of all CO emissions and related production data including the dates and times of emissions monitored. CO emission data will be used to calculate the pounds of CO emitted per ton of HMA produced. (SC 1.26)
- Records of emissions and operating information to comply with 40 CFR Part 60 subparts A and I for EUHMAPLANT (SC 1.21)

The general permit for the facility requires that calculations for emissions referenced above be made available by the 15th of the calendar month for the previous calendar month. (SC 1.20, SC 5.2) In addition, the general permit requires the facility to maintain copies of all records and calculations on file for a period of at least 5 years.

Summary-

On Wednesday, July 23, 2014 AQD District Staff arrived onsite to conduct a self-initiated, unannounced site inspection for Pyramid Paving and Contracting Company (Pyramid) West Branch Michigan Facility (N7271). The facility is a permitted Hot Mix Asphalt (HMA) plant operating under General Permit 149-03C which was approved on June 22, 2010.

Based on information obtained during the July 23, 2014 site inspection, and subsequent records review on September 10, 2014, it appears that the facility is operating in compliance with the referenced general permit. sgl

NAME Maureen J. UBlone DATE 9/22/2014 SUPERVISOR C. Ware