DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B425363517

FACILITY: LAKELAND ASPHALT CORP		**SRN / ID:** B4253
LOCATION: 548 Ave A, BATTLE CREEK		**DISTRICT:** Kalamazoo
CITY: BATTLE CREEK		**COUNTY:** CALHOUN
CONTACT: Laura Williams , Estimator		**ACTIVITY DATE:** 06/29/2022
STAFF: Amanda Chapel	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

On June 29, 2022, AQD Air Quality Division's (AQD) Amanda Chapel (staff) completed an unannounced air quality inspection of Lakeland Asphalt located at 548 Avenue A, Battle Creek, Calhoun County, Michigan. The purpose of this inspection was to verify the facility was in compliance with Permit to Install (PTI) No. 50-77B issued on May 9, 1996 and PTI No. 178-18, issued in July of 2018 as a general permit to install for non-metallic mineral crushing. The last inspection was completed on August 15, 2018 and the facility was determined to be in non-compliance at that time.

The business office is located in a new building on the west end of the property. There are residential properties along the south side of Avenue A and to the east of the facility. No asphalt odors were noted in the area by staff prior to entering the facility and the pavement outside the facility, on the roadway, was wet from the water truck to reduce dust. The facility starts up in about mid-April and runs until about Thanksgiving. There are approximately 70 staff and they work Monday to Friday, 7am to 7pm and sometimes half days on Saturday.

I made initial contact with the receptionist, provided a business card and stated the purpose of the visit. After a short wait, Laura Williams came out and we followed her in the state vehicle down to the hot mix asphalt (HMA) plant. As noted in the previous inspection report, changes were made to the plant in 2014. The original plant's pug mill and hot aggregate screening process were replaced in 2015 with a mixing drum that routes mix drum exhaust back to the dryer drum burner. The facility demonstrated that the proposed changes did not trigger a reconstruction under state/federal regulations.

The current HMA plant configuration includes six cold aggregate bin feeders and two recycled asphalt pavement (RAP) bins that are exempt under Rule 289(2)(a); two 30 Kgal. asphaltic cement (AC) tanks exempt per Rule 289(2)(b); and six (previously noted as five) 200-ton storage silos exempt per Rule 289(2)(c). The dust fines discharge from the Astec baghouse (installed 2019) are routed back to the dryer drum and incorporated into the aggregate mix.

Originally an Astec baghouse was installed in 2011. The facility replaced the baghouse in 2019 with an equivalate Astec model. This is exempt under Rule 285(2)(d) reconstruction or replacement of air pollution control equipment with equivalent or more efficient equipment.

The roadways were being watered with a water truck during the inspection. Facility staff stated the roadways both in and outside the plant are watered throughout the day. Facility staff stated they use water to keep the dust down and the watering done continuously, and they were contracting a company to lay down brine as a longer-term option. The exposed dirt area between the storage piles and rented crusher were wet, to support this statement. The HMA plant was in

operation and staff went up to the control tower and met with the plant operator. Plant staff explained that the process is as follows: a loader delivers stock from cold aggregate piles into the plant, this is dried to 0% moisture along with the recycled asphalt which is added to the mix along with the fresh asphaltic cement. This is all mixed in the drum dryer and then conveyed up to the storage silos, awaiting delivery to a truck.

The facility makes various types of asphalt, depending on the job and requirements for the mixture. Recycled asphalt shingles are used, approximately 10% of the time or less. This is based on the contract and facility staff said most contracts don't allow them to be used. These are stored underneath a covered lean-to area on site. The plant drum burner has not fired fuel oil or recycled used oil (RUO) since at least 2010 because natural gas is much more cost effective. The natural gas dryer burner is tuned at the beginning of every season. The most common product mixes produced by the plant are 36A and 13A and these mixtures typically contain 20 – 25% RAP.

The Astec baghouse is equipped with a pressure drop gauge which is monitored in the control room. During the inspection, the pressure drop gauge read 0.04 inches H20 with a limit of 0.2 inches H2O. The inlet temperature was 354 degrees F with a maximum of 400 degrees F and the aggregate temperature was 590 degrees F. Staff stated that the baghouse and HMA are interlocked. The plant cannot run without the baghouse operational. If the baghouse malfunctions, the plant is shutdown automatically.

The facility has at least one storage pile of cutback asphalt or cold patch on site. The use and storage of cutback asphalt is regulated under Rule 618 during the ozone season, May 1 to September 30. The product is called Bit-Mat MC Cutback Asphalt. Facility staff stated it was the same mix used during the previous inspection.

During the previous inspection, staff noted a portable crusher on site. The Astec ProSizer 3100 was subject to air use permitting requirements and a Rule 201 violation notice was be sent to the facility. As a result of this violation notice, the facility obtained PTI No. 178-18. Ms. Williams said that the facility sold the crusher to Alta Equipment in January of 2020. The facility now rents a crusher from Balkema, which is on site. The facility pays Balkema by the ton to crush the recycled asphalt. They stated this began in 2019 and Balkema is responsible for all of the permitting and records associated with that crusher. AQD staff will need to look into this further. Since Lakeland Asphalt no longer owns the crusher they obtained PTI No. 178-18 for, they can request this permit be voided.

PTI No. 50-77B (May 9, 1996)

Since facility has not fired the dryer drum burner with fuel oil or RUO since before 2010; the facility dismantled and removed the old HMA plant; and does not use wet scrubber controls, SC Nos. 13, 21, 23 (Attachment A) Nos. 8, 9.B, 10, 11, 14, 16, and 18.ii-iii, are not applicable at this time.

SC # 14 – Particulate emissions from the asphalt plant shall not exceed 0.15 pound/1000 pounds of exhaust gases. The AQD has not requested particulate testing to date.

SC # 15 – Visible emissions from the plant shall not exceed a 6-minute average of 20% opacity, except as specified in Rule 301(1)(a). AQD Staff observed the plant operations, both from the baghouse stack and general operations, and did not see any visible emissions that were above 20% opacity for longer than a 6-minute average. Visible emissions are most often seen from loading raw materials or trucks going through the yard.

SC # 16 - Rules 1001, 1003 and 1004 - Verification of particulate emission rates from the asphalt plant by testing, at owner's expense, in accordance with Department requirements, may be required for operating approval. Particulate testing has not been required to date by the AQD.

SC # 17 – Applicant shall not operate the asphalt plant unless a baghouse is installed and operating properly. An Astec baghouse was installed originally in 2011 and a new, equivalent Astec baghouse was installed in 2019. This baghouse swap was discussed in more detail above. The baghouse appeared to be installed and operating properly during the inspection.

SC # 18 – Equip and maintain the baghouse with a pressure drop gauge. The facility has installed a pressure drop gauge which was operational during the inspection.

SC# 19 – Condition requires that the exhaust gases be discharged unobstructed vertically upwards from a stack with a maximum dimension of 33 inches by 35 inches at an exit point not less than 36 feet above ground level. Rectangular stack condition was associated with the old baghouse that was replaced along with the baghouse. The surface area of the permitted stack was 1155 square inches which is equivalent to a stack diameter of about 38 inches. It appears that the new stack is < 38 inches in diameter.

SC # 20 – Condition limits operation of the asphalt plant to not more than 13 hours per day. Based on records provided, the plant operates no more than 13 hours per day.

SC # 22 – Facility developed and submitted a Fugitive Dust Plan to the AQD in March 1998. Dust control measures used at that facility are discussed above. There have been no complaints received by the AQD regarding dust issues from the site.

SC # 23/ Attachment A:

2 – Condition limits production rate while firing natural gas to 1,000,000 tons of HMA per year. Per facility's 2021 MAERS report, annual 2021 HMA throughput was 424,896 tons or <43% of the permit limit.

3 –The facility is complying with the criteria and HAP emission limits based on their annual production throughput and pollutant emission factors listed in the permit.

4 – The facility appears to have a fabric filter that is installed and functioning properly.

5 – The facility is required to maintain the air pollution control equipment and maintain a log of significant maintenance activity. The facility provided maintenance records detailing the date and what the maintenance activity was.

6/# 7 – The baghouse is equipped with a pressure differential gauge which was functioning properly during the inspection.

 # 9 – The facility is required to maintain a log of baghouse pressure drop readings for each operating day. The facility provided records of the daily baghouse pressure drop readings for review.

 # 12 – The facility is required to maintain the batch asphalt plant and maintain a log of significant maintenance activities. These records were provided for review.

 # 13 – The facility is required to maintain a HMA production log on a monthly basis. The facility provided both a daily production log and a monthly totals production log for review.

 # 15 – The facility is limited in RAP usage compared to HMA. The content of asphalt cannot exceed HMA to 30% RAP content on a monthly basis. The facility provided records for review and the highest percentage of RAP was 27.7% in August and September 2021.

 # 17 – The facility is required to maintain a production log for virgin HMA and RAP used on a daily basis. The facility provided daily records of production for virgin HMA and RAP to review.

 # 18(i) – The facility also provided production logs of RAP used on a daily and monthly basis.

 # 19 through # 21 – The facility has met these conditions by submitting an annual MAERS report.

The facility also completed testing on the cold patch that was on site, to show compliance with the Rule 618 requirement to maintain cold patch below 3% VOC between May 1 and September 30. According to the results, the material was tested per ASTM D 93 Test Method. Also, no distillate was recovered up to 260°C indicating compliance with specification utilizing ASTM D 402 protocol to establish VOC limits. The total distillate tested was 2.9%, showing compliance with Rule 618.

The facility appears to be in compliance with all requirement contained in Permit to Install (PTI) No. 50-77B issued on May 9, 1996 and all other applicable state and federal air quality regulations.

NAME Aimee Clapp DATE 7/7/22 SUPERVISOR RL 7/11/22