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

B162071888		
FACILITY: CENTRAL ASPHALT INC.		SRN / ID: B1620
LOCATION: 2290 MAY ST, MOUNT PLEASANT		DISTRICT: Bay City
CITY: MOUNT PLEASANT		COUNTY: ISABELLA
CONTACT: Jeff Spagna , Plant Manager		ACTIVITY DATE: 05/15/2024
STAFF: Benjamin Witkopp	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Compliance inspection	n and complaint investigation.	
RESOLVED COMPLAINTS: C-2	3-01201, C-23-01821, C-24-01084, C-24-01085, C-24	4-01198, C-24-01327

Ben Witkopp of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Air Quality Division (AQD) conducted an inspection of the facility on Wednesday May 15, 2024. After an independent walk around, staff reviewed records with Plant Manager Jeff Spagna. The facility is covered by air permit 74-86C which was last modified in February 2023. The modification was made to incorporate a new vapor collection and control system for the silos and loadout areas. The facility produces hot mix asphalt (HMA) which is used for roadway and parking lot paving projects.

The facility was operating at the time of inspection. Both the north and south loadout areas were being used. The liquid asphalt tanks located on the north side of the loadout areas were equipped with vapor condensers. The loadout areas are enclosed in steel tunnel structures which extend all the way to the ground. The automatic garage style doors on the east end were both kept closed between truck arrivals. Having the doors closed on the east side prevents winds from blowing through. The door is shut once a truck enters an enclosed loadout area. A silo safety gate can not be opened unless the door is shut. When a safety gate is triggered to allow loadout, the control system draws air / captures vapor from that particular silo loadout. It should be noted the company built extensions on the west end of both loadout areas. The sloped extensions feature horizontal and vertical vapor collection. The system is triggered when the truck passes an infrared beam of light. The ventilation system captures the vapors that would have normally been lost once the front of the truck had exited but the rear portion remained to be loaded. The air captured by the collection system is then routed to what is known as Blue Smoke Control. Due to the amount of air being handled, the system is comprised of two banks, a north one and one on the south. The unit contains metal mesh filters at the bottom to remove oil mist from the air prior to it passing upward through three different types of fabric type filters for additional control. The magnehelic on the north bank of the Blue Smoke Control system read 0.9 inches pounds per square inch (psig) while the south bank read 1.2 psig. The acceptable range specified by the manufacturer is 0.5 to 8.0. Additionally, air / vapors displaced during silo loading rise from the top of the silos, are captured, and then routed to the Blue Smoke Control system. No visible emissions were seen coming from the tops of the silos. The same is true for the enclosed conveyor feeding the silos, the exhaust stack from the Blue Smoke Control system, and the stack from the plant itself. After the walk around, staff met with Jeff to review records.

The permit has overall limits on carbon monoxide (CO) and sulfur dioxide (SO2). The limits are 90 tons per year (tpy) and 85.5 tpy respectively and are based on a 12 month rolling time period. The emissions would result from the combustion process used to heat aggregates and liquid asphalt. The plant uses pipeline quality natural gas as fuel which results in only small amounts of SO2. The amount of SO2 would be higher if fuel oil was used. The plant does not use fuel oil. The site does not have oil storage tanks or lines for burning fuel. Jeff said the oil burners for the plant were sold. Burning fuel oil would require significant work at this point. Records showed the amount of CO as 30.53 tpy while SO2 was 0.65 tpy. The emission factors of 0.198 pounds of CO per ton of HMA and 0.0042 pounds of SO2 per ton of HMA being used by the company were generated with the help of a previous AQD inspector based on prior stack testing.

There are other requirements in the permit which would apply if fuel oil was burned instead of natural gas. However, fuel oil is not used. The amount of recycled asphalt pavement (RAP) used in the production of HMA is limited to 50 percent. The highest monthly amount was 14 percent and was found in July 2023. The plant also has a production limit of 895,000 tons of HMA based on a 12 month rolling time period. The plant produced 308,376 tons during the latest 12 month rolling time period.

Jeff maintains a log of inspection and maintenance activities for the plants baghouse as required by the permit. Everything appeared appropriate. The baghouse system is pulse cleaned to keep the

pressure drop between 2 and 6 inches. At AQD's suggestion at the time of the last inspection, the company inspections include other items such as silo tops, venting, connections, conveyor, loadout area, etc. to be more encompassing. The addition of the Blue Smoke Control system necessitated additional company inspections to be added to the list and subsequently performed.

The permit requires a minimum stack height of 40 feet. The stack had been 48 feet for years. The company has voluntarily increased it to 100 feet.

CONCLUSION

The facility was issued a violation notice on November 30, 2022. The cited violations involved insufficient vapor capture on the silos and asphalt load out area. Additionally, the liquid asphalt storage tanks lacked vapor condensation / recovery devices. On December 14, 2022 the company provided a written response to resolving the situation. The proposed resolution included installing improved vapor capture from both the silos and asphalt load out areas. Additonally, the company committed to the purchase and installation of a state-of-the-art control system to recover the captured vapors. The capture was also enhanced by installing tunnel extensions with associated vapor collection at the loadout area exits. On the entry to the loadout area a system was engineered whereby a door must be shut behind an incoming truck. The safety gate allowing asphalt loading will not open unless the entry door is shut. Ensuring the entry door is shut further facilitates capture by eliminating any chance of wind blowing through the load out tunnels. The company also sealed gaps on the asphalt distribution system and tops of silos. New seals and clamps were installed on the slat conveyor. Lastly, the stack from the asphalt plant is required to be a minimum of 40 feet tall. The company took it upon itself to install a 100 foot tall stack as a further enhancement. All required work had been completed prior to the start of the paving season in spring of 2023 as the company kept AQD apprised of progress being made. The installation of the loadout extensions ductwork was not required, but the company elected to do so itself. That portion of the project was completed during the 2023 / 2024 offseason period. It was in place prior to the start of paving season in 2024. Given the observations presented above, the violation issued on November 30, 2022 is considered resolved.

NAME TB. Intholas

DATE 7-16-24

SUPERVISOR