

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

N638541636

FACILITY: MID MICHIGAN MATERIALS INC		SRN / ID: N6385
LOCATION: 6966 FISHER RD, JEDDO		DISTRICT: Southeast Michigan
CITY: JEDDO		COUNTY: SAINT CLAIR
CONTACT: Jeffrey W. Wilson, President		ACTIVITY DATE: 08/25/2017
STAFF: Kerry Kelly	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection to determine AMC-MMM's compliance with the evaluated requirements in PTI 3-98 and State and Federal air quality regulations.		
RESOLVED COMPLAINTS:		

On August 25, 2017, I (Kerry Kelly, MDEQ-AQD) conducted a targeted, unannounced inspection of Mid-Michigan Materials, Inc. located at 6966 Fisher Road in Jeddo, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Rules; NSPS Subpart OOO for Non-Metallic Mineral Processing Plants; and General Permit-to-Install (PTI) Number 3-98 for a non-metallic mineral crushing operation.

Upon arrival at the site, I introduced myself and stated the purpose of the visit to Ms. Robin Brennan, Weigh Master. Ms. Brennan introduced me to Mr. Kurt Beals, Quality Control and Safety. Mr. Beals assisted me on the inspection.

Mid-Michigan Materials' crushing operation runs from 6:00 AM until 5:00 PM Monday through Friday and from 6:00 AM until noon on Saturday during the construction season. Seventeen people are employed by the company. The company operates 4 crushers and one wash plant at the location. The crushing takes place at Plant 1, Plant 3, Plant 4, and/or Plant 5. Material is washed and screened at Plant 2. The company office and Plants 1, 2, 3, and 4 are located north of Fisher Road in Sanilac County. The maintenance building and Plant 5 are located south of Fisher Road in St. Clair County.

On February 24, 2017, AMC-Mid-Michigan Materials, Inc. (AMC-MMM) notified the AQD that it had purchased Mid-Michigan Materials, Inc. on November 30, 2016 and would be assuming ownership of PTI 3-98. AMC-MMM mines sand and gravel from dry banks and from the watered-in portion of a gravel pit on its property. The mining takes place with a hydraulic excavator. Mined material is processed at the facility's crushing plants and wash plant. The company refers to the plants as: Plants 1, 2, 3, 4, and 5. Crushing takes place at Plants 1, 3, 4, and 5. Washing takes place at Plant 2. In the permit, equipment at Plant 1 (crushing) and Plant 2 (wash) are combined and named "Wash Plant". For the purposes of this report, I will refer to the crushing portion of the "Wash Plant" as Plant 1 and the washing portion of the "Wash Plant" as Plant 2.

Mr. Beals first showed me around Plant 2, which is located behind the office building. Material from Plant 1 is conveyed to the Plant 2. At Plant 2, material is separated, using water, based on size. Sizes separated and stock-piled at Plant 2 are; 2NS, river rock, 6A, pea stone, fill sand, and mason sand. The roads around Plant 2 appeared to be sufficiently damp during the inspection. I did not observe any fugitive dust or emissions from the equipment or roads at Plant 2. Mr. Robert Wilson, Vice President – Mid-Michigan Materials provided records of the sweeping and watering of the roadways in the yard (attachment 1). According to Mr. Wilson, the stock piles consist of materials that are already wet from being washed and therefore don't need to be watered. The stock piles around Plant 2 appeared to be sufficiently damp during the inspection and I did not observe any emissions from the stock piles during the inspection.

At the northern end of Plant 2 there is a storage building containing a steel cutter, grinder, saw,

drill, enclosed sandblast unit, welding equipment, two dismantled space heaters, and torch cutting equipment. I inspected the space heaters, formally propane-fired, and observed they were not connected to a fuel source. The steel cutter, grinder, saw, drill, and sand blast unit appear to be exempt from the requirement to obtain a permit to install per R 336.1285(2)(l)(vi) because the emissions are released into the general in-plant environment. The welding equipment appears to be exempt from the requirement to obtain a permit to install per R 336.1285(2)(i). According to Mr. Beals, the torch cutter is used for repairs/maintenance. This equipment appears to be exempt from the requirement to obtain a permit to install per R 336.1285(2)(j)(i) because it is portable torch cutting equipment that does not cause a nuisance or adversely impact surrounding areas (no complaints on record regarding torch cutting activities at Mid-Michigan Materials) and the equipment is used for maintenance, repair, or dismantling.

A propane-fired emergency generator is used as a back-up source of power to the office building. I inspected and took a photo of the generator name plate (attachment 2). The generator is located in front of the office on the west side of the road. Based on information from the nameplate, and the Generac website (attachment 3), it appears the generator has a maximum heat input of 245,000 Btu/hour. It appears this generator is exempt from the requirement to obtain a permit to install because it is an internal combustion engine with a heat input less than 10,000,000 Btu/hour. It appears the engines at AMC-MMM may be subject to 40 CFR 60.4236 in the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart JJJJ) because construction of the engine, according to Mr. Wilson, commenced in 2006. 40 CFR 60.4236 sets deadlines for importing or installing stationary SI ICE produced in previous model years. Specifically, 40 CFR 60.4236(c) prohibits the installation of an emergency engine greater than 25 HP, that does not meet the applicable requirements in 40 CFR 60.4233 after January 1, 2011. According to Mr. Jeff Wilson, President – MMM, the emergency generator was installed in August or September 2006, which is prior to the deadlines in 40 CFR 60.4236(c). Applicability of the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63 Subpart ZZZZ) was not evaluated because the MDEQ-AQD has not adopted by reference 40 CFR 63 Subpart ZZZZ at area sources of HAPs. There is a propane tank next to the emergency generator which appears to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(b) because it appears to be less than 40,000 gallons capacity and is used to store propane.

From Plant 2, Mr. Beals took me to Plant 5, also known as the "Gravel Plant". Plant 5 is located on the south side of Fisher Road, in St. Clair County, and was not running during the inspection. This equipment is used to produce 20 AA, 22A, 23A gravel. Crushing equipment at Plant 5 includes a Pioneer jaw crusher, Pioneer roll crusher, two screens, and multiple conveyors and is included in PTI 3-98 as "Portable Crushing Plant #2". I took a photo of the nameplate for the jaw and roll crusher (attachment 4). I observed labels consistent with the permit labels for "Portable Crushing Plant #2" as required in the permit. The roads and stock piles at Plant 5 appeared sufficiently damp during the inspection. I did not see any dust being generated while at the Gravel Plant. Mr. Wilson provided records of the sweeping and watering of the roadways in the yard (attachment 1).

The equipment at the Gravel Plant is powered by one of two diesel generators. A diesel fuel storage tank is on site at the Gravel Plant to store fuel for the generators. I inspected, and took pictures, of each of the generator's name plates (attachment 5 and 6). One generator (Serial Number 2WB16349) is rated at 487 horsepower (~4,130,463.3 Btu/hour assuming 30 percent thermal efficiency) and the other generator (Serial Number 8JJ00462) is rated at 382 horsepower (~3,239,912.9 Btu/hour assuming 30 percent thermal efficiency). Mr. Brian Leahy, Senior Meteorologist – Barr Engineering provided potential to emit (PTE) calculations for NO_x, CO, and hazardous air pollutants (HAPs) for the two diesel-fired generators (attachment 7). To

calculate the PTE, Mr. Leahy reviewed the most recent six years of MAERS records were to establish a relationship between engine and crushing plant operation. The ratio of gallons of diesel combusted to material throughput was then multiplied by the maximum annual throughput allowed under the PTI 3-98, and assuming that 100% of the allowable throughput will be processed in the single crushing plant served by the two generators. The resultant potential fuel consumption (gal/yr) was then multiplied by heating value of diesel fuel (0.139 mmbtu/gal) to obtain a potential annual heat input for the engines. Using emission factors in Section 3.3 of AP-42 (Gasoline and Diesel Industrial Engines), potential regulated NSR pollutant and HAP emissions were estimated using the potential annual heat input. The highest reported potential NOx, CO, and formaldehyde emissions were; 26.8 tons/year of NOx, 5.8 tons/year of CO, and 0.007 tons/year of formaldehyde. The PTE for each pollutant evaluated is below major source thresholds. The generators appear to be exempt from the requirement to obtain a permit to install per R336.1285(2)(g) because they are internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input. It appears the engines at AMC-MMM are not subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60 Subpart III) because construction of the engines, according to MAERS, commenced prior to July 11, 2005. Applicability and compliance with the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63 Subpart ZZZZ) was not evaluated because the MDEQ-AQD is not delegated the regulatory authority for 40 CFR 63 Subpart ZZZZ at area sources of HAPs.

The diesel storage tank appears to have a capacity of approximately 500 gallons. The diesel fuel storage tank appears to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(g)(ii).

Next Mr. Beal showed me inside the maintenance building. In the maintenance building I observed a cold cleaner, two propane-fired space heaters, four approximately 50 gallon tanks, and tanks for storing engine oil, transmission fluid, and hydraulic fluid. The space heaters appear to have a rated heat input capacity of less than 50,000,000 Btu/hour and fire propane (also known as liquid petroleum gas) making them exempt from the requirement to obtain a permit to install per R 336.1282(2)(b)(i). Upon inspecting the cold cleaner, I noted the surface to air interface was approximately three square feet, the lid was closed, a basket for drying parts, and operating instructions were posted in a conspicuous location. The solvent used in the cold cleaner is mineral spirits. It appears the cold cleaner is exempt from the requirement to obtain a permit to install per R 336.1281(2)(h) and is in compliance with R 336.1707. The hydraulic/lubricating oil tanks appear to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(c).

Outside of the maintenance building there were several tanks including; one 1,000 used oil tank, one 500 gallon diesel fuel storage tank, one 500 gallon mineral spirit storage tank, and one 500 gallon used antifreeze tank. The diesel fuel storage tank appears to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(g)(ii). The used oil and antifreeze tanks appear to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(c). The mineral spirit tank appears to be exempt from the requirement to obtain a permit to install per R 336.1284(2)(i).

At Plant 4, a cone crusher and water screen are used to produce sand to 5/8 inch material. I inspected the nameplate on the cone crusher for Plant 4 and took a picture (attachment 8, number 1). The equipment in Plant 4 is listed in PTI 3-98 as "Portable Wash & Crushing Plant # 4". During the inspection I observed labels, consistent with the permit, on the equipment in plant 4. This equipment is powered by electricity from the grid. During the inspection, the stockpiles and roads were damp. I did not observe any emissions from the crushing equipment, roads, or

stockpiles in Plant 4 during my inspection. Mr. Wilson provided records of the sweeping and watering of the roadways in the yard (attachment 1).

Next I inspected the equipment at Plant 3 and took a picture of the nameplate for the Nordberg cone crusher (attachment 8, number 2). The equipment in Plant 3 is listed in PTI 3-98 as "Portable Crushing Plant # 3" and is used to produce dust to 1 inch material. During the inspection I observed labels, consistent with the permit, on the equipment in plant 3. This equipment is powered by electricity from the grid. During the inspection, the stockpiles and roads were damp. I did not observe any emissions from the crushing equipment, roads, or stockpiles in Plant 3 during my inspection. Mr. Wilson provided records of the sweeping and watering of the roadways in the yard (attachment 1).

At Plant 1, a jaw crusher and three screens are used to produce septic sand, Class II, and Class IIA material. I inspected the nameplate on the Kolberg-Pioneer, Inc. crusher for Plant 1 and took a picture (attachment 8, number 3). The equipment in Plant 1 is listed in PTI 3-98 as "Wash Plant". During the inspection I observed labels, consistent with the permit, on the equipment in Plant 1. This equipment is powered by electricity from the grid. During the inspection, the stockpiles and roads were damp. I did not observe any emissions from the crushing equipment, roads, or stockpiles in Plant 1 during my inspection. Mr. Wilson provided records of the sweeping and watering of the roadways in the yard (attachment 1).

It was noted in the August 5, 2013 inspection report for MMM, that a Superior stacker would need to be evaluated for visible emissions as soon as possible or a Violation Notice (VN) would be issued to his company. AQD received a visible emissions readings report for the stacker on September 27, 2013.

Mr. Robert Wilson provided records of the material throughput for each crushing plant (attachment 9). These records indicate the total throughput for the all plants was 677,425 tons in 2017. In 2016, AMC-MMM reported a total throughput of 770,162 tons. It appears, AMC-MMM is in compliance with the site wide, yearly throughput limit of 2,000,000 tons.

As a result of this inspection, it appears AMC-MMM is in compliance with the evaluated requirements in PTI 3-98 and State and Federal air quality regulations.

NAME K. Kelley

DATE 9/28/17

SUPERVISOR SK