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MANILA

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

M373336889

FACILITY: Great Lakes Aggregates, Highland Park Plant		SRN / ID: M3733
LOCATION: 15150 OAKLAND AVE, HIGHLAND PARK		DISTRICT: Detroit
CITY: HIGHLAND PARK		COUNTY: WAYNE
CONTACT: Tom Downs, Operations Manager		ACTIVITY DATE: 06/10/2016
STAFF: Terseer Hemben	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection		
RESOLVED COMPLAINTS:		

Scheduled Compliance Inspection

Great Lakes Aggregates

15150 Oakland Avenue, Highland Park, MI 48203 Phone: 734-783-7400, Cell: 810-343-3848

SRN: M3733

Permit#: PTI# 106-15, General permit # 82-00

Responsible Official: Mr. Thomas Downs

Date: June 10, 2016

BACKGROUND

The Great Lakes Aggregates (GLAH) located at 15150 Oakland Avenue, Highland Park, MI operates a concrete recycling business. The facility deals in concrete mixing (EUPLANT) that was permitted in 2000, under Gen Permit (PTI) # 82-00. This permit chiefly regulates Particulate Matter and administratively enforces fugitive dust control. The EUPLANT comprises concrete crushers, screens and conveyors and earth moving equipment. The facility is also permitted to operate a furnace that provides heat for space heating during cold weather. The space heater permitted under PTI# 105-15 burns used or waste oils from heavy duty machinery operated at the site. Waste oil collected after heavy equipment maintenance is recycled and used as fuel for the space heater described as EUFURNACE. Combustion by-products from the EUFURNACE are discharged into the ambient air through the stack as criteria pollutants: Carbon monoxide (CO), Lead (Pb), NOx, Sulfur dioxide (SO2), and Total Organic Carbon (TOC). The EUFURNACE waste oil heater is a Reznor Model No. RA250 designed to use maximum heat input 250,000 BTU/HR. The EUFURNACE is exempt under rule 282(b)(iv) for use of waste oil as fuel in furnace with heat input capacity less than 500,000 BTU/HR. The source is classified as minor for criteria emissions.

Inspection Narrative

I arrived at the facility premises on June 10, 2016 at 1200 hours. Temperature at the hour was 74 F and wind speed 6.9 mph coming from the SE. Humidity was 48%. The purpose of visit was to conduct an annual scheduled inspection for compliance with emissions of criteria pollutants and recordkeeping on fuel usage at the facility. I met the site Manager, Mr. Scotty Mcghee, outside the facility. We entered the building and proceeded to the office area. Scotty and I went through a pre-inspection conference. The manager informed the facility receives used oil as fuel from the EUPLANT in 55 gallon drums. The facility has a 500 gallon tank on the site that stores water for dust suppressant and associated utility

needs. The facility kept records electronically offsite using Derenzo and Associates as a contractor. We walked through the concrete mixing premises and observed the dust suppressant and dust sweeping equipment on the site. The furnace installed on top of the building, was not in operation at the time of this inspection. Access to the furnace was via a ladder. We held a post-inspection conference after the walk-through. Mr. McGhee answered all the questions I asked during the interview satisfactorily. I requested hard copies of furnace and concrete crushing operation emission records. Mr. McGhee showed some records, and requested time to contact Mr. Thomas Downs, the compliance manager, to provide the rest of records. The time extension was granted. I left the area at 1340 hours.

**COMPLAINT/COMPLIANCE HISTORY:**

None recently, the last fugitive dust complaint was registered and resolved in 2012.

**OUTSTANDING LOV'S:**

None

**PROCESS DESCRIPTION:**

The GLAH operates concrete crushers and limestone mixers on site. The facility office building is heated during the cold season using a space heater. The space heater uses waste oil recycled from the concrete mixing and earth moving equipment. Concrete and Asphalt piles were stored at site. Trucks roll in and out of the property daily in high traffic delivering asphalt and concrete materials to the site, while concrete and asphalt blends are loaded off the site. Mr. McGhee informed no asbestos materials were accepted at the site.

**EQUIPMENT AND PROCESS CONTROLS:**

The GLAH operates the space heating furnace under Air Permit (PTI) # 106-15. The permit allows use of waste or used oil for fuel in a furnace with a rated design heat capacity of maximum input 250,000 BTU per hour. This condition is federally supported by rule 40 CFR 279.23 as defined in 40 CFR 279.1 pertaining to a "do-it-yourself" operator that generates waste oil from personal machineries and uses at the site. Exhaust gases from the combustion of used oil are required to be discharged unobstructed vertically upwards at the minimum point 40 feet above ground (the exit point of the gases should be open and free from discharge restrictions).

The EUPLANT operated under Gen permit # 82-00 observes limits in opacity and material throughput as stated in Special Condition 25 and administrative condition 11 as listed in Appendix A of the permit.

**Regulatory Summary**

The permit to install (PTI) # 106-15 issued in 2015 set material limits for the EUFURNACE and process restrictions on the quality of waste or used oil burned. Federal delegation (40 CFR 279.21(b) and 40 CFR 279.23) requires the facility using waste oils in furnace for space heating to send waste or used oil fuel analysis after receiving a written notification from the AQD. Federal delegation requires the AQD to verify that design heat input capacity for the furnace complies with material limits condition. This is a minor source because the EUFURNACE is exempt by Rule 282(b)(iv) by the virtue of heat input capacity 250,000 BTU/hr. The EUPLANT is regulated under General permit# 82-00 guided by NESHAP Subpart A and OOO for administration of opacity relating to process operations.

**OPERATING SCHEDULE/PRODUCTION RATE:**

The GLAH is set to operate 24 hrs. A day, 7 days a week, and 365 days in the year. However, the EUFURNACE only operates in the cold season.

**APPLICABLE RULES/PERMITS PTI# 106-15**

NSPS 40 CFR 279.21 (b); 40 CFR 279.23 (Subpart C)

State: R 201, R 224, R 301, R 331, R 901 considerations apply

Based on the above permit rules guiding the use of waste oil as fuel, Staff observed the following:

EUFURNACE: Waste oil fired heater; Reznor Model No. RA250; Input capacity 250,000 Btu/hr. operated-

1. In compliance –GLAH stated there has been no modification of equipment or process at the facility since the permit was issued in 2015 (Rule 201),
2. In compliance – GLAH demonstrated permittee did not exceed the rated design heat input capacity for

EUFURNACE of 250,000 BTU per hour. (R 336.1224(2)(b), 40 CFR 279.23) [SC. II.1]. Staff visually inspected the EUFURNACE and confirmed the nameplate on the equipment carried the specification: Reznor Model No. RA250. 250,000 Btu/hr.

3. In compliance-GLAH stated permittee did not burn in EUFURNACE any fuels other than No. 1 and No. 2 virgin fuel oils, waste oil (including crankcase, hydraulic, and transmission oils), or used oil fuel that is generated by the permittee, either on-site or off-site, or by household "do-it-yourselfer" used oil generators as defined in 40 CFR 279.1. (R 336.1224(2)(b), 40 CFR 279.23) [SC. II.2]. GLAH stated the facility utilizes used waste oil recovered from the machinery and internal combustion engines in the EUPLANT (concrete-asphalt mixing) as fuel for the EUFURNACE.

4. In compliance – GLAH demonstrated permittee did not burn waste oil or used oil fuel in EUFURNACE unless such waste oil or used oil fuel was pretreated (e.g. sedimentation, filtration, etc.) to reduce water and sediment. (R 336.1224(2)(b), R 336.1331) [SC. III.1]. GLAH stated the EUFURNACE is equipped with a dry oil filter that removes suspended materials from the waste oil before combustion is carried out [Attachment# 1, pg. 1, 5 and 6].

5. Not Applicable- The AQD did not request analysis of waste oil or used oil fuel analysis in order to determine the concentration of halogens in the oil. (R 336.1224(2)(b), 40 CFR 279.21(b), 40 CFR 279.23) [SC. V.1].

6. In compliance – GLAH demonstrated the permittee kept, in a satisfactory manner, monthly records of fuel burned in EUFURNACE. The records should demonstrate the following information for each 55-gal drum burned in EUFURNACE:

a. The type(s) of fuel, such as No. 1 and No. 2 virgin fuel oils, waste oil (including crankcase, hydraulic, and transmission oils), or used oil. [SC. VI.1a]. Records submitted by the GLAH confirmed the records were kept in a format listing gallons of oil, continuous pre-treatment (filtration), and comments detailing the origin of oil [Attachment# 1, pg. 5 & 6].

b. GLAH indicated whether the oil was generated by the permittee, either on-site or off-site, or by household "do-it-yourselfer" used oil generators, the permittee should keep all records on file at the facility and make them available to the Department upon Request. (R 336.1224(2)(b), 40 CFR 279.23) [SC. VI.1b] Records received from the Company indicated the oil came from GLAH equipment only [Attachment# 1, pg. 5 & 6].

7. In compliance – GLAH demonstrated the permittee maintained documentation verifying that the design heat input capacity for EUFURNACE complied with SC II.1. The permittee should keep records on file at the facility and make them available to the Department upon request. (R 336.1224(2)(b), 40 CFR 279.23) [SC. VI.2]. The manager presented a manufacturer's handbook containing information on the specifications of EUFURNACE indicating the designed heat capacity and recommending appropriate fuel for the unit.

8. In compliance- GLAH demonstrated the exhaust gases from the stacks SVFURNACE were discharged unobstructed vertically upwards to the ambient air unless otherwise noted. (R 336.1224(2)(b); 40 CFR 279.23 [SC. VIII.1]. Staff verified The EUFURNACE was located on top of the building and had a stack exit point that discharged to the ambient. Visual inspection confirmed compliance.

Per General Permit # 82-00 for Crusher (EUPLANT) and associated equipment.  
NESHAP subpart A and OOO; Rule 205; 301; 303; 331; and 910;

9. In compliance – GLAH demonstrated there has not been any modification to equipment or process permitted under the Gen permit# 82-00 (SC. IA; R 336.1201(1)). Mr. Thomas Downs, the manager, took me on site tour and visually demonstrated how the equipment such as conveyors, crushers, loaders, screens and associated equipment were the originals from time of permitting. The labels on the equipment faded, but were still identifiable [Attachment# 2, response # 9, pg. 1].

10. In compliance – GLAH demonstrated each crusher and screen installed and operated at the site is equipped with a water spray (SC. IB). During the inspection, Staff observed water trucks refilling water into the 500 gallon tank used for water storage. The crushers and screens processed wet concrete and the final products were sent to storage piles as wet concrete Photographs of controls are attached [Attachment # 2, Response# 10, pgs. 5, 6, 7, 8, 9, 10].

11. In compliance – GLAH demonstrated visible emissions from the following equipment did not exceed limits (%). GLAH stated the VE was tested by Angelo's Crushed Concrete and submitted. The information had been requested by GLAH via FOIA and awaits response. Staff observed the following while on the site [Attachment # 2, pg 1, and Response #11:

- 1) Any equipment enclosed within a building – visual inspection observed there was no visible emission (SC. IC (1)).
- 2) All crushers – 15% (SC. IC (2)). Staff observed the crushers were operated under water spray. Opacity observed from crushers occurred due to downward displacement of air by addition of water from the top, and was estimated at less than 5% [Attachment B, pg. 7].
- 3) Screens - 10% (SC. IC (3)). The opacity observed from the screen during operations was less than 5% [Attachment B, pg. 8]
- 4) Rock drills – 5% (SC. IC (4)). Not applicable.
- 5) Conveyors/Transfer points 10% (SC. IC (5)). Opacity observed from conveyors and transport points was 0% [Attachment B, pg. 11]
- 6) Wash screens and downstream equipment, storage bin, etc. – No visible emissions. There was no visible opacity from wash screens and downstream equipment (SC. IC (6)) [Attachment B, pg. 8].
- 7) All equipment (NSPS-baghouse) - 7% (SC. IC(7)). Not applicable. GLAH uses water sprays only.
- 8) Wheel loaders and truck traffic – 5% (SC. IC(8)). The grounds and roadways were wetted. Opacity observed on the premise at the time of inspection was 0%.
- 9) Materials storage – 5% (SC. IC(9)). Opacity observed around storage piles was 0%. The piles were thoroughly water sprayed.
- 10) Equipment or process related to mineral crushing – 10% (SC. IC(10)). The opacity observed around equipment and or process related crushing was less than 5% [Attachment # 2, pg. 6 and 7].

Mr. Downs attempted to produce the copies of emissions testing report for review, but the consultant in custody of the report was out of office. GLAH pledged to forward the testing result to AQD when available [Attachment # 2, pg. 3, Item# 11].

12. In compliance – GLAH demonstrated any non-metallic mineral material crushed did not exceed 2,000,000 tons per year per site (Rule 205; SC. IIA.1). Records submitted by the GLAH through MAERS showed the maximum throughput of crushed concrete was 517,992 tons per year in 2014, and 195,673 tons per year in 2015 [Attachment# 2, pg. 14 and pg. 19]

13. Not applicable –GLAH did not need to demonstrate the pollutant particulate emission from the crushing did not exceed 0.04 lbs. / 1000 lbs. of exhaust gases calculated on a dry gas basis for exhaust from each baghouse or dust collector (Rule 331; SC. IIB.1). The facility did not use baghouse or dust collector [Attachment # 2, pg. 3, response # 13].

14. In compliance – GLAH demonstrated permittee kept and maintained daily and annual records of the amount of material processed for each site the facility operated at (Rule 205; SC. IIIA.1). GLAH submitted the daily and annually record logs to AQD for review [Attachment # 2, pg. 23 and 24.

15. In compliance –GLAH demonstrated permittee made available all reports and schedules to the DEQ-AQD upon request (Rule 201(1); SC. IIIA.2). The manager showed hard copies of records kept on site. AQD viewed the hardcopies, but did not request in writing.

16. Undetermined – GLAH is yet to demonstrate permittee tested visible emission rates and particulate emission rates from all NSPS subject crushers, screens, all transfer points on conveyors, and all other miscellaneous equipment associated with the non-metallic mineral crushing facility and covered by the NSPS Subpart A and OOO and submitted results to the DEQ-AQD supervisor in accordance with Rule 2001; SC. IIIB.1. GLAH is yet to send the visible test records as previously addressed in Response # 11 [Attachment#2, pg. 2, Response# 16].

17. Undetermined - GLAH is yet to demonstrate permittee used method/analysis of test results for particulate emissions in accordance with 40 CFR, Part 60, Subparts A and OOO (Rule 2001; SC. IIIB.2). Response is same as in Response # 16.

18. Undetermined- GLAH demonstrated that permittee tested for particulate emission rates 60 days after

- achieving maximum production rate, but not later than 180 days after initial startup of the non-metallic mineral crushing facility (Rule 2002, SC. IIIB.3). Response is same as in Response # 16.
19. Undetermined – GLAH is yet to demonstrate permittee submitted the test results to District Supervisor within 30 days following completion of the testing (Rule 2002; SC. IIIB.4). Response is same as in response # 16.
20. Undetermined -GLAH is yet to demonstrate permittee notified the Air Quality Division, within 15 days after initial startup of the non-metallic mineral crushing facility of the actual date of initial startup (Rule 201, 40 CFR, part 60, Subpart A; SC. IV.1). Response is same as in Response# 16.
21. In compliance – GLAH demonstrated permittee labeled all equipment associated with the non-metallic mineral crushing facility within 45 days of initial startup according to the company IDs specified in the application (Form EQP5756) Labels should be conspicuous on the equipment (Rule 201; 40 CFR 60.670; SC. IV.2). Visual inspection during the inspection observed the equipment was labeled [Attachment 2, pg. 8, 9, and 10].
22. In compliance - GLAH demonstrated permittee equipped each crusher and screen with a water spray. The control equipment shall be properly operated as necessary to comply with all emission limits (Rule 205; 301; 303; 331; and 910; SC. IV.3). The water spray pump was maintained and working properly during the inspection [Attachment 2, pg. 5, 6, and 7]
23. In compliance – GLAH demonstrated permittee did not operate the non-metallic mineral crushing facility unless the program for continuous fugitive emissions control for all facility roadways, the facility yard, all storage piles, and all material handling operations specified in Appendix A were implemented and maintained (Rule 205, 371, 901, Sc. IV.4). Staff inspected the operations and observed the water spray system was in operation during concrete manufacturing processes. Roadways, yard, storage piles and material handling operations were all water sprayed. GLAH presented the Highland Park facility did not operate under conditions that would lead to fugitive emissions from roadways. The Company attached a statement from Rolar Property Services, Inc. regarding weekly site sweeping services [Attachment 2, pg. 26-32].
24. In compliance – GLAH demonstrated permittee did not crush any asbestos tailings or asbestos containing waste materials, as defined by the NESHAP regulations, in the non-metallic mineral crushing activity (40 CFR 61.141, SC. IV.5). The manager stated the site only accepts concrete and asphalt materials from road construction [Attachment 2, pg. 3, Response# 24].
25. In compliance – GLAH demonstrated the annual production limit of 2,000,000 tons per year per site did not apply to facility covered by a site specific permit (Rule 201; 205, 901, SC. IV.6). The GLAH presented the rock crushing process at the facility is covered by the General Permit PTI for Non Metallic Mineral Crushing Facilities. One requirement of the General PTI is a maximum throughput of material of 2,000,000 tons of concrete on an annual basis unless covered by a site specific. MAERS records attached for review showed throughput information for calendar years 2014 and 2015. Both throughput totals were less than the 2,000,000 tons per year threshold [Attachment 2, pg. 14 and 19, Response# 25].

## Discussion

Rule 201(1) -The GLAH space heater, EUFURNACE, and EUPLANT were permitted and numbered Permit# 106-15, and Gen PTI# 82-00, respectively, consistent with Rule 201. No change or modification had been made since permitted in 2015.

Rule 301- the disposal of possible contaminants (oil impurities) was conducted according to compliance requirements of Rule 301. The material caught in filters used in EUFURNACE was put in solid waste containers for disposal off the property through contractor service. GLAH did not use baghouse nor dust collector.

Rule 224 was not violated. The overall criteria pollutants identified with the facility are not on the list of toxic contaminants listed under section 112(b) of clean air act [Attachment pg. 7].



NSPS 40 CFR 279.21 (b); 40 CFR 279.23 (Subpart C) required emission units using waste oil as fuel for space heating to submit oil analysis in response to written request from the DEQ. DEQ did not request oil analysis from the GLAH. The facility is in compliance with the federal rule.

NSPS 40 CFR 60, Subpart A and OOO is addressed in the Special Condition 11 of General PTI 82-00 limiting the visible opacity of specific equipment and process from range 0% to 15% monitored by a trained Operator in use of method 9. The facility contracts water Trucks to regularly spray dust suppressant on roadways, driveways, piles and premises.

Rule 205 - Records of regular maintenance and proper disposal of the oil filters from the EUFURNACE and recycling of used oils from the EUPLANT supported requirements classifying the facility operation as a minor source in pollutants emission. The change of oil filters bearing impurities from waste oil through proper process operation was maintained consistent with permit conditions, and observation of standard operating procedures qualified the facility as minor source.

Rule 331 – Waste oil used as fuel was introduced into the furnace for combustion through active filters. Calculations involving throughput and emissions from the EUFURNACE were kept on records [Attachment pg. 1]. Calculations submitted by GLAH showed out of 900 gallons of waste oil burned per year, 2.1 pounds of PM10 were emitted.

Rule 901- the burning of only approved filtered waste oil and consistent changing of filters to maximize efficiency of EUFURNACE resulted to elimination of odor emission. No complaint involving odors has been registered with AQD.

Rule 373 – The fugitive dust control program outlined in Appendix A of the Special Conditions addresses the required compliance. The facility provided an adequate fugitive dust abatement program.

Rule 303 – The rule requires a trained observer to monitor and grade opacity readings at the facility. GLAH trained Mr. Thomas Downs as the opacity grader.

Rule 910 – The rule requires the operator to maintain air-cleaning devices in use. GLAH does not use air cleaning device at the site. Neither baghouse nor dust collector are in use at the facility. Fugitive dust opacity is controlled with use of water spray.

#### APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

In compliance

#### MAERS REPORT REVIEW:

GLAH submitted records for the 2014 and 2015 MAERS that showed emissions compliance.

#### FINAL COMPLIANCE DETERMINATION

##### Determination

The AQD determined the Great Lakes Aggregate, Highland Park facility located in Highland Park performed in compliance with PTI # 106 - 15 and General Permit # 82-00 conditions during the scheduled inspections. However, Staff will verify the VE testing report yet to be received. There were no odors at the facility or surrounding premises at the time of inspection. The company contracts calculations and recordkeeping to a Derenzo Environmental Services. The records were kept in an electronic format.

NAME     JL    

DATE     9/30/16    

SUPERVISOR     JK