

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

N758154176

FACILITY: EAGLE MINE LLC		SRN / ID: N7581
LOCATION: 6510 AAA Road, MICHIGAMME		DISTRICT: Marquette
CITY: MICHIGAMME		COUNTY: MARQUETTE
CONTACT: Jennifer Nutini , Environmental Engineer		ACTIVITY DATE: 02/28/2020
STAFF: Joe Scanlan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection to determine compliance with PTI# 50-06B		
RESOLVED COMPLAINTS:		

### SOURCE DESCRIPTION

Eagle Mine is an underground, high-grade nickel and copper mine located at 6510 AAA Road, Michigamme Township, in northern Marquette County. The mine is expected to produce 365 million pounds of nickel, and 295 million pounds of copper, and trace amounts of other minerals over its estimated mine life (2014 – 2025). Ore is trucked to and processed at the Humboldt Mill (N0934), a separately-permitted facility located approximately 45 miles away. Eagle Mine and the Humboldt Mill are currently both owned and operated as subsidiaries of Lundin Mining Corporation. The original mine developer and owner was Kennecott Minerals, a division of Rio Tinto.

### REGULATORY APPLICABILITY

Eagle Mine is the first and only mine to be permitted under Michigan's Part 632 Non-Ferrous Mineral Mining Law. The facility is also subject to 40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ; both of which address internal combustion engines (EUGENERATOR1). The facility is a true minor source of criteria pollutants and an area source for hazardous air pollutants and therefore is not subject to Prevention of Significant Deterioration (PSD) review or the Renewable Operating Permit program.

The first Eagle Mine permit (PTI# 50-06) was issued on December 14, 2007. The permit was subsequently revised because Rio Tinto decided to obtain electrical power from the grid rather than generate it on site. PTI# 50-06A was issued on July 14, 2011 with an emergency generator rather than three primary generators.

PTI# 50-06B was issued June 28, 2013. The changes Rio Tinto requested with this application include elimination of ore crushing activities as the ore will be trucked to the Humboldt Mill, elimination of storage and handling of fly ash, elimination of the ore pass in the underground mine, replacement of the four 4 MMBtu/hr propane heaters with two propane heaters with a total heat input of 48 MMBtu/hr, placement of the backfill plant above ground rather than in the mine, addition of an aggregate storage building, replacement of the two 120 ton storage silos with two 250 ton cement storage silos, improvements to underground activities to reduce emissions including reduced material handling and use of sprayed water, elimination of the mine vent baghouse, and paving of most plant roads. These design changes result in a reduction of the facility-wide potential to emit for most pollutants compared to the original facility design.

Post issuance of PTI# 50-06B Lundin Mining Corporation finalized purchase of the mine on July 13, 2013. Lundin expanded the Eagle project and began mining the "Eagle East" ore deposit; an ore body about 1.7 km east of and approximately 700 meters deeper than the original ore body. "Eagle East" is accessed underground through the original mine portal and the Main Ventilation Air Rise (MVAR) continues to be the only mine ventilation exhaust point. Mining the Eagle East deposit was acceptable under PTI# 50-06B because no new emission unit was installed and resulting emissions were less than the permitted emission limits.

The site visit for this inspection was completed on February 28, 2020, while the mine was operating under PTI# 50-06B, and this activity report is focused on the conditions permitted in PTI# 50-06B. However, as detailed below, the mine has been operating under a revised version of this PTI since May 29, 2020.

### UNDERGROUND OPERATIONS

In the underground operations at the facility, development rock and ore are removed using drilling and

blasting. Development rock that has been blasted loose is loaded into trucks and either transported to the surface to the Temporary Development Rock Storage Area (TDRSA) or transported to other areas of the mine to be used as backfill. Ore that has been blasted loose is loaded into trucks and transported to the surface to the enclosed Coarse Ore Storage Area (COSA). Once development rock and/or ore has been removed the stope will be backfilled using cemented backfill for primary stopes and development rock and/or aggregate for secondary stopes. Two propane fired heaters with a total heater load of 48 million BTU/hour are used to heat air going into the mine, especially during the colder months of the year. Underground vehicle traffic consists primarily of loaders used to load ore and development rock into production trucks, travel of loaded production trucks out of the mine, travel of empty production trucks into the mine, and travel of production trucks loaded with backfill into the mine. As part of maintaining the roads in the underground mine, Eagle Mine grades the roads. The naturally wet conditions in the mine are not conducive to generation of particulate emissions. In addition, depending on particle size, the dimensions of the various areas of the mine, the air flow rate in the various areas of the mine, conditions in the mine such as air density and air viscosity, and the density of the particulate matter, particulate matter settles in the mine thus reducing emissions to the outdoor air.

The Main Ventilation Air Raise (MVAR) exhausts air emissions generated in the underground mine to the outside air. The MVAR stack is located to the west of the mine surface facilities. The mine portal, used for access to the mine, is located with the surface facilities.

## SURFACE OPERATIONS

### Ore Processing & Storage

Ore is trucked from the underground mine to the above-ground COSA, an enclosed building with short term storage capacity for production ore. Trucks from the mine unload on the south side of the building through plastic curtains in a partially enclosed unloading bay. Ore is moved from the unloading bay to the storage pile in the building. A mobile rock-breaker is used in the COSA to break ore that is too large for the grizzly screen at the Humboldt Mill. Haul trucks enter and exit through doors on the north side of the building; a loader loads ore into the haul trucks. The doors of the building are closed during ore loading. There are four vent fans on the north side of the building.

### Vehicle Travel

Above-ground vehicle traffic consists primarily of production trucks loaded with ore from the mine to the COSA, production trucks loaded with development rock from the mine to the TDRSA, truck travel on the TDRSA, travel of empty production trucks back to the mine, travel of production trucks loaded with backfill into the mine, full and empty product haul trucks, cement delivery trucks, and aggregate delivery trucks. Each truck leaving the "contact" areas of the facility go through a Part 632-approved truck wash in order to remove any ore and development rock that may be on the truck to prevent track-out to the non-contact areas and public roadways.

### Development Rock Processing & Storage

Development rock processing consists of handling development rock in the TDRSA and the TDRSA storage pile.

### Aggregate Storage Building

The aggregate storage building is used for handling pre-crushed stone delivered from off-site by truck and unloaded in an enclosed truck bay. Aggregate is transferred to the backfill plant by conveyor and a loader is used to move aggregate inside the building. The aggregate storage building has a dust collector; capture efficiency is assumed to be 80% and control efficiency is expected to be 99%. An 80% control efficiency is applied to the uncaptured emissions due to the enclosed nature of the building. Emissions not captured by the dust collector will exhaust through four ventilation fans in the building walls.

### Cement Storage

Two 250 ton cement silos are used to store cement for use in the backfill plant. Cement is pneumatically unloaded from delivery trucks into the silos. Cement is fed to the backfill plant by screw auger.

## Backfill Plant

The backfill plant is a batch plant (similar to a concrete batch plant) that blends aggregate and/or development rock with cement and water inside an enclosed building. The backfill mixture is loaded onto mine trucks to be transported underground. "Shotcrete" may be used as a substitute for the standard cemented backfill material. Shotcrete is a form of concrete that is pneumatically projected at high velocity onto a surface and therefore is useful in mine settings. The shotcrete mixture is prepared in the backfill plant. The backfill plant building has a dust collector to control particulate emissions from the blender and from aggregate/development rock and cement handling in the building.

## Emergency Generator

There is one model year 2008 Caterpillar 3516C diesel fired 2000 kW (2,681 hp) emergency generator at the facility. This engine is subject to both the NSPS (40 CFR 60 Subpart IIII) and the RICE MACT (40 CFR 63 Subpart ZZZZ). The generator provides back-up power for some facility operations (water treatment plant, mine ventilation fan, and to allow safe evacuation of the mine) in the event the grid power supply is lost.

## Diesel Fuel Storage

There are three 20,000 gallon diesel fuel storage tanks on site to store fuel for the emergency generator and mine vehicles. These tanks appear to be exempt under Rule 284(d).

## PTI# 50-06D

PTI application number 50-06D was submitted regarding proposed changes to surface operations and the timeframe of the ore truck throughput limit. Surface operation changes include an additional five acres of storage for aggregate and sand only; there will be no additional storage of ore or development rock. Truck throughput will remain the same number of 50-ton ore trucks (17,140), however the time period of the truck throughput limit was changed from 12-month rolling time period to a calendar year time period. This was requested by the company to address trucking limitations in the winter months due to weather events. The application also included the addition of a portable screening plant that will sort development rock by size

A virtual Public Meeting was held March 30, 2020 and included an Informational Session and a Question and Answer Session followed by a Public Hearing. PTI# 50-06D was approved on May 29, 2020. The changes in PTI# 50-06D will be addressed in a following activity report after an additional site inspection.

## PTI# 50-06B COMPLIANCE

AQD District Staff Joseph Scanlan, Sydney Bruestle and Michael Conklin coordinated with the Eagle Mine staff Jennifer Nutini and Amanda Zeidler for a site visit and a brief underground tour of levels 1 and 2 on February 28, 2020. Upon arrival at the main gate, AQD staff were administered standard mine safety protocol instruction. After donning required PPE, AQD staff proceeded to the main offices and located Ms. Nutini and Ms. Zeidler. After a brief introductory meeting, each AQD staff member was then given an emergency supplemental air device prior to entrance to the underground portion of the mine.

Following are the Special Conditions for each Emission Unit and Flexible Group as set forth in PTI# 50-06B:

## EUMVAR

The Main Ventilation Air Raise (MVAR) is the outlet from the fresh air ventilation system that is utilized to supply air to underground workers. Emissions produced by underground activities are vented through the MVAR. The underground ore production activities include vehicle travel, drilling, blasting, ore and development rock handling, backfill material handling, and mine heaters.

## SC I Emission Limits

1. PM, Nickel and Copper emission limits based on testing

AQD staff were on site during the 2014 stack test and test protocol was approved by AQD staff before

the test was conducted. The test focused on emissions from ore mining, rather than development rock mining, to evaluate the worst-case emissions since the development rock has much lower metal content than the ore. Testing was conducted when underground activities, including blasting, were occurring at distances close to the MVAR inlet; particulate potentially generated from activities occurring at greater distances from the MVAR would typically be lower from the MVAR due to gravitational settling in the mine.

The test duration was acceptable; each of the three test runs lasted more than two hours. Testing covered drilling, blasting, and rock removal. While overall ore production at the time of testing was low, drilling, blasting, and material handling activities during the test were representative of typical daily operations and therefore the test results are acceptable. Since development rock has lower metal content than ore, no development rock drilling, blasting, or handling was conducted during the test. Including development rock in the test would not represent the worst-case metal emissions.

Test results were reviewed by AQD staff. No deficiencies with the testing were reported to Eagle Mine and the results were well below the emission limits and determined to be acceptable.

2. Visible emissions from EUMVAR shall not exceed a six-minute average of 5 percent opacity

Staff did not observe any opacity from EUMVAR during the site visit.

#### SC II Material Limits

NA

#### SC III Process/Operation Restrictions

NA

#### SC IV Design/Equipment Parameters

1. The permittee shall not operate EUMVAR unless the dust suppression systems in the mine are installed, maintained, and operated in a satisfactory manner.

Dust suppression is applied by water truck and/or underground utility water hoses, as necessary, to reduce emissions from underground roadways and underground ore and development rock handling. Water truck and hoses were in place and operating underground at the time of inspection.

#### SC V Testing/Sampling

1. Within 60 days after commencement of ore production, the permittee shall verify the PM, nickel, and copper emission rates from EUMVAR by testing at owner's expense, in accordance with Department requirements.

See SC I.1 response above

#### SC VI Monitoring/Recordkeeping

1. The permittee shall keep a daily record of water applications on underground roadways.

Daily records of water application to underground roadways were readily available during the inspection and adequate.

#### SC VII Reporting

NA

#### SC VIII Stack/Vent Restrictions

No changes have been made to the stack since installation.

EUCOSA



The Coarse Ore Storage Area (COSA) is an enclosed building with short-term capacity to store production ore. Trucks from underground unload through plastic curtains in a partially enclosed unloading bay on the south side of the building. Road trucks are loaded by a front end loader on the north side of the building, with the building doors closed during truck loading. The COSA contains a mobile rock-breaker.

**SC I Emission Limits**

1. Visible emissions from EUCOSA shall not exceed a six-minute average of 5 percent opacity.

Staff did not observe any opacity from EUCOSA at the time of inspection.

**SC II Material Limits**

NA

**SC III Process/Operational Restrictions**

1. The permittee shall not unload ore into EUCOSA unless the unloading is conducted in the partially enclosed unloading bay.

Unloading of mine trucks was only conducted in the partially enclosed unloading bay at the time of inspection.

2. The permittee shall not load ore into trucks in EUCOSA unless the doors are closed.

All haul trucks were being loaded behind closed doors at the time of inspection.

3. The permittee shall not store ore outside of the enclosed EUCOSA building.

No ore was being stored outside the facility at the time of inspection.

**SC IV Design/Equipment Parameters**

1. The permittee shall not unload ore into EUCOSA unless the plastic curtains are installed and maintained in a satisfactory manner.

Plastic curtains were installed and being maintained in a satisfactory manner at the time of inspection.

**SC V Testing/Sampling**

NA

**SC VI Monitoring/Recordkeeping**

NA

**SC VII Reporting**

NA

**SC VIII Stack/Vent Restrictions**

No changes have been made to the stacks since installation.

**EUFUGITIVES**

Fugitive emissions are produced by aboveground vehicle traffic and handling and storage of development rock in the Temporary Development Rock Storage Area (TDRSA).

**SC I**

1. Visible emissions from all wheel loaders and all truck traffic shall not exceed five (5) percent opacity.

Staff did not observe opacity from vehicle traffic during the inspection.

2. Visible emissions from each storage pile shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of the Natural Resources and Act 451.

Staff did not observe opacity from the storage piles during the inspection.

#### SC III Process/Operation Restrictions

1. The permittee shall not operate the facility unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A, or an alternate plan approved by the AQD District Supervisor, has been implemented and is maintained.

An adequate Fugitive Dust Control Plan for continuous fugitive emissions control has been submitted and was being implemented at the time of inspection.

2. The permittee shall not exceed a maximum equivalent of 17,140 50-ton ore loads leaving the facility for each 12-month rolling time period.

Records provided by the facility show a total 17,190 50-ton ore trucks departed the facility between 6/01/2019 and 5/31/2020. This exceeds the limit of 17,140 trucks by 50 trucks.

3. The permittee shall pass each truck through the Part 632 approved truck wash facility prior to the truck leaving the areas of the plant where contact with ore is possible, known as "contact areas."

All trucks, including passenger vehicles, must go through the truck wash facility prior to leaving the plant. AQD staff were subjected to this while on site and had to wait in our tour vehicle while it was cleaned.

4. The permittee shall cover or apply a dust suppressant to all product haul trucks travelling on site, in accordance with the fugitive dust plan, to reduce fugitive dust emissions.

All haul trucks are covered prior to leaving the plant area, as observed by AQD staff during inspection.

#### SC IV Design/Equipment Parameters

1. The maximum area of uncovered material storage piles that the permittee may maintain at any one time is 8.6 acres.

No material was being stored outside of the designated storage areas at the time of inspection.

2. The permittee shall pave the plant roadways routinely travelled by production trucks and product haul trucks. Routinely travelled roadways include the facility access road (beginning at the facility gate) and roads connecting to the portal, the backfill plant, the COSA, the mine services building, the TDRSA, the aggregate building, and the truck wash. This condition does not require paving of temporary/transient travelways within the TDRSA or roadways that will not routinely be travelled by production trucks and product haul trucks, such as the perimeter security road.

All required areas are paved as observed during inspection.

#### SC V Testing/Sampling

NA

#### SC VI Monitoring/Recordkeeping

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month;
2. The permittee shall keep a daily record of the type, size (weight) and number of ore transport trucks leaving the facility. Each month, in a manner acceptable to the AQD District Supervisor, the

permittee shall calculate an equivalent number of 50-ton ore transport loads leaving the facility based on that month's daily records. The permittee shall also calculate the equivalent number of 50-ton ore transport loads leaving the facility per 12-month rolling time period.

All records are complete, adequate and available upon demand. A random sampling (7/17/2020) showed 49 truck tickets 2,227.99 metric tons of massive and semi-massive ore loaded.

#### SC VII Reporting

NA

#### SC VIII Stack/Vent Restrictions

NA

#### EUAGGSTOR

Aggregate storage building for handling pre-crushed stone delivered from off site. Aggregate is unloaded from trucks in an enclosed storage bay. Aggregate is transferred by enclosed conveyor to the backfill plant.

#### SC I Emission Limits

1. Visible emissions from EUAGGSTOR shall not exceed a six-minute average of 5 percent opacity.

AQD Staff did not observed opacity from EUAGGSTOR at the time of inspection.

#### SC II Material Limits

NA

#### SC III Process Operational Restrictions

1. The permittee shall not operate EUAGGSTOR unless a malfunction abatement plan (MAP) as described in Rule 911(2), for all air pollution control equipment, has been submitted within 365 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits

A MAP dated 2/25/2014 has been submitted and is adequate.

2. The permittee shall not unload aggregate in EUAGGSTOR unless the doors are closed.

All aggregate unloading was done with doors closed at the time of inspection.

3. The permittee shall not store aggregate outside of the enclosed EUAGGSTOR building. (see draft PTI waiting public hearing)

No aggregate was being stored outside of the EUAGGSTOR building at the time of inspection

#### SC IV

1. The permittee shall not operate EUAGGSTOR unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner.

The dust collector/baghouse is equipped with a pressure differential gauge and was operating correctly at the time of inspection. Baghouse pressure is checked weekly in accordance to the MAP and was reading 1.3 wg, within the range of 1" to 6" wg.

#### SC V Testing/Sampling

NA

#### SC VI Monitoring/Recordkeeping

NA

#### SC VII Reporting

NA

#### SC VIII Stack/Vent Restrictions

No changes have been made to the stacks since installation.

#### EUBACKFILL PLANT

Cement is discharged from the silos to the backfill plant, where it is blended with aggregate and water. Once blended, the mixture is loaded into mine trucks to be transported underground. In addition to cemented backfill, a limited amount of shotcrete will be produced in the backfill plant.

#### SC I Emission Limits

1. Visible emissions from EUBACKFILL shall not exceed a six-minute average of 5 percent opacity.

AQD staff did not observe any opacity from EUBACKFILL during the inspection.

#### SC II Material Limits

NA

#### SC III Process/Operational Restrictions

1. The permittee shall not operate EUBACKFILL unless a malfunction abatement plan (MAP) as described in Rule 911(2), for all air pollution control equipment, has been submitted within 365 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

A MAP dated 2/25/2014 has been submitted and is adequate.

2. The permittee shall not operate EUBACKFILL unless it is located inside an enclosed building.

EUBACKFILL is located in an enclosed building.

3. The permittee shall transfer aggregate and cement to EUBACKFILL using enclosed conveyors/augers.

Conveyors/augers are enclosed.



**SC IV Design/Equipment Parameters**

1. The permittee shall not operate EUBACKFILL unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner

Fabric filter dust collector was installed and operating correctly at the time of inspection.

**SC V Testing/Sampling**

NA

**SC VI Monitoring/Recordkeeping**

NA

**SC VII Reporting**

NA

**SC VIII Stack/Vent Restrctions**

Stacks have not been modified since installation.

**EUGENERATOR1**

A 2000 kW (2937 HP) diesel fueled generator, model year 2008. This engine is subject to NESHAP ZZZZ and NSPS IIII.

**SC I Emission Limits**

The company is using manufacturer certification documents to show compliance with the emission limits for SC I.1 (NMHC+ NOx), SC I.2 (CO) and SC I.3 (PM). The documents show the emissions are:

NOx -- 5.45 g/hp-hr

CO -- 0.3 g/hp-hr

PM -- 0.025 g/hp-hr

**SC II Material Limits**

1. The permittee shall burn only diesel fuel, in EUGENERATOR1, with the maximum sulfur content of 15 ppm (0.0015 percent) by weight.

The facility has the required fuel supply certification from the supplier showing generator is fueled with low-sulfur fuel oil and the sulfur content is below 15ppm.

**SC III Process/Operational Restrictions**

1. The permittee shall not operate EUGENERATOR1 for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month.

The engine was operated a total of 22.8 hours over a 12 month time period from 6/01/2019 to 5/31/2020.

2. The permittee may operate EUGENERATOR1 for no more than 100 hours per 12-month rolling time period as determined at the end of each calendar month for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

The engine was operated a total of 15.4 hours for maintenance purposes over a 12 month time period from 6/01/2019 to 5/31/2020.

3. The permittee shall install, maintain, and operate EUGENERATOR1 according to the manufacturer

written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine.

The engine is installed, maintained, and operated according to the manufacturer's written instructions.

#### SC IV Design/Equipment Parameters

1. The permittee shall equip and maintain EUGENERATOR1 with a non-resettable hours meter to track the operating hours. On the date of the inspection the hour reading was 134.8.

EUGENERATOR1 is equipped with such an hour meter.

2. The nameplate capacity of EUGENERATOR1 shall not exceed 2000 kW-hr.

The generator is a 2000 kW model.

#### SC V Testing/Sampling

1. Within 180 days after the date of permit issuance, the permittee shall verify NMHC + NO<sub>x</sub>, CO and PM emission rates from EUGENERATOR1, by testing at owner's expense, in accordance with Department requirements or by providing manufacturer certification documentation as required in SC VI.2.

The company is using manufacturer certification documents to show compliance with SC V.1.

#### SC VI Monitoring/Recordkeeping

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.

Records were provided, however they were not provided on a monthly basis but on an incident basis. See records request and supplied information. The facility should record engine usage in the manner specified in the permit.

2. The permittee shall keep, in a satisfactory manner, a record of testing required in SC V.1 or manufacturer certification documentation indicating that EUGENERATOR1 meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. The permittee shall keep all records on file and make them available to the Department upon request.

The company is using manufacturer certification documents to show compliance with SC VI.2.

3. The permittee shall monitor and record the hours of operation of EUGENERATOR1 during emergencies and non-emergencies, on a monthly and 12-month rolling time period basis. The permittee shall record the time of operation of EUGENERATOR1 and the reason it was in operation during that time.

The facility has provided records of non-emergency and emergency use for a 12-month rolling time period from 6/01/2019 - 5/30/2020. See records request and supplied information.

4. The permittee shall keep, in a satisfactory manner, fuel supplier certification records for EUGENERATOR1 for each delivery of the diesel fuel oil. The certification shall include the name of the oil supplier, sulfur content, and a statement that the fuel complies with the specifications under the definition of distillate oil in 40 CFR 60.41c.

The facility has the required fuel supply certification from the supplier showing generator is fueled with low-sulfur fuel oil and the sulfur content is below 15ppm.

#### SC VII Reporting

NA

**SC VIII Stack/Vent Restrictions**

The stack has not been changed or altered since it was installed.

**FGSILOS (EUCEMENTSIL01 and EUCEMENTSIL02)**

Two 250 ton capacity cement silos, each equipped with a bin vent fabric filter. The silos are loaded via pneumatic conveyors. Cement is screw augured from the silos to the backfill plant.

**SC I Emission Limits**

1. Visible emissions from FGSIL0S shall not exceed a six-minute average of 5 percent opacity.

The silos have bin vent filters. AQD staff did not observed the silos in operation as they operate at somewhat irregular times.

**SC II Material Limits**

NA

**SC III Process/Operational Restrictions**

1. The permittee shall not operate FGSIL0S unless a malfunction abatement plan (MAP) as described in Rule 911(2), for all air pollution control equipment, has been submitted within 365 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

A MAP dated 2/25/2014 has been submitted and is adequate.

**SC IV Design/Equipment Parameters**

1. The permittee shall not operate EUCEMENTSIL01 or EUCEMENTSIL02 unless the respective bin vent filter is installed, maintained, and operated in a satisfactory manner.

The silos are only operated with the bin vent filter in place. The filters are checked every 12 weeks and replaced every 26 week. Each silo has a pressure differential gauge but no alarm. On the date of inspection there were no cement deliveries--the bin vent filters only operate when the system is pressurized when being filled with cement.

**SC V Testing/Sampling**

NA

**SC VI Monitoring/Recordkeeping**

NA

**SC VII Reporting**

NA

**SC VIII Stack/Vent Restrictions**

The stacks have not been altered since installation.

**CONCLUSION**

Aside from a minor exceedance of allowable number trucks within a 12-month rolling time period per SC III.2 of EUFUGITIVES, the facility appears to be in compliance with PTI# 50-06B. Additionally, the facility should use the format specified in the PTI under EUGENERATOR1 SC VI.1 to record calculations on a monthly basis.

AQD staff did not observe any other violations or concerns with the Michigan Air Pollution Control Rules.

At the time of this writing this SAR, PTI# 50-06B has been voided and replaced by PTI# 50-06D.

NAME Joe Scanlan DATE 10/12/20 SUPERVISOR EDJ