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

M189144893

FACILITY: Lafarge Presque Isle Quarry		**SRN / ID:** M1891
LOCATION: 11351 East Grand Lake Road, PRESQUE ISLE		**DISTRICT:** Cadillac
CITY: PRESQUE ISLE		**COUNTY:** PRESQUE ISLE
CONTACT: Vicki McCoy , Environmental Engineer		**ACTIVITY DATE:** 06/26/2018
STAFF: Kurt Childs	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: 2018 FCE.		
RESOLVED COMPLAINTS:		

Full Compliance Evaluation
M1891 Redlands Quarries NY Inc., Lafarge Presque isle Quarry

I conducted an FCE of the Lafarge Presque Isle Quarry to determine compliance with Permit to Install (PTI) 186-99A, Federal NSPS for the Non-Metallic Mineral Industry 40 CFR 60, Subpart OOO and the Michigan Air Pollution Control Rules. At the time of the inspection the weather was fair with winds from the East around 10 mph and temperatures in the mid-60's. I met with Ms. Vicki McCoy, Chemical Quality/Environmental Specialist.

Inspection:

The quarry office is located approximately 1.5 miles down an access road (Stoneport Dr.) near the screening building, secondary crushing building and loading pier. Driving into the plant I observed one of the large dump trucks crossing down into the pit access rd. and raising a large amount of dust. Stoneport Dr. was well coated with an asphalt emulsion that prevented dust, but the plant and quarry roads are gravel. The access road and plant roads were dry as were areas next to the roads that I observed equipment travelling on. Fugitive dust was raised by the vehicles traveling on these areas.

Ms. McCoy met me at the main office and we toured the facility by truck and foot. We drove into the quarry to observe the primary crusher and quarry operations. Several trucks were operating in the quarry and the roads appeared to have been treated with water, there was no fugitive emissions from the vehicle traffic. Ms. McCoy stated that they have a water truck that operates throughout the day, each day and that the operator assists driving other equipment when other operators are on break. This may be the reason (in addition to the weather) why some areas had dried out.

We observed two dump trucks charging the primary crusher which is located in the ground. The primary crusher was operating with no visible emissions from dumping or crushing operations.

We also drove along the storage piles and conveyors leading to the loading pier. No ships were in port but some stockpiling was taking place. There are 14 different materials stockpiled that are blended to produce 35 different products for the steel, sugar, lime, and aggregate industries. There were light visible emissions from the drop points on one of the stockpiles but not exceeding the 10% opacity limit. All of the conveyors observed had covers on them with the exception of those immediately after the wash plant (not necessary).

We walked to the screen building which encloses the main screening processes. No visible emissions were present outside the building and there was very little dust inside. The screens appear to be enclosed well. The "mill addition" process, utilizing the "Svedala" feeder, crusher and triple deck screen, is located on the northwest side of the screen building. The mill addition is a tertiary crushing operation dedicated to aggregate production. The triple deck screen is enclosed inside an extension of the building. The feeder, crusher and associated conveyors are located outside and were operating at the time of the inspection. There were no visible emissions from the feeder, conveyors or crusher. The mill addition was installed in 1999 and is therefore subject to Subpart OOO for affected facilities installed after August 31, 1983 but before April 22, 2008. At this time, it is unknown if the mill addition equipment was tested in 1999 as required by Subpart OOO. Ms. McCoy reviewed files in her office but did not immediately find records of the Subpart OOO testing. Following the inspection, I reviewed the AQD District office files and found that our correspondence and testing files only go back to around 2008. Older files have been sent to the records retention center. I requested these records be returned to the District and found a copy of the "NSPS OOO Visible Emissions Test Results (November 4-5, 1999)" in the 1993 - 1999 testing file. I scanned the first five pages of the report which contain the title, contents, executive summary and results. I retained a copy for this report and provided a copy to the company.

We walked to the secondary crushing building that houses four crushers. There is a baghouse located on the northwest side of the building, it was not operating as the plant had been shut down earlier in the day and the baghouse was not restarted until the time of our observations. We observed the two Symons cone crushers inside the secondary crusher building which were operating. Stone is directed to these crushers through enclosed chutes and appear to be well sealed there were no visible emissions inside the building from these crushers. The Hazemag crusher is also in this building on another level and was not observed.

The Skandik secondary crusher is located towards the northwest end of the building and receives material through an open top. There was a significant amount of dust in this area of the building and drifting out an adjacent large door on the second level that was open at the time of the inspection. Visible emissions from this opening were approximately 10%. The PTI does not allow visible emissions from the building, the Subpart OOO limit is 7% opacity. Ms. McCoy assured me that the door is normally closed but was open due to the recent shut down. The door was later closed during our inspection. Dust from the secondary crusher accumulates within the building and must be cleaned out. There do not appear to be any "vents" as defined in Subpart OOO with "mechanically induced airflow".

The secondary crusher baghouse appears to only serve the Hazemag and Symons crushers (based on information from PTI applications) and has at least one pick-up point on the C-3 conveyor located in the basement of the secondary crusher building (observed). The C-3 conveyor receives material from each of the four crushers. It is effectively collecting dust from the discharge of each of the crushers but not from the charging of the Skandik crusher (the other crushers have enclosed charging).

The Skandik crusher was installed in March of 2017 following the issuance of PTI 186-99A. It replaced an Allis Chalmers secondary crusher. Since it is a new crusher, it is subject to the Subpart OOO for affected facilities installed after April 22, 2008. Subpart OOO requires PM and visible emissions testing of affected facilities (crushers, screens, bucket elevators, conveyors at Lafarge Presque Isle Quarries). These requirements are included in the PTI which requires that PM and visible emission rates from the Sandvik crusher be evaluated in accordance with Subpart OOO.

PM emissions testing of the baghouse and visible emission testing of the secondary crusher building were conducted on August 3, 2017. The test report refers to testing of the "Hydroset" which is not a piece of regulated equipment, but refers to a particular optional feature of the Sandvik crusher. Assuming the report is referring to the Sandvik crusher, PM testing was not required because the Sandvik crusher is not controlled by the baghouse and has no other "stack". The NSPS PM testing requirement is for affected facility "stack" emissions. The NSPS PM limit is 0.022 gr/dscf.

The test report notes that the control device is a baghouse that is associated with the Hazemag and Symons secondary crushers. This appears to be correct and, as reported, the test results indicate compliance with the Hazemag and Symons crushers PM and PM10 emission limits (0.02 lb/1,000 lbs of gas and 1.1 lb/hr. respectively). However, testing of the Hazemag and Symons crushers is not required in the PTI. The test report presents the PM emissions in units consistent with the Michigan Air Pollution Control Rule limits (lb/1000 lbs gas) but not with the Subpart OOO emission limits (gr/dscf). Visible emission testing was also conducted and did appear to meet the Subpart OOO requirements for the Sandvik crusher.

Following the inspection, we returned to Ms. McCoy's office to review the applicable recordkeeping. All of the necessary records were readily available, and copies were provided and are attached. The specific records are referenced in the permit condition review section.

Permit Condition Review:

I. Emission Limits

Pollutant	Limit	Equipment	2017 Test results
1. PM	0.02 lb/1,000 lbs gas	Combined emissions from Hazemag and (2) Symons cone crushers	0.001 lb/1,000 lbs of gas
2. PM10	1.1 pph		0.03 lb/hr
3. PM10	4.7 tpy		NA
4. PM	0.022 gr/dscf	Sandvik Secondary Crusher	NA, no stack emission point
5. Visible Emissions	5% opacity	Truck/loader traffic and storage piles	0%

II. Material Limits

1. FGLIMESTONE Limestone processed, 2,900 tons per hour, 11, 972,650 tons per calendar year. Co. Records indicate limestone processed through the primary crusher were; 1,500 to 2,000 tph and 5,332,066 tpy, MAERS Primary Crushing 5,332,066 tpy.

2. Svedala H-8000 Hydrocone crusher (mill addition), 840 tons per hour, 4,415,040 tons per year. Company records indicate 2017 mill addition material throughput was 356 tph and 954,694 tpy.

III. Process/Operational

1. Maintain and operate a conveyor belt scale on conveyor C-1 (primary crusher). Ms. McCoy stated C-1 is equipped with a scale that has a readout in the quarry office.

2. Maintain and operate a conveyor belt scale on conveyor A-1(mill addition). Ms. McCoy stated A-1 is equipped with a scale that has a readout in the quarry office.

3. Central baghouse operating properly. The baghouse was not operating initially at the time of the inspection but was started up during the inspection. No visible emissions were observed from the stack once operation resumed.

4. Svedala (mill addition) triple deck screen complete enclosure. The mill addition triple deck screen is enclosed in a newer addition to the northwest side of the screenhouse.

5. Comply with opacity limits in Appendix A. The source was in compliance with all of the opacity limits in Appendix A of the PTI with the exception of the Sandvik secondary crusher due to an open door on the crusher building. The door was closed during the inspection eliminating the visible emissions.

6. No crushing of asbestos containing materials. No asbestos materials are crushed or processed at the source, only raw materials mined on site are processed.

7. Comply with fugitive dust control program. The source appeared to be in compliance with most aspects of the fugitive dust control program the only sources of fugitive dust emission that were observed were the storage pile drop points (which were in compliance with opacity limits) and vehicle travel on plant road and yard areas. Records of monthly water application are maintained and were provided.

IV. Design

1. Label equipment. Each piece of equipment was labeled with a small sign containing the equipment ID.

V. Testing

1. Verify PM emissions from Sandvik secondary crusher as required by the NSPS. This requirement does not appear to be applicable to this facility. The NSPS requires PM testing of stack emissions from affected sources. The Sandvik secondary crusher does not have an associated stack. Emissions from the Sandvik crusher are emitted directly into the secondary crusher building enclosure. Stack testing was conducted in 2017 on the Carter Day baghouse serving the Hazemag, Symons crushers and conveyor C-3. None of this equipment is an affected source under NSPS since it was installed prior to 1983.

2. Visible emissions from Sandvik secondary crusher. VE testing of the Sandvik crusher (secondary crusher building) was conducted in 2017 following installation of the crusher. The results were 0% opacity.

VI. Monitoring/Recordkeeping

1. Hourly and yearly records of limestone processed. Records are maintained and were up to date, copies of the monthly records for 2017 are attached.

2. Hourly and yearly records of limestone processed through the Svedala H-8000 crusher. Records are maintained and were up to date, copies of the monthly records for 2017 are attached.

3. Monthly and 12-month rolling time-period emission records for Hazemag and Symons crushers. Records are maintained and were up to date, copies of the monthly records for 2017 are attached and demonstrate compliance with the 4.7 tpy limit.

VII. Reporting

1. Written notification of construction and operation of the Sandvik secondary crusher. Notification was received by email on 1/31/2017.

VIII. Stack Parameters

1. SVBAGHOUSE01 28" x 19" and 7' high, unobstructed vertically. The stack is greater than 7' high but appears to have an opening larger than the 19" width. The opening is covered by a grate and is horizontal not vertical. These stack parameters originated in PTI 186-99. The original Sly baghouse was replaced in 1993 with the Carter Day baghouse.

IX. Other

1. Comply with Subpart OOO. Pending verification that the mill addition equipment has been tested, the mill addition equipment and Sandvik crusher at the Source appear to be in compliance with the requirements of NSPS Subpart OOO.

Summary:

The source appears to be in compliance with the requirements of PTI 186-99A, NSPS OOO and the Michigan Air Pollution Control Rules at the time of the inspection with the following exceptions:

Stack parameters do not meet permit requirements (unobstructed vertical discharge and potentially size).

Potential compliance issues include: verifying the baghouse is operating when any of the secondary crushers are operating; Ensuring enclosure openings on the screenhouse and secondary crusher building are closed when the process is operating; Ensuring plant roads and yard areas are maintained with appropriate dust control. Verification should be confirmed through future unannounced inspections.

NAME  DATE 6-26-18 SUPERVISOR SN