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

B147764775

FACILITY: Holcim (US) Inc. DBA Lafarge Alpena Plant		**SRN / ID:** B1477
LOCATION: 1435 Ford Avenue, ALPENA		**DISTRICT:** Cadillac
CITY: ALPENA		**COUNTY:** ALPENA
CONTACT: Mallory Miller ,		**ACTIVITY DATE:** 08/26/2022
STAFF: Kurt Childs	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: MI-ROP-B1477-2020b 2022 FCE PCE 3.		
RESOLVED COMPLAINTS:		

B1477 Holcim U.S. d/b/a Lafarge Alpena Plant Partial Compliance Inspection #3

On August 26, 2022 I conducted the third and final compliance inspection of the Lafarge Alpena Plant to complete the Full Compliance Evaluation (FCE) for 2022. I met with Michael McCarter and Mallory Miller who accompanied me on the inspection. Partial Compliance Inspection (PCE) 3 covered the following flexible groups in MI-ROP-B1477-2020b:

FG CLINKER SYS

FG FINISH MILLS

FG CEMENT STR LOAD

FG CKD HAND SYS

FG FPENGINES

FG EXGEN

FG COLDCLEANERS

At the time of the inspection the weather was partly sunny, 75 degrees f, winds from the northwest. Off-site observations did not indicate any visible emissions or odors. FG KG5 (Kilns 19 – 21) was not operating.

FG CLINKER SYS:

The clinker handling system encompasses clinker transport and storage from the clinker coolers to either storage or to FG FINISH. Gypsum, Limestone and CKD can be added to the clinker as needed during this process. As a result, this process consists mainly of conveyors, transfer points, and storage bins and silos. Particulate matter is the air pollutant of concern and emissions are controlled be various dust collectors. Lafarge Alpena Plant staff have developed a collection of photographs with corresponding identification for each of the dust collector vents identified in the ROP. The photos are maintained in a three-ring binder, and this was used during the inspection to locate and identify each emission point.

We identified and observed each of the dust collectors. At the time of the inspection no visible emissions were present from the equipment in FG CLINKER SYS with the exception of a small, uncovered section of the 16 belt conveyor near the base. A small plume of visible emissions was present. In the past it has been common for sections of the conveyor cover to be off for maintenance. Fugitive dust was also

observed from open doors at the bottom of the clinker silos. The doors were closed during the inspection with the exception of one that was damaged.

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
VE	10 percent opacity[2]	Six-minute average	FG CLINKER SYS		
PM	0.02 grain per dry standard cubic foot [2]	Test Protocol	FG CLINKER SYS	NA	Testing not required this review perio
PM	0.10 pound Per 1,000 pounds of exhaust gases calculated on a dry gas basis [2]	Test Protocol	EU CLINK AD/PROP	NA	Testing not required this review perio
PM	13.8 tons per year[2]	12-month rolling time period as determined at the end of each calendar month	EU CLINK AD/PROP	NA	Not Reviewe

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Dust collectors and covered clinker conveyers are installed, maintained, and operated in a satisfactory manner, with the exception of the 16-belt conveyor cover section that was open at the time of the inspection.

Dust Collector	VE/Reading (% opacity)

EU BLD FUEL PILE: 40-100	**0**
40-110	**0**
40-120	**0**
309DC9	**0**
309DC10	**0**
EU CLINK AD/PROP: 41-352	**0**
41-356	**0**
41-439	**0**
41-427	**0**
41-447	**0**

2. An approved O&M plan dated November 2, 2017 is on file at the Cadillac District office.

3. Clinker appears to be stored on-site per PC MACT/O&M Plan including appropriate control measures. Clinker is not stored in open piles.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. **The clinker conveyors, associated with FG CLINKER SYS, were equipped and maintained with covers to minimize fugitive emissions from the conveyors except as noted in III.1 above.**

V. TESTING/SAMPLING

1. Opacity tests of FG CLINKER SYS were conducted in accordance with 40 CFR Part 63, Subparts A and LLL in April 2002. Copies of the test results are on file at the Cadillac District office.

VI. MONITORING/RECORDKEEPING

1. Visible emissions Method 22 and Method 9 (if necessary) monitoring for FG CLINKER SYS (storage bins, conveying system transfer points, bulk loading and unloading systems) is conducted as specified in Appendix 3.3

2. Method 9 visible emissions readings have not been necessary.

3. PM and PM10 emission calculations are maintained and are provided upon request (see attached records) or through the MAERS submittal.

VII. REPORTING

NA this review period.

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Dimensions Diameter (inches)	Minimum Height Above Ground (feet)
SV40-120 EU CLINK STR BLD	56.4[2]	63[2]
SV40-100 EU CLINK STR BLD clinker reclaim belt	559 (square inches)[2]	54 Orientation is not unobstructed vertically up[2]
SV 40-110 EU CLINK STR BLD clinker belt transfer	346 (square inches)[2]	121 Orientation is not unobstructed vertically up[2]
EU CLINK AD/PROP SV25-825	437 (square inches)[2]	21.3 Orientation is not unobstructed vertically up[2]
EU CLINK AD/PROP SV26-825	437 (square inches)[2]	55.3 Orientation is not unobstructed vertically up[2]

The stacks/vents appeared to meet these specifications at the time of the inspection.

FG FINISH MILLS

Finish Mills use ball mills and roll presses to convert clinker, gypsum, limestone and CKD to Portland cement. Cement finishing operations are enclosed in a separate large building within the plant property. The building contains six separate finishing lines (13-15 and 19–21), each centered on a rotating ball mill. Ball mills 20 and 21 are each preceded by a roller press and followed by a separator. Finishing line 19 does not have a roller press but does include a separator. Finish lines 13-15 do not include roller presses and the ball mill and separators are one unit on these lines. Dust control points within the finishing lines include each ball mill and separator and the roller press and lower roller press system (material transfer from conveyor to elevator). Separators are used collect and reclaim the Portland cement. During the inspection we identified and observed each dust collector stack. At that time there were no visible emissions from any of the stacks. We did observe an open door near the top of the Finishing building from which a significant amount of fugitive dust was escaping. Ms. Miller made a call and requested that staff close that door.

I. EMISSION LIMITS

lutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fr Source Recordkeepir Testing
VE	10% opacity[2]	Six-minute average	FG FINISH MILLS	0%	Not Reviewe
PM-10	1.0 pound per hour[2]	Test Protocol	EU BALL MILL 20 Mill Vent EU BALL MILL 21 Mill Vent (Limit applies to each individual emission unit.)	NA	Not Reviewe
PM-10	10.0 pounds per hour[2]	Test Protocol	EU BALL MILL 20 Separator EU BALL MILL 21-Separator (Limit applies to each individual emission unit.)	NA	Not Reviewe

PM-10	4.1 tons per year[2]	12-month rolling time period as determined at the end of each calendar month	EU BALL MILL 20 Mill Vent	NA	Not Reviewe
PM-10	4.5 tons per year[2]	12-month rolling time period as determined at the end of each calendar month	EU BALL MILL 21 Mill Vent	NA	Not Reviewe
PM-10	44.0 tons per year[2]	12-month rolling time period as determined at the end of each calendar month	EU BALL MILL 20 Separator EU BALL MILL 21 Separator (Limit applies to each individual emission unit.)	NA	Not Reviewe
PM	0.15 pounds per 1000 pounds of exhaust gases, calculated on a dry basis[2]	Test Protocol	EU BALL MILL 20 Mill Vent EU BALL MILL 20 Separator EU BALL MILL 21 Mill Vent EU BALL MILL 21 Separator (Limit applies to each individual emission unit.)	NA	Not Reviewe
PM	0.07 pounds hour[2]	Test Protocol	EU Roll Press 20 (43-271)	NA	Not Reviewe

			and **EU Roll Press 21** **(44-271)**		

II. Material Limits

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Dust collectors are installed, maintained, and operated in a satisfactory manner. Each stack was observed during operation and there were no visible emissions.

Dust Collector	VE/Reading (% opacity)
Ball Mill 13, 45-261	0
Ball Mill 14, 45-262	0
Ball Mill 15, 45-264	0
Ball Mill 19, 49-011	0
Ball Mill 19, 49-265	0
Ball Mill 19, 49-269	0
Ball Mill 19, 49-270	0
Ball Mill 20, 43-011	0
Ball Mill 20, 43-269	0
Ball Mill 20, 43-270	0
Ball Mill 21, 44-011	0

Ball Mill 21, 44-269	**0**
Ball Mill 21, 44-270	**0**
Roll Press 20, 43-271	**0**
Roll Press 20, 43-272	**0**
Roll Press 21, 44-271	**0**
Roll Press 21, 44-272	**0**

2. An approved O&M plan dated November 2, 2017 is on file at the Cadillac District office.

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

1. Opacity tests of FG FINISH MILLS were conducted in accordance with 40 CFR Part 63, Subparts A and LLL in April 2002. Copies of the test results are on file at the Cadillac District office. PM/PM10 emission testing is no longer required for this emission unit.

VI. MONITORING/RECORDKEEPING

1. and 2. Method 22 and Method 9 (if necessary) visible emissions monitoring and CAM compliance. Method 22 monitoring as specified in Appendix 3.5. VE readings are onducted annually in accordance with Appendix 3.3.

3,6 - 9. CAM daily Method 22 monitoring for compliance with the PM10 limit. Daily monitoring is conducted there were no visible emissions, or the equipment was not operating at the time of the observations and therefore no CAM excursions or exceedences. The records are maintained.

4,5 PM and PM10 emission calculations are maintained and are provided upon request or through the MAERS submittal.

VII. REPORTING

ROP and CAM Reports were reviewed as they were received throughout the FCE period.

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Heigh Above Ground (feet)
1. SV43-269 **EU BALL MILL 20 mill vent**	**80^2**	**108^2**
2. SV43-270 **EU BALL MILL 20 separator**	**80^2**	**108^2**
3. SV44-269 **EU BALL MILL 21 mill vent**	**80^2**	**108^2**
4. SV44-270 **EU BALL MILL 21 separator**	**80^2**	**108^2**

The mill vent stacks are located inside the separator stacks and both exit on the roof of the finish grind building and appear to meet the height limit. There have not been any changes to these stacks.

IX. OTHER REQUIREMENT(S)

FG FINISH MILLS appears to be in compliance with the requirements of the PC MACT and NESHAP based on emissions information, testing, recordkeeping and reporting.

FG CEMENT STR LOAD

Cement Storage and Bulk Loading of Portland Cement to boats, rail cars, and trucks. EU STORE UNIT 2, Storage Unit 2, various silos that store the cement including transfers of cement to EU BULK LD TRUCK via pump. This storage unit was not in use at the time of the inspection. EU STORE UNIT 3, Storage Unit 3, various silos that store the cement including transfers of the cement to EU BULK LD TRUCK via pump. EU STORE UNIT 4, a set of 30 storage silos that store, transfer and load cement onto ships and railcars. The cement storage and loading system includes the pneumatic transportation of cement from the finish mills to the cement storage silos and loading of ships, trains, and trucks. Dust collection points include the storage units and loading processes. Storage units 2, 3, and 4 are sets of storage silos and each storage unit has dust control on the silo vents. Loading operations are controlled by cartridge type dust collectors on each loading rig. Controls are on both the conveyor and the loading spout. At the time of the inspection no trains were being loaded. A ship was in port but had not begun loading. Truck loading was

active and we observed these operations. I did not detect any visible emissions from any of the dust collectors.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
1. VE	10% opacity[2]	Six-minute average	FG CMNT STR LOAD	0%	Not Reviewe
2. PM	0.05 pound per 1000 pounds of exhaust gas, calculated on a dry gas basis [2]	Test Protocol	EU STORE UNIT 2	NA	Not Reviewe
3. PM	0.15 pound per 1000 pounds of exhaust gas, calculated on a dry gas basis [2]	Test Protocol	EU STORE UNIT 3 EU STORE UNIT 4, Rail (The limit applies to each individual dust collector of East, Middle, and West) EU STORE UNIT 4, Boat EU BULK LD TRUCK(Dust collector EU-46 -710B)	NA	Not Reviewe

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
4. PM-10	2.33 pph[2]	Hourly	EU BULK LD TRUCK	NA	Not Reviewe
5. PM	2.4 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EU BULK LD TRUCK	PM	Proper operation o control devic demonstrate compliance, stack testin required duri the review period Calculations indicate PM emissions are less than 1 ton per 12 mos rolling TP each
6. PM-10	0.2 ton per year[2]	12-month rolling time period as determined at the end of each calendar month	EU STORE UNIT 4, Rail (The limit applies to each individual dust collector of East, Middle, and West)	NA	Not Reviewe
7. PM-10	0.8 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EU STORE UNIT 4, Rail (The limit applies to each individual dust collector of East, Middle, and West)	NA	Not Reviewe
8. PM-10	1.5 pph[2]	Hourly	EU BULK LD TRUCK(Dust collector EU-46 -710B)	NA	Not Reviewe

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
9. PM-10	6.4 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EU BULK LD TRUCK (Dust collector EU-46-710B)	NA	Not Reviewe

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Dust collectors are installed, maintained, and operated in a satisfactory manner.

Dust Collector	VE/Reading
EU STORE UNIT 2: Silo dust collector 50 -462	Not in use.
bottom transfer dust collector 570DC01.	Not in use.
EU STORE UNIT 3: South silos dust collector SV50-701	0%
north silos dust collector SV50-702	0%
bottom transfer dust collector 570DC02.	0%
EU STORE UNIT 4: Rail dust collectors 574DC01, 574DC02, 574DC03, 574DC04, 46-710B.	Not operating at time of inspection.
EU STORE UNIT 4: Silos 50-416 thru 50-426	0% storage unit, telescopes and slides not in use.

Rig 1 thru 14 Telescopes DC09 thru DC22 **Rig1- 14 Air Slides DC23 thru DC36**	

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

1. Opacity tests of FG CMT STR LOAD were conducted in accordance with 40 CFR Part 63, Subparts A and LLL in April 2002. Copies of the test results are on file at the Cadillac District office.

VI. MONITORING/RECORDKEEPING

1. The permittee shall conduct monthly Method 22 and Method 9 (if necessary) visible emissions monitoring as specified in Appendix 3.3. VE readings are conducted annually in accordance with Appendix 3.3.

2. The permittee shall keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG CMT STR LOAD. Method 9 records shall include the time of the visible emissions, cause of the visible emissions, corrective action taken and time of completion of corrective action. Records are maintained as required.

3. and 4. PM and PM10 emission calculations are maintained and are provided upon request (see attached records) or through the MAERS submittal.

VII. REPORTING

Standard ROP reporting reviewed as received. No testing to report.

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requiremen
1. SV46-710B **EU BULK LD TRUCK**	**24^2**	**50^2**	**R 336.2803** **R 336.2804**
2. SV574DC01 **EU STORE UNIT 4 (Air Slide 1)**	**6.0^2**	**20^2**	**R 336.2803** **R 336.2804**

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requiremen
3. SV574DC01 **EU STORE UNIT 4 (Air Slide 1)**	**6.0[2]**	**20[2]**	**R 336.2803 R 336.2804**
4. SV574DC03 **EU STORE UNIT 4 (Rail Load Spout)**	**6.0[2]**	**20[2]**	**R 336.2803 R 336.2804**

The observed stack parameters appear to be consistent with the stack/vent requirements.

IX. OTHER REQUIREMENT(S)

FG CMT STR LOAD appears to be in compliance with the requirements of the PC MACT and NESHAP based on emissions information, testing, recordkeeping and reporting.

FG CKD HAND SYS

The CKD handling system includes pneumatic transportation of CKD from the kiln baghouses to the pug mill where water is added to the CKD. The mixture is loaded into scraper vehicles and transported to the landfill where it is applied. Dust collection points include KG5 dust return (EU DUST RETURN), KG6 FEED (EU FEED END 6), and the CKD Pug mill (EU CKD PUGMILL). Transport is enclosed pneumatic and pugmill operations are wet. Dust collectors are located inside and around the kiln feed end building.

EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
VE	**10% opacity**	**Six-Minute Average**	**FG CKD HAND SYS**	**0**	**Not reviewe**
PM-10	**0.02 grain per actual**	**Test Protocol[a]**	**EU DUST RETURN 5**	**NA**	**Not reviewe**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Emissions observed during inspection	Emissions fro Source Recordkeepin Testing
	cubic foot of exhaust gas [2]		(This limit applies to dust tanks 31-006), EU FEED END 6 (This limit applies to elevators 32-131 and 32-132, and vibrating screen 32-006)		
PM	0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis [2]	Test Protocol[a]	FG CKD HAND SYS	NA	Not reviewe

II. MATERIAL USE

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Baghouses and dust collectors are installed, maintained, and operated in a satisfactory manner. No visible emissions were observed from any of the stacks.

Dust Collector	VE/Reading
EU DUST RETURN 5: 31-181	0%
31-182	0%
31-184	0%
31-185	0%

31-187	0%
EU FEED END 6: 32-171	0%
32-173	0%
32-172	0%
EU CKD PUGMILL: 33-250.	0%

2. The O&MPlan/ MAP has been previously approved by the AQD and is on file at the Cadillac District office.

V. TESTING/SAMPLING

1. Opacity testing of FG CMNT STR LOAD in accordance with PC MACT requirements (40 CFR 63.1349(b) (2). Copies of the test results are on file at the Cadillac District office.

VI. MONITORING

1. The permittee shall conduct monthly Method 22 and Method 9 (if necessary) visible emissions monitoring as specified in Appendix 3.3. VE readings are conducted annually in accordance with Appendix 3.3.

2. The permittee shall keep, in a satisfactory manner, all Method 22 and Method 9 visible emissions readings from the FG CMT STR LOAD. Method 9 records shall include the time of the visible emissions, cause of the visible emissions, corrective action taken and time of completion of corrective action. Records are maintained as required.

3. preventative maintenance records are maintained and available.

VII. REPORTING

Standard ROP reporting reviewed as received. No testing to report.

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)
1. SV31-187 **Serves EU DUST RETURN 5 dust tank 31-006 (Batman Tank)**	**24.2[2]**	**120[2]**
2. SV32-171 **Serves EU FEED END 6 elevators 32-131, 32-132, and vibrating screen 32-006**	**33.7[2]**	**110[2]**

IX. OTHER REQUIREMENT(S)

1. and 2. Comply with PC MACT and NSPS. Vents appear to meet the specified parameters and no changes have been made.

COLD CLEANERS

Numerous small cold cleaners scattered around the plant using mineral spirits. Lafarge uses aqueous based solvent. Lids on the cleaners are maintained closed when not in use and there were no concerns noted during the inspection.

PCE 3 Summary:

This PCE addresses compliance with MI-ROP-B1477-2020b for Flexible Groups FG CLINKER SYS, FG FINISH MILLS, FG CEMENT STR LOAD, FG CKD HAND SYS, FG FPENGINES, FG EXGEN, and FG COLDCLEANERS. A site inspection was conducted as well as a records review to determine compliance with these requirements. Reporting was reviewed as it was received. Not all records were readily available and extra effort was required to obtain them. These issues were addressed with Lafarge Alpena staff for the future. As a result of this PCE it appears that the emission units, control devices, and monitoring equipment for FG CLINKER SYS, FG FINISH MILLS, FG CEMENT STR LOAD, FG CKD HAND SYS, FG FPENGINES, FG EXGEN, and FG COLDCLEANERS are operating in compliance with the ROP requirements at the time of the inspection.

FCE SUMMARY:

The 2022 FCE was conducted through three site inspection PCEs and reviews of each report as they were received throughout the review period. Overall, the facility appeared to be in compliance with the requirements of MI-ROP-B1477-2020b and the Air Pollution Control Rules following completion of the PCEs. However, a violation

notice was issued outside of the FCE and eventually resolved during the review period for improper operation of control equipment (Rule 910) on FG CLINKER SYS. No additional violations have been cited as a result of this FCE.

NAME _____ DATE _____ SUPERVISOR _____ 2022.12.29 09:11:23 -05'00'