

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

**FCE Summary Report**

<b>Facility :</b> Holcim (US) Inc. DBA Lafarge Alpena Plant	<b>SRN :</b> B1477
<b>Location :</b> 1435 Ford Avenue	<b>District :</b> Cadillac
	<b>County :</b> ALPENA
<b>City :</b> ALPENA <b>State:</b> MI <b>Zip Code :</b> 49707	<b>Compliance Status :</b> Compliance
<b>Source Class :</b> MAJOR	<b>Staff :</b> Kurt Childs
<b>FCE Begin Date :</b> 1/1/2019	<b>FCE Completion Date :</b> 9/8/2020
<b>Comments :</b> 2020 FCE	

**List of Partial Compliance Evaluations :**

Activity Date	Activity Type	Compliance Status	Comments
08/13/2020	Scheduled Inspection	Compliance	2020 PCE 2 and FCE.
08/12/2020	Stack Test	Compliance	Test Protocol for - CEMS RATA - Raw Mills 14 & 15, Kilns 19, 20, 21, 22, 23, & West Gas Scrubber.
08/11/2020	Stack Test	Compliance	EUKILN20 PC MACT PM/CPMS 6/30/2020 Stack Test Results.
08/11/2020	Excess Emissions (CEM)	Compliance	See Activity Report.
08/11/2020	Sample Results Review	Compliance	6/30/2020 EU KILN 20 PM/CPMS stack test results.
08/11/2020	Other	Compliance	2020 2nd Quarter EER Review.
06/17/2020	Stack Test	Compliance	EU KILN 21 PM/CPMS test 5/21/2020, PCMACT. Results demonstrate compliance with 0.07 lbs/ton clinker emission limit at 0.022 lbs/ton. SSOL established at 5.23 mA. SSOL protocol and calculations verified. Additional stack test review by TPU.
04/28/2020	Excess Emissions (CEM)	Non Compliance	See Activity Report
04/28/2020	Other	Non Compliance	2020 1st Quarter EER Review.
04/21/2020	Sample Results Review	Compliance	FG KG6 HCL/SO2 surrogate CEMS monitoring.
04/21/2020	Stack Test	Compliance	Hydrogen Chloride Testing Report - ROP Certification not required. See Activity Report.
04/06/2020	Stack Test	Compliance	EUKILN20, EUKILN21 PC MACT PM/CPMS Stack Test Report.
04/06/2020	Stack Test	Non Compliance	EUKILN20 PC MACT PM/CPMS Stack Test Results.

Activity Date	Activity Type	Compliance Status	Comments
04/06/2020	Sample Results Review	Compliance	EU KILN 20 PM/CPMS stack test results.
04/06/2020	Sample Results Review	Compliance	EUKILN20, EUKILN21 PC MACT PM/CPMS 3/19/20 Test Report Review.
03/30/2020	Other	Non Compliance	Review of EU KILN 19 R 912 notification of HCL 3ppm 30 day rolling average emission limit exceedance. Failure of control equipment for a 5 hour period on 3-9-20 resulted in excess HCL emissions. Due to the low emission limit the exceedance is expected to last for up to 20 days.
03/27/2020	ROP SEMI 2 CERT	Compliance	2019 2nd Semi-annual Report ROP No. MI-ROP-B1477-2012c July - December 2018. Report contains 27 mainly monitor downtime and excess emission deviations previously reported.
03/27/2020	CAM Excursions/Exceedances	Compliance	Semi-Annual CAM Report July-December Excursion/Exceedance. Excursions for the entire year were reported FG KG5 COMS :2706 min. excess emissions.
03/27/2020	CAM monitor downtime	Compliance	Semi-annual CAM Report July-December Monitor Downtime. Downtime for entire year reported. The permittee reported there were downtimes on FG KG5 COMS and FG CLINK COOL CPMS. All Downtime previously reported.
03/27/2020	ROP Annual Cert	Compliance	Annual Compliance Certification Report ROP No. MI-ROP-B1477-2012c January- December. Report contains mainly monitor downtime and excess emission deviations previously reported in Quarterly Excess Emission reports. Also a revision to ROP SEMI 1 for EU KILN 20 and 21 COMS downtime.
03/19/2020	Stack Test Observation	Compliance	EU KILN 20, EU KILN 21 PM CPMS operating parameter retest.
03/19/2020	Scheduled Inspection	Compliance	PCE 1 of 3 for 2020 FCE. Covers FG Quarry, FG RAW MAT, FG RAW MILL SYS.
03/16/2020	MAERS	Compliance	See MAERS for Further Info.
03/10/2020	Rule 912	Compliance	KG5, EU KILN 19 Excess emissions of HCL. 3ppm 30-day rolling average limit. Written report to follow email notification. Written report received 3/19/20.

Activity Date	Activity Type	Compliance Status	Comments
03/05/2020	Stack Test Observation	Compliance	KG6 HCL/SO2 re-test.
02/27/2020	MACT (Part 63)	Compliance	FG KG5 and FG KG6 40CFR 63, Subpart LLL PC MACT Initial Notification of Compliance Form and Certification. Includes references to past CEMS RATA and emission testing events as compliance demonstrations for each PC MACT pollutant for each kiln.
02/20/2020	Stack Test	Compliance	EU CLINK COOL 22 PM/CPMS testing. PM emission limit = 0.07 lb./ton clinker. Test results = 0.014 lb./ton clinker. New CPMS operating limit = 4.35 mA. Operating data included. Report was timely and certified.
02/20/2020	Complaint Investigation	Compliance	Fugitive dust complaint follow-up.
02/13/2020	Other	Compliance	Additional information - 2/02/2020 R 912 report, EU KILN 20 SO2 30-day rolling average exceedance. The response states the 912 exceedance was due to process problems requiring kiln shut down, repairs and restart. Due to the limited operating time/clinker production the 30-day ton/clinker limit was exceeded.
02/04/2020	Rule 912		EU KILN 20 Email notification of Rule 912 SO2 pounds per ton of clinker 30-day rolling average limit exceedance.
02/03/2020	Other	Non Compliance	2019 4th Quarter EER CEMS report review.
01/31/2020	Excess Emissions (CEM)	Non Compliance	See Activity Report
01/23/2020	Stack Test	Non Compliance	EU KILN 20, EU KILN 21 PC MACT PM TEST. PM limit = 0.07lb/ton. Both kilns failed with 0.10 lb/ton. Retest conducted 12/18/19, results received 12/26/2019 under review by TPU.
01/22/2020	Meeting Notes	Compliance	FG KG6 HCL-SO2 test teleconference.
01/13/2020	Stack Test	Compliance	EU KILN 20, EU KILN 21 PC MACT PM TEST. PM limit = 0.07lb/ton. Both kilns passes with 0.04 and 0.05 lb/ton respectively. Operating data included. Additional review by TPU.

Activity Date	Activity Type	Compliance Status	Comments
01/13/2020	Stack Test	Compliance	FG KG6 WGS, EU Kiln 19, EU Kiln 20, PC MACT HCL CEM Performance Evaluation Test Report. The report states each of the HCL CEMS meets the requirements of PS 15. Additional review by TPU.
01/13/2020	Stack Test	Compliance	EU KILN 21 PC MACT HCL Performance Evaluation Test Report. The report states each of the HCL CEMS meets the requirements of PS 15. Additional review by TPU.
01/13/2020	Stack Test	Compliance	FG KG6 WGS PM/ PM CPMS Stack Test Part 63, Subpart LLL (PC MACT). Test results indicate the PM emissions pass the 0.07 lb./ton limit by rounding (0.073 lb./ton). A new CPMS operating limit of 4.89 mA was established. Additional review by TPU.
12/30/2019	Rule 912	Compliance	Rule 912 report for incident reported by email on 11/20/19. EU KILN 20 excess SO2 emissions, 30-day rolling lbs/ton clinker limit. Excess emissions occurred from 11/18 through 11/20. Stack O2 monitor fault lead to unintentional improper operation of the kiln. MAP revisions to be implemented.
12/18/2019	Stack Test	Compliance	FG KG6, EUKILN 22 & 23 - Dioxin / Furan Stack test results. 40 CFR 63 Subpart LLL. See Activity Report.
12/18/2019	Stack Test	Compliance	FG KG6 HCL alternate monitoring method - SO2 as HCL surrogate. 40 CFR 63 Subpart LLL. See Activity Report.
12/18/2019	Sample Results Review	Compliance	FG KG6 D/F test for 40 CFR Subpart LLL, 10/24-25/2019.
12/18/2019	Sample Results Review	Compliance	FG KG6 WGS HCL emissions and SO2 alternate monitoring demonstration. 40 CFR 63 Subpart LLL.
12/09/2019	ROP Other	Compliance	Test Protocol for: Confirmation of the absence of Cyclonic Flow at Kiln 22 & 23 Exhaust Ducts. Emissions of HCL at Wet Gas Scrubber Exhaust Stack.
12/04/2019	Stack Test Observation	Compliance	FG KG6 PC MACT HCL/SO2 testing, WGS stack.

Activity Date	Activity Type	Compliance Status	Comments
11/21/2019	Stack Test	Compliance	Stack Test for Kiln 19 - PM CPMS - MACT LLL. PM emissions and correlated CPMS mA readings. PM emissions are compliant the CPMS operating limit is reported as 5.04 mA, though this seems artificially high. Several abnormally high mA readings occurred during Run 1 biasing the final avg. high. This appears to be acceptable since it is not addressed by the Subpart LLL testing procedures. Most of the mA readings were around 4.5 mA. The production rate during the test was greater than 50%. Additional review to be conducted by TPU staff.
11/21/2019	Rule 912	Compliance	Follow up to verbal notification received on 11/12/19 of FG KG6 HCL 30 day limit exceedance. Letter from Warner Norcross Judd LLP on behalf of Lafarge. Faulty HCL CEM will be replaced by monitoring SO2, testing to be conducted.
11/20/2019	Stack Test Observation	Compliance	FG KG6 WGS PM/PM CPMS test.
11/19/2019	CEM RATA	Compliance	RATA for Kiln 20 & 21 Hg CEMS. The report indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production for each emission unit. Additional review to be conducted by TPU staff.
11/12/2019	Rule 912	Compliance	Verbal notification of FG KG6 exceedance of HCL 30-day rolling average emission limit. Report to follow in 10 days.
11/05/2019	Stack Test	Compliance	Compliance test report: EU RAW MILL 14 and EU RAW MILL 15, PM emissions. Results indicate compliance with the 0.03 lb./1000 lbs of exhaust gas, 27.51 lb/hr and 120.2 TPY PM emission limits. Production records indicate normal operation during the test.

Activity Date	Activity Type	Compliance Status	Comments
11/05/2019	CEM RATA	Compliance	RATA for FG KG6 Wet Gas Scrubber NOx, O2, CO2, CO, SO2, THC. Hg RATA not included. The report indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review to be conducted by TPU staff.
11/05/2019	CEM RATA	Compliance	RATA for EU RAW MIL 14 & EU RAW MILL 15 THC CEMS. The report was timely and certified and indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review to be conducted by TPU staff.
11/05/2019	CEM RATA	Compliance	RATA for EU KILN 23 NOx, O2, CO2, CO. The report was timely and complete and indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review to be conducted by TPU staff.
11/05/2019	CEM RATA	Compliance	RATA for EU KILN 22 NOx, O2, CO2, CO. The report was timely and complete and indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review to be conducted by TPU staff.
11/05/2019	CEM RATA	Compliance	RATA for EU KILN 19 NOx, O2, CO2, CO, SO2, Hg, and THC CEMS. The report was timely and certified and indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review to be conducted by TPU staff.
11/05/2019	CEM RATA	Compliance	RATA for EU KILN 20 NOx, O2, CO2, CO, SO2, and THC CEMS. Hg CEMS RATA was not included. The report indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review by TPU staff.

Activity Date	Activity Type	Compliance Status	Comments
11/05/2019	CEM RATA	Compliance	RATA for EU KILN 21 NOx, O2, CO2, CO, SO2, and THC CEMS. Hg CEMS RATA was not included. The report indicates compliance with the relative accuracy specifications. Process production records indicate >50% of maximum production. Additional review by TPU staff.
10/31/2019	Excess Emissions (CEM)		See Activity Report
10/31/2019	Other	Compliance	2019 3rd Quarter EER Review
10/25/2019	Complaint Investigation	Compliance	PEAS complaint
10/23/2019	Stack Test Observation	Compliance	EU Kiln 19 HCL Test, EU Kiln 20 PM test.
10/15/2019	Sample Results Review	Compliance	Review of stack test results for D/F emissions EU KILN 19, EU KILN 20, EU KILN 21
10/10/2019	Stack Test	Compliance	FG KG5 Dioxin/Furan Stack Test Report. Each of the kilns in FG KG5 had D/F emissions well below the 0.20ng/dscm@7%O2 limit.
09/26/2019	Stack Test Observation	Compliance	September Stack Testing.
09/25/2019	Stack Test	Compliance	Clinker Cooler 22, 23, 92, 93 PM test and CPMS operating limits. Results indicate compliance with 0.07 lb/ton clinker emission limit and set new operating limits. Average clinker throughput was >50% capacity.
09/12/2019	ROP Semi 1 Cert	Compliance	2019 1st Semi-annual Report ROP No. MI-ROP-B1477-2012c. Report contains previously reported monitor downtime incidents for each kilns NOx, CO, SO2, and Opacity monitors. Also Raw Mill 14 and 15 THC monitors and Clinker Cooler PM CPMS. 2 excess opacity deviations for kilns 19 and 20, 1 S02 exceedance on FG KG6. All previously reported. The 2019 Annual Report Certification included a revision to this report for EU KILN 20 COMS downtime 12,210 minutes, and EU KILN 19 COMS 20,886 minutes.
09/12/2019	CAM Excursions/Exceedances	Compliance	1st Semi-Annual CAM Report Excursion/Exceedance. KG5 COMS :264 min. EE.

Activity Date	Activity Type	Compliance Status	Comments
09/12/2019	CAM monitor downtime	Compliance	1st Semi-annual CAM Report Monitor Downtime. The permittee reported there were downtimes on FG CLINK COOL CPMS (365 hrs) and KG5 COMs (43440 mins). All Downtime previously reported.
09/05/2019	Other Non ROP		Lafarge Alpena sent an email and attachments notifying AQD that the plant plans to resume burning shingles as a non-solid waste fuel under the current ROP and 40 CFR Part 241. This was a curtesy notification since this determination is up to the operator and no notification is required.
07/30/2019	Excess Emissions (CEM)	Compliance	See Activity Report.
07/30/2019	Other	Compliance	2019 2nd quarter EER review
07/25/2019	Rule 912	Compliance	FG KG6 SO2 30 day rolling Avg. emission limit exceedance. Faulty pH probe in scrubber caused improper scrubber pH. Probe replaced, scrubber returned to normal. Include in Semi-annual deviation report.
07/25/2019	Rule 912	Compliance	EUKILN20 HCL 30 day rolling average emission exceedance. Daily emissions too high, pushed HCL over 30 day limit. Response indicates 30 day calculation included emissions from start up and shut down. Include in Semi-annual deviation report.
07/25/2019	Rule 912	Compliance	EUKILN20 and EUKILN21 HCL 30 day rolling avg. emission limit exceedance. EUKILN20 HCL 30 day rolling average emission exceedance. Daily emissions too high, pushed HCL over 30 day limit. Response indicates 30 day calculation included emissions from start up and shut down. Include in Semi-annual deviation report.
07/24/2019	Stack Test Observation	Compliance	EUCLINKCOOL22 PM/CPMS test.
07/23/2019	Stack Test	Compliance	CEMS RATA Testing Protocol. KG5, KG6, RM 14&15. PM, Hg, THC, RATA.

Activity Date	Activity Type	Compliance Status	Comments
07/16/2019	Telephone Notes		Tx with Lois Hall of Alpena who reported that on July 15th 2019 at 8:15PM Lafarge had a heavy orange plume from the stacks that she thought was probably due to a process upset. AQD can follow up during stack testing the following week.
06/07/2019	Stack Test		FG KG5 and FG KG6 D/F test protocol. Protocol is lacking information, passed comments on to J. Howe AQD-TPU.
06/05/2019	Stack Test	Compliance	Test Protocol RM 14&15 THC, CC PM/CPMS
05/06/2019	Excess Emissions (CEM)	Compliance	See Activity Report
05/06/2019	Other	Compliance	2019 1st Quarter EER.
03/19/2019	ROP Annual Cert	Compliance	Annual Compliance Certification Report ROP No. MI-ROP-B1477-2012c January- December. Report contains mainly monitor downtime and excess emission deviations previously reported in Quarterly Excess Emission reports.
03/19/2019	ROP SEMI 2 CERT	Compliance	2018 2nd Semi-annual Report ROP No. MI-ROP-B1477-2012c July - December 2018. Report contains mainly monitor downtime and excess emission deviations previously reported.
03/19/2019	CAM Excursions/Exceedances	Compliance	Semi-Annual CAM Report July-December Excursion/Exceedance. Excursions for the entire year were reported FG KG5 COMS :2094 min. EE, FG CLINK COOL CPMS had 4320 minutes of exceedance.
03/19/2019	CAM monitor downtime	Compliance	Semi-annual CAM Report July-December Monitor Downtime. Downtime for entire year reported. The permittee reported there were downtimes on FG CLINK COOL CPMS, KG5 COMs and KG6. All Downtime previously reported.
03/12/2019	MACT (Part 63)	Compliance	PC MACT/CISWI notification of waste-to-fuel switch (12/13/2018) and resulting switch from CISWI regulation to PC MACT (effective on 6/13/2019).
03/12/2019	CEM RATA	Compliance	2018 RATA FG KG5 (NOx, O2, CO2, CO, SO2, Hg), EU KILN 23 (NOx, O2, CO2, CO), FG RAW MILL SYS (THC). Results under review by TPU.

Activity Date	Activity Type	Compliance Status	Comments
03/08/2019	MAERS	Compliance	See MAERS for further info.
03/07/2019	ROP Other	Compliance	CERM Rata Test Protocol.
02/11/2019	CEM RATA	Compliance	CEMS RATA EUKiln 22 and FGKG6 WGS; NOx, CO, SO2, Hg. Report is timely and certified and indicates the CEMS are within the required relative accuracy. Additional review to be conducted by TPU.
02/05/2019	Stack Test	Compliance	12/12-14/2018 emissions testing of CC22 (to re-establish PM CPMS operating limit) and FGKG6 CISWI compliance. The test report sets a new operating limit for CC22 of 4.55 mA and indicates compliance with the CISWI emission limits for NOx, CO, and Dioxin/Furan.
02/05/2019	CEM RATA	Compliance	FG KG6 HCL CEMS Performance Evaluation. Results of HCL dynamic spiking tests for Kilns 22 and 23 (combined) indicate compliance with the 50% Relative Standard Deviation criteria of Performance Specification 15. Additional technical review of the report to be conducted by TPU.
02/04/2019	Other	Compliance	2018 4th quarter EER and CEMS downtime report review.
02/01/2019	Excess Emissions (CEM)	Compliance	See Activity Report
01/03/2019	Stack Test	Compliance	FGKG5 and FGKG6 NOx, SO2, PM, Metals, Dioxin/Furans emissions and CISWI test. Report is timely and certified. The results indicate compliance with emissions limits though NO emissions are reported as NOx and no NOx correction factor is included or discussed as agreed to prior to test. TPU review indicates NOx, SO2, and CO results were reported incorrectly or not at all.
01/03/2019	CEM RATA	Compliance	CEMS RATA FGKG5, FGKG6, FGRAWMILLS. Report is timely and certified and indicates the CEMS are within the required relative accuracy. Additional review to be conducted by TPU.

Activity Date	Activity Type	Compliance Status	Comments
01/02/2019	CEM RATA	Compliance	FG KG5 HCL CEMS Performance Evaluation. Results of HCL dynamic spiking tests for Kilns 19, 20, and 21 indicate compliance with the 50% Relative Standard Deviation criteria of Performance Specification 15. Additional technical review of the report to be conducted by TPU.

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Supervisor: \_\_\_\_\_